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February 5, 2019  
L-18-271

10 CFR 50.90

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT:  
Davis-Besse Nuclear Power Station, Unit No. 1  
Docket No. 50-346, License No. NPF-3  
License Amendment Request – Proposed Post-Shutdown Emergency Plan

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," FirstEnergy Nuclear Operating Company (FENOC) requests an amendment to the Renewed Facility Operating License No. NPF-3 for Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS). The proposed amendment would revise the DBNPS Emergency Plan for the post-shutdown and permanently defueled condition. The proposed changes are being submitted to the Nuclear Regulatory Commission (NRC) for approval, prior to implementation, pursuant to 10 CFR 50.54(q)(4).

By letter dated April 25, 2018 (Accession No. ML18115A007), FENOC certified to the NRC, pursuant to 10 CFR 50.82(a)(1)(i) and 10 CFR 50.4(b)(8), that power operation will cease at DBNPS by May 31, 2020.

Once the certifications of permanent cessation of power operation and of permanent removal of fuel from the reactor vessel is docketed for DBNPS, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the license will no longer authorize reactor operation or emplacement or retention of fuel into the reactor vessel.

The proposed changes to the DBNPS Emergency Plan would revise the on-shift and the augmented Emergency Response Organization (ERO) staffing in support of the post-shutdown and permanently defueled condition of DBNPS. In addition to the proposed changes associated with the shutdown and defueled condition, other minor changes to the emergency plan are proposed. FENOC has reviewed the proposed changes against the planning standards in 10 CFR 50.47(b) and requirements in 10 CFR 50, Appendix E and concludes that the standards and requirements will continue to be met.



The proposed changes to the DBNPS Emergency Plan are commensurate with the reduced spectrum of credible accidents in the post-shutdown and permanently defueled condition. In order to assist in the transition from an operating facility to a permanently defueled facility, the changes are required to properly reflect the conditions of the facility while continuing to preserve the DBNPS Decommissioning Trust Fund and the effectiveness of the DBNPS Emergency Plan.

The description and evaluation of the proposed changes to DBNPS Emergency Plan are contained in Enclosure A. Attachment 5 of the enclosure contains a new regulatory commitment.

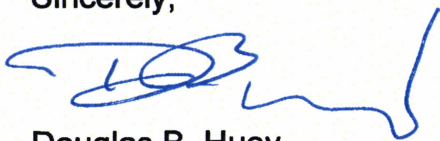
Between November 26 and 29, 2018, FENOC discussed the proposed changes to the DBNPS Emergency Plan with State of Ohio, Ottawa County, and Lucas County officials. Enclosure B provides copies of letters from the aforementioned organizations indicating that they understand the proposed changes and are satisfied that the proposed changes do not impact their respective radiological emergency preparedness plans.

FENOC requests review and approval of the proposed license amendment by January 31, 2020, and a 90-day implementation period from the effective date of the amendment. FENOC requests that the approved amendment become effective following the docketing of the certifications required by 10 CFR 50.82(a)(1) that DBNPS has been permanently defueled.

If there are any questions, or if additional information is required, please contact Mr. Thomas Lentz, Manager, FENOC Nuclear Licensing and Regulatory Affairs, at (330) 315-6810.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 5, 2019.

Sincerely,



Douglas B. Huey

Davis-Besse Nuclear Power Station, Unit No. 1

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Enclosure:

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- B. State and County Reviews

cc: NRC Region III Administrator  
NRC Resident Inspector  
NRR Project Manager  
Branch Chief, Ohio Emergency Management Agency,  
State of Ohio (NRC Liaison)  
Utility Radiological Safety Board

Enclosure A  
L-18-271

Evaluation of a Request for Licensing Action  
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Subject: Request to Revise the Davis-Besse Nuclear Power Station Emergency Plan

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- 1. Tabular Summary of Proposed Changes to the DBNPS Emergency Plan, Revision 33
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- 3. Proposed Revisions to the DBNPS Emergency Plan, Revision 33 (Clean Version)
- 4. Emergency Response Organization Task Analysis
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## 1.0 SUMMARY DESCRIPTION

This evaluation supports a FirstEnergy Nuclear Operating Company (FENOC) request to amend Renewed Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station (DBNPS).

The proposed amendment would revise the DBNPS Emergency Plan on-shift and augmented Emergency Response Organization (ERO) staffing to support the planned permanent cessation of power operations and permanent defueling of DBNPS. Specifically, the proposed changes in this license amendment request would eliminate on-shift ERO positions not needed for the safe storage of spent fuel in the spent fuel pool (SFP) during the initial decommissioning period and eliminate those augmented ERO positions not necessary to effectively respond to remaining credible accidents. The proposed changes to the on-shift and augmented ERO staffing are commensurate with the reduced spectrum of credible accidents for a permanently shutdown and defueled nuclear power reactor facility. The proposed amendment includes two regulatory commitments; the first is to have a chemistry technician available during fuel handling activities should a radiation monitor not be available to evaluate the need to enter an emergency action level (EAL) should facility conditions warrant, and second, to conduct a drill to confirm the ability of the augmented ERO to perform required functions. The commitments are described in Attachment 5.

FENOC has evaluated the proposed changes in accordance with 10 CFR 50.54(q) and has determined the proposed changes are a reduction in effectiveness of the DBNPS Emergency Plan as defined in 50.54(q)(1)(iv). In accordance with 10 CFR 50.54(q)(4), changes to the emergency plan that reduce the effectiveness of the plan may not be implemented without prior Nuclear Regulatory Commission (NRC) approval; therefore, the proposed changes to the DBNPS Emergency Plan are hereby submitted to the NRC as a license amendment request in accordance with 10 CFR 50.90.

## 2.0 DETAILED DESCRIPTION

### 2.1 Description of Proposed Changes

The on-shift and augmented ERO staffing is being revised to respond to the reduced spectrum of credible accidents for a permanently shutdown and defueled power reactor facility.

Most of the accident scenarios postulated in the Updated Final Safety Analysis Report (UFSAR) will no longer be applicable with the reactor in the permanently shutdown and defueled condition. The Operations staff will no longer be required to implement emergency operating procedures and the scope of the applicable abnormal response procedures that remain will be significantly reduced.

Attachment 1 provides a tabular summary of the proposed changes to the DBNPS Emergency Plan addressing the permanently shutdown and defueled condition. Attachment 2 provides the revised DBNPS Emergency Plan with the proposed changes shown in a markup format. Attachment 3 provides a clean version of the revised DBNPS Emergency Plan. Attachment 4 contains an ERO task analysis of the augmented ERO positions proposed for elimination evaluating the transfer of tasks to remaining ERO positions in the permanently shutdown and defueled condition. Attachment 5 contains a regulatory commitment to conduct a drill to confirm the ability of the augmented ERO to perform required functions.

## 2.2 Proposed On-Shift Staffing Changes

The current minimum required on-shift staff detailed in DBNPS Emergency Plan Table 5-1, "Manpower, Location, and Response Considerations for Emergencies," A, "Onshift Minimum Staffing Requirements," consists of:

- One (1) Shift Manager (SRO) [Senior Reactor Operator]
- One (1) Unit Supervisor (SRO)
- One (1) Shift Engineer (STA) [Shift Technical Advisor]
- Two (2) Reactor Operators (ROs)
- Six (6) Non-Licensed Operators (NLOs)
- One (1) Radiation Protection Technician
- One (1) Chemistry Technician
- One (1) Security Shift Supervisor
- One (1) CAS Operator

Following docketing of the certifications for permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS Emergency Plan will be revised to eliminate the following on-shift positions:

- One (1) Unit Supervisor (SRO)
- One (1) Shift Engineer (STA)
- Two (2) Reactor Operators (ROs)
- Four (4) Non-Licensed Operators (NLOs)
- One (1) Chemistry Technician

The following proposed on-shift complement will be required to implement the DBNPS Emergency Plan in the permanently shutdown and defueled condition:

- One (1) Shift Manager [qualified as a Certified Fuel Handler (CFH)]
- Two (2) Non-Certified Operators (NCOs)
- One (1) Radiation Protection Technician
- One (1) Security Shift Supervisor
- One (1) CAS Operator



To support the reduction in on-shift staffing following docketing of the certifications for permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS staffing levels were evaluated by reviewing NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1 (Reference 1) and validating the conclusion of this amendment request, in part, by using the methodology in Nuclear Energy Institute (NEI) 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities," (NEI 10-05) (Reference 2), considering the postulated accidents that will be applicable to DBNPS in the permanently shutdown and defueled condition. Section 4.5 contains a summary of the results of an analysis of the proposed post-shutdown on-shift staffing performed to address the permanent shutdown of DBNPS. The required DBNPS on-shift staff following permanent removal of fuel from the reactor vessel is commensurate with the need to safely store spent fuel in a manner that is protective of public health and safety. The required staffing is addressed in detail in Section 4.0.

## 2.3 Additional Staffing Considerations

### 2.3.1 Fire Brigade Staffing

Fire Brigade staffing is described in Section 4.4.7. The Fire Brigade complement will continue to consist of five (5) trained and qualified responders, including a Fire Brigade Captain and four (4) additional trained and qualified Fire Brigade Members in accordance with the Fire Hazards Analysis Report.

### 2.3.2 Position Titles

Changes in position titles [Non-Certified Operator (NCO) and Certified Fuel Handler (CFH)] are consistent with changes proposed by a license amendment request submitted to the NRC on October 22, 2018 that revises Technical Specifications Sections 1.1 "Definitions," and 5.0 "Administrative Controls" for a permanently defueled condition (Reference 3). The proposed changes would revise the minimum shift staffing requirements at DBNPS by replacing references to licensed and non-licensed operators with references to CFHs and NCOs. The NCO position is used to differentiate from the Shift Manager position. A CFH program was submitted to the NRC by letter dated August 15, 2018 (Accession No. ML18227A019) (Reference 4).

An individual qualified as a CFH will supervise and perform fuel handling operations when the DBNPS reactor is in the permanently shutdown and defueled condition. Shift Managers will be qualified as CFHs. The Shift Manager requires additional qualifications beyond the CFH training. Command and control will remain with the Shift Manager, regardless of location of the individual designated as the Shift Manager, until relieved by the Emergency Plant Manager or the Emergency Assistant Plant Manager.

NCOs will perform duties typically associated with those performed by NLOs, such as manipulation and monitoring of plant equipment. NCOs will also be assigned to monitor indications and communications in the Control Room.

The specific training requirements of the positions will be developed by the DBNPS Training Department and will be reviewed and approved by Operations management. The training program will be designed with an emphasis on systems and processes important to maintaining SFP cooling and monitoring, and controlling SFP parameters, such as SFP water level and temperature. Consequently, the positions will be trained on pertinent Control Room indications and controls that will be monitored and operated to maintain SFP cooling and SFP water level, in addition to monitoring plant radiological conditions. The training program will include training on applicable aspects of the DBNPS Emergency Plan-related duties. Individuals will be trained and qualified consistent with 10 CFR 50.120, "Training and qualification of nuclear power plant personnel."

Personnel assigned to fill the NCO positions could include either currently licensed operators or current NLOs. With respect to the licensed operators being assigned as NCOs, much of the required training for the NCO position will already have been completed since the individuals have been trained and qualified as licensed operators to support power operations. With respect to the NLOs assigned as NCOs, they have been trained and qualified as NLOs to support power operations. Therefore, it is expected that these individuals will require additional training related to Control Room operations when the DBNPS reactor is in the permanently shutdown and defueled condition.

#### 2.3.3 Senior Site Management

In addition to the above changes, in the DBNPS post-shutdown organization, the positions of Site Vice President and Director, Performance Improvement will not exist. The General Plant Manager will assume the responsibilities assigned to the positions of Site Vice President and Director, Performance Improvement in the DBNPS Emergency Plan.

#### 2.4 Proposed Augmented Emergency Response Organization Changes

Following docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS Emergency Plan will be revised to modify the augmented ERO commensurate with the reduced spectrum of credible accidents for the permanently shutdown and defueled reactor and the need to safely store spent fuel at the facility in a manner that is protective of public health and safety.

The proposed changes to the DBNPS Emergency Plan would eliminate certain augmented ERO positions currently identified in Section 5.0 and Figure 5-2 of the DBNPS Emergency Plan, and in the Emergency Plan Implementing Procedures (EPIPs) that describe the activation and operation of the Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), and Joint Information Center (JIC). The augmented ERO positions proposed for elimination are identified in Table 2.4-1 and Sections 4.4 and 4.5.

Table 2.4-1

Current DBNPS Augmented ERO Positions	Proposed Post-Shutdown Augmented ERO Positions <sup>1,2</sup>
<b>Technical Support Center</b>	
Emergency Plant Manager	Emergency Plant Manager
Emergency Assistant Plant Manager	Emergency Assistant Plant Manager <sup>3</sup>
Recovery Advisor	--
TSC Engineering Manager	TSC Engineering Manager
TSC Engineering Lead	--
TSC Operations Lead	--
TSC Engineers (Mechanical, Electrical, I&C, Operations)	Mechanical, Electrical, I&C, Operations - Available to respond on an as-needed basis as determined by the TSC Engineering Manager
Core/Thermal Hydraulics Engineer	--
TSC Computer Technician	--
Severe Accident Management (SAM) Engineer	--
Emergency RP Manager	Emergency RP Manager
Emergency Security Manager	Emergency Security Manager
OCA Security Supervisor	OCA Security Supervisor
<b>Operations Support Center</b>	
OSC Manager	OSC Manager
Assistant OSC Manager	--
OSC Systems Engineers <sup>4</sup>	--
OSC RP Coordinator	OSC RP Coordinator
OSC Communicator	--
OSC Team Briefer/Debriefers and RP Briefer/Debriefers <sup>5</sup>	--
Rad Data Technician	Rad Data Technician
On-call Personnel (Electrical, I&C, Mechanical Maintenance, RP, Chemistry)	On-call Personnel (Electrical, Mechanical Maintenance, RP, Chemistry) – Reduced numbers <sup>6</sup>
Pool Personnel (Electrical, I&C, Mechanical Maintenance, RP, Chemistry, Operations)	Available to respond on an as-needed basis
<b>Emergency Operations Facility</b>	
Emergency Director	Emergency Director
Emergency Offsite Manager	Emergency Offsite Manager
Emergency Director Advisor	--
EOF Operations Advisor	--
Dose Assessment Coordinator	Dose Assessment Coordinator
RTL Coordinator	RTL Coordinator



Table 2.4-1 (Continued)

<b>Current DBNPS Augmented ERO Positions</b>	<b>Proposed Post-Shutdown Augmented ERO Positions<sup>1,2</sup></b>
RMT Coordinator	RMT Coordinator
<b>Emergency Operations Facility (continued)</b>	
Dose Assessor (2)	Dose Assessor (1)
DBAB RMTs	DBAB RMTs
Field RMTs	Field RMTs
Emergency Facility Services Manager <sup>7</sup>	--
Emergency Planning Advisor	Emergency Planning Advisor
Log & Status Board Keepers	--
State/County Communicator	State/County Communicator
Resource Coordinator (including Warehouse pool personnel)	--
NRC Liaison	--
Assembly Area Coordinator (including Maintenance Services personnel)	--
Technical Liaison – EOF Communicator	Technical Liaison – EOF Communicator
Technical Liaisons (Ohio, Ottawa County, Lucas County)	Technical Liaisons (Ohio, Ottawa County, Lucas County)
<b>Joint Information Center</b>	
Company Spokesperson	Company Spokesperson
JIC Manager	JIC Manager
Public Affairs Duty Officer	--
Security	Security
JIC Writer	--
News Statement Coordinator	--
JIC Communicator	--
Public Relations Communicator <sup>8</sup>	--
Audio/Visual Coordinator	--
Technical Briefer	Technical Briefer
Public Inquiry Hotline Operator	Public Inquiry Hotline Operator
Media Assistant (2)	Media Assistant (2)

<sup>1</sup> A dash (--) indicates the position is proposed for elimination upon implementation of the Post-Shutdown Emergency Plan.

<sup>2</sup> Information regarding the proposed elimination of each position is provide in Sections 4.4, 4.5, and Attachment 4.

<sup>3</sup> The Emergency Assistant Plant Manager reports to the Control Room.

<sup>4</sup> Disciplines represented include primary systems, secondary systems, and electrical and controls.

<sup>5</sup> The OSC Team Briefer/Debriefer and RP Briefer/Debriefer are two separate positions.

<sup>6</sup> Eliminates one (1) mechanical maintenance technician, one (1) electrical maintenance technician, two (2) instrumentation & control (I&C) technicians, one (1) chemistry technician, and two (2) RP technicians.

<sup>7</sup> Position is located in the TSC, but the position reports to the Emergency Offsite Manager located in the EOF.

<sup>8</sup> Position is located in the EOF, but position reports to JIC Manager located in the JIC.

The intent of Table 2.4-1 is to compare the current augmented ERO positions against the proposed post-shutdown augmented ERO positions. As an example, the TSC Core/Thermal Hydraulics Engineer is a position that is proposed for elimination in the post-shutdown augmented ERO, because in a permanently shutdown and defueled condition the responsibilities associated with monitoring a reactor core are no longer needed. The proposed elimination of the listed augmented ERO positions are described in the following sections.

Attachment 4 identifies the current augmented ERO and contains an analysis of the augmented ERO positions proposed for elimination, evaluating the transfer of tasks to remaining ERO positions in the permanently shutdown and defueled condition. The analysis evaluates and dispositions each ERO task as being reassigned or eliminated, as appropriate.

The Table provided in Attachment 4 contains columns with headings "Implementing Actions" and "Task Assigned To?". These columns provide the details regarding the disposition of each task. Some of the duties are identified as being eliminated because they become unnecessary following permanent cessation of power operations and permanent removal of fuel from the reactor vessel. Other duties are identified as eliminated because the duties are performed redundantly by other positions in the ERO and will continue to be performed by those positions in the post-shutdown augmented ERO.

DBNPS will revise procedures consistent with the proposed changes presented in Attachment 4 to align with the revised ERO task assignments. These procedures will be used to support training of the post-shutdown augmented ERO staff and during the conduct of drills to validate the staffing and assignment of tasks.

## 2.5 Other Changes

Additionally, a number of administrative changes are being proposed to the DBNPS Emergency Plan that are not related to the on-shift and augmented ERO staffing changes proposed to support the planned permanent cessation of power operations and permanent defueling of DBNPS. These changes include, but are not limited to, changes that improve grammar and correct typographical errors. The changes are described in Attachment 1. These changes do not adversely impact the DBNPS Emergency Plan and are not evaluated further.

## 3.0 REASON FOR PROPOSED CHANGES

The proposed changes reflect the pending permanent cessation of operation and permanent defueling of the DBNPS reactor, which is expected to occur by May 31, 2020. After the reactor is shutdown, the fuel assemblies will be removed from the reactor vessel and placed into the SFP. After a suitable time period, the irradiated fuel will be transferred from the SFP to the ISFSI with the irradiated fuel already stored there. The irradiated fuel will be stored at the ISFSI until the irradiated fuel is removed from site.

Upon docketing of the certifications for permanent cessation of operations, 10 CFR 50.82(a)(1)(i), and permanent removal of fuel from the reactor vessel, 10 CFR 50.82(a)(1)(ii), pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license for DBNPS will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel.

The proposed revisions to the DBNPS Emergency Plan are commensurate with the reduction in hazards associated with the permanently defueled condition and will allow the facility staff to transition from that required for an operating facility to that required for a permanently defueled facility. The proposed changes are required to properly reflect the conditions of the facility while continuing to preserve the DBNPS Decommissioning Trust Fund and the effectiveness of the DBNPS Emergency Plan.

#### 4.0 TECHNICAL EVALUATION

An evaluation of the proposed changes to the DBNPS Emergency Plan on-shift and augmented ERO staffing that supports the planned permanent cessation of power operations and permanent defueling of DBNPS is contained in the following paragraphs.

##### 4.1 On-Shift and ERO Staffing Regulations and Guidance

The onsite emergency plan planning standards in 10 CFR 50.47(b)(2) state, in part, that:

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

NUREG-0654, Section II.B, "Onsite Emergency Organization," provides guidance for meeting the planning standards and requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, Section IV.A. The guidance describes the onsite emergency organization, including the staffing requirements contained in Table B-1. This table specifies a minimum of ten on-shift responders in four Major Functional Areas. It also specifies seven on-shift response functions where the duties may be performed by shift personnel who are assigned other functions (that is, there are no dedicated responders to perform these functions). Table B-1 specifies two Major Functional Areas (that is, firefighting and site access control and accountability) which must be staffed on a site-specific basis.

The on-shift staff must be able to cope with a spectrum of events until augmenting personnel arrive in accordance with the site's emergency plan and site-specific commitments. The augmenting responders assume managerial, engineering, and administrative duties from the on-shift personnel, allowing on-shift personnel to focus on their assigned functions.



On November 23, 2011, the NRC published a final rule in the Federal Register amending certain emergency preparedness requirements in its regulations that govern domestic licensing of production and utilization facilities (Reference 5). This final rule amended 10 CFR Part 50, Appendix E, Section IV.A, "Organization," to address the assignment of tasks or responsibilities to on-shift ERO personnel that could potentially overburden them and prevent the timely performance of their emergency plan functions. Specifically, Section IV.A.9 states that licensees shall perform, "... a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan."

Coincident with the rule change in 10 CFR Part 50, Appendix E, Section IV.A.9, the NRC issued Interim Staff Guidance (ISG) NSIR/DPR-ISG-01, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants" (ISG-01) (Reference 6). The ISG provides information relevant to performing the on-shift staffing analysis. The ISG states that NEI developed NEI 10-05 to establish a standard methodology for a licensee to perform the required staffing analysis, and that the NRC reviewed NEI 10-05 and found it to be an acceptable methodology for this purpose. The ISG also indicates that the completed staffing analyses are required to be part of the emergency plan and the results documented and submitted to the NRC in accordance with 10 CFR 50.54(q)(5).

#### 4.2 DBNPS-Specific Background

DBNPS Emergency Plan Table 5-1A, "Onshift Minimum Staffing Requirements," describes the minimum on-shift staffing utilized to support the emergency plan. Table 5-1A specifies the on-shift staffing for certain positions in the Major Functional Areas identified in Table B-1, "Minimum Staffing Requirements for NRC Licensees for Nuclear Power Plant Emergencies" of NUREG-0654, including:

- Plant Operations and Assessment of Operational Aspects
- Emergency Direction and Control
- Notification and Communication
- Radiological Assessment
- Plant System Engineering, Repair and Mitigative Actions
- In-Plant Protective Actions
- Fire Fighting
- First Aid and Rescue
- Site Access Control and Accountability

DBNPS Emergency Plan Table 5-1B, "Augmented Emergency Response Staffing Requirements," outlines the other key responders (augmented ERO) capable of responding within 30 minutes of an emergency declared during normal hours and within

60 minutes of an emergency declared during off-hours to support the on-shift organization. Table 5-1B also identifies the Emergency Response Facility (ERF) reporting locations for the augmenting ERO personnel.

#### 4.2.1 On-Shift Staffing

DBNPS Emergency Plan, Section 5.0, "Organizational Control of Emergencies," describes the key DBNPS ERO positions and associated responsibilities. The section outlines the on-shift staffing requirements, which provide initial emergency response actions and provisions for timely augmentation of on-shift personnel when required. The DBNPS ERO, including the normal on-shift organization is described in Section 5.1, "DBNPS Organization," and Section 5.3, "Onshift Emergency Response Organization." The normal watch organization is presented in Figure 5-1, "Onshift Emergency Organization," and functions 24 hours per day, 7 days per week.

If initiating conditions exist that result in the declaration of an emergency, the Shift Manager assumes the role of Emergency Director and is responsible for emergency direction and coordination. The normal operating organization assumes their pre-assigned emergency response roles. This is considered to be a short-term response organization that will be augmented within one hour after call-out of additional plant personnel.

To address the required on-shift staff while DBNPS is operating, an on-shift staffing analysis was conducted in accordance with the guidance provided in NEI 10-05 satisfying the requirements of 10 CFR 50, Appendix E, Section IV.A.9. This analysis examined the capability of the minimum on-shift staff provided in DBNPS Emergency Plan Table 5-1A to perform the key emergency response actions for events described in ISG-01 until the augmenting staff arrived.

The emergency response to each of the events described in ISG-01 was determined by conducting a tabletop of the event using the DBNPS Emergency Plan and emergency plan procedures and the applicable departmental procedures such as emergency and abnormal operating procedures. Each scenario was reviewed to determine the required plant actions and emergency plan implementation actions based on plant procedures prior to staff augmentation. These actions were then compared to the minimum on-shift staffing for emergency response implementation as described in Table 5-1A of the DBNPS Emergency Plan, ensuring that no actions were assigned to staff members that conflicted with either their dedicated emergency response role or their dedicated operational role, as appropriate. In cases where multiple tasks were assigned to an individual, the team evaluated the timing of the tasks to ensure that they could be performed by the individual in series within any specified time requirements. The analysis considered the station design basis accidents (DBA) described in the UFSAR along with additional scenarios specified by the guidance documents. The scenarios included in the analysis were the waste gas decay tank rupture, steam generator tube rupture (SGTR), main steam line break (MSLB), small break loss of coolant accident

(LOCA) – outside containment, large break loss of coolant accident (LB-LOCA), fuel handling accident (FHA), design basis threat (DBT), probable aircraft threat (PAT), control room fire requiring control room evacuation and alternate shutdown, and station blackout (SBO).

DBNPS Emergency Plan Table 5-1 specifies the minimum staffing requirements for the DBNPS on-shift staff, defines the positions initially responsible for satisfying key functions, and specifies positions that will augment the on-shift staff.

In support of this amendment request, an analysis of the post-shutdown on-shift staffing was conducted using the guidance in NEI 10-05. To properly address the permanently shutdown and defueled condition, the scenarios considered in the analysis included the waste gas decay tank rupture, FHA, control room fire requiring evacuation, a DBT, and a PAT. The SBO, the Anticipated Transient Without Scram (ATWS), and Appendix R fire were not considered in the post-shutdown on-shift staffing analysis. Once the certifications required by 10 CFR 50.82 are docketed, DBNPS will no longer be licensed to operate. The ATWS event would no longer be credible. The SBO rule (10 CFR 50.63) will no longer be applicable. Though 10 CFR 50, Appendix R will no longer be applicable, a fire consistent with the intent of NEI 10-05 was evaluated. This was a fire in the Control Room requiring Control Room evacuation. A summary of the results is presented in Section 4.5.1 of this enclosure.

#### 4.2.2 Augmented Emergency Response Organization Staffing

In addition to the on-shift staffing requirements, which provide initial emergency response actions, DBNPS Emergency Plan, Section 5.0, "Organizational Control of Emergencies," describes the provisions for timely augmentation of on-shift personnel when required.

The on-call (augmenting) ERO is described in DBNPS Emergency Plan Section 5.2, "DBNPS Emergency Management," Section 5.4, "Onsite Emergency Response Organization," and Section 5.5, "Near Site Emergency Response Facility." The augmented ERO is illustrated in Figure 5-2, pages 1 – 10.

The DBNPS Emergency Plan defines four classes of emergency events: Notification of Unusual Event (UE), Alert, Site Area Emergency (SAE) and General Emergency (GE). Because on-shift personnel can normally address an emergency response to UEs without additional support, staff augmentation may not be activated for a UE declaration.

If an Alert, SAE, or GE is declared, or if the minimum on-shift crew requires assistance during a UE, the onsite emergency organization will be augmented by additional plant personnel as described in Sections 5.4 and 5.5 of the DBNPS Emergency Plan. The DBNPS Emergency Plan describes the augmented emergency organization that will staff and operate the EOF, TSC, and OSC, each within one hour of the request for activation, and the JIC. The Shift Manager maintains command and control



responsibility during UEs, unless the TSC has been activated. When declared operational, overall responsibility for the emergency is assumed by Emergency Plant Manager or Emergency Assistant Plant Manager in the Control Room or TSC, or the Emergency Director in the EOF.

Procedures are in place to ensure the timely activation of ERFs. DBNPS Emergency Plan Section 5.8, "Supporting Emergency Organizations," describes the interfaces among the various offsite emergency organizations.

#### 4.3 Accident Analysis

DBNPS UFSAR Chapter 15 describes abnormal operational transients and DBAs that are applicable during plant operations. Upon docketing of the certifications required by 10 CFR 50.82(a)(1)(i) and (ii), the 10 CFR 50 license for DBNPS will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2). Therefore, most of the accident scenarios postulated in the UFSAR will no longer be applicable.

The postulated DBAs that will remain applicable to DBNPS in the permanently shutdown and defueled condition are the FHA in the SFP, and the waste gas decay tank rupture. UFSAR Chapter 15 will be revised to eliminate the DBAs that will not be applicable in the permanently shutdown and defueled condition.

In the permanently shutdown and defueled condition, DBNPS will be required to respond to events that involve a waste gas decay tank rupture, a FHA, a loss of SFP cooling or water inventory, and external events (for example, fire or hostile actions) that could lead to a loss of SFP cooling or water inventory. In addition, DBNPS will continue to implement the emergency response actions necessary to respond to potential aircraft impacts required by 50.54(hh)(1). These strategies will be in place for the protection of the SFP.

In the permanently shutdown and defueled condition, the DBNPS Fire Brigade will implement the SFP inventory makeup strategies required under 10 CFR 50.54(hh)(2). The strategies will no longer address restoration of core cooling and containment, since they are not applicable in the permanently shutdown and defueled condition. DBNPS will continue to maintain a trained and qualified Fire Brigade responsible for implementation of the SFP inventory makeup strategies. The Fire Brigade personnel identified in the DBNPS Emergency Plan are separate and distinct from those responsible for implementing the major elements of the emergency plan including command and control, emergency classification, offsite notifications, and dose assessment and protective action recommendation development. Therefore, sufficient staffing is available to implement SFP inventory makeup strategies required under 10 CFR 50.54(hh)(2) without impacting the performance of designated emergency plan functions.

As described in Section 4.4.7 of this evaluation, events involving a loss of SFP cooling or water inventory can be addressed by implementation of SFP inventory makeup

strategies required under 10 CFR 50.54(hh)(2). These strategies will continue to be maintained to satisfy applicable portions of DBNPS License Condition 2.C(8) of Renewed Operating License NPF-3.

#### 4.4 Functional Area Technical Evaluation

FENOC evaluated the proposed changes to the on-shift staffing to address the Major Functional Areas found in Table B-1 of NUREG-0654. The analysis addresses the on-shift staff for DBNPS and the augmented ERO for each function. The DBNPS Emergency Plan Table 5-1A identifies the following functional areas:

- Plant Operations and Assessment of Operational Aspects
- Emergency Direction and Control
- Notification and Communication
- Radiological Assessment
- Plant System Engineering, Repair and Mitigative Actions
- In-Plant Protective Actions
- Fire Fighting
- First Aid and Rescue
- Site Access Control and Accountability

An analysis of the proposed on-shift and augmented ERO staffing changes associated with DBNPS Emergency Plan Table 5-1A is provided for each Major Functional Area in Sections 4.4.1 through 4.4.9 that follows.

##### 4.4.1 Major Functional Area: Plant Operations and Assessment of Operational Aspects

###### 4.4.1.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A, in the Major Functional Area of Plant Operations and Assessment of Operational Aspects, consists of:

- One (1) Shift Manager (SRO)
- One (1) Unit Supervisor (SRO)
- One (1) Shift Engineer (STA)
- Two (2) Reactor Operators
- One (1) Non-Licensed Operator

### Proposed Changes

Upon docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor, the on-shift staff in the Major Functional Area of Plant Operations and Assessment of Operational Aspects will be revised to eliminate:

- One (1) Unit Supervisor (SRO)
- One (1) Shift Engineer (STA)
- Two (2) Reactor Operators

#### 4.4.1.2 Augmented ERO

Table 5-1B of the DBNPS Emergency Plan does not identify augmented ERO personnel in the Major Functional Area of Plant Operations and Assessment of Operational Aspects. There are no proposed changes to the augmented ERO in this Major Functional Area.

#### 4.4.1.3 Analysis

Plant operations on-shift staffing, as implemented for an operating nuclear power reactor, is based on the philosophy of defense-in-depth. Because of the reduced number of possible events requiring mitigating actions and the limited number of actions to be performed by the on-shift positions in the permanently shutdown and defueled condition, the monitoring and control responsibilities of the on-shift staff is limited to the operation of SFP support systems.

The requirement for licensed ROs and the Unit Supervisor, who holds a SRO license is eliminated. In accordance with the current technical specifications, the minimum shift crew composition requires ROs and SROs who are licensed by the NRC. The Shift Manager and the Unit Supervisor fulfill the requirements for the SROs, and the Reactor Operators fulfill the requirement for the ROs. In accordance with the DBNPS Emergency Plan, the Shift Manager, the Unit Supervisor, and the Reactor Operators support the Major Functional Area of Plant Operations and Assessment of Operational Aspects. Consistent with proposed changes to the DBNPS Technical Specifications (Reference 3) that revise the minimum shift staffing requirements and the position titles associated with SROs, ROs, and NLOs, the proposed positions will be fulfilled by individuals qualified as CFHs and NCOs. Because of the reduced number of possible events requiring mitigating actions in the permanently shutdown and defueled condition, and the limited number of actions to be performed by the on-shift positions, the Shift Manager and NCO positions would provide the resources needed to implement the DBNPS Emergency Plan.

With DBNPS in a permanently shutdown and defueled condition, the operations staff will need to respond to events regarding a waste gas decay tank rupture, a FHA, a loss of SFP cooling or water inventory, and external events that could lead to a challenge to maintaining SFP cooling or water inventory. The Control Room continues to have indications, alarms, and controls related to SFP parameters.

The analysis of the proposed post-shutdown on-shift staffing, summarized in Section 4.5.1, validated that with DBNPS in a permanently shutdown and defueled condition, with the postulated accidents that would be applicable to that condition, the on-shift complement would be able to perform all required Emergency Plan actions in a timely manner and that there are no identified collateral duties that would prevent the timely performance of emergency plan functions.

The proposed on-shift staffing continues to meet the planning standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR 50, commensurate with the reduced spectrum of credible accidents with DBNPS in the permanently shutdown and defueled condition, and that DBNPS retains the ability to implement the DBNPS SFP mitigation actions.

#### 4.4.2 Major Functional Area: Emergency Direction and Control

##### 4.4.2.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A in the Major Functional Area of Emergency Direction and Control, consists of:

- One (1) Shift Manager (This function may be performed by someone filling another position having functional qualifications)

##### Proposed Changes

There are no proposed changes to the DBNPS on-shift staff in the Major Functional Area of Emergency Direction and Control following permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

##### 4.4.2.2 Augmented ERO

Table 5-1B of the DBNPS Emergency Plan identifies the Emergency Assistant Plant Manager as an augmented ERO position in this Major Functional Area. Additionally, DBNPS Emergency Plan Section 5.2.1, "Emergency Director," indicates that the designated Emergency Director or the Emergency Plant Manager can relieve the Shift Manager of emergency director responsibilities. There are no changes proposed to the augmented ERO in this Major Functional Area.

##### 4.4.2.3 Analysis

The responsibility of command and control resides with the Shift Manager. The Shift Manager assumes the responsibility of the Emergency Director and implements the DBNPS Emergency Plan in response to an emergency at the facility. The Emergency Plant Manager may assume the Emergency Director position upon arrival in the Control Room or TSC, and overall command and control of the emergency. The Emergency

Assistant Plant Manager may assume the Emergency Director position upon arrival in the Control Room, and overall command and control of the emergency. The Emergency Director may assume the overall command and control of the emergency upon arrival in the TSC or EOF.

The analysis of the proposed post-shutdown on-shift staffing, summarized in Section 4.5.1, validated that with DBNPS in a permanently shutdown and defueled condition, with the postulated accidents that would be applicable to that condition, the proposed DBNPS on-shift complement would be able to perform all required emergency plan actions in a timely manner and that there are no identified collateral duties that would prevent the timely performance of emergency plan functions.

The proposed on-shift staffing continues to meet the planning standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E commensurate with the reduced spectrum of credible accidents in a permanently shutdown and defueled condition, and that DBNPS retains the ability to implement the SFP mitigation actions.

#### 4.4.3 Major Functional Area: Notification and Communication

##### 4.4.3.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A in the Major Functional Area of Notification and Communication, consists of:

- Licensee - CAS Operator (This function may be performed by someone filling another position having functional qualifications)
- Local/State - NLO or above (This function may be performed by someone filling another position having functional qualifications)
- Federal - NLO or above (This function may be performed by someone filling another position having functional qualifications)

##### Proposed Changes

Aside from the previously discussed title change from NLO to NCO, there are no proposed changes to the DBNPS on-shift staff in the Major Functional Area of Notification and Communication following permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

##### 4.4.3.2 Augmented ERO

Table 5-1B identifies the State/County Communicator as an augmenting position in the EOF. There are no proposed changes to the augmented ERO in this Major Functional Area.

#### 4.4.3.3 Analysis

10 CFR 50, Appendix E, Section IV.D.3 requires licensees have the capability to notify responsible State and local government agencies within 15 minutes after declaration of an emergency. 10 CFR 50.72(a)(3) requires licensees to notify the NRC immediately after notification of the appropriate State or local agencies and not later than 60 minutes after declaration of one of the emergency classifications. This function is currently performed by an on-shift NLO (or a qualified individual in another position) performing the communicator functions. This function is currently augmented by the State/County Communicator in the EOF.

DBNPS uses a dedicated 4-way phone system located in the Control Room and EOF to support the Notification and Communication function. It is used to transmit information to the State and County Emergency Operations Centers (EOCs), the Ohio Highway Patrol Office, and the Lucas County and Ottawa County Sheriff's dispatcher offices for UEs, Alerts, SAEs, and GEs. This system is available on a 24-hour basis and incorporates each principal emergency response center into a single dedicated network. In addition, each organization can be reached via normal commercial lines as a backup to the 4-way phone system.

NRC notifications are treated as a continuous action in accordance with 10 CFR 50.72(c)(3), meaning that once the initial NRC communications are established, it is assumed that the NRC will request an open line to be continuously maintained with the NRC Operations Center using the dedicated Emergency Notification System (ENS) network. The use of dedicated phone circuits enables these notifications to be performed by the same on-shift communicator who performs the State and local notifications.

There are no proposed changes to the on-shift or augmented ERO staff in the Major Functional Area of Notification and Communication following permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

The analysis of the proposed post-shutdown on-shift staffing, summarized in Section 4.5.1, validated that with DBNPS in a permanently shutdown and defueled condition, with the postulated accidents that would be applicable to that condition, the DBNPS on-shift complement would be able to perform required emergency plan actions in a timely manner and that there are no identified collateral duties that would prevent the timely performance of emergency plan functions prior to augmentation.

The proposed on-shift staffing continues to meet the planning standards of 10 CFR 50.47(b) and the requirements of Appendix E to 10 CFR Part 50, commensurate with the reduced spectrum of credible accidents in a permanently shutdown and defueled condition, and that DBNPS retains the ability to implement the SFP mitigation actions.



#### 4.4.4 Major Functional Area: Radiological Assessment

##### 4.4.4.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A in the Major Functional Area of Radiological Assessment, consists of:

- Dose Assessment - Shift Engineer (STA) (This function may be performed by someone filling another position having functional qualifications)
- In-Plant Surveys - RP Technician
- Onsite Surveys - RP Technician (This function may be performed by someone filling another position having functional qualifications)
- Chemistry - Chemistry Technician

##### Proposed Changes

Upon permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS on-shift staff in the Major Functional Area of Radiological Assessment will be revised to eliminate the on-shift Chemistry Technician and the Shift Engineer (STA). Any required duties will be retained as a collateral duty of other qualified on-shift staff.

##### 4.4.4.2 Augmented ERO

Table 5-1B of the DBNPS Emergency Plan is revised to eliminate the 1 - 2 hour augmenting Chemistry Technician.

##### 4.4.4.3 Analysis

The on-shift Chemistry Technician and the Shift Engineer (STA) are proposed for elimination following permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

The on-shift Chemistry Technician is responsible for performing post-accident chemistry samples and analyses and supporting operations in the area of chemistry as directed by the Shift Manager. However, the analysis of the proposed post-shutdown on-shift staffing indicates that no chemistry job tasks were noted as being required within the first 90 minutes of any of the analyzed events.

Currently, the Chemistry Technician is an on-shift position so that a technician is always available to collect and analyze a liquid sample if the applicable radiation monitor is not available during a release, or as directed by the Shift Manager. When the on-shift Chemistry Technician position is eliminated, the function will be maintained by having trained and qualified personnel on-shift to perform sampling and analysis requested by the Shift Manager to determine if an emergency declaration is required.

Specific knowledge requirements would include how to obtain specific liquid samples. The initial training requirements for the designated on-shift person will include the training modules needed to ensure they are equipped with the required skills and knowledge to perform the required liquid sampling and analysis. These training modules will be specifically identified in their training program description for the designated on-shift person position. This training will be developed in accordance with the requirements of 10 CFR 50.120.

For gaseous releases, the most limiting scenario for releasing gas would be to mechanically damage spent fuel during handling or by impact of a heavy object. Plant activities that could cause mechanical damage will require the radiation monitor listed in gaseous effluent EALs be in service or that a Chemistry Technician be onsite, thereby alleviating any reliance on a potentially delayed sample analysis to determine EAL applicability. Applicable fuel handling procedures will be revised to require that the radiation monitor listed in gaseous effluent EALs be in service or that a Chemistry Technician be onsite as a prerequisite prior to fuel handling activities. This is a regulatory commitment and is listed in Attachment 5.

The NRC requires that the DBNPS Emergency Plan maintain a level of effectiveness commensurate with the potential consequences to public health and safety and common defense and security. With the permanent cessation of power operations and the permanent removal of the fuel from the reactor vessel, most of the accident scenarios postulated for an operating power reactor are no longer possible. The reactor, reactor coolant system (RCS), and reactor support systems are no longer in operation and have no function related to the storage of the irradiated fuel. Therefore, postulated accidents involving failure or malfunction of the reactor, RCS, or reactor support systems are no longer credible.

The on-shift Shift Engineer (STA) is currently responsible for performing initial dose assessment activities. The purpose of conducting the offsite dose assessment is to review radiological conditions using data from available instrumentation, assess the impact of changing radiological conditions on emergency classification, assist in accident assessments based upon those changing radiological conditions, and recommend appropriate offsite protective measures. Dose assessment will no longer be required to evaluate multiple release paths, because the permanent defueled status will prohibit operation of the reactor, and these paths are only applicable to an operating unit. The only path that will be required to be assessed is the path in which the SFP source term potentially could be discharged.

In the analysis of the post-shutdown on-shift staffing the NCO is used to perform the dose assessment function. The use of the NCO to support the on-shift dose assessment is appropriate for a permanently shutdown and defueled condition because many of the potential initiating conditions that would lead to an emergency declaration

are no longer credible. The set of plant equipment involved in this condition is also greatly reduced, which also reduces the need for assessments and mitigation activities for an emergency.

Implementation of these proposed ERO changes maintains the chemistry sampling and dose assessment functions by using other trained on-shift staffing, and will continue to meet the planning standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E, commensurate with the reduced spectrum of credible accidents with DBNPS in the permanently shutdown and defueled condition.

The proposed changes to the augmented ERO following permanent cessation of power operations and permanent removal of fuel from the reactor vessel includes the elimination of the 1 - 2 hour augmenting Chemistry Technician position. The need to perform complex chemistry sampling is greatly reduced with the permanent cessation of power operations and the source term confined to the SFP. There is no need to dispatch a Chemistry Technician to support sampling. The on-shift staffing will be adequate to perform sampling of the SFP. However, if conditions warrant, Chemistry personnel are available to be called in by the OSC Manager. Implementation of these changes do not impact the overall effectiveness to perform the necessary emergency planning functions and will not cause undue impact to the performance of the DBNPS Emergency Plan.

#### 4.4.5 Major Functional Area Plant System Engineering, Repair and Mitigative Actions

##### 4.4.5.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A in the Major Functional Area of Plant System Engineering, Repair and Mitigative Actions, consists of:

- Technical Support - Ops - Shift Engineer (STA) (This function may be performed by someone filling another position having functional qualifications)
- Technical Support - Core Damage - Shift Engineer (STA) (This function may be performed by someone filling another position having functional qualifications)
- Repair and Mitigative Actions - Mechanical Repair, Electrical Repair, I&C Repair (This function may be performed by someone filling another position having functional qualifications)

#### Proposed Changes

Upon docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS on-shift staff in the Major Functional Area of Plant System Engineering, Repair and Mitigative Action will be revised to eliminate the on-shift Shift Engineer (STA).

#### 4.4.5.2 Augmented ERO

Table 5-1B of the DBNPS Emergency Plan is revised to reduce the augmenting Mechanical Maintenance Technicians from two (2) to one (1).

Table 5-1B of the DBNPS Emergency Plan is revised to reduce the augmenting Electrical Maintenance Technicians from two (2) to one (1).

Table 5-1B of the DBNPS Emergency Plan is revised to eliminate the two (2) augmenting Instrument & Control Technicians (I&C).

Table 5-1B of the DBNPS Emergency Plan is revised to eliminate the augmenting Core/Thermal Hydraulics Engineer.

Table 5-1B of the DBNPS Emergency Plan is revised to eliminate the augmenting Mechanical Engineer.

Table 5-1B of the DBNPS Emergency Plan is revised to eliminate the augmenting Electrical Engineer. Table 5-1B of the DBNPS Emergency Plan is revised to eliminate the augmenting I&C Engineer.

#### 4.4.5.3 Analysis

The Shift Engineer (STA) performs independent assessments of plant operating concerns, technical support, appropriate corrective actions, analysis of events and their effects, effectiveness of response(s) to emergent conditions, classifications of emergencies, protection of the public, and any other actions related to critical safety functions and plant safety during abnormal and emergency situations. The Shift Engineer (STA) also contributes to operations during normal plant conditions. By routine monitoring of equipment and plant operations, the Shift Engineer (STA) can focus on preventative actions to mitigate the consequences of an accident. Because of the permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the Shift Engineer (STA) position is no longer necessary for technical and analytical assistance. The Technical Support function will be assumed by the remaining on-shift personnel.

The analysis of the proposed post-shutdown on-shift staffing concluded that the DBNPS on-shift Shift Manager (CFH) and NCOs can perform any required technical analysis, until augmented by the TSC, in a timely manner, and there are no collateral duties that would prevent the performance of this task.

Currently, the on-shift complement does not include dedicated maintenance personnel. In accordance with Table 5-1A notes, mechanical repair, electrical repair, and I&C repair expertise may be provided by on-shift personnel assigned other functions.

During initial stages of an event, the scope of repair and corrective actions performed by on-shift personnel will typically be limited to actions that promptly restore a non-functional component or system to a functional status (that is, resetting a relay or logic

manipulation) or to place a component or system in a desired configuration such as opening a valve or closing a breaker. The DBNPS on-shift NCOs have the expertise to perform this level of minor maintenance actions as directed by the Shift Manager and are available to satisfy any minor troubleshooting and repair activities that might be needed until the augmenting staff arrives.

The analysis of the proposed post-shutdown on-shift staffing concluded that no maintenance activities were required until augmenting personnel arrived.

The proposed changes to the augmented ERO following permanent cessation of power operations and removal of fuel from the reactor vessel include the elimination of one (1) augmenting Mechanical Maintenance position, one (1) augmenting Electrical Maintenance position, and the augmenting I&C Technician positions.

DBNPS proposes to maintain the OSC Manager position, and a pool of one (1) augmenting Mechanical Maintenance Technician and one (1) augmenting Electrical Maintenance Technician, to support repair and corrective actions. In the permanently shutdown and defueled condition there are no complex automatic control systems in service. The need for dedicated I&C technicians is not required. If conditions warrant, the OSC Manager can call out I&C support as necessary.

The current DBNPS ERO staffing is intended to address the risks to public health and safety inherent in an operating reactor. The risk with DBNPS in the permanently shutdown and defueled condition is significantly reduced. Many of the potential initiating conditions that would lead to an emergency declaration will no longer be credible. The set of plant equipment required in the permanently shutdown and defueled condition is also greatly reduced, which reduces the assessments and mitigation activities that the OSC must perform. The spectrum of credible accidents and operational events, and the quantity and complexity of activities required for safe storage of spent fuel is reduced, as compared to an operating power reactor. Restoration of equipment supporting SFP cooling and inventory will be the primary focus of emergency mitigation actions for the TSC and OSC with DBNPS in a permanently shutdown and defueled condition.

The OSC Manager will continuously evaluate the need for resources. If conditions warrant, the OSC Manager can call out additional maintenance support as necessary. OSC resources will continue to be augmented positions with specific training and qualification requirements for assigned personnel in accordance with the site training program.

The primary events of concern in the post-shutdown and defueled condition will be a waste gas decay tank rupture, a fuel handling accident, a loss of SFP cooling or water inventory, and external events. Events involving a loss of SFP cooling or water inventory can be addressed by implementation of the SFP inventory makeup strategies, as required by 10 CFR 50.54(hh)(2). OSC staff is not relied upon to implement SFP inventory makeup. As such, elimination of the augmenting Mechanical Maintenance, Electrical Maintenance, and Instrument & Control Technician positions do not impact the ability of the ERO to perform repair functions based on the permanent shutdown and defueled condition of DBNPS.

Table 5-1B identifies the Core/Thermal Hydraulics Engineer as an augmented responder (30 minutes during normal hours) to the TSC. The proposed change eliminates this position. The primary duty of the TSC Core/Thermal Hydraulics Engineer is to perform core damage assessments. In a permanently shutdown and defueled condition, responsibilities associated with assessing a reactor core are no longer needed. Elimination of the TSC Core/Thermal Hydraulics Engineer position will have no effect on emergency response in a permanently defueled condition because the position is not required to assess the condition of fuel in the SFP during an emergency. The TSC Core/Thermal Hydraulics Engineer position can be eliminated without increasing the risk to public health and safety because the major task of evaluating core conditions or thermal hydraulics is not necessary or possible in a permanently shutdown and defueled condition.

Table 5-1B identifies Mechanical, Electrical and I&C Engineers as augmented responders to the TSC. The proposed changes eliminate these positions. The primary duties of the TSC Engineer positions include: providing engineering analysis and troubleshooting, evaluating the implementation of Severe Accident Management Guidelines, and assisting in the assessment and development of repair plans. These duties, described in implementing procedures, are either no longer necessary in a permanently shutdown and defueled condition or can be performed by other members of the post-shutdown ERO.

The TSC Engineering Manager is tasked with performing an engineering assessment of plant conditions and actions needed to mitigate damage to the plant. Engineering functions will continue to be performed by supplemental engineering resources that will respond and be utilized, as required. DBNPS EIPs will continue to direct the TSC Engineering Manager to continuously evaluate the need for engineering resources and call in additional engineering assistance, as needed. These individuals may be tasked with activities to be completed at engineering offices external to the TSC, called to report to the TSC, or directed to other facilities as needed.

DBNPS EIPs will continue to identify engineering resources as augmented positions with specific training and qualification requirements for assigned personnel in accordance with the site training program. However, these positions will no longer be identified as on-call positions. The elimination of the TSC Engineer positions is justified because the spectrum of credible accidents and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC must perform.

The proposed changes to the ERO staffing continues to meet the planning standards of 10 CFR 50.47(b) and the requirements of 10 CFR Part 50, Appendix E, commensurate with the reduced spectrum of credible accidents in the permanently defueled condition, and ensures that DBNPS retains the ability to promptly implement SFP mitigation actions.



#### 4.4.6 Major Functional Area: In-Plant Protective Actions

##### 4.4.6.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A in the Major Functional Area of In-Plant Protective Actions, consists of:

- Two (2) Radiation Protection Technicians (This function may be performed by someone filling another position having functional qualifications)

##### Proposed Changes

Upon docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS on-shift staff in the Major Functional Area of In-Plant Protective Actions will be revised to reduce In-Plant Protective Action Radiation Protection Technicians (or individuals filling other positions but having functional qualifications) from two (2) to one (1).

##### 4.4.6.2 Augmented ERO

Table 5-1B of the DBNPS Emergency Plan is revised to reduce the augmenting Radiation Protection Technicians from four (4) to two (2).

##### 4.4.6.3 Analysis

Table 5-1A notes Operations personnel are qualified on survey instruments. This qualification reduces the need for an additional responder in the area of In-Plant Protective Actions until augmenting staff arrives.

The proposed changes to the augmented ERO following permanent cessation of power operations and removal of fuel from the reactor vessel include eliminating two (2) of the four (4) augmenting Radiation Protection Technicians. The function of these resources is to provide radiation protection oversight of the complement of personnel for emergency repair, search and rescue, first aid, firefighting, and personnel monitoring. Once the ERO is activated, the two (2) augmenting Radiation Protection Technicians will join the on-shift Radiation Protection Technician providing three (3) personnel to support station emergency plan activities.

The need for radiation protection oversight of personnel has been greatly reduced due to technological advances. Originally, radiological access control was a labor intensive task. Dedicated Radiation Protection Technicians were required to check dose margins, training qualifications, and ensure workers had read and understood the radiation protection work permit. Worker access control is now automated because radiation protection work processes have been computerized. Radiation Work Permit (RWP) access control and electronic dosimeter computer systems work together to provide a fully integrated system allowing workers to sign-in on RWPs and to self-issue electronic dosimeters. During a declared emergency, Radiation Work Permits (RWPs)

and dose set points will change depending on the emergency and plant conditions. Both systems have been used by plant workers for several years. Worker dose margins and training qualifications are also automatically verified when the RWP access control system is used. If a worker's dose margin is inadequate or training is expired, the worker's access would be precluded and the access control system would not allow issuance of an electronic dosimeter. In an emergency, approval to exceed dose margins is required. During the log-in process, workers acknowledge their electronic dosimeter alarm set points and that they have read and understand their RWP. The electronic dosimeter provides the worker with a continuous status of dose received and work area dose rates and will alarm at preset dose and dose rates. Worker use of electronic dosimeters facilitates more efficient use of Radiation Protection Technicians to provide Radiation Protection coverage while preserving the As Low As Reasonably Achievable (ALARA) concept.

Access control is maintained because the worker must obtain an electronic dosimeter and enter a radiation work permit number into the access control computer system prior to being allowed access into the Radiologically Controlled Area (RCA). No setup is required for the RWP access control computers, which allows Radiation Protection Technicians to be used for more critical tasks during emergency response. Personnel are required to self-monitor for radioactive contamination whenever they exit the RCA. No Radiation Protection Technician involvement is necessary for this contamination monitoring activity because workers are trained to perform this task without supervision or oversight. However, contaminated personnel exiting the RCA will require Radiation Protection oversight. This oversight can be performed by the augmented Radiation Protection Technicians.

For a permanently shutdown and defueled condition, the evaluated accidents are limited to the SFP area. Because entry is expected to be limited to those areas where maintenance necessary to maintain SFP cooling is required and the areas potentially affected by an accident involving the SFP are limited, there is a significant decrease in the areas potentially requiring radiation protection coverage. Repair teams can be covered by the on-shift radiation protection personnel. If radiation protection coverage is not provided (for entry into areas with low radiological risk or known radiological conditions), work protection is still ensured because emergency workers are required to wear electronic dosimeters (which will alarm at preset dose and dose rate set points) and because of the installed area radiation monitors that alarm locally and remotely at preset dose rates located throughout the plant.

Therefore, three (3) Radiation Protection Technicians will be capable to providing adequate protective actions to support plant activities with DBNPS in the permanently shutdown and defueled conditions.

The proposed change to the ERO staffing continues to meet the planning standards of 10 CFR 50.47(b) and the requirements of 10 CFR Part 50, Appendix E, commensurate with the reduced spectrum of credible accidents in the permanently defueled condition and ensures that DBNPS retains the ability to promptly implement SFP mitigation actions.

#### 4.4.7 Major Functional Area: Fire Fighting

##### 4.4.7.1 On-Shift Staffing

The current minimum required on-shift staff to implement the DBNPS Emergency Plan, as detailed in Table 5-1A in the Major Functional Area of Fire Fighting, consists of:

- Fire Brigade Captain (RO/EO3)
- Four (4) Fire Brigade Members

##### Proposed Changes

Upon docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the DBNPS on-shift staff in the Major Functional Area of Fire Brigade will be revised to remove the reference of RO/EO3 personnel. Required duties will be retained and performed by trained and qualified personnel.

##### 4.4.7.2 Augmented ERO

DBNPS Emergency Plan Table 5-1B does not identify augmented ERO in the Major Functional Area of Fire Fighting. There are no proposed changes to the augmented ERO in this Major Functional Area.

##### 4.4.7.3 Analysis

The Fire Brigade will continue to be staffed in accordance with the DBNPS Fire Hazards Analysis Report. Fire Brigade training and qualification requirements will be maintained in accordance with site procedures. The Fire Brigade will continue to perform the task of firefighting with DBNPS in the permanently shutdown and defueled condition. The Fire Brigade will be available to implement SFP inventory makeup strategies required under 10 CFR 50.54(hh)(2) without impacting the performance of designated emergency plan functions.

#### 4.4.8 Major Functional Area: First Aid and Rescue

Aside from the previously described title change from NLO to NCO, there are no proposed changes to the DBNPS on-shift staff in the Major Functional Area of First Aid and Rescue following permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

#### 4.4.9 Major Functional Area: Site Access Control and Accountability

There are no proposed changes to the DBNPS on-shift staff in the Major Functional Area of Site Access and Accountability following permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

#### 4.5 Emergency Response Organization Changes – Emergency Response Facility Evaluation

NUREG-0654 (Reference 1), Section II.B, "Onsite Emergency Organization," presents guidance for meeting the planning standards and requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, Section IV.A. The guidance describes the onsite emergency organization, including the staffing requirements found in Table B-1, "Minimum Staffing Requirements for NRC Licensees for Nuclear Power Plant Emergencies."

DBNPS Emergency Plan Section 7.0, "Emergency Facilities and Equipment," describes the DBNPS ERFs. These facilities include the Control Room, TSC, OSC, EOF, and JIC. The following sections address the impact of the proposed augmented ERO staffing changes on each ERF.

The Control Room contains the necessary instrumentation for operating the plant under normal and accident conditions. The Control Room is continuously staffed, Control Room personnel make the initial declaration and classification of an emergency and perform activities of the other ERFs until those facilities are operational. Manipulations of the reactor or the plant to mitigate the consequences of an accident and restore safe conditions, however, remain as the primary function of the Control Room.

Upon permanent cessation of power operations and the permanent removal of the fuel from the reactor vessel, irradiated fuel will be stored both in the SFP and in the ISFSI. After an appropriate time period, the irradiated fuel will be transferred from the SFP to the ISFSI. At this point the irradiated fuel will be stored at the ISFSI until it is permanently removed from the site. Upon docketing of the certifications for permanent cessation of power operations, 10 CFR 50.82(a)(1)(i), and permanent removal of fuel from the reactor vessel, 10 CFR 50.82(a)(1)(ii), pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel. As a result, the reactor, RCS, and reactor support systems, will no longer be in operation. These systems have no storage function for irradiated fuel. Therefore, postulated accidents involving a failure or malfunction of the reactor, RCS, or reactor support systems are no longer applicable.

During facility decommissioning, the principal public safety concerns involve the radiological risks associated with the storage of spent fuel onsite. The proposed level of onsite operations staff will continue to provide for communication and coordination capabilities with offsite organizations for the level of support required for the remaining DBAs and the prompt implementation of mitigative actions in response to an SFP accident.

The "Functional Area Technical Evaluation," presented in Section 4.4, concluded that the proposed on-shift staffing changes do not impact the capabilities of the DBNPS on-shift staff to respond to an emergency and continues to comply with the DBNPS Emergency Plan, site commitments, and regulations.

#### 4.5.1 On-Shift Staffing – Control Room

To support the reductions in on-shift staffing following permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the proposed post-shutdown on-shift staffing levels were evaluated using the NEI 10-05 methodology. The results supported the changes to the on-shift staff provided in Table 4.5-1 of this enclosure.

**Table 4.5-1**

<b>Position</b>	<b>Current On-Shift Staffing</b>	<b>Proposed Post-Shutdown Staffing<sup>1</sup></b>
<b>Control Room Staff</b>		
Shift Manager	1	1
Unit Supervisor	1	--
Shift Engineer (STA)	1	--
Reactor Operators	2	--
NLOs / NCOs	1	2
<b>Control Room Totals</b>	<b>6</b>	<b>3</b>
<b>Other On-shift Positions</b>		
RP Technicians	1	1
Chemistry Technician	1	--
Fire Brigade <sup>2, 3</sup>	1 Fire Brigade Captain (RO/EO3) 4 Fire Brigade Members	1 Fire Brigade Captain (NCO identified above) 4 Fire Brigade Members
Site Access Control and Accountability	1 Security Shift Supervisor 1 CAS Operator	1 Security Shift Supervisor 1 CAS Operator
<b>Other Totals</b>	<b>9</b>	<b>7</b>
<b>TOTAL</b>	<b>15</b>	<b>10</b>

- 1 A dash (--) indicates the position is proposed for elimination upon implementation of the Post-Shutdown Emergency Plan.
- 2 In accordance with the Fire Hazards Analysis Report, the Fire Brigade is comprised of one (1) Fire Brigade Captain and four (4) Fire Brigade members.
- 3 The current on-shift Fire Brigade is comprised of one (1) Fire Brigade Captain that may either be a Reactor Operator or an NLO and four (4) individuals that may either be Reactor Operators or NLOs. The post-shutdown Fire Brigade will remain as five (5) qualified individuals. The Fire Brigade Captain will be an NCO, while the four (4) brigade members may not be NCOs.

##### 4.5.1.1 Post-Shutdown On-Shift Staffing Analysis

The analysis of the proposed post-shutdown on-shift staffing evaluated the ability of the proposed post-shutdown on-shift staff to implement the DBNPS Emergency Plan following permanent cessation of power operations and permanent removal of fuel from the reactor vessel. The proposed post-shutdown on-shift staffing was evaluated in conjunction with the postulated accidents that could occur with DBNPS in the permanently shutdown and defueled condition.

DBNPS will ensure a sufficient number of personnel are trained to support the on-shift positions prior to implementation of the post-shutdown emergency plan changes.

Consistent with the methodology of NEI 10-05, the current on-shift staffing analysis evaluated postulated DBA scenarios. DBNPS UFSAR Chapter 15 describes the abnormal operational transients, off-design operational transients, and DBA scenarios that are applicable during plant operations.

Upon docketing of the certifications required by 10 CFR 50.82(a)(1), the 10 CFR 50 license for DBNPS will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2). Post shutdown, the reactor, RCS, and reactor support systems will no longer be in operation. As a result, postulated accidents involving a failure or malfunction of the reactor, RCS, or reactor support systems are no longer applicable. Therefore, most of the accident scenarios postulated in the UFSAR will no longer be applicable once DBNPS is permanently shutdown and defueled.

The postulated DBAs that will remain applicable to DBNPS in its permanently shutdown and defueled condition are the FHA in the SFP and the waste gas decay tank rupture. DBNPS UFSAR Chapter 15 will be revised to eliminate the accidents that will not be applicable in the permanently shutdown and defueled condition.

The following accident scenarios were evaluated in the DBNPS post-shutdown staffing analysis:

#### Waste Gas Decay Tank Rupture

The rupture of a waste gas decay tank would release the entire contents of the tank to the Auxiliary Building atmosphere. The Auxiliary Building is ventilated and discharged to the station vent. In the analysis, however, the activity is assumed to be released from the waste gas decay tank to the atmosphere over a two-hour period.

#### Design Basis Threat

The event consists of notification to the Shift Manager from the Security Shift Supervisor that a hostile action is occurring at or inside the Protected Area. A hostile force will breach the Protected Area fence, but there are no adverse consequences to plant safety. Damage inflicted on plant systems, structures and components is not sufficient to cause a radiological release. There is no fire significant enough to warrant firefighting efforts prior to the arrival of offsite resources and/or the augmented ERO.

The event accounts for the expected constraints on the movement of personnel (for example, movement not allowed, limited movement using the two-person rule, and so forth). Specifically, individuals must usually be in, or readily able to respond to, assigned response locations before being credited with performing a function or task that implements the emergency plan.

An analysis objective is to confirm that sufficient staff is available to simultaneously implement both the emergency plan and the security plan.



### Fuel Handling Accident (FHA) with General Emergency and Protective Action Recommendation

The FHA event analyzes an event involving mechanical damage to the fuel assemblies during transfer operations and a dry fuel storage cask drop accident.

Dry fuel storage cask movement would include numerous extra personnel present for the activity. There will not be a time during dry fuel storage cask movement when only the minimum on-shift ERO is present. The dry fuel storage cask drop event is not included in the proposed post-shutdown on-shift staffing analysis.

The event consists of a fuel assembly striking a sharp object or dropped fuel assembly in the SFP, resulting in fuel cladding integrity failure.

This event assumes a dose that exceeds the Environmental Protection Agency's (EPA) Protective Action Guides (PAGs) beyond the site boundary, and thus necessitates promulgation of a Protective Action Recommendation (PAR).

### Aircraft Probable Threat [10 CFR 50.54(hh)]

This event includes all emergency response actions taken prior to an aircraft impact in accordance with Regulatory Guide 1.214, "Response Strategies for Potential Aircraft Threats," Rev 1, March 2014, for an aircraft threat that is greater than 5 minutes, but less than 30 minutes, from the site, including the dispersal of the Fire Brigade away from target areas. These actions should generally reflect those listed in 10 CFR 50.54(hh)(1), as expanded upon in Regulatory Guide 1.214, and others required by the emergency plan.

The event consists of notification to the Shift Manager from the NRC Headquarters Operations Officer that an Aircraft Probable Threat has been declared for DBNPS.

### Fire Requiring Evacuation of the Control Room and Control of SFP Cooling

A fire occurs requiring the evacuation of the Control Room and procedures implemented to control SFP cooling from a remote location.

The SBO, the ATWS, and the Appendix R fire were not considered in the post-shutdown on-shift staffing analysis. Once the certifications required by 10 CFR 50.82 are docketed, DBNPS will no longer be licensed to operate. Hence, an ATWS is not considered credible, and 10 CFR 50.63 and 10 CFR 50, Appendix R will no longer be applicable. Though 10 CFR 50, Appendix R will no longer be applicable, a fire consistent with the intent of NEI 10-05 was evaluated. This was a fire in the Control Room requiring Control Room evacuation.

The spectrum of credible accidents and operational events for a permanently shutdown and defueled reactor, and the number and complexity of activities required for the safe storage of spent nuclear fuel is reduced, as compared to an operating plant. The primary events of concern in the post-shutdown and defueled condition will be a waste gas decay tank rupture, a FHA, a loss of SFP cooling or water inventory, and external events.

During fuel handling activities, there will ordinarily be extra personnel onsite to assist with fuel movement, in addition to minimum on-shift staff. Loss of SFP cooling or water inventory can be addressed by implementation of normal and emergency SFP inventory makeup strategies and mitigating strategies required under License Condition 2.C(8) of Renewed Operating License NPF-3.

The analysis of the proposed post-shutdown on-shift staffing validated that with DBNPS in a permanently shutdown and defueled condition, the staffing presented in Table 4.5-1 can perform required post-shutdown emergency plan actions in a timely manner and there are no collateral duties that would prevent the timely performance of post-shutdown emergency plan functions. The proposed on-shift staffing changes continues to comply with the DBNPS Emergency Plan, site commitments, and applicable regulations.

#### 4.5.2 Augmented Emergency Response Organization

The proposed augmented ERO changes described in this submittal will be implemented following docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel.

Prior to an emergency declaration, the normal plant operating organization is in place. The initial classification of an off-normal event and declaration are performed by the on-shift Shift Manager. Upon classification and declaration of an emergency, the Shift Manager assumes the role of Emergency Director and retains that role until another qualified Emergency Director can assume control. Initially, the ERO consists of the normal operating shift personnel. The normal operating staff is augmented by qualified plant personnel. Those personnel onsite respond when the station alarm is sounded and an announcement is made, or when individuals are notified by another means. Personnel not onsite will be notified via an ERO notification system. Designated on-shift personnel perform the notifications.

In the permanently shutdown and defueled condition, DBNPS will maintain multiple ERO teams to respond to an emergency declaration, with one complete team on-duty at any given time. When the Shift Manager directs the activation of the ERO call-out system, all ERO members are notified to ensure adequate coverage of ERO positions at each ERF. ERO members not on-call are expected to respond unless they are unavailable.

DBNPS requires ERO personnel to act promptly in reporting to their assigned ERF even when not on-duty. During duty periods, an EPIP requires that team members respond within the required response time to their ERF (unless a longer time frame is specified for their specific ERO position) and that on-call ERO members remain fit for duty throughout the duty assignment. Individuals are trained to respond to their ERF even if they are not on-duty. Excess personnel that respond may be assigned support responsibilities or be designated as a relief shift. This conservative policy ensures timely activation because some off-duty personnel may respond sooner than the on-duty personnel.

The proposed revisions to the DBNPS Emergency Plan will not change the requirements described above. Management's continued expectation is that duty and support ERO members report to their respective ERF as quickly as possible. ERO personnel are expected to respond when notified by the ERO notification system. Procedures identify ERO positions assigned to each ERF and the minimum staffing required before each facility can be declared operational and available to perform its designed functions. The procedures will continue to assign responsibilities to ERO responders, with the purposes of removing the responsibilities of coordinating with offsite responders and delivering information to the public from the Control Room, allowing on-shift personnel to focus on returning the facility to a safe condition.

The risk in the permanently shutdown and defueled condition is significantly reduced, since many of the potential initiating conditions that would lead to an emergency declaration will no longer be credible. The set of plant equipment required in the permanently defueled condition is also greatly reduced, which reduces the assessments and mitigation activities the ERO staff (TSC, OSC, or EOF) must perform. Restoration of equipment supporting SFP cooling and inventory will be the primary focus of emergency mitigation actions for the TSC and OSC staff in a permanently shutdown and defueled condition.

#### 4.5.2.1 Technical Support Center Augmenting Positions

DBNPS Emergency Plan Section 5.4.4, "Technical Support Center (TSC) Organization," describes the key DBNPS ERO positions and associated responsibilities, including augmented ERO positions that respond to the TSC. Table 4.5-2 identifies those augmented ERO positions that respond to the TSC following an emergency declaration and the proposed changes to the post-shutdown augmented ERO responding to the TSC.

**Table 4.5-2**

<b>Current DBNPS Augmented ERO Positions</b>	<b>Proposed Post-Shutdown Augmented ERO Positions<sup>1</sup></b>
<b>Technical Support Center</b>	
Emergency Plant Manager	Emergency Plant Manager
Emergency Assistant Plant Manager <sup>2</sup>	Emergency Assistant Plant Manager <sup>3</sup>
Recovery Advisor	--
TSC Engineering Manager	TSC Engineering Manager
TSC Engineering Lead	--
TSC Operations Lead	--
TSC Engineers (Mechanical, Electrical, I&C, Operations)	Mechanical, Electrical, I&C, Operations - Available to respond on an as-needed basis as determined by the TSC Engineering Manager
Core/Thermal Hydraulics Engineer	--
TSC Computer Technician	--
SAM Engineer	--
Emergency RP Manager	Emergency RP Manager
Emergency Security Manager	Emergency Security Manager
OCA Security Supervisor	OCA Security Supervisor

1 A dash (--) indicates the position is proposed for elimination upon implementation of the Post-Shutdown Emergency Plan.

2 In the current DBNPS Emergency Plan, the Emergency Assistant Plant Manager reports to the Control Room.

3 In the proposed DBNPS Emergency Plan, the Emergency Assistant Plant Manager may report to the TSC.

The TSC is located in the Davis-Besse Administration Building (DBAB). Following permanent cessation of power operations and permanent removal of fuel from the DBNPS reactor vessel, the TSC will continue to be located in the DBAB. The changes proposed to the DBNPS Emergency Plan do not involve any physical modifications to, or layout and configuration changes in, the TSC.

The current DBNPS Emergency Plan is intended to address the risks to public health and safety inherent with an operating reactor. The risk in the permanently shutdown and defueled condition is significantly reduced because many of the potential initiating conditions that would lead to an emergency declaration will no longer be possible.

The spectrum of credible accidents and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently shutdown and defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC must perform. Therefore, the Recovery Advisor, TSC Engineering Lead, TSC Operations Lead, TSC Engineers (Core/Thermal Hydraulics, Mechanical, Electrical, I&C, and Operations), SAM Engineer, and the TSC

Computer Technician positions can be eliminated without placing an undue burden on the remaining ERO positions in the TSC and without increasing the risk to public health and safety. The proposed augmented ERO staffing reductions continue to address the risks to public health and safety, comply with the DBNPS Emergency Plan, site commitments, and applicable regulations.

The proposed staffing changes to the TSC eliminates the TSC Engineers (Core/Thermal Hydraulics, Mechanical, Electrical, I&C, Operations, and SAM). The TSC EPIP indicates that a combination of three (3) of the aforementioned engineers provide minimum staffing that would be necessary to declare the TSC operational.

The primary duties of the TSC Engineer positions include monitoring plant conditions for any indication of core damage, responding to engineering requests from the Engineering Manager, evaluating the implementation of Severe Accident Management Guidelines, and assisting the OSC in preparing to send repair teams into the plant. These duties are either no longer necessary in a permanently shutdown and defueled condition or can be performed by the TSC Engineering Manager. The TSC Engineering Manager will be tasked with performing engineering assessments of plant conditions and/or actions needed to mitigate damage to the plant.

After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. Thus, the need for augmenting engineers is reduced. The TSC Engineering Manager, tasked with performing engineering assessments of plant conditions and actions needed to mitigate damage to the plant, will provide technical support in the Major Functional Area of Plant System Engineering, Repair, and Corrective Action. The TSC Engineering Manager will have the necessary qualifications, expertise, and capabilities to perform engineering assessments of plant conditions and actions needed to mitigate damage to the plant in response to a fuel handling accident or an event resulting in damage to the SFP integrity or the loss of SFP cooling or inventory.

With respect to responding to engineering requests from the TSC Engineering Manager, this function will continue to be performed by supplementing qualified engineering resources. The TSC Engineering Manager will continuously evaluate the need for engineering resources and call in qualified engineering personnel, as needed. These individuals may be tasked with activities to be completed at engineering offices external to the TSC, called to report to the TSC, or directed to other facilities.

Engineering resources will continue to be available, as supplemental positions, with specific training and qualification requirements for assigned personnel in accordance with the site training program. However, these positions will no longer be identified as on-call positions. Eliminating the TSC Engineer positions is justified because the spectrum of credible accidents and operational events, and the quantity and complexity

of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently shutdown and defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC must perform.

The Recovery Advisor's primary duties are to collect plant and equipment status in preparation for entering the recovery phase and ensuring the Outage Control Center is set up for a forced outage during recovery. After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. Thus, the Recovery Advisor is not needed.

The TSC EPIP does not identify the TSC Engineering and Operations Lead positions as minimum staffing that would be necessary to declare the TSC operational. The duties of the TSC Engineering Lead include coordination of the TSC engineering activities. The duties of the TSC Operations Lead include coordination of the TSC operations engineering activities. With the removal of the TSC Engineers from the TSC, the Lead positions are no longer necessary. The TSC Engineering Manager coordinates engineering activities.

The elimination of the TSC Computer Technician position does not impact the capabilities of the on-shift staffing or augmented response. The TSC will continue to be activated at an Alert or higher declaration. Functional responsibilities of the eliminated positions, as a result of the proposed changes, will be reassigned to remaining positions, as necessary.

Attachment 4 contains an analysis of the TSC augmented ERO positions proposed for elimination and evaluates the transfer of tasks to remaining ERO positions following permanent cessation of power operations and permanent removal of fuel from the reactor vessel. The analysis evaluates and disposes each ERO task as being reassigned or eliminated, as appropriate. Based on the analysis, given the elimination of credible accidents involving an operating reactor, the proposed post-shutdown augmented ERO can continue to satisfactorily perform their existing Emergency Plan responsibilities as well as any transferred responsibilities.

#### 4.5.2.2 Operations Support Center Augmenting Positions

DBNPS Emergency Plan Section 5.4.5, "Operations Support Center (OSC) Organization," describes the key DBNPS ERO positions and associated responsibilities, including augmented ERO positions that respond to the OSC. Table 4.5-3 identifies those augmented ERO positions that respond to the OSC following an emergency declaration and the proposed changes to the post-shutdown augmented ERO responding to the OSC.

**Table 4.5-3**

<b>Current DBNPS Augmented ERO Positions</b>	<b>Proposed Post-Shutdown Augmented ERO Positions<sup>1</sup></b>
<b>Operations Support Center</b>	
OSC Manager	OSC Manager
Assistant OSC Manager	--
OSC Systems Engineers	--
OSC RP Coordinator	OSC RP Coordinator
OSC Communicator	--
OSC Team Briefer/Debriefers and RP Briefer/Debriefers <sup>2</sup>	--
Rad Data Technician	Rad Data Technician
On-call Personnel (Electrical, I&C, Mechanical Maintenance, RP, Chemistry)	On-call Personnel (Electrical, Mechanical Maintenance, RP, Chemistry) – Reduced numbers
Pool Personnel (Electrical, I&C, Mechanical Maintenance, RP, Chemistry, Operations)	Available to respond on an as-needed basis

1 A dash (--) indicates the position is proposed for elimination upon implementation of the Post-Shutdown Emergency Plan.

2 The OSC Team Briefer/Debriefers and the RP Briefer/Debriefers are two separate positions.

The OSC is located on the third floor of the Containment Access Facility. Following permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the OSC will continue to be located on the third floor of the Containment Access Facility. The proposed changes to the DBNPS Emergency Plan do not involve any physical modifications to, or layout and configuration changes in, the OSC.

The OSC Manager is responsible for ensuring adequate staffing of the OSC to support the emergency, working with the Emergency Plant Manager to set priorities for the OSC, and directing the activities of the OSC to support the emergency response. If at any time the OSC Manager determines additional manpower is necessary to accomplish the mission of the OSC, the OSC Manager will arrange for additional personnel to support the emergency response functions of the OSC.

In the permanently shutdown and defueled condition, the primary functions of the OSC will remain dispatching of, and accounting for, Repair and Corrective Action Teams. The OSC Manager is responsible for ensuring adequate staffing of the OSC and continuously evaluating the need for resources. The OSC Manager can call in additional assistance, if necessary. OSC resources will continue to be positions with specific training and qualification requirements for personnel in accordance with the site training program.



The following OSC positions are proposed for elimination following permanent cessation of power operations and permanent removal of fuel from the reactor vessel:

- Assistant OSC Manager
- OSC System Engineers
- OSC Communicator
- RP Briefer/Debriefer
- OSC Team Briefer/Debriefer
- Reduced numbers of on-call personnel (Mechanical Maintenance, I&C, Electrical)

In the permanently shutdown and defueled condition, the spectrum of credible accidents and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The primary events of concern in the post-shutdown and defueled condition will be a waste gas decay tank rupture, a FHA, a loss of SFP cooling or water inventory, and external events. Events involving a loss of SFP cooling or water inventory can be addressed by implementation of SFP inventory makeup strategies required under 10 CFR 50.54(hh)(2). These strategies will continue to be maintained as they are part of License Condition 2.C(8) of Renewed Operating License NPF-3. The OSC staff is not relied upon to implement SFP inventory activities.

Restoration of equipment supporting SFP cooling and inventory will be the primary focus of emergency mitigation actions for the TSC and OSC in a permanently shutdown and defueled condition. Although ERO activation and response time requirements will be unchanged, the elimination of credible accidents involving an operating reactor provides additional time to plan and execute assessment and mitigation actions. The proposed ERO changes do not impact the capability to assess and monitor actual or potential offsite consequences of a radiological emergency or provide information to offsite authorities in a timely manner. Therefore, the Assistant OSC Manager, OSC System Engineers, RP Briefer/Debriefer, and OSC Team Briefer/Debriefer positions can be eliminated without placing an undue burden on the remaining ERO positions in the OSC and without increasing the risk to public health and safety.

The proposed staffing changes eliminate one (1) augmenting Mechanical Maintenance Technician, the augmenting I&C Technicians, and one (1) augmenting Electrical Maintenance Technician. These positions are included in DBNPS Table 5-1B as augmenting responders. The elimination of these augmented ERO positions was previously described in Section 4.4.5, which evaluated the Major Functional Area of Plant System Engineering, Repair and Mitigative Actions.

The proposed augmented ERO staffing continues to address the risks to public health and safety, comply with the DBNPS Emergency Plan, site commitments, and applicable regulations.

Attachment 4 contains an analysis of the OSC augmented ERO positions proposed for elimination and evaluates the transfer of tasks to remaining ERO positions following permanent cessation of power operations and permanent removal of fuel from the reactor vessel. The analysis evaluates and dispositions each ERO task as being reassigned or eliminated, as appropriate. Based on the analysis, given the elimination of credible accidents involving an operating reactor, the proposed post-shutdown augmented ERO can continue to satisfactorily perform their existing Emergency Plan responsibilities, as well as any transferred responsibilities.

#### 4.5.2.3 Emergency Operations Facility Augmenting Positions

DBNPS Emergency Plan Section 5.5.2, "Emergency Operations Facility (EOF) Organization," describes the DBNPS ERO, their key positions and associated responsibilities, including augmented ERO positions that respond to the EOF. Table 4.5-4 identifies those augmented ERO positions that respond to the EOF following an emergency declaration and the proposed changes to the post-shutdown augmented ERO responding to the EOF.

**Table 4.5-4**

<b>Current DBNPS Augmented ERO Positions</b>	<b>Proposed Post-Shutdown Augmented ERO Positions<sup>1</sup></b>
<b>Emergency Operations Facility</b>	
Emergency Director	Emergency Director
Emergency Offsite Manager	Emergency Offsite Manager
Emergency Director Advisor	--
EOF Operations Advisor	--
Dose Assessment Coordinator	Dose Assessment Coordinator
RTL Coordinator	RTL Coordinator
RMT Coordinator	RMT Coordinator
Dose Assessor (2)	Dose Assessor (1)
DBAB RMTs	DBAB RMTs
Field RMTs	Field RMTs
Emergency Facility Services Manager <sup>2</sup>	--
Emergency Planning Advisor	Emergency Planning Advisor
Log & Status Board Keepers	--
State/County Communicator	State/County Communicator
Resource Coordinator (including Warehouse pool personnel)	--

<b>Current DBNPS Augmented ERO Positions</b>	<b>Proposed Post-Shutdown Augmented ERO Positions<sup>1</sup></b>
NRC Liaison	--
Assembly Area Coordinator (including Maintenance Services personnel)	--
Technical Liaison – EOF Communicator	Technical Liaison – EOF Communicator
Technical Liaisons (Ohio, Ottawa County, Lucas County)	Technical Liaisons (Ohio, Ottawa County, Lucas County)

1 A dash (--) indicates the position is proposed for elimination upon implementation of the Post-Shutdown Emergency Plan.

2 Position is located in the TSC, but the position reports to the Emergency Offsite Manager located in the EOF.

The EOF functions to maintain overall management of the emergency response resources; evaluate, coordinate, and communicate emergency response activities with federal, state, and county emergency response organizations, evaluate offsite radiological condition, and make recommendations to offsite agencies regarding protective actions. Federal, state, and county representatives are provided space and communications at the EOF, and staff this facility at an Alert or higher classification.

The EOF is located offsite near Lindsey, Ohio. Following permanent cessation of power operations, the EOF will continue to be located at its current location near Lindsey, Ohio. The proposed changes to the DBNPS Emergency Plan do not involve any physical modifications to, or layout and configuration changes in, the EOF.

The EOF maintains extensive communications capability with all DBNPS ERFs and direct links are established between the EOF, the state and county emergency operation centers (EOCs), and the JIC to provide up-to-date emergency status reports. The proposed changes to the DBNPS Emergency Plan do not involve changes to the ability of offsite authorities to report to the EOF, and as a result, do not impact the ability of the offsite authorities to mobilize to, or operate from, the EOF.

When activated, the Emergency Director reports to the EOF and directs the activities of the augmented ERO throughout the emergency and until the recovery activities have been terminated. The Emergency Director, or a designated alternate, issues periodic status reports of the event to offsite representatives located in the EOF. The Technical Liaison – EOF Communicator will provide and interpret plant information to the offsite representatives in the EOF. Additionally, Technical Liaisons are dispatched to the state and county EOCs when requested and appropriate, or generally, during an Alert or higher declaration to act as a liaison with the plant technical staff so the magnitude of the emergency can be more clearly conveyed to the state and county staffs in their respective EOCs. The proposed ERO changes do not reduce the ability of DBNPS to provide the necessary information regarding the status and progression of an event or in the frequency at which event information updates are provided. As a result, the proposed changes do not impact the ability of DBNPS to communicate with the offsite response organizations.

Centralized coordination of offsite radiological assessments is necessary to ensure that the data and its interpretation are reviewed by the DBNPS and offsite response organizations with monitoring and assessment responsibilities. The number and type of organizations performing this effort vary with time and follow emergency declarations and offsite notification. Initially, plant emergency response personnel are performing this function, and they are directed from, and their results evaluated, at the Radiological Testing Laboratory (RTL). The RTL is a facility located near the TSC whose purpose is to equip and dispatch radiological monitoring teams (RMTs); and for the receipt, counting, and disposition of potentially contaminated environmental samples. The RTL reports to the Dose Assessment Coordinator in the EOF. State and federal response agencies would augment plant assessment efforts. The proposed changes to the EOF staff do not impact the capability to assess and monitor actual or potential offsite consequences of a radiological emergency. Appropriate assessment and mitigation are within the capabilities of the proposed EOF staff provided in Table 4.5-4.

DBNPS will continue to maintain the capability to display plant and meteorological data in the EOF, maintain offsite monitoring equipment at the RTL, and maintain the current dose assessment capabilities at the EOF.

The proposed staffing changes includes the elimination of the NRC Liaison position. The primary duty of the NRC Liaison is to establish and maintain communication with the NRC. The Technical Liaison – EOF Communicator, located in the EOF, is assigned these duties in the post-shutdown emergency plan.

In addition to the NRC Liaison, the following EOF positions are proposed for elimination following the docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel:

- Emergency Director Advisor
- EOF Operations Advisor
- Emergency Facility Services Manager
- Log and Status Board Keepers
- Resource Coordinator (including Warehouse pool personnel)
- Assembly Area Coordinator (including Maintenance Services personnel)

The proposed elimination of the EOF staffing listed above does not impact the capabilities of the on-shift staffing or augmented response. The positions can be eliminated without placing an undue burden on the remaining ERO positions in the EOF and without increasing the risk to public health and safety. The EOF will continue to be activated at an Alert or higher declaration. Functional responsibilities of the positions proposed for elimination will be reassigned to remaining positions. The proposed augmented ERO staff will continue to address the risks to public health and safety and comply with applicable regulations. The proposed changes to the ERO staffing

in the EOF do not impact the ability of the state and county response organizations to effectively implement their Federal Emergency Management Agency (FEMA) approved radiological emergency plans. Additional discussion of the potential impact on offsite response organizations is included in Section 4.6.

Attachment 4 contains an analysis of the EOF augmented ERO positions proposed for elimination and evaluates the transfer of tasks to remaining ERO positions following permanent cessation of power operations and permanent removal of fuel from the reactor vessel. The analysis evaluates and dispositions each ERO task as being reassigned or eliminated, as appropriate. Based on the analysis, given the elimination of credible accidents involving an operating reactor, the proposed post-shutdown augmented ERO can continue to satisfactorily perform their existing Emergency Plan responsibilities as well as any transferred responsibilities.

#### 4.5.2.4 Joint Information Center Augmenting Positions

DBNPS Emergency Plan Section 5.6, "Joint Information Center (JIC)," and Figure 5-2, Page 10, provides the augmented ERO positions that respond to the JIC. Table 4.5-5 identifies those augmented ERO positions that respond to the JIC following an emergency declaration and the proposed changes to the post-shutdown augmented ERO responding to the JIC.

**Table 4.5-5**

<b>Current DBNPS Augmented ERO Positions</b>	<b>Proposed Post-Shutdown Augmented ERO Positions<sup>1</sup></b>
<b>Joint Information Center</b>	
Company Spokesperson	Company Spokesperson
JIC Manager	JIC Manager
Public Affairs Duty Officer	--
Security	Security
JIC Writer	--
News Statement Coordinator	--
JIC Communicator	--
Public Relations Communicator <sup>2</sup>	--
Audio/Visual Coordinator	--
Technical Briefer	Technical Briefer
Public Inquiry Hotline Operator	Public Inquiry Hotline Operator
Media Assistant (2)	Media Assistant (2)

1 A dash (--) indicates the position is proposed for elimination upon implementation of the Post-Shutdown Emergency Plan.

2 The position is located in the EOF, but reports to the JIC Manager located in the JIC.

The DBNPS JIC is in a facility located outside of the 10-mile EPZ. The JIC provides a location for the news media to receive information from all involved agencies and companies during an emergency and provide it to the public. Media monitoring and rumor control are also accomplished at the JIC, allowing company and state representatives to address incorrect information or rumors. Responses to media telephone inquiries are also addressed at the JIC.

The JIC meets the intent of the guidance in Planning Standard G of NUREG-0654. Following permanent cessation of operations and permanent removal of fuel from the reactor vessel, the JIC will continue to be located at a facility outside of the 10-mile EPZ. The proposed changes to the DBNPS Emergency Plan do not involve any physical modifications to, or layout/configuration changes in, the JIC.

The following JIC positions are proposed for elimination following permanent cessation of power operations and permanent removal of fuel from the reactor vessel:

- Public Affairs Duty Officer
- JIC Writer
- News Statement Coordinator
- Public Relations Communicator
- JIC Communicator
- Audio/Visual Coordinator

In the permanently shutdown and defueled condition, media briefings and rumor control will continue to be conducted regularly during an emergency to provide accurate and timely information to the public. The proposed JIC staffing changes described above do not impact the capabilities of the augmented ERO staff to provide emergency event information. The positions can be eliminated without placing an undue burden on the remaining ERO positions in the JIC and without increasing the risk to public health and safety. Functional responsibilities of the positions proposed for elimination will be reassigned to remaining positions.

Attachment 4 contains an analysis of the JIC augmented ERO positions proposed for elimination and evaluates the transfer of tasks to remaining ERO positions following permanent cessation of power operations and permanent removal of fuel from the reactor vessel. The analysis evaluates and disposes each ERO task as being reassigned or eliminated, as appropriate. Based on the analysis, given the elimination of credible accidents involving an operating reactor, the proposed post-shutdown augmented ERO can continue to satisfactorily perform their existing Emergency Plan responsibilities as well as any transferred responsibilities.

#### 4.6 Assessment of Proposed Staffing Changes on Offsite Response Organization Interfaces

FENOC evaluated the proposed DBNPS Emergency Plan ERO staffing changes for impacts on the ability of the State and County response organizations to implement their FEMA-approved radiological emergency plans. The evaluation follows.

Due to the location of DBNPS, the planning and responsibilities at the state and local levels involve coordination with the State of Ohio, and Ottawa and Lucas Counties. DBNPS Emergency Plan Section 3.2, "Emergency Organizations," describe the DBNPS requirements to notify the State and Counties of emergencies. The proposed changes to the DBNPS Emergency Plan do not involve changes to these notification requirements, and as a result, DBNPS maintains the ability to notify the appropriate offsite authorities of emergencies.

DBNPS Emergency Plan Section 7.6, "Communications Systems," describes the communications network maintained between DBNPS, state, and local organizations as a means of promptly notifying and maintaining communications with appropriate authorities. Included in the communications network is a dedicated 4-way phone system. The 4-way phone system permits DBNPS personnel in the Control Room and the EOF to communicate with the State and County Warning Points and EOCs, the Ohio Highway Patrol Office, and the Lucas County and Ottawa County Sheriff's dispatcher offices during emergency situations. The proposed changes to the DBNPS Emergency Plan do not involve changes to the communications network, and as a result, do not impact the ability of DBNPS to notify and initiate coordination with the offsite authorities regarding emergency events.

DBNPS dispatches technical liaisons to the State and County EOCs when requested, or generally, at an Alert or higher declaration, to aid in the EOC's staff in understanding of the event. These positions are retained in the post-shutdown augmented ERO. Therefore, DBNPS maintains the ability to aid offsite officials with respect to emergency events.

In summary, no coordination or communication impediments, with the offsite response organizations were identified by the proposed changes to the DBNPS ERO. As a result, there should no impact on the ability of the State and County response organizations to implement their FEMA-approved radiological emergency plans.

#### 4.7 Validation and Training

To validate the results of the proposed changes to the ERO described within this amendment request, FENOC will perform a drill to confirm the ability of the Post Shutdown on-shift and augmented emergency response organization to perform the necessary functions of each emergency response facility and to utilize the post-shutdown procedures being developed, depicting the revised assignment of duties. The drill will evaluate the ability to accomplish the stated mission of each ERF and ensure that the planning standard functions are preserved with no degradation in time sensitive

activities or in the ability to communicate with offsite response organizations. State and local response organizations will be provided the opportunity to participate, and the NRC and FEMA will be provided advance notice and the opportunity to observe drill activities. This is a regulatory commitment and is listed in Attachment 5.

Training will be developed and be in place prior to performing the post-shutdown ERO validation drill. The drill scenario will include SFP events and will be designed to test the major elements of the DBNPS Post-Shutdown Emergency Plan. Major elements to be tested will include communications and coordination with offsite response organizations, including the JIC.

Implementing procedures will be revised to address the permanently shutdown and defueled conditions. These post-shutdown procedures will be available in draft form to support the post-shutdown ERO staff training and the conduct of the drills. Final implementation of the procedures will occur concurrent with implementation of the requested DBNPS Post-Shutdown Emergency Plan changes.

In addition, other training drills will be conducted to train post-shutdown ERO members. These drills may not involve every ERF or state or local organization participation. However, every ERO member will participate in at least one training drill.

#### 4.8 Conclusion

As described in Section 4, FENOC evaluated the proposed changes in the DBNPS on-shift staff. Additionally, a proposed post-shutdown on-shift staffing analysis was performed to validate the ability of the proposed post-shutdown on-shift staff to implement emergency plan functions in conjunction with the postulated accidents that will be applicable in the permanently shutdown and defueled condition. An evaluation of the proposed augmented ERO staffing was performed to analyze the transfer of tasks from those positions proposed for elimination to remaining augmented ERO positions following permanent cessation of power operations and permanent removal of fuel from the reactor.

Functional responsibilities of the ERO positions proposed to be eliminated are either being reassigned to remaining ERO positions or eliminated if no longer applicable in the permanently defueled condition. The proposed post-shutdown ERO changes do not impact the capability to assess and monitor actual or potential offsite consequences of a radiological emergency and the ability to promptly implement SFP mitigation actions. Appropriate assessment and mitigating actions are within the capabilities of the reduced ERO staff. Therefore, the proposed ERO will continue to address the risks to public health and safety, and comply with the DBNPS Emergency Plan, and applicable regulations.



## 5.0 REGULATORY EVALUATION

### 5.1 Applicable Regulatory Requirements/Criteria

#### Regulations

The specific standards for establishing an onsite emergency organization to respond to emergency events is contained in 10 CFR 50.47(b) and 10 CFR Part 50, Appendix E, Section IV.A.

10 CFR 50.47(b)(1) states:

Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

10 CFR 50.47(b)(2) states:

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

10 CFR Part 50, Appendix E, Section IV.A.1 states that emergency plans must contain:

A description of the normal plant operating organization.

10 CFR Part 50, Appendix E, Section IV.A.2: states that emergency plans must contain:

A description of the onsite emergency response organization with a detailed discussion of:

- Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;
- Plant staff emergency assignments;
- Authorities, responsibilities, and duties on an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

10 CFR Part 50, Appendix E, Section IV.A.9 states that licensees perform:

[A] detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan.

#### Guidance

NRC Regulatory Guide 1.101, "Emergency Response Planning and Preparedness for Nuclear Power Reactors," Revision 4, July 2003, states in part:

The criteria and recommendations in Revision 1 of NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," (November 1980) are methods acceptable to the NRC staff for complying with the standards in 10 CFR 50.47 that must be met in onsite and offsite emergency response plans. These criteria provide a basis for NRC licensees and State and local governments to develop acceptable radiological emergency plans and improve emergency preparedness.

NUREG-0654, Section II, "Planning Standards and Evaluation Criteria," Evaluation Criteria II.B.1 and II.B.5 address the 10 CFR 50.47(b)(2) planning standard. Evaluation Criterion II.B.1 specifies the onsite emergency organization of plant staff personnel for all shifts, and its relation to the responsibilities and duties of the normal shift complement. Evaluation Criterion II.B.5 states in part that:

Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both on-site and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.

NSIR/DPR-ISG-01, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants," Revision 0 (Reference 6) provides information relevant to performing the on-shift staffing analysis. The ISG states that NEI 10-05 (Reference 2) is an acceptable methodology for performing the staffing analysis. The ISG also indicates that the completed staffing analyses are required to be part of the emergency plan and the results documented and submitted to the NRC in accordance with 10 CFR 50.54(q)(5).

NRC Regulatory Guide 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors," Revision 1, July 2016, describes a method that the NRC considers to be acceptable to implement the requirements in 10 CFR 50.54(q). In Section 2.a.(2), the NRC encourages licensees to arrange a conference call with the NRC staff to clarify 10 CFR 50.54(q) requirements and guidance within this regulatory guide for changes in ERO staffing that eliminates key ERO positions.

Regulatory Issue Summary 2005-02, "Clarifying the Process for Making Emergency Plan Changes," Revision 1, was issued by the NRC to clarify the meaning of "decrease in effectiveness" and the process for making changes to emergency plans, and to provide some examples of changes that are considered to be a decrease in effectiveness.

### Conclusion

The proposed changes to the DBNPS Emergency Plan do not affect compliance with these regulations or guidance and, as a result, the standards and requirements would continue to be met.

### 5.2 Precedent

The requested changes to the on-shift staffing and augmented ERO staffing are similar in nature to the post-shutdown changes approved by the NRC for Vermont Yankee Nuclear Power Station (Accession No. ML14346A065) (Reference 7), Ft. Calhoun Station (Accession No. ML17123A348) (Reference 8), and Oyster Creek Nuclear Generating Station (Accession No. ML17356A213) (Reference 9).

### 5.3 No Significant Hazards Consideration

The proposed amendment would revise the Davis-Besse Nuclear Power Station (DBNPS) Emergency Plan on-shift and augmented Emergency Response Organization (ERO) staffing in order to support the planned permanent cessation of power operations and permanent defueling of DBNPS. Specifically, the proposed changes in this license amendment request would eliminate the on-shift positions not needed for the safe storage of spent fuel in the spent fuel pool (SFP) during the initial decommissioning period and eliminate ERO positions not necessary to effectively respond to remaining credible accidents. The proposed changes to the on-shift and augmented ERO staffing are commensurate with the reduced spectrum of credible accidents for a permanently shutdown and defueled nuclear power reactor facility.

FirstEnergy Nuclear Operating Company (FENOC) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes to the DBNPS Emergency Plan do not impact the function of plant structures, systems, or components (SSCs). The proposed changes do not involve the modification of any plant equipment or affect plant operation. The proposed changes do not affect accident initiators or precursors, nor does it alter design assumptions. The proposed changes do not prevent the ability of the on-shift staff and augmented ERO to perform their intended functions to mitigate the consequences of any accident or event that will be credible in the permanently shutdown and defueled condition. The proposed changes only remove positions that will no longer be credited in the DBNPS Emergency Plan.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed changes reduce the number of on-shift and augmented ERO positions commensurate with the hazards associated with a permanently shutdown and defueled facility. The proposed changes do not involve installation of new equipment or modification of existing equipment, so that no new equipment failure modes are introduced. Also, the proposed changes do not result in a change to the way that the equipment or facility is operated so that no new accident initiators are created.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

Margin of safety is associated with confidence in the ability of the fission product barriers (fuel cladding, reactor coolant system pressure boundary, and containment structure) to limit the level of radiation dose to the public. The proposed changes do not adversely affect existing plant safety analysis assumptions, safety limits, or limiting safety system settings that would adversely affect plant safety as a result of the proposed changes. The proposed changes are associated with the DBNPS Emergency Plan and do not impact operation of the plant or its response to transients or accidents. The change does not affect

the Technical Specifications. The proposed changes do not involve a change in the method of plant operation, and no accident analyses will be affected by the proposed changes. Safety analysis acceptance criteria are not affected by the proposed changes. The revised DBNPS Emergency Plan will continue to provide the necessary response staff with the proposed changes.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, FENOC concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

#### 5.4 Conclusion

In conclusion, based on the considerations discussed above, FENOC concludes that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

#### 6.0 ENVIRONMENTAL CONSIDERATION

The proposed changes are applicable to emergency planning standards for DBNPS involving on-shift and augmented ERO staffing to support the planned permanent cessation of operations and permanent defueling of the facility. The proposed changes do not reduce the capability to meet the emergency planning standards established in 10 CFR 50.47 and 10 CFR 50, Appendix E. The proposed amendment is confined to changes to recordkeeping, reporting, or administrative procedures or requirements; changes to the name, position, or title of an officer of the licensee or permit holder, including but not limited to, the radiation safety officer or quality assurance manager; or changes to the format of the license or permit or otherwise makes editorial, corrective or other minor revisions, including the updating of NRC approved references. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(10). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 7.0 REFERENCES

1. NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, published November 1980.
2. NEI 10-05, Rev. 0, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities" (Accession No. ML111751698).
3. FENOC Letter to NRC, "License Amendment Request – Proposed Changes to Technical Specifications Sections 1.1 "Definitions," and 5.0 "Administrative Controls" for a Permanently Defueled Condition," dated October 22, 2018 (Accession No. ML18295A289).
4. FENOC Letter to NRC, "Request for Approval of Certified Fuel Handler Training Program," dated August 15, 2018 (Accession No. ML18227A019).
5. Federal Register Volume 76, Number 226, Wednesday, November 23, 2011, Rules and Regulations, "Enhancements to Emergency Preparedness Regulations; Final Rule."
6. NSIR/DPR-ISG-01, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants," Revision 0, November 2011 (Accession No. ML113010523).
7. Letter, USNRC to Entergy Nuclear Operations, Inc., "Vermont Yankee Nuclear Power Station – Issuance of Amendment to Renewed Facility Operating License Re: Changes to the Emergency Plan (TAC No. MF3668)," dated February 4, 2015 (Accession No. ML14346A065)
8. Letter, USNRC to Omaha Public Power District, "Fort Calhoun Station – Unit 1 – Issuance of Amendment Re: Revise Emergency Plan to Address the Permanently Defueled Condition (CAC No. MF8326)," dated July 27, 2017 (Accession No. ML17123A348)
9. Letter, USNRC to Exelon Generation Company, LLC, "Oyster Creek Nuclear Generating Station – Issuance of Amendment Re: Changes to the Emergency Plan for Permanently Defueled Condition (CAC No. MF9352; EPID L-2017-LLA-0177), dated March 7, 2018, (Accession No. ML17356A213)

**Attachment 1**

**Tabular Summary of Proposed Changes to the  
DBNPS Emergency Plan, Revision 33  
(61 Pages Follow)**

<b>Emergency Plan Section</b>	<b>Before (Rev. 33)</b>	<b>After (Pending Revision Number)</b>	<b>Reason for Change</b>
Cover page/Header	Davis-Besse Nuclear Power Station Emergency Plan Revision 33	Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan Revision TBD	Reflect the change to post shutdown.  The "Revision 33" to "Revision TBD" and "Emergency Plan" to "Post-Shutdown Emergency Plan" changes are made globally and are not specifically identified in the remainder of this document.
Foreword, paragraph 3	Revision 33 of the Emergency Plan meets the requirements of 10 CFR 50.54(q). Changes made in Revision 33 of the Emergency Plan do not decrease the effectiveness.	Revision TBD of the Post-Shutdown Emergency Plan meets the requirements of 10 CFR 50.54(q). Changes made in Revision TBD do not decrease the effectiveness. The Plan has been revised in accordance with NRC Safety Evaluation [TBD].	This change will be submitted for NRC approval.
Foreword, paragraph 4	The issuance and control of this Emergency Plan and activities associated with Emergency Response at the Davis-Besse Nuclear Power Station are the responsibility of the Site Vice President, DB Nuclear. Additions, deletions, or modifications to the Emergency Plan shall be approved by the Emergency Response Manager, the Director, Site Performance Improvement, and the General Plant Manager. It is intended that this Emergency Plan and the Emergency Plan Procedures	The issuance and control of this Post-Shutdown Emergency Plan and activities associated with Emergency Response at the Davis-Besse Nuclear Power Station are the responsibility of the General Plant Manager. Additions, deletions, or modifications to the Post-Shutdown Emergency Plan shall be approved by the Emergency Response Manager and the General Plant Manager. It is intended that this Post-Shutdown Emergency Plan and the Emergency Plan Procedures be fully compatible with the applicable	Editorial change – titles.  Deleted position titles and change to General Plant Manager.



<b>Emergency Plan Section</b>	<b>Before (Rev. 33)</b>	<b>After (Pending Revision Number)</b>	<b>Reason for Change</b>
	be fully compatible with the applicable requirements for quality assurance set forth in the FENOC Nuclear Assurance Program Manual.	requirements for quality assurance set forth in the FENOC Nuclear Assurance Program Manual.	
Foreword, signatures	Director, Site Performance Improvement Site Vice President, DB Nuclear	Deleted.	Reflect the change to post shutdown organization. These position titles changed to the General Plant Manager.
Summary of Plan Changes	List of changes made for Rev 33  List not provided for simplicity.	Full revision to address implementation of the Post-Shutdown Emergency Plan. No revision bars are used to identify the changes.  The changes to the on-shift and augmented Emergency Response Organization staffing support the permanent cessation of power operations of the Davis-Besse Nuclear Power Station and the permanent removal of fuel from the reactor vessel.  List of Rev 33 changes deleted.	Reflect the change to Post-Shutdown Emergency Plan.
Table of Contents	Sections, List of Tables, List of Figures, and page numbering	Sections, List of Tables, List of Figures, and page numbering	Editorial – renumbered due to changes reflecting the Post-Shutdown Emergency Plan
Table of Contents, 4.4	EMERGENCY ACTION LEVELS (EALs) and Fission Product Barriers (FPBs)	EMERGENCY ACTION LEVELS (EALs)	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.

<b>Emergency Plan Section</b>	<b>Before (Rev. 33)</b>	<b>After (Pending Revision Number)</b>	<b>Reason for Change</b>
Table of Contents, 4.4.1	Barrier Abbreviation Codes	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
Table of Contents, 4.4.2	Fission Product Barriers (FPBs) Recognition Categories Codes	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
Table of Contents, 4.4.3	Operation Mode Applicability	Deleted.	Operation Modes are no longer applicable in the permanently shutdown and defueled condition.
Table of Contents, 5.1.1	Plant Management and Administrative Organization	Facility Management and Administrative Organization	The term "plant" is changed to "facility." This is an administrative change that reflects DBNPS will be permanently shutdown and defueled. The term "facility" is a more appropriate description of a site that is undergoing decommissioning.  The "plant" to "facility" change is made globally and is not specifically identified in the remainder of this document.
Table of Contents, 5.2.5	Emergency Director Advisor	Deleted.	The position does not exist in the Post-Shutdown ERO.
Table of Contents, 5.3.2	Unit Supervisor	Deleted.	The title "Unit Supervisor" will not exist in the post-shutdown on-shift staff.
Table of Contents, 5.3.3	Shift Engineer (Shift Technical Advisor)	Deleted.	The Shift Engineer (Shift Technical Advisor) position will not exist in the post shutdown on-shift staff.
Table of Contents, Appendix F	Davis-Besse Nuclear Power Station (DBNPS) ERO On-Shift Staffing Analysis Report	Davis-Besse Nuclear Power Station (DBNPS) ERO Post-Shutdown On-Shift Staffing Analysis Report	Reflect the change to post shutdown.
1.3, <u>Alternate Technical Support Center (ATSC)</u>	An area within the Lindsey Emergency Response Facility, which has the capability to display and transmit plant status information to individuals who are knowledgeable	An area within the Lindsey Emergency Response Facility, which has the capability to display and transmit facility information to individuals who are knowledgeable	Reflect the change to post shutdown.  In the permanently shutdown and defueled condition, the spent fuel pool operation is the focus of ATSC personnel.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	of, and responsible for engineering and management support of reactor operations in the event of an emergency situation.	of, and responsible for engineering and management support of SFP operations in the event of an emergency situation.	
1.11, <u>CONTAINMENT CLOSURE</u>	The procedurally defined actions taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under existing plant conditions.	Deleted.	The defined term is never used in the Emergency Plan. Deletion of this definition will result in a renumbering of the definitions listed in Section 1.0, "Definitions." The renumbering is considered an administrative activity and will not be described within the reminder of Section 1.0.
1.21, <u>Emergency Core Cooling System</u>	Engineered safety features system comprised of the Low Pressure Injection, High Pressure Injection, and Core Flood Systems.	Deleted.	Reflect the change to post shutdown. ECCS is no longer required in the permanently shutdown and defueled condition.
1.31, <u>FAULTED</u>	The term applied to a steam generator that has a steam leak on the secondary side of sufficient size to cause an uncontrolled drop in steam generator pressure or the steam generator to become completely depressurized.	Deleted.	Reflect the change to post shutdown. In the permanently shutdown and defueled condition the steam generator is not operating.
1.33, <u>FISSION PRODUCT BARRIER THRESHOLD</u>	A pre-determined, site-specific, observable threshold indicating the loss or potential loss of a fission product barrier.	Deleted.	Reflect the change to post shutdown. Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
1.44, <u>INDEPENDENT FUEL STORAGE FACILITY</u>	INDEPENDENT FUEL STORAGE INSTALLATION (ISFSI)	INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)	Editorial Change – correct title.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
1.76, <u>RCS INTACT</u>	The RCS should be considered intact when the RCS pressure boundary is in its normal condition for the cold shutdown mode of operation (e.g., no freeze seals or nozzle dams).	Deleted.	The reactor, Reactor Coolant System (RCS) is no longer in operation and has no function related to the storage of the irradiated fuel and can be removed from the emergency plan.
1.78, <u>REFUELING PATHWAY</u>	The reactor refueling canal, spent fuel pool and fuel transfer canal comprise the REFUELING PATHWAY.	Deleted.	Reflect the change to post shutdown.  In the permanently shutdown and defueled condition the reactor will not be refueled and reference to the refueling pathway is not necessary.
1.81, <u>RUPTURED</u>	The condition of a steam generator in which primary-to-secondary leakage is of sufficient magnitude to require a safety injection.	Deleted.	Reflect the change to post shutdown.  In the permanently shutdown and defueled condition the steam generator is not operating.
1.82, <u>Safety Parameter Display System (SPDS)</u>	A computer system that acquires and displays plant data. This system provides data to Operator Aids and the Emergency Response Data System (ERDS).	A computer system that acquires and displays facility data. This system provides data to Operator Aids.	Reflect the change to post shutdown.  In the permanently shutdown and defueled condition ERDS is no longer required.
1.83, <u>SAFETY SYSTEM</u>	A system required for safe plant operation, cooling down the plant and/or placing it in the cold shutdown condition, including the ECCS. These are typically systems classified as safety-related (as defined in 10CFR50.2): Those structures, systems and components that are relied upon to	Deleted.	Reflect the change to post shutdown.  In the permanently shutdown and defueled condition these are no longer required.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<p>remain functional during and following design basis events to assure:</p> <p>(1) The integrity of the reactor coolant pressure boundary;</p> <p>(2) The capability to shut down the reactor and maintain it in a safe shutdown condition;</p> <p>(3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures</p>		
1.85, <u>Shift Manager's Office</u>	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.	A facility that is located within the Control Room envelope and may be used by the Emergency Assistant Plant Manager during emergency conditions to observe and provide guidance to the Shift Manager for direction and control of facility activities.	Revised to allow for flexibility in the location of the Emergency Assistant Plant Manager.
Table 1-1, ACRONYMS	<p>AFW – Auxiliary Feed Water</p> <p>APRM – Average Power Range Meter</p> <p>ATWS – Anticipated Transient Without Scram</p> <p>BWR – Boiling Water Reactor</p>	Deleted.	<p>Reflect the change to post shutdown.</p> <p>In the permanently shutdown and defueled condition these acronyms are no longer required.</p> <p>Removed acronyms not used in the Emergency Plan.</p>

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	BWST – Borated Water Storage Tank CCW – Component Cooling Water CRA – Control Rod Assembly CSF – Critical Safety Function CSFST – Critical Safety Function Status Tree CTMT/CNMT – Containment DBTC – Davis-Besse Training Center DHR – Decay Heat Removal ECCS – Emergency Core Cooling System EOP – Emergency Operating Procedure EPG – Emergency Procedure Guideline EPRI – Electric Power Research Institute ERG – Emergency Response Guideline ESF – Engineered Safety Feature ESW – Emergency Service Water		

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	FAA – Federal Aviation Administration HPI – High Pressure Injection HPCI – High Pressure Coolant Injection HPSI – High Pressure Safety Injection IPEEE – Individual Plant Examination of External Events (Generic Letter 88-20) ITS – Improved Technical Specifications LER – Licensee Event Report LOCA – Loss of Coolant Accident LPI – Low Pressure Injection LPSI – Low Pressure Safety Injection LPZ – Low Population Zone LWR – Light Water Reactor MFW – Main Feed Water (pump) MSIV – Main Steam Isolation Valve MSL – Main Steam Line MSSV – Main Steam Safety Valve		

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	MU – Makeup MU-HPI – Makeup High Pressure Injection NESP – National Environmental Studies Project NORAD – North American Aerospace Defense Command NSSS – Nuclear Steam Supply System NUMARC – Nuclear Management and Resources Council OTSG/SG – Steam Generator PAF – Primary Access Facility POAH – Point of Adding Heat PORV – Power Operated Relief Valve PRA/PSA – Probabilistic Risk Assessment/Probabilistic Safety Assessment PWR – Pressurized Water Reactor RCC – Reactor Control Console RCDT – Reactor Coolant Drain Tank RCIC – Reactor Core Isolation Cooling		



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	RCS – Reactor Coolant System RETS – Radiological Effluent Technical Specifications RPS – Reactor Protection System RPV – Reactor Pressure Vessel RO – Reactor Operator RVLIS – Reactor Vessel Level Indicating System RWCU – Reactor Water Cleanup SAM – Severe Accident Management SBGTS – Stand-By Gas Treatment System SBO – Station Blackout SG – Steam Generator SI – Safety Injection SRO – Senior Reactor Operator STA – Shift Technical Advisor TOAF – Top of Active Fuel VPF – Visitor Processing Center		
Table 1-1, ACRONYMS		Added: CFH – Certified Fuel Handler	Reflect the change to post shutdown. On-shift staff will include Certified Fuel Handlers (CFHs) and Non-Certified Operators (NCOs).

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		NCO – Non-Certified Operator SFP – Spent Fuel Pool	
2.1, <u>Site Description</u> , 2 <sup>nd</sup> paragraph	DBNPS employs a pressurized light water reactor steam supply system furnished by the Babcock & Wilcox Co. (now AREVA NP) to generate approximately 930 MWe. The reactor design core power is 2817 MWt.	DBNPS formerly employed a pressurized light water reactor steam supply system furnished by the Babcock & Wilcox Co. (now AREVA NP) to generate approximately 930 MWe. The reactor design core power was 2817 MWt. The reactor permanently ceased power operations on [DATE] and was permanently defueled on [DATE]. Spent Fuel is stored in the Spent Fuel Pool (SFP) and the Independent Spent Fuel Storage Installation (ISFSI).	Reflect the permanently shutdown and defueled condition.
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, AREVA NP, Bechtel, etc.).	Other offsite organizations, not within the immediate area, may also be requested to offer technical assistance (i.e., AREVA NP, Bechtel, etc.).	Reflect the change to post shutdown. Davis-Besse will no longer be an operating plant and support from INPO is not expected.
Table 2-1, FUNCTIONAL INTERRELATIONSHIPS OF RESPONSE ORGANIZATIONS	Plant Operation Control	SFP Operation Control	Reflect the change from reactor control to SFP control in the permanently shutdown and defueled condition.

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3.2, <u>Emergency Organizations</u> , 3 <sup>rd</sup> paragraph, 3 <sup>rd</sup> sentence	If the Shift Manager cannot assume these duties, authority is delegated to the Unit Supervisor or Shift Engineer (Shift Technical Advisor) in that order.	If the Shift Manager cannot assume these duties, authority is delegated to another qualified member of the on-shift staff.	The Shift Engineer (Shift Technical Advisor) position will not exist in the post shutdown on-shift staff.  The title "Unit Supervisor" will not exist in the post-shutdown on-shift staff.
3.2, <u>Emergency Organizations</u> , 3 <sup>rd</sup> paragraph, 4 <sup>th</sup> and 5 <sup>th</sup> sentences	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 Emergency Plant Manager or Emergency Assistant Plant Manager may assume the Emergency Director position upon arrival in the Control Room or TSC.	The Emergency Assistant Plant Manager and the Emergency Plant Manager may respond to the TSC.
3.2, <u>Emergency Organizations</u> , 4 <sup>th</sup> paragraph	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.	The on-shift crew is responsible for implementing emergency procedures in accordance with assigned response functions. Emergency response functions are also assigned to off-shift facility staff personnel who can be rapidly alerted and mobilized, to augment or relieve the operating shift personnel of emergency duties.	Reflect the permanently shutdown and defueled condition.
4.1, <u>Emergency Classification Levels (ECLs)</u> , 2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> sentence	An ECL is determined to be met by identifying abnormal conditions and then comparing them to INITIATING CONDITIONS (ICs) through EMERGENCY ACTION LEVELS (EAL) and Fission Product Barrier	An ECL is determined to be met by identifying abnormal conditions and then comparing them to INITIATING CONDITIONS (ICs) through EMERGENCY ACTION LEVELS	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.

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	(FPB) threshold values as discussed below.	(EAL) and threshold values as discussed below.	
4.2, <u>EMERGENCY CLASSIFICATION</u>	The 15-minute criterion commences when plant instrumentation, plant alarms, computer displays, or incoming verbal reports that correspond to an EAL first become available to any plant operator.	The 15-minute criterion commences when facility instrumentation, facility alarms, computer displays, or incoming verbal reports that correspond to an EAL first become available to any facility personnel.	Reflect the permanently shutdown and defueled condition.
4.3, <u>INITIATING CONDITION (ICS)</u> , 1 <sup>st</sup> paragraph	The INITIATING CONDITION (IC), EMERGENCY ACTION LEVELS (EALs) and the Fission Product Barrier (FPB) matrix with their related basis information are located in Appendix E of the Emergency Plan.	The INITIATING CONDITION (IC) and EMERGENCY ACTION LEVELS (EALs) with their related basis information are located in Appendix E of the Post-Shutdown Emergency Plan.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
4.3.1, <u>Recognition Category Codes</u>	F designates Fission Product Barrier Degradation	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
4.4, <u>EMERGENCY ACTION LEVELS (EALs) and Fission Product Barriers (FPBs)</u>	<u>EMERGENCY ACTION LEVELS (EALs) and Fission Product Barriers (FPBs)</u>	<u>EMERGENCY ACTION LEVELS (EALs)</u>	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
4.4, <u>EMERGENCY ACTION LEVELS (EALs)</u> , 3 <sup>rd</sup> paragraph	Fission Product Barriers (FPBs) are given unique character identification codes and are further subdivided into Loss and Potential loss categories. Meeting or exceeding one or more FPB can result in	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.

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	various ECLs. The first two letters simply identify the particular barrier by abbreviation. The letter in the FPB identification code associates it with a particular FPB recognition category. The FPB identification codes are developed as follows:		
4.4.1	Barrier Abbreviation Codes FC designates FUEL CLAD RC designates REACTOR COOLANT CT designates CONTAINMENT	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
4.4.2	Fission Product Barriers (FPBs) Recognition Categories Codes A designates RCS or SG Tube Leakage B designates Inadequate Heat Removal C designates CT Radiation / RCS Activity D designates CT Integrity or Bypass E designates ED Judgment	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.
4.4.2	Fission Product Barrier Thresholds are listed within each Fission	Deleted.	Fission Product Barriers are no longer applicable in the permanently shutdown and defueled condition.

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	Product Barrier Category, and are identified by a sequential number.  FPBs are treated the same as EALs in that they exist only as long as the condition(s) for loss or potential loss exist, as opposed to ECLs which once declared, remain in place until termination or recovery.		
<u>4.4.3, Operating Mode Applicability</u>	Operating Mode Applicability  For purposes of event classification, the following operating mode applicability definitions establish the conditions when the EAL or FPB thresholds represent a threat:	Deleted.	Operating Mode is no longer applicable in the permanently shutdown and defueled condition.
Table 4.1	Operating Mode Applicability	Deleted.	Operating Mode is no longer applicable in the permanently shutdown and defueled condition.
<u>4.4.3, Operating Mode Applicability, 2<sup>nd</sup> paragraph</u>	The Operating Mode Applicability table is based on the Technical Specifications definition of Operational Mode. ICs are based on the operating mode that exists at the time the event occurred, prior to any protective system or operator action initiated in response.	Deleted.	Operating Mode is no longer applicable in the permanently shutdown and defueled condition.
<u>4.4.3, Operating Mode Applicability, 3<sup>rd</sup> paragraph</u>	For events that occur in Cold Shutdown or Refueling, escalation is via EALs that have Cold Shutdown or Refueling for mode applicability,	Deleted.	Operating Mode is no longer applicable in the permanently shutdown and defueled condition.

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	even if Hot Shutdown (or a higher mode) is entered during any subsequent heat-up. In particular, the FPB threshold values are applicable only to events that initiate in Hot Shutdown or higher. If there is a change in operating mode following an event declaration, any subsequent events involving EALs outside of the current declaration escalation path will be evaluated on the mode of the plant at the time the subsequent events occur.		
4.4.6, <u>Classifying Transient Events</u> , 1 <sup>st</sup> paragraph, 3 <sup>rd</sup> sentence	In some situations, this can be readily determined, in other situations, further analyses (e.g., coolant radiochemistry sampling) may be necessary.	In some situations, this can be readily determined, in other situations, further analyses may be necessary.	Reflect the permanently shutdown and defueled condition. Reactor coolant sampling is no longer necessary.
5.0, <u>ORGANIZATIONAL CONTROL OF EMERGENCIES</u> , 1 <sup>st</sup> paragraph	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.	In planning for emergencies the availability of the normally present on-shift staff, augmented by support from other utility personnel and offsite support agencies, is considered.	Reflect the permanently shutdown and defueled condition.
5.1, <u>DBNPS Organization</u> , 1 <sup>st</sup> paragraph	Daily operating and engineering activities at DBNPS are under the control of the Vice President - Nuclear.	Spent fuel storage and engineering activities at DBNPS are under the control of the General Plant Manager.	Reflect the permanently shutdown and defueled condition. Editorial change – title.

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5.1, DBNPS Organization, 2 <sup>nd</sup> paragraph	DBNPS has engineering service contracts with the Nuclear Steam Supply System (NSSS) supplier and the Architect-Engineer.	DBNPS has engineering service contracts with the Architect-Engineer.	Reflect the permanently shutdown and defueled condition. NSSS no longer required.
5.1.1, Plant Management and Administrative Organization, 1 <sup>st</sup> paragraph	The General Plant Manager directs and supervises all operating, administrative, technical and maintenance activities in connection with the continuous, efficient and safe operation of the DBNPS.	The General Plant Manager directs and supervises all administrative, technical and maintenance activities in connection with the continuous, efficient and safe storage of spent fuel the DBNPS.	Reflect the permanently shutdown and defueled condition.
5.1.1, Plant Management and Administrative Organization, 2 <sup>nd</sup> paragraph	To support the General Plant Manager, an administrative organization has been established. Responsibilities have been assigned for the various aspects of station operation.	To support the General Plant Manager, an administrative organization has been established. Responsibilities have been assigned for the various aspects of station activities.	Reflect the permanently shutdown and defueled condition.
5.1.2, Onshift Operations Group, 2 <sup>nd</sup> paragraph	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.	The Onshift Operations Group conforms with ANSI N18.1, and includes both management and operations personnel. Figure 5-1, Onshift Emergency Organization, shows the functional levels. Other continuous duty, 24 hours-per-day organizations include Operations, Radiation Protection and Security. Maintenance personnel and the various Engineering organizations are onsite during normal work hours,	I&C and Chemistry personnel will not be part of the on-shift staff post shutdown.  Dedicated Maintenance personnel will not be part of the on-shift staff post shutdown.



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	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.	Monday through Friday, excluding holidays.	
5.1.3, Normal Plant Shift Staffing, 1 <sup>st</sup> paragraph	The plant's operating staff meets or exceeds the requirements of Technical Specification 5.2.2 and Technical Requirements Manual 10.2.1.	The facility's operating staff meets or exceeds the requirements of Technical Specification 5.2.2.	Reflect the permanently shutdown and defueled condition.
5.1.3, Normal Plant Shift Staffing, 2nd paragraph	In addition, the plant is continuously manned with a minimum shift complement consisting of the following: 1 Chemistry Tester 1 Radiation Protection Technician 5 Fire Brigade Members (may have other assignments) *Nuclear Security Force *safeguards information	In addition, the facility is continuously staffed with a minimum shift complement consisting of the following: 1 Radiation Protection Technician 5 Fire Brigade Members (may have other assignments) *Nuclear Security Force *safeguards information	Chemistry Tester position is not part of the on-shift staff post shutdown.

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5.1.3, Normal Plant Shift Staffing, 5 <sup>th</sup> paragraph	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 directs the onshift personnel and verifies that their work is performed according to approved procedures. Ultimate authority for directing all phases of SFP operations always lies with the Shift Manager.	The plant will no longer be operating. SFP activities replace reactor operation.
5.1.3, Normal Plant Shift Staffing, 6 <sup>th</sup> paragraph	A Unit 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 operation of the Nuclear Steam Supply System, Turbine Generator, and other station equipment. During an emergency, the Unit Supervisor may also direct employees to function as emergency maintenance personnel or to assist fire brigade team members. The Unit Supervisor assumes the role of Shift Manager, including Emergency Director duties, should the Shift Manager become incapacitated.	Non-Certified Operators, who are assigned to each shift, assist the Shift Manager by following his directives in controlling station equipment. During an emergency, the Non-Certified Operators may also function as emergency maintenance personnel or to assist fire brigade team members. An appropriately qualified Non-Certified Operator could assume the role of Shift Manager, including Emergency Director duties, should the Shift Manager become incapacitated.	The plant will no longer be operating. The referenced systems will no longer be in service.  The title "Unit Supervisor" will not exist in the post-shutdown on-shift staff.
5.1.3, Normal Plant Shift Staffing, 7 <sup>th</sup> paragraph	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	Deleted.	The Shift Engineer (Shift Technical Advisor) is not part of the on-shift staff post shutdown.

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	<p>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 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.</p>		
5.2.1.b.4	Emergency Director Advisor	Deleted.	The Emergency Director Advisor is not part of the Post-Shutdown ERO.

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5.2.1.c.	<p>In the absence of the Emergency Director, one of the following will assume the duties and responsibilities of the Emergency Director:</p> <ol style="list-style-type: none"> <li>1. Emergency Plant Manager</li> <li>2. Emergency Assistant Plant Manager</li> <li>3. Shift Manager</li> <li>4. Unit Supervisor</li> <li>5. Shift Engineer (Shift Technical Advisor)</li> </ol>	<p>In the absence of the Emergency Director, one of the following will assume the duties and responsibilities of the Emergency Director:</p> <ol style="list-style-type: none"> <li>1. Emergency Plant Manager</li> <li>2. Emergency Assistant Plant Manager</li> <li>3. Shift Manager</li> <li>4. Another qualified on-shift individual</li> </ol>	<p>The title "Unit Supervisor" will not exist in the post-shutdown on-shift staff.</p> <p>The Shift Engineer (Shift Technical Advisor) is not part of the on-shift staff post shutdown.</p>
5.2.1.c	<p>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.</p>	<p>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 or TSC.</p>	<p>The Emergency Assistant Plant Manager may respond to the TSC</p>
5.2.3, Emergency Plant Manager	<p>The Emergency Plant Manager is the senior individual responsible for the coordination and conduct of all activities associated with plant operations, plant assessment,</p>	<p>The Emergency Plant Manager is the senior individual responsible for the coordination and conduct of all activities associated with storage of spent fuel in the SFP, facility</p>	<p>The plant will no longer be operating. SFP activities replace reactor operation.</p>

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	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.	assessment, emergency classification associated with facility parameters, and onsite actions taken to mitigate the emergency situation. The Emergency Plant Manager reports to and advises the Emergency Director on facility status and provides recommendations for emergency reclassification based upon technical information and indications recorded in the TSC.	
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.	Deleted.	The Emergency Director Advisor is not a position in the Post-Shutdown ERO.
5.3.2, Unit Supervisor	During power operations, the Unit Supervisor is responsible for	Deleted.	The title "Unit Supervisor" will not exist in the post shutdown on-shift staff.

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	<p>assisting the Shift Manager in the supervision of Operations personnel.</p> <p>The Unit Supervisor will immediately assume the duties and authorities of the Shift Manager, including Emergency Director duties, if the Shift Manager becomes incapacitated.</p>		
5.3.3, Shift Engineer (Shift Technical Advisor)	<p>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.</p> <p>The Shift Engineer (Shift Technical Advisor) will assume the role of Emergency Director if the Shift Manager and the Unit 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</p>	Deleted.	The Shift Engineer (Shift Technical Advisor) is not part of the on-shift staff post shutdown.

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	circumstances, this position may be filled by an onshift SRO assigned another function.		
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, Electrical Maintenance and Instrument and Controls Maintenance support functions.	Deleted.	Dedicated Maintenance personnel will not be part of the on-shift staff post shutdown. Maintenance activities will be performed by on-shift personnel assigned other functions.
5.4.1, Overview	The assignment of responsibilities in the Onsite Emergency Response Organization is ultimately the responsibility of the Vice President, Nuclear. However, the Emergency Response Manager is responsible for establishing and maintaining a predefined Onsite Emergency Response Organization. Alternate	The assignment of responsibilities in the Onsite Emergency Response Organization is ultimately the responsibility of the General Plant Manager. However, the Emergency Response Manager is responsible for establishing and maintaining a predefined Onsite Emergency Response Organization. Alternate	Editorial changes – title, grammar.

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	assignments to various positions are specified to provide for timely, automatic, and unambiguous manning to satisfy emergency response requirements.	assignments to various positions are specified to provide for timely, automatic, and unambiguous staffing to satisfy emergency response requirements.	
5.4.1.a, Control Room	Control Room staff will control the operation of the power plant during both normal and emergency operations.	Control Room staff will control the operation of the SFP during both normal and emergency conditions.	The plant will no longer be operating. SFP activities replace reactor operation.
5.4.2, Direction and Coordination	The primary function of the Onsite and Near Site 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.	The primary function of the Onsite and Near Site Emergency Response Organization is to relieve the Control Room staff of those duties and responsibilities not directly related to the safe storage of spent fuel in the SFP.	The plant will no longer be operating. SFP activities replace reactor operation.
5.4.3, Control Room	At the ALERT level or greater, additional operators will be assigned to assist in the OSC, under the direction of the OSC Manager.	Deleted.	Reflect the permanently shutdown and defueled condition.
5.4.4.a, Emergency Assistant Plant Manager, 1 <sup>st</sup> paragraph	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	The Emergency Assistant Plant Manager is responsible for coordination and interface between the TSC emergency organization and the facility. The Emergency Assistant Plant Manager advises the Emergency Plant Manager on facility status and trends, and their potential impact on protective action	The Emergency Assistant Plant Manager may respond to the TSC.



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	Emergency Plant Manager on plant status and trends, and their potential impact on protective action recommendations and emergency classification.	recommendations and emergency classification.	
5.4.4.c, Technical Support Center (TSC) Engineering Manager, 1st paragraph	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 is responsible for performing an engineering assessment of facility conditions and/or actions needed to mitigate damage to the facility, continuously evaluate the need for engineering resources, and 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 will perform Engineering functions in the TSC. The spectrum of credible and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC must perform.
5.4.4.c, Technical Support Center (TSC) Engineering Manager, last paragraph	Reporting to the TSC Engineering Manager are the TSC Engineering Lead, and the TSC Operations Lead.	Other augmented, qualified engineering resources that may be requested report to the TSC Engineering Manager.	TSC Engineers will be called in as needed.
5.4.4.d, TSC Engineering Lead	<p>The TSC Engineering Lead is staffed as appropriate, and is responsible for coordinating the TSC Engineers.</p> <p>The TSC Engineering Lead reports to the TSC Engineering Manager and interfaces with the TSC</p>	Deleted.	After docketing of the certification of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result the TSC Engineering Lead and engineers are no longer needed.

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	<p>Operations Lead, and the Emergency Radiation Protection Manager.</p> <p>Reporting to the TSC Engineering Lead are engineers with expertise in the following disciplines:</p> <ol style="list-style-type: none"> <li>1. Core/Thermal Hydraulics</li> <li>2. Electrical</li> <li>3. Mechanical</li> <li>4. Instrument and Control</li> </ol>		<p>The Engineering Manager will perform Engineering functions in the TSC. The spectrum of credible and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC must perform.</p>
5.4.4.e, TSC Operations Lead	<p>The TSC Operations Lead is staffed as appropriate, and 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.</p> <p>The TSC Operations Lead reports to the TSC Engineering Manager, and interfaces with the TSC Engineering Lead and the Emergency Radiation Protection Manager.</p>	Deleted.	<p>The Engineering Manager will perform Engineering functions in the TSC. The spectrum of credible and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC must perform.</p>

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	Reporting to the TSC Operations Lead are personnel with expertise in various aspects of plant operations and computer technology.		
5.4.4.g, Emergency Facilities Services Manager	<p>1. The Emergency Facilities Services Manager reports to the Emergency Offsite Manager in the Emergency Operations Facility and is responsible for coordinating with emergency response facility management to ensure the sufficient availability of personnel to support the operations of the DBAB and EOF. This personnel pool includes:</p> <ul style="list-style-type: none"> <li>a) Communicators</li> <li>b) Logkeepers</li> <li>c) Status Board Keepers</li> <li>d) Clerical</li> <li>e) Maintenance</li> <li>f) Laborers</li> </ul> <p>2. The Emergency Facilities Services Manager is also responsible for the procurement of the following equipment in support of DBAB and EOF operations during an emergency:</p>	Deleted.	The Emergency Facilities Services Manager position will not exist in the post-shutdown ERO and tasks have been reassigned to remaining ERO personnel.

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	a) Food and sleeping supplies. b) Road maintenance, (e.g., snow removal). c) Phone service. d) Onsite transportation. e) Support as requested by the TSC Engineering Manager. 3. The Emergency Facilities Services Manager is also responsible for the operation of DBAB systems such as the emergency ventilation system, the potable water system and the emergency power systems. during emergencies.		
5.4.5.a, OSC Manager, 2 <sup>nd</sup> paragraph	Reporting to the OSC Manager are the Assistant OSC Manager, and the OSC Radiation Protection Coordinator.	The OSC Radiation Protection Coordinator reports to the OSC Manager.	The Assistant OSC Manager position is eliminated from the Post-Shutdown ERO. Tasks transferred to remaining ERO personnel.
5.4.5.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.	Deleted.	The Assistant OSC Manager position is eliminated from the Post-Shutdown ERO. Tasks transferred to remaining ERO personnel

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5.4.5.c, The OSC Radiation Protection Coordinator, 1 <sup>st</sup> paragraph	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 dispatches technicians within the protected area to survey, sample, and analyze various systems and/or areas to determine the emergency radiological conditions.	Augmenting Chemistry Technician positions will not exist in the Post-Shutdown ERO.
5.4.5.c, The OSC Radiation Protection Coordinator, last paragraph	Reporting to the OSC Radiation Protection Coordinator are all RP and Chemistry testers not specifically assigned other responsibilities within the emergency organization.	Reporting to the OSC Radiation Protection Coordinator are all RP testers not specifically assigned other responsibilities within the emergency organization.	On-shift Chemistry Technician positions will not exist in the post shutdown condition.
5.4.5.f, OSC Pool Personnel	Members of the OSC Personnel Pool report to the Assistant OSC Manager.	Members of the OSC Personnel Pool report to the OSC Manager.	The Assistant OSC Manager position will not exist in the Post-Shutdown ERO.
5.4.5.g, OSC System Engineers	<p>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.</p> <p>The OSC Systems Engineers will report to the OSC Manager, and interface with the various emergency repair teams, and the TSC engineers.</p>	Deleted.	The Engineering Manager will perform Engineering functions in the TSC/OSC. The spectrum of credible and operational events, and the quantity and complexity of activities required for the safe storage of spent nuclear fuel is reduced as compared to an operating plant. The set of plant equipment required in the permanently defueled condition is also greatly reduced, which reduces the assessment and mitigation activities the TSC/OSC must perform.

<b>Emergency Plan Section</b>	<b>Before (Rev. 33)</b>	<b>After (Pending Revision Number)</b>	<b>Reason for Change</b>
5.5.1, Overview	The assignment of responsibilities in the Near Site Emergency Response Organization is ultimately the responsibility of the Vice President, Nuclear.	The assignment of responsibilities in the Near Site Emergency Response Organization is ultimately the responsibility of the General Plant Manager.	Editorial changes – title, grammar.
5.5.2.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 Emergency Response Organization and the NRC.	Deleted.	The NRC Liaison position will not exist in the Post-Shutdown ERO.
5.5.2.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.	Deleted.	The EOF Operations Advisor position will not exist in the Post-Shutdown ERO.
5.5.2.c, Dose Assessment Coordinator, 2 <sup>nd</sup> paragraph	The Dose assessment Coordinator interfaces with the EOF Operations Advisor and the Emergency RP Manager.	The Dose assessment Coordinator interfaces with the Emergency RP Manager.	The EOF Operations Advisor position will not exist in the Post-Shutdown ERO.

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5.5.2.d, Emergency Planning Advisor, 2 <sup>nd</sup> paragraph	The Emergency Planning Advisor interfaces with the Emergency Facilities Services Manager for the procurement of personnel and equipment.	The Emergency Planning Advisor is responsible for the procurement of personnel and equipment.	The Emergency Facilities Services Manager position will not exist in the Post-Shutdown ERO.
5.5.2.d, Emergency Planning Advisor, 3 <sup>rd</sup> paragraph	Reporting to the Emergency Planning Advisor are the EOF Communications Staff, and the Log and Status Board Keepers (EOF).	The EOF Communications Staff report to the Emergency Planning Advisor.	The Log and Status Board Keepers positions will not exist in the Post-Shutdown ERO.
5.5.2.d, Emergency Planning Advisor, last paragraph	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 Assistance Center (CAC).	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 Assistance Center (CAC), and the Nuclear Regulatory commission (NRC). A member of the EOF communications staff will be present at meetings between the ERO and the NRC.	Reflect reassignment of the NRC Liaison//Communicator tasks.
5.8.3.a.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.	The Post-Shutdown Emergency Plan for DBNPS, and the emergency plans for the State of Ohio, Ottawa County and Lucas County, have been formulated to provide timely	Editorial – grammar.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
		notification and close coordination with these agencies.	
5.8.4.a, Institute of Nuclear Power Operations (INPO)	<p>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.</p> <p>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.</p> <p>3. INPO is able to provide the following emergency support functions:</p> <p>a) Assistance in locating sources of emergency manpower and equipment.</p> <p>b) Analysis of the operational aspects of the incident.</p> <p>c) Dissemination to member utilities, of information concerning the incident, that is applicable to their operations.</p>	Deleted.	DBNPS will no longer be an operating plant. Support from INPO is no longer expected.



Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<p>d) Organization of industry experts who could advise the utility on technical matters.</p> <p>4. To support these functions, INPO maintains the following emergency support capabilities:</p> <p>a) Twenty-four hour-a-day operation of an Emergency Response Center.</p> <p>b) Designated INPO representative(s) who can be quickly dispatched to the utility emergency response organization to coordinate INPO support activities and information flow.</p> <p>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:</p> <p>a) Staff a liaison to the appropriate utility manager.</p> <p>b) Work with the INPO Duty Person, in Atlanta, to coordinate all requests for assistance, INPO response, and related communications.</p>		

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<p>c) Assist the utility, as requested, in initiating and updating entries into industry information systems (such as NUCLEAR NETWORK).</p> <p>d) Ensure that all information concerning the emergency, which is released by the INPO liaison, is properly and formally cleared through appropriate utility channels.</p> <p>6. The president of INPO will direct an analysis of operational factors relating to the incident.</p> <p>Onsite activities, when undertaken, will be coordinated with the onsite INPO Representative.</p>		
5.8.4.b	Nuclear Steam Supply System (NSSS) Vendor and Architect/Engineer Support	Architect/Engineer Support	DBNPS will no longer be an operating nuclear power plant. NSSS support is no longer required.
5.8.4.b, 1 <sup>st</sup> paragraph	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 Areva NP.	Deleted.	DBNPS will no longer be an operating nuclear power plant. NSSS support is no longer required.
5.8.4.b, 2 <sup>nd</sup> paragraph	These two firms can be called on during emergency situations to provide the technical analysis and engineering support necessary to mitigate abnormal plant conditions	This firm can be called on during emergency situations to provide the technical analysis and engineering support necessary to mitigate abnormal facility conditions	DBNPS will no longer be an operating nuclear power plant. NSSS support is no longer required.

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Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area Plant Operations and Assessment of Operational Aspects	Shift Manager (SRO) – 1 Unit Supervisor (SRO) – 1 Shift Engineer – 1 Reactor Operator – 2 Non-Licensed Operator (EO3) – 1	Shift Manager (SM) / Certified Fuel Handler (CFH) – 1 Non-Certified Operator (NCO) – 2	<p>DBNPS will no longer be an operating nuclear power plant. The following on-shift positions will be eliminated:</p> <ul style="list-style-type: none"> <li>• Shift Engineer/Shift Technical Advisor</li> <li>• Two (2) Reactor Operators</li> </ul> <p>Following permanent cessation of operations and removal of fuel from the reactor vessel, Operations on-shift personnel will consist of one (1) Shift Manager (SM) / Certified Fuel Handler (CFH) and two (2) Non-Certified Operators (NCOs). Title changes to CFH and NCO are dependent upon NRC approval of proposed changes to the DBNPS Technical Specifications that replace references to licensed and non-licensed operators with references to CFHs and NCOs.</p> <p>These staffing levels have been evaluated in the DBNPS analysis of proposed post shutdown on-shift staffing in conjunction with the postulated accidents that will be applicable in the permanently defueled condition.</p>
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area Notifications & Communication	Local/State – NLO or above Federal – NLO or above	Local/State – NCO or above Federal – NCO or above	Title changes for the NLO to NCO are dependent upon NRC approval of proposed changes to the DBNPS Technical Specifications that replace references for reactor operators and non-licensed operators with references to NCOs.
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area	Dose Assessment – Shift Engineer (STA) – 1 <sup>(a)</sup> <sup>(a)</sup> May be filled by someone filling another position having functional qualifications	Dose Assessment – NCO or above – 1 <sup>(a)</sup> <sup>(a)</sup> May be filled by someone filling another position having functional qualifications	NCO or above replaces Shift Engineer (STA).

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Radiological Assessment			
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area Radiological Assessment	Chemistry – Chemistry Technician - 1	RP Technician - 1 <sup>(a)</sup> <sup>(a)</sup> May be filled by someone filling another position having functional qualifications	DBNPS will no longer be an operating nuclear power plant. The on-shift Chemistry Technician position will be eliminated.  Removal of the on-shift Chemistry Technician has been evaluated in the DBNPS analysis of proposed post-shutdown on-shift staffing in conjunction with the postulated accidents that will be applicable in the permanently defueled condition.
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area Plant System Engineering, Repair and Mitigative Actions	Technical Support – Ops – Shift Engineer (STA) – 1 <sup>(a)</sup> <sup>(a)</sup> May be filled by someone filling another position having functional qualifications	Technical Support – Ops – NCO or above – 1 <sup>(a)</sup> <sup>(a)</sup> May be filled by someone filling another position having functional qualifications	NCO or above replaces Shift Engineer (STA)
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area Plant System Engineering, Repair and Mitigative Actions	Core Damage – Shift Engineer (STA) – 1 <sup>(a)</sup> <sup>(a)</sup> May be filled by someone filling another position having functional qualifications	Deleted.	DBNPS will no longer be an operating nuclear power plant.  After docketing of certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, Core Damage assessment is no longer needed.
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area In-	Radiation Protection – RP Technician – 2 <sup>(a)</sup>	Radiation Protection – RP Technician – 1 <sup>(a)</sup>	Removal of one on-shift RP Technician has been evaluated in the DBNPS analysis of proposed post-shutdown on-shift staffing in conjunction with the postulated accidents that will be applicable in the permanently defueled condition.

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Plant Protective Actions	<sup>(a)</sup> May be filled by someone filling another position having functional qualifications		
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area Fire Fighting	Fire Brigade Captain (RO/EO3) – 1 Fire Brigade Member – 4	Fire Brigade Captain (NCO) – 1 <sup>(a)</sup> Fire Brigade Member – 4	Fire Brigade will be composed of the Fire Brigade Captain (NCO) and four other trained and qualified individuals.
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS, Functional Area 1 <sup>st</sup> Aid and Rescue	NLO	NCO	Title change
Table 5-1A, ONSHIFT MINIMUM STAFFING REQUIREMENTS TOTAL	15	10	Reduction in the number of on-shift staff has been evaluated in the DBNPS analysis of proposed post-shutdown on-shift staffing in conjunction with the postulated accidents that will be applicable in the permanently defueled condition.
Table 5-1A. ONSHIFT MINIMUM STAFFING REQUIREMENTS Notes	Personnel assigned to the shift in excess of the minimum staffing listed above may be assigned to any of the emergency positions in functions 2 through 9 for which they are qualified. Appendix F, Davis-Besse Nuclear Power Station (DBNPS) ERO On-Shift Staffing Analysis Report, documents the minimum shift's ability to implement the emergency plan.	Personnel assigned to the shift in excess of the minimum staffing listed above may be assigned to any of the emergency positions in functions 2 through 9 for which they are qualified. Appendix F, Davis-Besse Nuclear Power Station (DBNPS) ERO Post-Shutdown On-Shift Staffing Analysis Report, documents the minimum shift's ability to implement the emergency plan.	DBNPS will no longer be an operating nuclear power plant.  Removal of the on-shift Chemistry Technician has been evaluated in the DBNPS analysis of proposed post-shutdown on-shift staffing in conjunction with the postulated accidents that will be applicable in the permanently defueled condition.

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	Operations personnel and Chemistry Technicians are qualified on survey instruments	Operations personnel are qualified on survey instruments	
Table 5-1B, AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS CONTROL ROOM	Emergency Assistant Plant Manager (1)	Emergency Assistant Plant Manager (1) <sup>3</sup>  Note 3: The Emergency Assistant Plant Manager may respond to the TSC.	Note 3 added to Unusual Event column and Alert, Site Area, and General Emergency column to indicate the Emergency Assistant Plant Manager can also respond to the TSC.
Table 5-1B, AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS OPERATIONS SUPPORT CENTER	Mechanical Maintenance (2) Instrument & Controls (2) Electrical Maintenance (2)	Mechanical Maintenance (1) Electrical Maintenance (1)	In the permanently shutdown and defueled condition there is no longer any complex automatic control systems in service. The augmenting technician positions can be reduced and the need for dedicated I&C maintenance technicians are not required. If conditions warrant, the OSC Manager can call out support as necessary.
Table 5-1B AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS OPERATIONS SUPPORT CENTER	Chemistry Technician (0) at 30 – 60 minutes RP Technician (1) at 30 – 60 minutes RP Technician (3) at 1 – 2 hours Chemistry Technician (1) at 1 – 2 hours	RP Technician (1) at 30 – 60 minutes RP Technician (1) at 1 – 2 hours	There is a significant decrease in the areas potentially requiring Radiation Protection coverage in a permanently shutdown and defueled condition.  Removal of the on-shift Chemistry Technician has been evaluated in the DBNPS analysis of proposed post-shutdown on-shift staffing in conjunction with the postulated accidents that will be applicable in the permanently defueled condition.

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Table 5-1B, AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS TECHNICAL SUPPORT CENTER	Core/Thermal Hydraulic Engineer (1) at 30 – 60 minutes	Deleted.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, core damage assessment is no longer needed.
Table 5-1B, AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS TECHNICAL SUPPORT CENTER	TSC I&C Engineer (1) at 1 – 2 hours TSC Electrical Engineer (1) at 1 – 2 hours TSC Mechanical Engineer (1) at 1 – 2 hours	TSC I&C Engineer – Call in as necessary TSC Electrical Engineer – Call in as necessary TSC Mechanical Engineer – Call in as necessary	The need for augmenting engineers is reduced. The TSC Engineering Manager, tasked with performing engineering assessments of plant conditions and actions needed to mitigate damage to the plant, will provide technical support in the Major Functional Area of Plant System Engineering, Repair, and Corrective Action.
Table 5-1B, AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS EMERGENCY OPERATIONS FACILITY	NRC Liaison (1)	Deleted.	The NRC Liaison position will not exist in the Post-Shutdown ERO.

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Figure 5-1, ONSHIFT EMERGENCY ORGANIZATION		Removed Chemistry, Shift Engineer (STA), Onshift Maintenance and Unit Supervisor	Modified to reflect on-shift organizational changes.
Figure 5-2, Emergency Response Organization (Page 1 of 10)		Removed Emergency Director Advisor	Modified to reflect ERO changes.
Figure 5-2, Emergency Response Organization (Page 2 of 10)		Removed Recovery Advisor. Eliminated Core Damage Assessment function from the TSC Engineering Manager.	Modified to reflect ERO changes.  After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, core damage assessment is no longer needed.
Figure 5-2, Emergency Response Organization (Page 3 of 10)		Removed Shift Engineer (STA)	Modified to reflect ERO changes.
Figure 5-2, Emergency Response Organization (Page 4 of 10)		Removed TSC Engineering Lead, TSC Operations Lead, Core/Thermal Hydraulic Engineer, TSC Mechanical Engineer, TSC Electrical Engineer, TSC I&C Engineer, TSC Operations Engineers, TSC Computer Technician, SAM Engineer	Modified to reflect ERO changes.
Figure 5-2, Emergency Response		Removed OSC System Engineers, RP Briefer/Debriefer, Assistant OSC Manager, OSC Team	Modified to reflect ERO changes.



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Organization (Page 6 of 10)		Briefer/Debriefer, Operations Personnel	
Figure 5-2, Emergency Response Organization (Page 8 of 10)		Removed EOF Operations Advisor, Emergency Facilities Services Manager, Assembly Area Coordinator, Maintenance Services personnel, Log and Status Board Keepers, Resource Coordinator, NRC Liaison, Warehouse pool personnel	Modified to reflect ERO changes.
Figure 5-2, Emergency Response Organization (Page 9 of 10)		Reduced Dose Assessors from 2 to 1	Modified to reflect ERO changes.
Figure 5-2, Emergency Response Organization (Page 10 of 10)		Removed Public Affairs Duty Officer, JIC Writer, News Statement Coordinator, JIC Communicator, PR Communicator, Audio/Visual Coordinator	Modified to reflect ERO changes.
6.1, <u>Activation of the Emergency Response Organizations</u> , 3 <sup>rd</sup> bullet	The Institute of Nuclear Power Operations (INPO) is notified at an Alert or higher classification with requests for assistance as necessary.	Deleted.	DBNPS will no longer be an operating nuclear power plant. Assistance from INPO is not expected.
6.1.1.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	Should emergency conditions arise, it is expected that the Non-Certified Operator(s) and/or the Shift Manager will be made aware of the situation by alarms, instrument	Reflect the post shutdown on-shift staffing.

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	readings, reports, etc. The Control Room Operator(s) will ensure that the Shift Manager is immediately informed of the situation.	readings, reports, etc. The Non-Certified Operator(s) will ensure that the Shift Manager is immediately informed of the situation.	
6.1.1.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:	The Shift Manager, when informed of an emergency situation, is responsible for assessing the emergency (e.g., systems and SFP status, radiological conditions, etc.) in the following manner:	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of the assessment.
6.1.1.b.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.	Determine the immediate actions to be taken to ensure the safe and proper operation of the SFP.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of the assessment.  The Shift Engineer (STA) position will not exist in the post-shutdown on-shift staff.
6.1.1.b.3.a)	Ensure the safe operation of the plant.	Ensure the safe operation of the SFP.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
			applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
6.2.3.a	An increased amount of plant instrumentation will be monitored. (In particular, indications of core status, e.g., incore thermocouple readings, etc.)	An increased amount of facility instrumentation will be monitored. (In particular, indications of SFP status)	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
6.3, <u>Mitigative Actions</u> , 1 <sup>st</sup> paragraph	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 mitigative 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 mitigative actions based on their training, knowledge, and experience.	Detailed operating procedures are available for use during emergencies, as well as during normal operations. Specific procedures are provided to assist the operators in placing the facility in a safe condition, and taking necessary supplemental mitigative actions. In addition, personnel are trained in the operation of the SFP systems and their associated procedures, and are therefore capable of taking appropriate mitigative actions based on their training, knowledge, and experience.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations. Operations staff will no longer be required to implement emergency operating procedures and the scope of the applicable abnormal response procedures that remain will be significantly reduced. On-shift staffing is trained in the operation of the SFP systems and their associated procedures, and are therefore capable of taking appropriate mitigative actions.
6.4.1.c, 3 <sup>rd</sup> bullet	Dispersal of plant operators and essential ERO members	Dispersal of Operations personnel, and essential ERO members	Reflect the change to post shutdown conditions.

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6.4.2, Offsite Protective Actions, 1 <sup>st</sup> paragraph	Responsibility for implementing actions to protect personnel in offsite areas rests with State and local officials, and is described in detail in the <u>The Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan</u> (under a separate cover), and is implemented in conjunction with <u>The Ottawa County Radiological Emergency Response Plan</u> , and <u>The Lucas County Radiological Emergency Response Plan</u> (under separate covers)	Responsibility for implementing actions to protect personnel in offsite areas rests with State and local officials, and is described in detail <u>The Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan</u> (under a separate cover), and is implemented in conjunction with <u>The Ottawa County Radiological Emergency Response Plan</u> , and <u>The Lucas County Radiological Emergency Response Plan</u> (under separate covers)	Editorial change – grammar.
Table 6-6, <u>GUIDELINES FOR PROTECTION AGAINST INGESTION OF CONTAMINATION</u> , Note 2	... such levels in milk should cause surveillance and protective actions for meat as appropriate.	... such levels in milk should cause surveillance and protective actions for meat as appropriate.	Editorial change – spelling.
7.0, <u>EMERGENCY FACILITIES AND EQUIPMENT</u> , last paragraph	Many of the DBNPS facilities and much of the equipment is normally used for routine plant operations.	Many of the DBNPS facilities and much of the equipment is normally used for routine activities.	Reflect the change to post shutdown conditions.
7.1.1.a	The Control Room is the location from which the plant is operated. It contains the instrumentation, controls, and displays for:	The Control Room is the location from which the SFP systems are monitored. It contains the	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<ol style="list-style-type: none"> <li>1. Nuclear systems</li> <li>2. Reactor coolant systems</li> <li>3. Steam systems</li> <li>4. Electrical systems</li> <li>5. Safety systems (including engineered safety features)</li> <li>6. Accident monitoring systems.</li> </ol> <p>The operating shift is staffed in accordance with TS 5.2.2 and TRM 10.2.1 requirements. Control manipulations and the safe operation of the plant are directed by the Senior Reactor Operator Licensed Shift Manager and Unit Supervisor, and are performed by Licensed Reactor Operators.</p>	<p>instrumentation, controls, and displays for:</p> <ol style="list-style-type: none"> <li>1. Electrical systems</li> <li>2. Systems associated with the SFP</li> <li>3. Accident monitoring systems.</li> </ol> <p>The on-shift staff is in accordance with TS 5.2.2. Control manipulations and the safe operation of the SFP are directed by the Shift Manager (qualified as a Certified Fuel Handler (CFH)) and are performed by Non-Certified Operators.</p>	<p>longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.</p> <p>Editorial change – title.</p>
7.1.1.b	During abnormal operating conditions, the complexity of Station responsibilities increases significantly and the Control Room transforms into an emergency response center.	During abnormal conditions, the complexity of Station responsibilities increases and the Control Room transforms into an emergency response center.	Reflect the permanently shutdown and defueled condition.
7.1.1.b.4	Management of plant operations.	Management of SFP operations.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of

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			fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
7.1.1.b.8	Restoring the plant to a safe condition.	Restoring the SFP to a safe condition.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
7.1.1.b, last paragraph	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.	During emergencies, the Emergency Assistant Plant Manager may use 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 facility activities.	Emergency Assistant Plant Manager location is flexible.
7.2, <u>Davis-Besse Administration Building (DBAB) Facilities</u>	The DBAB contains the Emergency Response Facilities (ERFs) necessary to assist Control Room personnel in accident assessment and abnormal operating conditions	The DBAB contains the Emergency Response Facilities (ERFs) necessary to assist Control Room personnel in accident assessment and abnormal conditions	Reflect the permanently shutdown and defueled condition.
7.2, 2 <sup>nd</sup> bullet	Relieve the Control Room staff of peripheral duties and communications not directly related to reactor system manipulations.	Relieve the Control Room staff of peripheral duties and communications not directly related to SFP system manipulations.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
			fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
7.2, 4 <sup>th</sup> bullet	Provide assistance to the operators from technical personnel who have comprehensive plant data at their disposal	Provide assistance from technical personnel who have comprehensive facility data at their disposal	Reflect the permanently shutdown and defueled condition.
7.2, 7 <sup>th</sup> bullet	Provide relevant plant data to the NRC for its analysis of abnormal plant operating conditions	Provide relevant facility data to the NRC for its analysis of conditions	Reflect the permanently shutdown and defueled condition.
7.3, Near Site Emergency Response Facility	The facility has access to station radio and public Address systems. The facility is equipped with an uninterruptable power system and an emergency diesel generator. The Near Site Emergency response Facilities include the following:	The facility has access to station radio and public address systems. The facility is equipped with an uninterruptable power system and an emergency diesel generator. The Near Site Emergency Response Facilities include the following:	Editorial changes – capitalization.
7.6.2.a.2.c	Emergency Response Data System (ERDS) data lines.	Deleted.	ERDS is no longer required following permanent shutdown.
7.9.1.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.	Radiation monitors are powered from the essential instrument distribution panels. The non-essential radiation monitors are powered from the uninterruptible instrument distribution panels.	Reflect the permanently shutdown and defueled condition.
7.9.1.d	With the exception of the Kaman monitors, each radiation monitor is capable of being checked	Each radiation monitor is capable of being checked periodically with solenoid actuated check sources.	Editorial - Kaman monitors no longer used.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	periodically with solenoid actuated check sources.		
7.9.2, Area Radiation Monitoring, 1 <sup>st</sup> paragraph	There are a total of 40 area monitors consisting of two types, Geiger-Mueller detectors and Ionization Chamber detectors.	Area monitors consist of two types, Geiger-Mueller detectors and Ionization Chamber detectors.	Reflect the permanently shutdown and defueled condition. The number of area radiation monitors will change.
7.9.2, Area Radiation Monitoring, 2 <sup>nd</sup> paragraph	These detectors can also monitor the high level of radiation that would be characteristic of the post-accident atmosphere in containment. The detectors are desensitized by a lead shield.	Deleted.	Reflect the permanently shutdown and defueled condition.
7.9.7, Seismic Monitoring System, 3 <sup>rd</sup> paragraph, last sentence	A video display will provide quick, accurate determinations to be made based on the seismic event, and to determine if a plant shutdown is required.	A video display will provide quick, accurate determinations to be made based on the seismic event.	Reflect the permanently shutdown and defueled condition.
7.9.7, Seismic Monitoring System, 4 <sup>th</sup> paragraph	In keeping with the purposes of the system, loss of site power will not prevent system operation. Backup power is supplied from the Station Battery, and also an internal battery in the network control center and each recorder.	In keeping with the purposes of the system, loss of site power will not prevent system operation. Backup power is supplied from an internal battery in the network control center and each recorder.	Reflect the permanently shutdown and defueled condition.
7.9.9, Control Room Instrumentation, 1 <sup>st</sup> paragraph	Control Room Instrumentation measures appropriate parameters that are indicative of the status of various plant systems and the reactor itself.	Control Room Instrumentation measures appropriate parameters that are indicative of the status of various SFP systems.	After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer



Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
			applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
7.9.9, Control Room Instrumentation, 2 <sup>nd</sup> and 3 <sup>rd</sup> paragraphs	<p>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.</p> <p>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.</p>	<p>Paragraph is deleted.</p> <p>USAR Table 7.5-1 provides a listing and a description of Control Room instrumentation that would be used in performing continued assessment of facility conditions.</p>	<p>After docketing of the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.</p>
7.9.10, Laboratory Facilities, 1 <sup>st</sup> paragraph	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 operations when conditions permit.	The Davis-Besse laboratory facilities are equipped to provide the water chemistry and radiochemical analysis support required during normal SFP operations. This equipment can also be utilized in the analysis of abnormal events when conditions permit.	After docketing the certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, reactor status is no longer applicable. With irradiated fuel being stored in the Spent Fuel Pool, it becomes the focus of operations.
7.9.10.b	For reactor coolant system sampling, a shielded, high-pressure	Deleted.	No longer required post shutdown.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	sampler is available for pressurized samples. These samples are obtained using the Post Accident Sampling System (PASS) which was designed specifically for this purpose.		
7.9.10.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.	Deleted.	No longer required post shutdown.
7.12, <u>Damage Control Equipment</u> , 2 <sup>nd</sup> paragraph	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.	Each maintenance crew is qualified and, when required, certified to perform the tasks associated with their craft in the working environment of a permanently shutdown and defueled nuclear plant.	Reflect the permanently shutdown and defueled condition.
Figure 7-1, <u>EMERGENCY FACILITIES BY GENERAL LOCATION</u>	Institute of Nuclear Power Operations Emergency Response Center (ERC) Atlanta Georgia	Deleted.	Davis-Besse will no longer be an operating plant and support from INPO is not expected.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
8.0, <u>MAINTENANCE OF EMERGENCY PREPAREDNESS</u>	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 Site Vice President - DB Nuclear in meeting these assigned responsibilities, an Emergency Response Manager, has been designated. The specific responsibilities of the Emergency Response Manager are described in	Efforts will be made to assure continuous emergency preparedness and operational readiness among Company personnel and the offsite response agencies and organizations. The General Plant Manager has been assigned the overall responsibility for emergency preparedness as related to the DBNPS. This responsibility includes not only maintenance of the DBNPS Post-Shutdown 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 General Plant Manager is also responsible for training of personnel who implement the Plan and Procedures. To assist the General Plant Manager in meeting these assigned responsibilities, an Emergency Response Manager, has been designated. The specific responsibilities of the Emergency Response Manager are described in	Editorial change – title.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	the following subsections; and in particular, subsection 8.1.3.	the following subsections; and in particular, subsection 8.1.3.	
8.1.1, Training, 1 <sup>st</sup> paragraph	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.	All personnel permitted access to the DBNPS protected area will take part in a formal training program under the direction of the General Plant Manager. This training program provides for the indoctrination of Company employees and contractors. In addition it provides specialized training for CFHs, chemistry personnel, radiation protection personnel, and personnel assigned specific responsibilities in the ERO.	Editorial change – title. Reflect the change to post shutdown staff, which will include CFHs rather than licensed operators.
8.1.1, Training, 2 <sup>nd</sup> paragraph	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:	The General Plant Manager 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 Post-Shutdown Emergency Plan, includes the following:	Editorial change – title.
8.1.1.a	All DBNPS staff personnel requiring unescorted access will receive training related to Emergency	All DBNPS staff personnel requiring unescorted access will receive industry standard training for	Reflect the permanently shutdown and defueled condition. Simplifies the Emergency Plan by replacing an explicit list with a reference to industry standard training.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<p>Response. This training will be completed initially, prior to being granted unescorted access, and annually to maintain unescorted access.</p> <p>With regard to Emergency Response, the following objectives have been established:</p> <ol style="list-style-type: none"> <li>1. State the purpose of the Post-Shutdown Emergency Plan, and associated procedures.</li> <li>2. State the classifications of station emergencies.</li> <li>3. Recognize the emergency alarms and state the proper response for each.</li> <li>4. State the actions required during Post-Shutdown Emergency Plan implementation.</li> <li>5. State the purpose and importance of accountability.</li> <li>6. Identify the location of emergency facilities and assembly areas inside the Protected Area and Owner Controlled Area.</li> </ol>	<p>unescorted access to a nuclear power plant and any specific training determined by DBNPS post shutdown.</p> <p>Deleted.</p>	

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<p>7. Discuss evacuation plans, including identification of evacuation routes.</p> <p>8. State the company's policy concerning the release of information to the public and news media regarding an emergency.</p> <p>9. State the function of the Prompt Notification System.</p> <p>10. Identify the appropriate communication system to be used for reporting emergencies, locating an individual in the facility, and conducting lengthy discussions.</p> <p>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.</p>		
8.1.2.a, 3 <sup>rd</sup> paragraph	All drills and exercises are subject to the approval of the General Plant Manager. In addition, the Site Vice President, DB Nuclear will approve the Biennial Exercise.	All drills and exercises are subject to the approval of the General Plant Manager.	Site Vice President, DB Nuclear will not exist in the post shutdown organization.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
8.1.2.b.3	Obtain the approval of the General Plant Manager (DB), and the Site Vice President-DB Nuclear (for the Biennial Exercise).	Obtain the approval of the General Plant Manager (DB).	Site Vice President, DB Nuclear will not exist in the post shutdown organization.
8.1.2.c.6.b	An annual drill will be conducted which includes an analysis of actual in-plant liquid samples (Reactor Coolant System) with simulated elevated radiation levels.	Deleted.	No longer required post shutdown.
8.3, <u>Review and Update of the Emergency Plan and Emergency Plan Procedures, 1<sup>st</sup> paragraph</u> , last sentence	This is more clearly defined in the Updated Safety Analysis Report (USAR), Section 13.3	This is more clearly defined in the Updated Safety Analysis Report (USAR).	Editorial – simplification.
8.3.2, last paragraph	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 Site Vice President – DB Nuclear.	Results of each annual and biennial review and update (if needed) of the Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan and Emergency Plan procedures will be reported to the General Plant Manager.	Site Vice President, DB Nuclear will not exist in the post shutdown organization.
Table 8-1, PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL	Emergency Assistant Plant Manager Station personnel designated as Emergency Assistant Plant Manager Emergency Assistant Plant Manager shall periodically receive training on	Deleted.	This training is no longer applicable in the permanently shutdown and defueled condition.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	DBNPS Emergency and Abnormal Operating Procedures and reactor thermal shock considerations equivalent to that received by SRO licensed individuals		
Table 8-1, PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL	Licensed Operators Shift Managers Unit 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.	Certified Fuel Handlers Shift Managers Other Certified staff members Certified Fuel Handlers receive extensive on-the-job and formal training as scheduled and conducted by the CFH training program. This program includes a comprehensive review of the DBNPS Post-Shutdown Emergency Plan and the Emergency Plan Procedures.	Editorial change – title.
Table 8-1, PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL	Personnel responsible for assessment of emergencies Emergency Director, Emergency Plant Manager, Emergency Offsite Manager, Shift Managers, Shift Technical Advisors (STAs), Key Emergency Response Personnel	Personnel responsible for assessment of emergencies Emergency Director, Emergency Plant Manager, Emergency Offsite Manager, Shift Managers, Key Emergency Response Personnel	Reflect changes for post shutdown staffing. Reflect the change to post shutdown. Site Vice President – DB Nuclear will not exist post shutdown.



Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
	<p>Staff personnel designated by the General Plant Manager who may act as OSC and TSC Managers.</p> <p>Other members of the Nuclear Group staff as designated by the Site Vice President - DB Nuclear</p> <p>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.</p>	<p>Staff personnel designated by the General Plant Manager who may act as OSC and TSC Managers.</p> <p>Training will include the Post-Shutdown 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 Post-Shutdown Emergency Plan and Emergency Plan 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.</p>	
Table 8-1, PERIODIC TRAINING OF EMERGENCY	Post Accident Sampling Personnel	Deleted.	Not required post shutdown.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
RESPONSE 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 systems and a walkdown of the system equipment.		
9.1, <u>Reentry</u> , 2 <sup>nd</sup> paragraph	... <u>The Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan</u> .	... <u>The Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan</u> .	Editorial – grammar.
9.2, <u>Recovery</u> , 2 <sup>nd</sup> paragraph	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.	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 status.	Reflect permanently shutdown and defueled condition.
9.2.1.f	Containment pressure is within technical specifications.	Deleted.	Reflect permanently shutdown and defueled condition. Containment pressure is not relevant in the permanently shutdown and defueled condition.
9.2.1.g	The reactor is in a stable safe shutdown condition and long-term core cooling is available as required.	The SFP is in a stable safe condition and long-term spent fuel cooling is available as required.	Reflect permanently shutdown and defueled condition.

Emergency Plan Section	Before (Rev. 33)	After (Pending Revision Number)	Reason for Change
9.2.2.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).	For events involving significant damage to systems required to maintain SFP cooling, the onsite emergency organization, or portions thereof, should be adequate to coordinate the necessary recovery actions (e.g., for ALERT classifications).	Reflect permanently shutdown and defueled condition.
9.2.2.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).	For events involving significant damage to the SFP or damage to the spent fuel resulting in a radiological release, a formal Recovery Organization will be established to manage the recovery actions (e.g., for SITE AREA or GENERAL EMERGENCY classifications).	Reflect permanently shutdown and defueled condition.
9.2.2, 4 <sup>th</sup> paragraph	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.	In the final phase of the recovery operations, a restoration program will begin. The overall purpose of the restoration program is to return to safe storage of spent fuel. This program will include a detailed incident analysis. Determinations will be made as to the repair work required to perform needed modifications to equipment and/or procedures.	Reflect permanently shutdown and defueled condition.

<b>Emergency Plan Section</b>	<b>Before (Rev. 33)</b>	<b>After (Pending Revision Number)</b>	<b>Reason for Change</b>
9.2.3.d.2	Coordinate the development of plans and procedures in support of plant systems and operations activities.	Coordinate the development of plans and procedures in support of SFP systems and activities.	Reflect permanently shutdown and defueled condition.
9.2.3.e.3	Provide recommendations to the Outage Director regarding plant operations-related aspects of the recovery.	Provide recommendations to the Outage Director regarding SFP operations-related aspects of the recovery.	Reflect permanently shutdown and defueled condition.
Figure 9-1 RECOVERY ORGANIZATION FRAMEWORK	Scheduling Manager block included reference to Recovery Advisor Material Manager block included reference to Resour[c]e Coordinator	Removed Recovery Advisor and Resour[c]e Coordinator references.	Reflect Post-Shutdown ERO organization.
Appendix A, Off-Normal Occurrence Procedure	10. Containment Evacuation RA-EP-02861 2.7, 6.4.1 11. Loss of Containment Integrity RA-EP-02865 2.7	Deleted.	Reflect permanently shutdown and defueled condition. Editorial – remainder of listing was renumbered due to the two deletions.
Appendix A, NUREG	B3 5.2.1, 5.3.1 – 5.3.3	B3 5.2.1, 5.3.1 – 5.3.2	Reflect Post-Shutdown ERO organization.
Appendix C	Institute of Nuclear Power Operations	Deleted.	Davis-Besse will no longer be an operating plant and support from INPO is not expected.
Appendix F, title	Davis-Besse Nuclear Power Station (DBNPS) ERO On-Shift Staffing Analysis Report	Davis-Besse Nuclear Power Station (DBNPS) ERO Post-Shutdown On-Shift Staffing Analysis Report	Reflect the change to post shutdown.

## Attachment 2

Proposed Revisions to the DBNPS Emergency Plan, Revision 33  
(Marked-up Version)  
(196 Pages Follow)

**DAVIS-BESSE**  
**NUCLEAR POWER STATION**  
**POST-SHUTDOWN**  
**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 Preparedness and Response in contributing to this safety as well as contributing to Station reliability is also recognized.

In accordance with this philosophy, this Post-Shutdown 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 33 TBD of the Post-Shutdown Emergency Plan meets the requirements of 10 CFR 50.54(q). Changes made in Revision 33 TBD of the ~~Emergency Plan~~ do not decrease its effectiveness. The Plan has been revised in accordance with NRC Safety Evaluation [TBD].

The issuance and control of this Post-Shutdown Emergency Plan and activities associated with Emergency Response at the Davis-Besse Nuclear Power Station are the responsibility of the ~~Site Vice President, DB Nuclear~~ General Plant Manager. Additions, deletions, or modifications to the Post-Shutdown Emergency Plan shall be approved by the Emergency Response ~~Manager, the Director, Site Performance Improvement, and Manager and~~ the General Plant Manager. It is intended that this Post-Shutdown Emergency Plan and the Emergency Plan Procedures be fully compatible with the applicable requirements for quality assurance set forth in the FENOC Nuclear Assurance Program Manual.

The Emergency Response Manager is hereby assigned the responsibility for emergency preparedness operations with authority as established in this Post-Shutdown Emergency Plan and outlined above. Day-to-day maintenance and implementation of the Emergency Response Program is the responsibility of the Emergency Response Manager and the Emergency Response Section.

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Emergency Response Manager

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Date

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Director, Site Performance Improvement

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Date

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General Plant Manager

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Date

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\_\_\_\_\_  
Site Vice President DB Nuclear

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\_\_\_\_\_  
Date



**Davis-Besse Nuclear Power Station**  
**Post-Shutdown Emergency Plan**  
**Revision ~~33~~ TBD**

Summary of Plan Changes

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Full revision to address implementation of the Post-Shutdown Emergency Plan. No revision bars are used to identify the changes.

The changes to the on-shift and augmented Emergency Response Organization staffing support the permanent cessation of power operations of the Davis-Besse Nuclear Power Station and the permanent removal of fuel from the reactor vessel.

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- F. Davis-Besse Nuclear Power Station (DBNPS) ERO Post-Shutdown On-Shift Staffing Analysis Report



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## 1.0 DEFINITIONS

Listed below are terms and their definitions as used in the Post-Shutdown Emergency Plan. Defined terms associated with the Emergency Action Levels in Appendix E are shown in ALL UPPER CASE LETTERS.

- 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 the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.
- 1.3 Alternate Technical Support Center (ATSC) - An area within the Lindsey Emergency Response Facility, which has the capability to display and transmit plant-facility status information to individuals who are knowledgeable of, and responsible for engineering and management support of ~~reactor~~-SFP operations in the event of an emergency situation.
- 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 Davis-Besse Nuclear Power Station NRC Operating License No. NPF-3.
- 1.9 Compensatory Indications  
Plant Process Computer, SPDS, and PI Data (Process Book).
- 1.10 CONFINEMENT BOUNDARY  
The barrier(s) between spent fuel and the environment once the spent fuel is processed for dry storage. As related to the DBNPS Dry Fuel Storage Facility, CONFINEMENT BOUNDARY is defined as the Dry Shielded Canister (DSC).

## ~~1.11~~ CONTAINMENT CLOSURE

The procedurally defined actions taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under existing plant facility conditions.

~~1.12~~1.11 Contaminated Area

An area where removable contamination exists at levels in excess of 1000 dpm/100cm<sup>2</sup> beta gamma or 20 dpm/100cm<sup>2</sup> alpha.

~~1.13~~ 1.12 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.

~~1.14~~1.13 Controlled Release

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

## 1.151.14 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.

## 1.161.15 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.

~~1.17~~ 1.16 Drill

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

4.181.17	EMERGENCY ACTION LEVEL (EAL)
----------	------------------------------

A pre-determined, site-specific, observable threshold for an Initiating Condition that, when met or exceeded, places the plant/facility in a given emergency classification level.

~~4.191.18~~ EMERGENCY CLASSIFICATION LEVEL (ECL)

One of a set of names or titles established by the US Nuclear Regulatory Commission (NRC) for grouping off-normal events or conditions according to (1) potential or actual effects or consequences, and (2) resulting onsite and offsite response actions. The emergency classification levels, in ascending order of severity, are:

- Unusual Event (UE)
- Alert (A)
- Site Area Emergency (SAE)
- General Emergency (GE)

~~4.201.19~~      **Emergency Operations Facility (EOF)**

An area located at 1240 South Main Street, Lindsey, Ohio, which is equipped to facilitate the control and coordination of emergency activities and assessments.

## ~~1.21 Emergency Core Cooling System~~

### **Engineered safety features system comprised of the Low Pressure Injection, High Pressure Injection, and Core Flood Systems**

## 1.221.20 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.

## 1.231.21 Post-Shutdown Emergency Plan

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

## 1.241.22 Emergency Plan Procedures

Those procedures which implement the Post-Shutdown Emergency Plan and are maintained by the Emergency Response Section. They include the Emergency Plan Implementing Procedures, Off-Normal Occurrence Procedures, and Administrative Procedures.

## 1.251.23 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 for a Plume Exposure Pathway; and the other, with a radius of 50 miles for an Ingestion Exposure Pathway. In these zones, predetermined Protective Action plans are needed.

1-261.24 EPA PROTECTIVE ACTION GUIDELINES

**Environment Protection Agency Protective Action Guidelines.** The EPA PAGs are expressed in terms of dose commitment: 1 Rem TEDE or 5 Rem CDE Thyroid. Actual or projected offsite exposures in excess of the EPA PAGs requires DBNPS to recommend protective actions for the general public to offsite planning agencies.

1.271.25      **Essential Personnel**

Those assigned specific emergency response duties as identified in the Post-Shutdown Emergency Plan.

1.281.26	Exclusion Area
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The area surrounding the plant facility in which the licensee has the authority to determine all activities including the exclusion or removal of persons and property. At the 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.

1.291.27 Exercise

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

1.3028 EXPLOSION

A rapid, violent and catastrophic failure of a piece of equipment due to combustion, chemical reaction or overpressurization. A release of steam (from high energy lines or components) or an electrical component failure (caused by short circuits, grounding, arcing, etc.) should not automatically be considered an EXPLOSION. Such events may require a post-event inspection to determine if the attributes of an EXPLOSION are present.

~~1.31~~ FAULTED

~~The term applied to a steam generator that has a steam leak on the secondary side of sufficient size to cause an uncontrolled drop in steam generator pressure or the steam generator to become completely depressurized.~~

1.3229 FIRE

Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute FIRES. Observation of flame is preferred, but is not required if large quantities of smoke and heat are observed.

~~1.33~~ FISSION PRODUCT BARRIER THRESHOLD ~~A pre-determined, site-specific, observable threshold indicating the loss or potential loss of a fission product barrier~~

1.3430 FLOODING

A condition where water is entering a room or area faster than installed equipment is capable of removal, resulting in a rise of water level within the room or area.

1.3531 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)

1.3632 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.

1.3733 GENERAL EMERGENCY

Events are in progress or have occurred which involve actual or IMMINENT substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

1.3834 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.

1.3935 HOSTAGE

A person(s) held as leverage against the station to ensure that demands will be met by the station.

1.4036 HOSTILE ACTION

An act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take HOSTAGES, and/or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, PROJECTILES, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power plant. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the OWNER CONTROLLED AREA).

1.4137 HOSTILE FORCE

One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.

1.4238 IMMINENT

The trajectory of events or conditions is such that an EAL will be met within a relatively short period of time regardless of mitigation or corrective actions.

1.4339 IMPEDE(D)

Personnel access to a room or area is hindered to an extent that extraordinary measures are necessary to facilitate entry of personnel into the affected room/area (e.g., requiring use of protective equipment, such as SCBAs, that is not routinely employed).

1.4440 INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)

A complex that is designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage.

1.4541 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:

- Ingestion of contaminated drinking supplies, such as water or milk,
- Ingestion of contaminated food, such as fresh vegetables or aquatic foodstuffs.

1.4642 INITIATING CONDITION (IC)

An event or condition that aligns with the definition of one of the four emergency classification levels by virtue of the potential or actual effects or consequences.

1.4743 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 1985, the reference datum was revised upward by 0.57 feet.

1.4844 Joint Information Center

A location for coordinating news statements 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.

1.4945 Loss

A state of inoperability in which Functional and Operable status cannot be maintained.

1.5046 Low Population Zone

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

1.5147 MAINTAIN

Take appropriate action to hold the value of an identified parameter within specified limits.

1.5248 Mitigative 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).

1.5349 Modes of Discharge

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

1.5450 News Statement

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

1.515 Non-essential Personnel

Personnel who are not pre-assigned specific emergency response duties.

1.5652 Normal Levels

The highest reading in the past twenty-four hours excluding the current peak value.

1.5753 Nuclear Group

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

1.5854 Offsite

Any area outside the OWNER CONTROLLED AREA.

1.5955 Onsite

The area within the OWNER CONTROLLED AREA.

1.6056 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).



## 1.6457 Operations Support Center

A location within the PROTECTED AREA where emergency response teams are assembled, briefed and coordinated during an emergency.

~~1.6258~~ OWNER CONTROLLED AREA (OCA)

The property associated with the station and owned by the company. Access is normally limited to persons entering for official business.

### 1.6359 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)

### 1.6460 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.].

### 1.6561 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:

- Whole body external exposure to gamma radiation from the radioactive plume and from deposited material,
- Inhalation exposure from the passing radioactive plume.

1.6662 Population At Risk

Those persons for whom Protective Actions are being or would be taken.

## 1.6763 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.

## 1.6864 PROJECTILE

An object directed toward a nuclear power plant that could cause concern for its continued operability, reliability, or personnel safety.

**1.6965 PROTECTED AREA**

**An area that normally encompasses all controlled areas within the security protected area fence.**

1.7066 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.

1.7167 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 the Davis-Besse Nuclear Power Station, the State of Ohio, and both Ottawa and Lucas Counties.

1.7268 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.

1.7369 Radiation Work Permit

A document which gives radiation protection requirements, authorization to enter the radiologically controlled area, and permission to receive radiation dose.

1.7470 Radiologically Controlled Area (RCA)

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.

1.7571 Radiological Testing Laboratory

A facility near the Technical Support Center 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.

~~1.76 RCS INTACT~~ The RCS should be considered intact when the RCS pressure boundary is in its normal condition for the cold shutdown mode of operation (e.g., no freeze seals or nozzle dams)

1.7772 Recovery Actions

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

~~1.78 REFUELING PATHWAY~~ The reactor refueling canal, spent fuel pool and fuel transfer canal comprise the REFUELING PATHWAY

1.7973 Release

A radiological release (airborne or liquid) to the outside environment attributable to the emergency event.

1.8074 RESTORE

Take the appropriate action required to return the value of an identified parameter to the applicable limits.

~~1.81 RUPTURED~~

~~The condition of a steam generator in which primary to secondary leakage is of sufficient magnitude to require a safety injection.~~

1.8275 Safety Parameter Display System (SPDS) – A computer system that acquires and displays plant-facility data. This system provides data to Operator Aids and the Emergency Response Data System (ERDS).

~~1.83 SAFETY SYSTEMA system required for safe plant operation, cooling down the plant and/or placing it in the cold shutdown condition, including the ECCS. These are typically systems classified as safety related (as defined in 10CFR50.2): Those structures, systems and components that are relied upon to remain functional during and following design basis events to assure:~~

- ~~(1) The integrity of the reactor coolant pressure boundary;~~
- ~~(2) The capability to shut down the reactor and maintain it in a safe shutdown condition;~~
- ~~(3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures~~

1.8476 SECURITY CONDITION

Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.

1.8577 Shift Manager's Office

A facility that is located within the Control Room envelope and ~~is~~ may be 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~~facility activities.

1.8678 SITE AREA EMERGENCY

Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that result in intentional damage or malicious acts: 1) toward site personnel or equipment that could lead to the likely failure of or; 2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

1.8779 SITE BOUNDARY

Area as depicted in UFSAR Figure 1.2-12 Site Plan. The SITE BOUNDARY is defined at a minimum exclusion distance of 0.75 miles. This is the nearest distance from potential release points at which protective actions would be required for members of the public.

1.8880 State

The State of Ohio.

1.8981 Technical Support Center (TSC)

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

1.9082 Uncontrolled Release

Any release of radioactivity from Davis-Besse Nuclear Power Station to the surrounding

environment which can be described by any one or combination of the following terms: unplanned, unintentional, and unregulated.

1.9483 UNISOLABLE

An open or breached system line that cannot be isolated, remotely or locally.

1.9284 UNPLANNED

A parameter change or an event that is not 1) the result of an intended evolution or 2) an expected plant-facility response to a transient. The cause of the parameter change or event may be known or unknown.

1.9385 UNUSUAL EVENT

Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

1.9486 VALID

An indication, report, or condition, is considered to be VALID when it is verified by: 1) an instrument channel check, 2) indications on related or redundant indicators, or 3) by direct observation by plant-facility personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

1.9587 VISIBLE DAMAGE

Damage to a component or structure that is readily observable without measurements, testing, or analysis. The visual impact of the damage is sufficient to cause concern regarding the operability or reliability of the affected component or structure.

1.9688 Vital Equipment

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

1.93 UNUSUAL EVENT

Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

1.94 VALID

An indication, report, or condition, is considered to be VALID when it is verified by: 1) an instrument channel check, 2) indications on related or redundant indicators, or 3) by direct observation by ~~plant~~ facility personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

1.95 VISIBLE DAMAGE

Damage to a component or structure that is readily observable without measurements, testing, or analysis. The visual impact of the damage is sufficient to cause concern regarding the operability or reliability of the affected component or structure.

1.96 Vital Equipment

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**

AC	Alternating Current
<del>AFW</del>	<del>Auxiliary Feed Water</del>
ATSC	Alternate Technical Support Center
ALARA	As Low As is Reasonably Achievable
<del>APRM</del>	<del>Average Power Range Meter</del>
ARM	Area Radiation Monitor
<del>ATWS</del>	<del>Anticipated Transient Without Scram</del>
B&W	Babcock and Wilcox
<del>BWR</del>	<del>Boiling Water Reactor</del>
<del>BWST</del>	<del>Borated Water Storage Tank</del>
CA	Controls Area (in control room)
CAC	Corporate Assistance Center
CAM	Continuous Air Monitor
CANS	Computerized Automated Notification System
CAS	Central Alarm Station
<del>CCW</del>	<del>Component Cooling Water</del>
CDE	Committed Dose Equivalent
CE	Combustion Engineering
<del>CFH</del>	<del>Certified Fuel Handler</del>
CFR	Code of Federal Regulations
CNRB	Company Nuclear Review Board
<del>CRA</del>	<del>Control Rod Assembly</del>
CRM	Containment Radiation Monitor
<del>CSF</del>	<del>Critical Safety Function</del>
<del>CSFST</del>	<del>Critical Safety Function Status Tree</del>
<del>CTMT/CNMT</del>	<del>Containment</del>
CTRM	Control Room
cpm	counts per minute
DADS	Data Acquisition and Display System
DBAB	Davis-Besse Administration Building
DBABA	Davis-Besse Administration Building Annex
DBNPS	Davis-Besse Nuclear Power Station
<del>DBTC</del>	<del>Davis-Besse Training Center</del>
DC	Direct Current
DFSF	Dry Fuel Storage Facility
<del>DHR</del>	<del>Decay Heat Removal</del>
DOE	Department of Energy
DOT	Department of Transportation
DPM	Decades Per Minute
dpm	disintegration's per minute
E&C	Electrical and Controls
EAL	Emergency Action Level
EAS	Emergency Alert System
<del>ECCS</del>	<del>Emergency Core Cooling System</del>
ECL	Emergency Classification Level
ED	Emergency Director

**TABLE 1-1**  
**ACRONYMS**

EEC	Energy Education Center
EMA	Emergency Management Agency
ENS	Emergency Notification System (NRC "red phone")
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
EPA	Environmental Protection Agency
EPG	Emergency Procedure Guideline
EPID	Emergency Plan Implementing Procedure
EPRI	Electric Power Research Institute
EPZ	Emergency Planning Zone
ERG	Emergency Response Guideline
ERO	Emergency Response Organization
ESF	Engineered Safety Feature
ESW	Emergency Service Water
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FE	FirstEnergy Corporation
FEMA	Federal Emergency Management Agency
FENOC	FirstEnergy Nuclear Operating Company
FSAR	Final Safety Analysis Report
GE	General Emergency
HPI	High Pressure Injection
HPCI	High Pressure Coolant Injection
HPSI	High Pressure Safety Injection
HPN	Health Physics Network
IC	Initiating Condition
I&C	Instrument and Control
IGLD	International Great Lakes Datum
IPEEE	Individual Plant Examination of External Events (Generic Letter 88-20)
ISFSI	Independent Spent Fuel Storage Installation
ITS	Improved Technical Specifications
JIC	Joint Information Center
Keff	Effective Neutron Multiplication Factor
LCEMA	Lucas County Emergency Management Agency
LCO	Limiting Conditions for Operation
LDE	Lens Dose Equivalent
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
LPI	Low Pressure Injection
LPSI	Low Pressure Safety Injection
LPZ	Low Population Zone
LWR	Light Water Reactor
MFW	Main Feed Water (pump)
mR	milliRoentgen
MSIV	Main Steam Isolation Valve

**TABLE 1-1**  
**ACRONYMS**

MSL	Main Steam Line
MSSV	Main Steam Safety Valve
MU	Makeup
MU HPI	Makeup High Pressure Injection
MW	Megawatt
MWe	Megawatt electric
MWt	Megawatt thermal
NCO	Non-Certified Operator
NEI	Nuclear Energy Institute
NESP	National Environmental Studies Project
NOAA	National Oceanographic and Atmospheric Administration
NORAD	North American Aerospace Defense Command
NOUE	Notification Of Unusual Event
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
NSSS	Nuclear Steam Supply System
NUMARC	Nuclear Management and Resources Council
OBE	Operating Basis Earthquake
OCA	Owner Controlled Area
OCEMA	Ottawa County Emergency Management Agency
ODCM/ODAM	Offsite Dose Calculation (Assessment) Manual
OEMA	Ohio Emergency Management Agency
ORO	Offsite Response Organization
OSHP	Ohio State Highway Patrol
OSC	Operations Support Center
OTSG/SG	Steam Generator
PA	Protected Area
PAF	Primary Access Facility
PAG	Protective Action Guide
PASS	Post Accident Sampling System (see ARCSS)
PNS	Prompt Notification System (siren system)
POAH	Point of Adding Heat
PORV	Power Operated Relief Valve
PRA/PSA	Probabilistic Risk Assessment / Probabilistic Safety Assessment
PWR	Pressurized Water Reactor
PSIG	Pounds per Square Inch Gauge
R	Roentgen
RCA	Radiologically Controlled Area
RCC	Reactor Control Console
RCDT	Reactor Coolant Drain Tank
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
REM	Roentgen Equivalent Man
REMP	Radiological Environmental Monitoring Program
RETS	Radiological Effluent Technical Specifications
RMT	Radiation Monitoring Team
RP	Radiation Protection



**TABLE 1-1**  
**ACRONYMS**

RPS	Reactor Protection System
RPV	Reactor Pressure Vessel
RO	Reactor Operator
RTL	Radiological Testing Lab
RVLIS	Reactor Vessel Level Indicating System
RWCU	Reactor Water Cleanup
RWP	Radiation Work Permit
SAM	Severe Accident Management
SAS	Secondary Alarm Station
SBGTS	Stand By Gas Treatment System
SBO	Station Blackout
SCBA	Self-Contained Breathing Apparatus
SDE	Shallow Dose Equivalent
SFP	Spent Fuel Pool
SG	Steam Generator
SI	Safety Injection
SPDS	Safety Parameter Display System
SRO	Senior Reactor Operator
SSE	Safe Shutdown Earthquake
STA	Shift Technical Advisor
TEDE	Total Effective Dose Equivalent
TOAF	Top of Active Fuel
TRM	Technical Requirements Manual
TSC	Technical Support Center
VPF	Visitor Processing Facility
UE	Unusual Event
USAR	Updated Safety Analysis Report
VDC	Volts DC
WE	Westinghouse Electric
WOG	Westinghouse Owners Group

**TABLE 1-2****COMMUNICATIONS TEST FREQUENCIES**

Monthly - At least once per calendar month

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 Post-Shutdown 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 Post-Shutdown 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 Post-Shutdown Emergency Plan is not the primary working document to be used during an emergency. The purpose of the Post-Shutdown Emergency Plan is to describe the program established at DBNPS to satisfy regulatory requirements and to safeguard the public and plant facility 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~~formerly employed a pressurized light water reactor steam supply system furnished by the Babcock & Wilcox Co. (now AREVA NP) to generate approximately 930 MWe. The reactor design core power ~~is was~~ 2817 MWt. The reactor permanently ceased power operations on [DATE] and was permanently defueled on [DATE]. Spent Fuel is stored in the Spent Fuel Pool (SFP) and the Independent Spent Fuel Storage Installation (ISFSI).

The Station encompasses 954 acres, of which more than 700 acres is marsh land. A portion of the marsh land is 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. Four (4) all-weather roads provide access to the site from Ohio Route 2. Figure 2-1 shows the general site location.

Site meteorological data for 2007 indicates that the prevailing winds at 10 meters above ground level are from the south/southwest. The average wind velocity at this level is 9.42 miles per hour (4.21 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 Davis-Besse Nuclear Power Station Development of Evacuation Time Estimates, Final Report Revision 2, 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 2010 Census information is 20,403 people. Approximately 89% 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 Davis-Besse Nuclear Power Station Development of Evacuation Time Estimates, Final Report Revision 2, which has been prepared in accordance with NUREG 0654/FEMA Rev.-1, Appendix 4.

The EPZ permanent resident population is reviewed annually. If at any time during the decennial period the EPZ permanent resident population increases such that it causes the longest ETE value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas, or for the entire 10-mile EPZ to increase by 25 percent or 30 minutes, whichever is less, from the currently NRC approved or updated ETE, FENOC updates the ETE analysis to reflect the impact of that population increase. The updated ETE analysis is submitted to the NRC under 10 CFR 50.4 no later than 365 days after

FENOC determines the criteria for updating the ETE have been met and at least 180 days before using it to form protective action recommendations and providing it to state and local governmental authorities for use in developing offsite protective action strategies.

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 or sheltering 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 and in NEI 99-01, Methodology for Development of Emergency Action Levels, Revision 6.

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

## 2.5 Objectives of Emergency Response

- 2.5.1 The objective of the Emergency Response Section 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 Post-Shutdown 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 Physical Security Plan and Procedures and this plan are coordinated to ensure that appropriate emergency actions can be taken. For example, the Physical 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 and Radiation Protection Nuclear Operating 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~~, AREVA NP, Bechtel, etc.).

## 2.7      Emergency Plan Procedures, Station Procedures and Fleet Business Practice

Detailed Emergency Plan Procedures direct the implementation of this Post-Shutdown Emergency Plan. Detailed Station procedures prescribe appropriate courses of action necessary to place the ~~plant~~ facility in a safe condition and limit the consequences for each classification of incident and/or emergency. Other Emergency Plan Procedures and a Fleet business practice detail maintenance of the Emergency Preparedness Program, Off Normal Occurrence Procedures (i.e. floods, tornadoes, etc.), Fleet emergency response support, and Public Relations. An index of these procedures and Fleet business practices are 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 Radiological Emergency Preparedness Plan, which includes the Ohio Radiological Emergency Preparedness (REP) Operations Manual and Ohio Emergency Operations Plan, Emergency Support Function #10, Hazardous Materials, Tab B – REP Incident Response Plan.
- 2.8.2 Ottawa County, The Ottawa County Radiological Emergency Response Plan
- 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 Post-Shutdown 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 <u>SFP</u> 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 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 Health Department  
Lucas County Engineer  
H.B.Magruder Hospital  
ProMedica Memorial Hospital  
Mercy 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

Areva, NP  
Bechtel Power Corp.

OTHER SUPPORT

American Nuclear Insurers  
Nuclear Mutual Limited

Figure 2-1

## DBNPS General Site Location

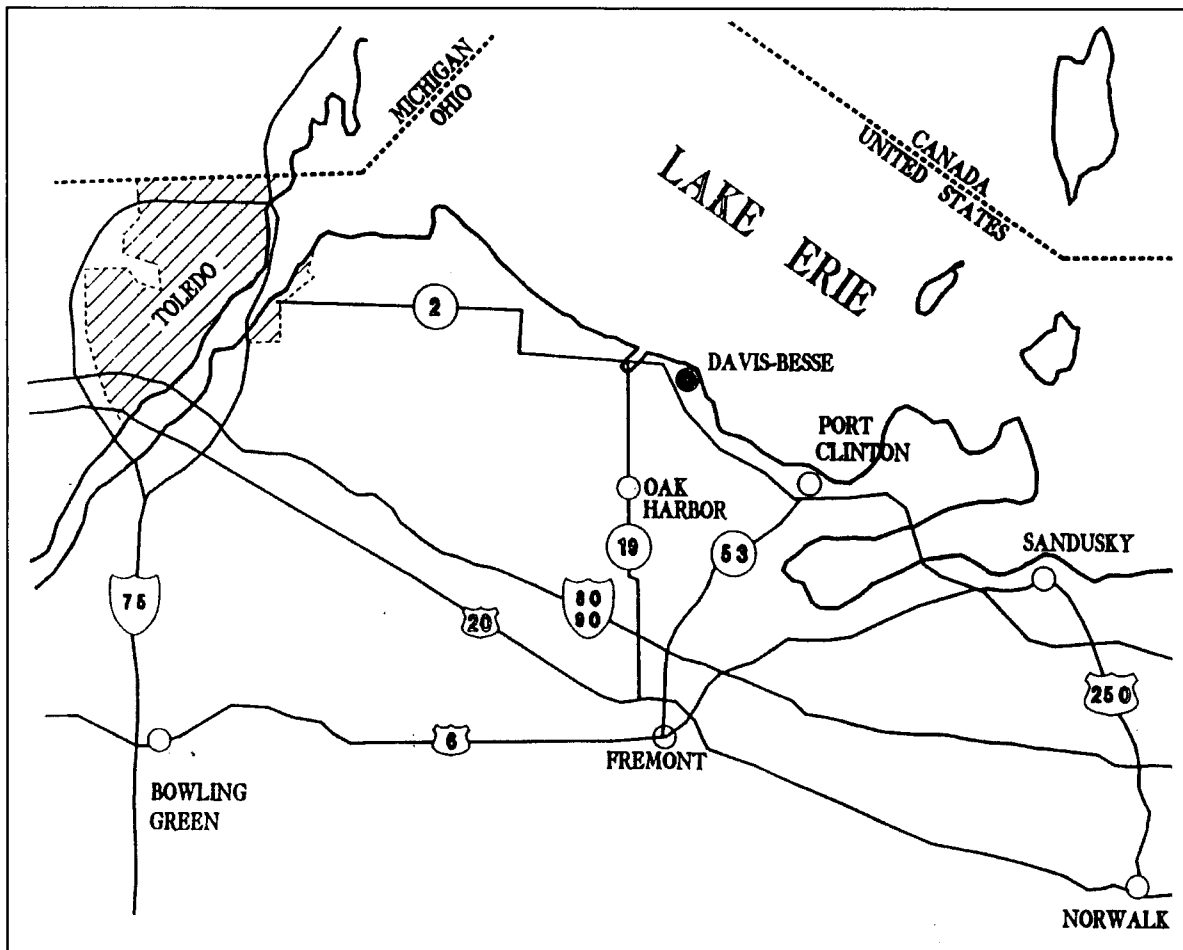
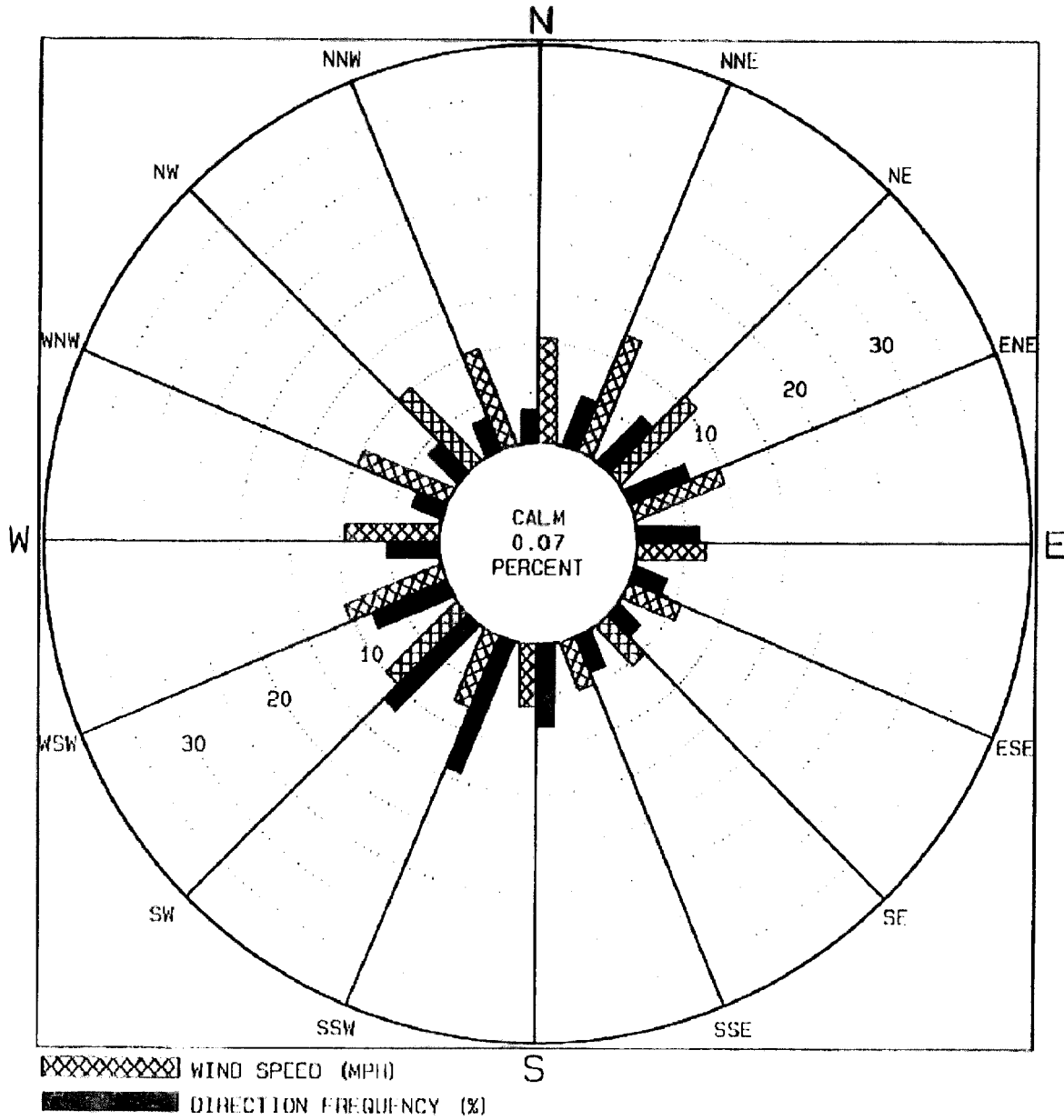


Figure 2-2  
DBNPS Site  
Annual Wind Distributions  
At the 10 Meter Level



DAVIS-BESSE  
ANNUAL 2011  
10M LEVEL

Figure 2-3

## DBNPS 10-Mile Emergency Planning Zone

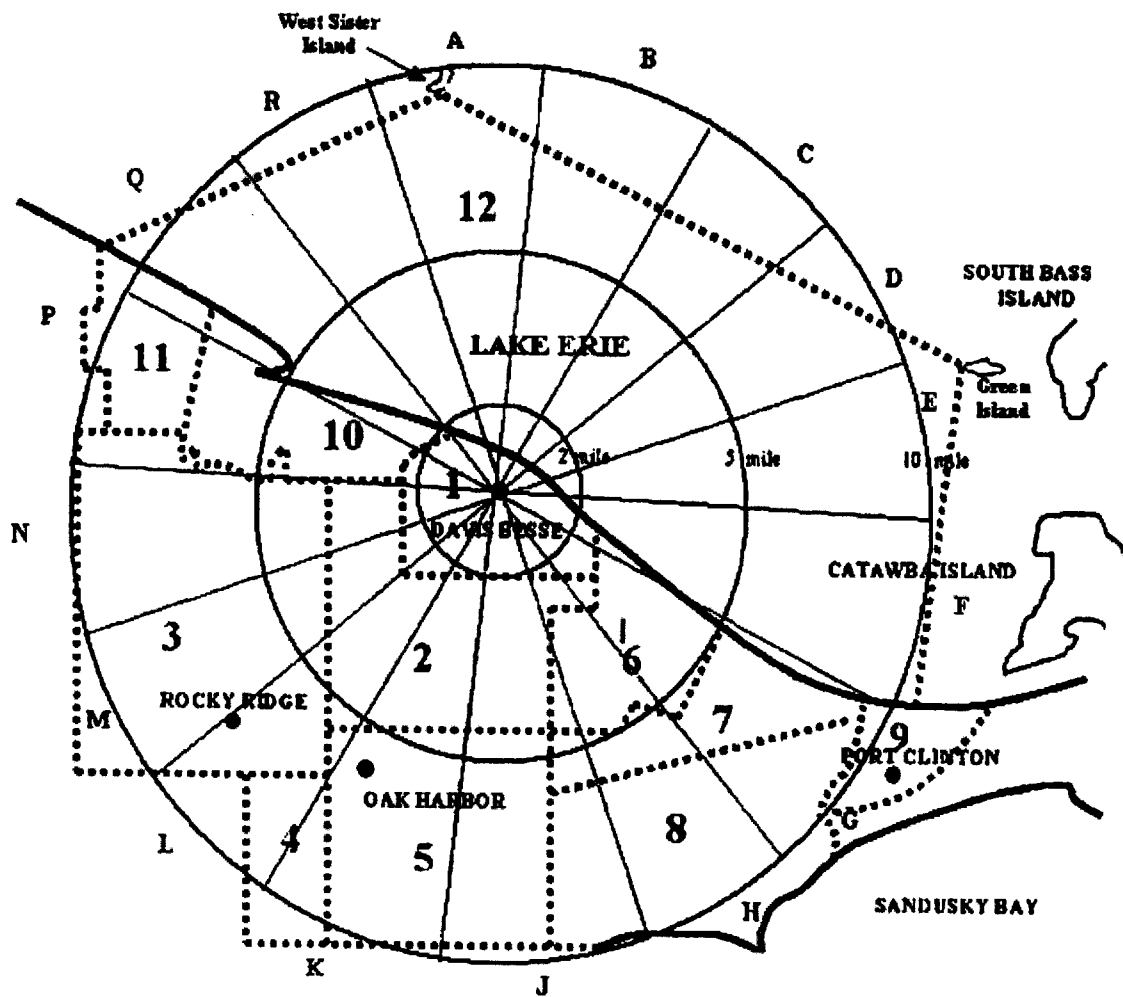
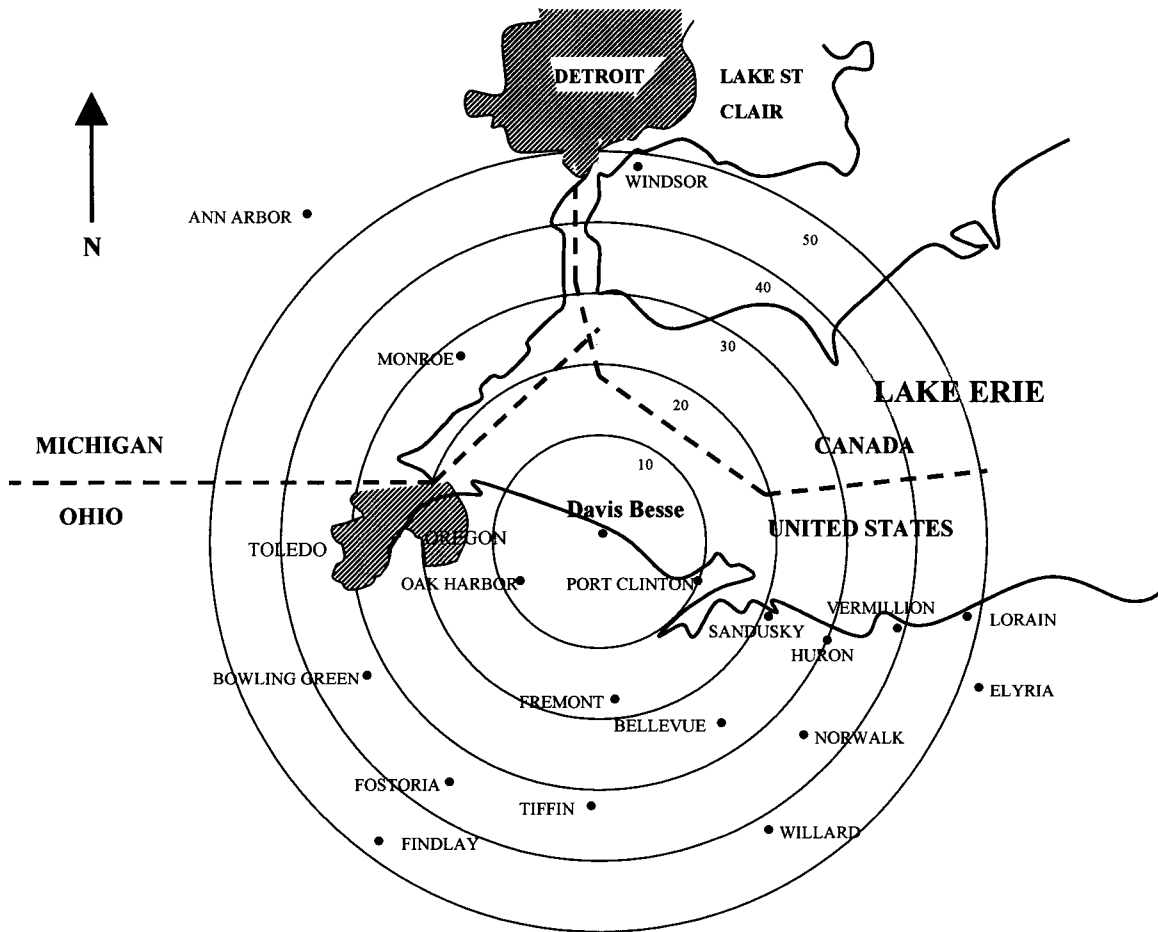


Figure 2-4

DBNPS 50-Mile Emergency Planning Zone



### 3.0 SUMMARY OF THE POST-SHUTDOWN EMERGENCY PLAN

The DBNPS Post-Shutdown 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 Post-Shutdown Emergency Plan will be put into effect whenever a radiological emergency or other potentially hazardous situation is identified. The details of the Post-Shutdown 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 Post-Shutdown 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 Post-Shutdown Emergency Plan Steps

In general, the Post-Shutdown 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 mitigative 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 Post-Shutdown 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 another qualified member of the on-shift staff ~~the Unit 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 or TSC. ~~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-on~~-shift crew is responsible for implementing emergency procedures in accordance with assigned response functions. Emergency response functions are also assigned to off-shift ~~plant facility~~ 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 Fleet Emergency Response Organization. Fleet emergency response 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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan.

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 Radiological Emergency Response Plan.

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 Onsite      Offsite		Necessity for Mitigative Actions <sup>1</sup>	Participation By Various Organizations		
				DBNPS		Offsite Agencies
				Onsite	Fleet Support	
Unusual Event	Possible	None	Possible	Notification Status <sup>2</sup>	Notification Status	Notification Status
Alert	Possible	Possible	Possible	Action	Standby Status <sup>3</sup>	Standby Status <sup>3</sup>
Site Area Emergency	Required	Possible	Probable	Action	Action	Action
General Emergency	Required	Required	Required	Action	Action	Action

<sup>1</sup>Action might include local fire support, ambulance service, medical assistance, or radiological assessment.

<sup>2</sup>Notification Status: Organization informed of situation onsite.

<sup>3</sup>Standby Status: Organization staffs preplanned centers, establishes communications, and assembles emergency teams, as required.

## 4.0 EMERGENCY CONDITIONS

### 4.1 Emergency Classification Levels (ECLs)

The Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan emergencies are divided into four Emergency Classification Levels (ECLs): GENERAL EMERGENCY, SITE AREA EMERGENCY, ALERT, and UNUSUAL EVENT.

The ECLs are arranged from most severe to least severe according to relative threat to the health and safety of the public and emergency workers. An ECL is determined to be met by identifying abnormal conditions and then comparing them to INITIATING CONDITIONS (ICs) through EMERGENCY ACTION LEVELS (EAL) and ~~Fission Product Barrier (FPB)~~ threshold values as discussed below. When multiple EALs are met, event declaration is based in the highest ECL reached. Post-Shutdown Emergency Plan, Section 6.0, Emergency Measures, summarizes the emergency measures to be taken by both the Onsite and corporate emergency response organizations.

#### 4.1.1 GENERAL EMERGENCY

Events are in progress or have occurred which involve actual or IMMINENT substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

#### 4.1.2 SITE AREA EMERGENCY

Events are in progress or have occurred which involve an actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts: 1) toward site personnel or equipment that could lead to the likely failure of or, 2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

#### 4.1.3 ALERT

Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

#### 4.1.4 UNUSUAL EVENT

Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

#### 4.1.5 RECOVERY

Recovery may be entered prior to returning to a normal organization and operation. Recovery provides dedicated resources and organizational structure in support of restoration and communication activities following the termination of the emergency event. Recovery phase is discussed in Section 9.0 of the Post-Shutdown Emergency Plan.

#### 4.2 EMERGENCY CLASSIFICATION

The Davis-Besse Nuclear Power Station maintains the capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications that an EAL has been exceeded. The 15-minute criterion commences when plant facility instrumentation, plant facility alarms, computer displays, or incoming verbal reports that correspond to an EAL first become available to any plant operator facility personnel.

#### 4.3 INITIATING CONDITION (ICs)

The INITIATING CONDITION (IC) and, EMERGENCY ACTION LEVELS (EALs) and the Fission Product Barrier (FPB) matrix with their related basis information are located in Appendix E of the Post-Shutdown Emergency Plan. The ICs provide a general description of emergency conditions that are organized beneath the broader categories of the ECLs. The IC can be a continuous, measurable function that is outside Technical Specifications, or encompass events such as FIRES or system/equipment failures.

Each IC is given a unique identification code consisting of four characters. The first character (letter) identifies the recognition category, the second character (letter) identifies the ECL, the third character (number) identifies the subcategory, and the fourth character (number) identifies the numerical sequence within the subcategory.

##### 4.3.1 Recognition Category Codes

- ~~F designates Fission Product Barrier Degradation~~
- R designates Abnormal Rad Levels / Rad Effluent
- H designates Hazards and Other Conditions Affecting Plant Safety
- S designates System Malfunctions
- C designates Cold Shutdown / Refueling System Malfunction
- E designates Dry Fuel Storage Facility (DFSF)

##### 4.3.2 Emergency Classification Level (ECL) Codes

- G designates GENERAL EMERGENCY
- S designates SITE AREA EMERGENCY
- A designates ALERT

- U designates UNUSUAL EVENT

The specific details on Initiating Conditions and their use are found in RA-EP-01500, Emergency Classification. The basis for the Emergency Action Levels is contained in Appendix E, DBRM-EMER-1500 A, Davis-Besse Emergency Action Levels Basis Document.

#### 4.4 EMERGENCY ACTION LEVELS (EALs) and Fission Product Barriers (FPBs)

EMERGENCY ACTION LEVELS (EALs) are predetermined, site specific, observable conditions within the ICs that place the state of the plant facility in a given ECL (Reference Post-Shutdown Emergency Plan, Appendix E).

EALs are individually identified by the IC identification code followed by the EAL number, such as RG1.1 for major effluent release or HU3.1 for tornado.

~~Fission Product Barriers (FPBs) are given unique character identification codes and are further subdivided into Loss and Potential loss categories. Meeting or exceeding one or more FPB can result in various ECLs. The first two letters simply identify the particular barrier by abbreviation. The letter in the FPB identification code associates it with a particular FPB recognition category. The FPB identification codes are developed as follows:~~

##### 4.4.1 Barrier Abbreviation Codes~~Deleted~~

- ~~— FC designates FUEL CLAD~~
- ~~— RC designates REACTOR COOLANT~~
- ~~— CT designates CONTAINMENT~~

##### 4.4.2 Fission Product Barriers (FPBs) Recognition Categories~~Codes Deleted~~

- ~~— A designates RCS or SG Tube Leakage~~
- ~~— B designates Inadequate Heat Removal~~
- ~~— C designates CT Radiation / RCS Activity~~
- ~~— D designates CT Integrity or Bypass~~
- ~~– E designates ED Judgment~~

~~Fission Product Barrier Thresholds are listed within each Fission Product Barrier Category, and are identified by a sequential number.~~

~~FPBs are treated the same as EALs in that they exist only as long as the condition(s) for loss or potential loss exist, as opposed to ECLs which once declared, remain in place until termination or recovery.~~

For EALs that contain time imbedded criterion, the Emergency Director should not wait until the applicable time period has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.

#### 4.4.3 Operating Mode Applicability Deleted

For purposes of event classification, the following operating mode applicability definitions establish the conditions when the EAL or FPB thresholds represent a threat:

TABLE 4-1  
Operating Mode Applicability

Mode	Reactivity Condition, Keff	% Rated Thermal Power*	Average Coolant Temperature
1) Power Operation	$\geq 0.99$	$> 5\%$	N/A
2) Startup	$\geq 0.99$	$\leq 5\%$	N/A
3) Hot Standby	$< 0.99$	N/A	$\geq 280^{\circ}\text{F}$
4) Hot Shutdown	$< 0.99$	N/A	$280^{\circ}\text{F} > T_{\text{avg}} > 200^{\circ}\text{F}$
5) Cold Shutdown	$< 0.99$	N/A	$\leq 200^{\circ}\text{F}$
6) Refueling	One or more vessel head closure bolts less than fully tensioned.		
D) Defueled	All reactor fuel removed from reactor pressure vessel (full core off load during refueling or extended outage).		

\* Excluding decay heat.

The Operating Mode Applicability table is based on the Technical Specifications definition of Operational Mode. ICs are based on the operating mode that exists at the time the event occurred, prior to any protective system or operator action initiated in response.

For events that occur in Cold Shutdown or Refueling, escalation is via EALs that have Cold Shutdown or Refueling for mode applicability, even if Hot Shutdown (or a higher mode) is entered during any subsequent heat up. In particular, the FPB threshold values are applicable only to events that initiate in Hot Shutdown or higher. If there is a change in operating mode following an event declaration, any subsequent events involving EALs outside of the current declaration escalation path will be evaluated on the mode of the plant at the time the subsequent events occur.

#### 4.4.4 Treatment of Multiple Events and Classification Level Upgrading

When multiple simultaneous events occur, the emergency classification level is based on the highest EAL reached. For example, two ALERTS remain in the ALERT category; or, an ALERT and a SITE AREA EMERGENCY is a SITE AREA EMERGENCY.

Although the majority of the EALs provide very specific thresholds, the Emergency Director must remain alert to events or conditions that lead to the conclusion that exceeding the EAL is IMMINENT. If, in the judgment of the Emergency Director, an IMMINENT situation is at hand, the

classification should be made as if the threshold has been exceeded. While this is particularly prudent at the higher emergency classification levels (as the early classification may provide for more effective implementation of protective measures), it is nonetheless applicable to all emergency classification levels. Figure 6-1 illustrates the scheme for upgrading emergency classification based on current conditions.

#### 4.4.5 Emergency Classification Level Downgrading

Another important aspect of usable EAL guidance is the consideration of what to do when the risk posed by an emergency is clearly decreasing. A combination approach involving recovery from a GENERAL EMERGENCY and some SITE AREA EMERGENCIES and termination from UNUSUAL EVENTS, ALERTS, and certain SITE AREA EMERGENCIES causing no long term ~~plant-facility~~ damage appears to be the best choice. Downgrading to lower emergency classification levels adds notifications but may have merit under certain circumstances. Figure 6-1 illustrates the options for downgrading or termination of events based on current ~~plant-facility~~ conditions. Recovery phase is discussed in Section 9.2.

#### 4.4.6 Classifying Transient Events

For some events, the condition may be corrected before a declaration has been made. The key consideration in this situation is to determine whether or not further ~~plant-facility~~ damage occurred while the mitigative actions were being taken. In some situations, this can be readily determined, in other situations, further analyses (e.g., ~~coolant radiochemistry sampling~~) may be necessary. Classify the event as indicated and terminate the emergency once assessment shows that there were no consequences from the event and other termination criteria are met.

Existing guidance for classifying transient events addresses the period of time of event recognition and classification (15 minutes). However, in cases when EAL declaration criteria may be met momentarily during the normal expected response of the ~~plant-facility~~, declaration requirements should not be considered to be met when the conditions are a part of the designed ~~plant-facility~~ response, or result from appropriate operator actions.

There may be cases in which a ~~plant-facility~~ condition that exceeded an EAL was not recognized at the time of occurrence but is identified well after the condition has occurred (e.g., as a result of routine log or record review), and the condition no longer exists. In these cases, an emergency should not be declared.

Reporting requirements of 10 CFR 50.72 are applicable and the guidance of NUREG-1022, Event Reporting Guidelines, 10 CFR 50.72 and 50.73, should be applied.

## 5.0 ORGANIZATIONAL CONTROL OF EMERGENCIES

In planning for emergencies the availability of the normally present ~~operating-on shift~~ 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 Post-Shutdown 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 Near Site Emergency Response Organization
- 5.6 Joint Information Center (JIC)
- 5.7 Corporate Assistance Center (CAC)
- 5.8 Supporting Emergency Organizations

### 5.1 DBNPS Organization

~~Daily operating~~Spent fuel storage and engineering activities at DBNPS are under the control of the ~~Vice President – Nuclear~~General Plant Manager.

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 Facility Management and Administrative Organization

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

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



### 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 Fleet Emergency Response Organization.

The Onshift Operations Group conforms with ANSI N18.1, and includes both management and operations ~~ing~~ 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 and, 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 Facility~~ Shift Staffing

The ~~plant's facility's~~ operating staff meets or exceeds the requirements of Technical Specification 5.2.2 and ~~Technical Requirements Manual 10.2.1~~. Table 5-1 MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES, A. ONSHIFT MINIMUM STAFFING REQUIREMENTS describes the minimum on shift staffing utilized to support the Post-Shutdown ~~e~~Emergency ~~p~~Plan.

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

- 1 ——— Chemistry Tester
- 1       Radiation Protection Technician
- 5       Fire Brigade Members (may have other assignments)
- \*       Nuclear Security Force
- \*safeguards information

An established duty roster system provides access to ~~plant facility~~ 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 SFP~~ operations always lies with the Shift Manager. The Shift Manager becomes the Emergency Director upon classification of an emergency at DBNPS.

~~A Unit Supervisor~~ Non-Certified Operators, who ~~is~~ are 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 Supervisor Non-Certified Operators may also direct employees to function as emergency maintenance personnel or to assist fire brigade team members. The An appropriately qualified Unit Supervisor Non-Certified Operator could assume 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 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 Security Shift Supervisor is responsible for coordinating the functions of the station security forces, and the operation and testing of security-related equipment. A Security Shift Supervisor will be onsite at all times.

## 5.2 DBNPS Emergency Management

In the event of a declared ALERT or higher level emergency, the Onsite and Near Site 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, or the Emergency Operations Facility (EOF).

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 Supervisor~~ Another qualified on-shift individual
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 or TSC. ~~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 storage of spent fuel in the SFP, plant facility assessment, emergency classification associated with plant facility parameters, and onsite actions taken to mitigate the emergency situation. The Emergency Plant Manager reports to and advises the Emergency Director on plant facility 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 onsite, 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 Information Center (JIC), conferring with the Emergency Director concerning plant-facility status, reviewing news statements with the Emergency Director, conferring with the JIC Manager concerning media response status, and acting as company spokesperson during media briefings.

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

#### 5.2.5 ~~Emergency Director Advisor~~Deleted

~~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-facility 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 Supervisor~~Deleted

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

~~The Unit 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)~~ Deleted

~~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 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 Security Shift Supervisor

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

### 5.3.5 ~~Onshift Maintenance Support~~Deleted

~~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, Electrical Maintenance, and Instrument 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~~ General Plant Manager. However, the Emergency Response Manager 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~~ staffing to satisfy emergency response requirements.

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

#### a. Control Room

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

#### b. Technical Support Center (TSC)

TSC staff will assess ~~plant~~ facility 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.

In the event that the onsite TSC is not accessible TSC personnel will utilize the Alternate TSC at the Lindsey Emergency Response Facility.

#### c. 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 and Near Site 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 and Near Site 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~~ safe storage of spent fuel in the SFP.

#### 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 facility. The Emergency Assistant Plant Manager advises the Emergency Plant Manager on plant facility 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 assessment and surveys are conducted within the Protected Area. The Emergency Radiation Protection Manager coordinates ~~plant~~ facility 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~~ facility 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~~ facility 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 performing an engineering assessment of ~~plant~~ facility conditions and/or actions needed to mitigate damage to the ~~plant~~ facility, continuously evaluate the need for engineering resources, and 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.

~~In addition to the TSC Operations Lead, other augmented, qualified engineering resources that may be requested R~~ eporting to the TSC Engineering Manager are the TSC Engineering Lead, and the TSC Operations Lead.

~~d. TSC Engineering Lead~~

~~The TSC Engineering Lead is staffed as appropriate, and 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~~

~~ee. TSC Operations Lead~~

~~The TSC Operations Lead is staffed as appropriate, and is responsible for coordinating and supervising the TSC Operations Engineering group with the on-shift operations staff. 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.~~

~~fd. 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. Emergency Facilities Services Manager~~

~~1. The Emergency Facilities Services Manager reports to the Emergency Offsite Manager in the Emergency Operations Facility and is responsible for coordinating with emergency response facility management to ensure the sufficient availability of personnel to support the operations of the DBAB and EOF. 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 and EOF 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 TSC Engineering Manager.~~

3. ~~The Emergency Facilities Services Manager is also responsible for the operation of DBAB systems such as the emergency ventilation system, the potable water system and the emergency power systems during emergencies.~~

he. 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, and the~~ The OSC Radiation Protection Coordinator reports to the OSC Manager.

~~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.~~

eb. 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.

ec. Rad Data Technician

The Rad Data Technician is an RP technician 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.

~~f~~d. OSC Pool Personnel

The OSC Pool Personnel 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.~~

## 5.5 Near Site Emergency Response Organization

### 5.5.1 Overview

During an emergency, a Near Site Emergency Response Organization will be activated at an Alert or higher emergency classification. The assignment of responsibilities in the Near Site Emergency Response Organization is ultimately the responsibility of the ~~Vice President, Nuclear~~ General Plant Manager. However, the Emergency Response Manager is responsible for establishing and maintaining a predefined Near Site Emergency Response Organization. Alternate assignments to various positions are specified to provide for timely, automatic, and unambiguous ~~manning-staffing~~ to satisfy emergency response requirements.

In general, the Near Site Emergency Response Organization will be housed at the Lindsey Emergency Response Facility. The Lindsey Emergency Response Facility houses the following three facilities:

#### a. Emergency Operations Facility (EOF)

EOF staff will assess conditions in the Owner Controlled Area and the Plume Exposure Pathway Emergency Planning Zone and provide protective action recommendation to the Emergency Director. The EOF will provide communications between Davis-Besse to external organizations/agencies.

##### 1. Dose Assessment Center

The Dose Assessment Center is located at Lindsey Emergency Response Facility and is responsible for evaluation of conditions in the Owner Controlled Area and the Plume Exposure Pathway Emergency Planning Zone, and making recommendations to the EOF.

##### 2. Radiological Testing Lab (RTL)

The RTL is located onsite in the DBAB and is the primary assembly point for Radiation Monitor Team personnel who evaluate habitability conditions in the Owner Controlled Area and perform radiological surveys in the Plume Exposure Pathway Emergency Planning Zone. Collected field survey information is communicated to the Dose Assessment Center.

#### b. Alternate Technical Support Center (TSC)

In the event that the onsite TSC is not accessible TSC personnel will utilize the Lindsey Emergency Response Facility and perform those tasks as described in Section 5.4.4.

#### c. Mustering Point for the Operations Support Center (OSC)

In the event that the station is not accessible, OSC personnel will muster at the Lindsey Emergency Response Facility and standby to support the plant facility mitigation strategy.

#### 5.5.2 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 Emergency Response Organization and the NRC.~~

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.~~

ea. 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 facility 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.b. 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~~ is responsible for the procurement of personnel and equipment.

~~Reporting to the Emergency Planning Advisor are the EOF Communications Staff report to the Emergency Planning Advisor, and the 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 Assistance Center (CAC), and the Nuclear Regulatory commission (NRC). A member of the EOF communications staff will be present at meetings between the ERO and the NRC. The EOF Communications staff may be augmented by additional personnel to assist in communications, Nuclear Network transmissions, and operations of support equipment.

ec.      County and State Technical Liaisons

A technical liaison is dispatched to each of the Ottawa County, Lucas County, and the State Emergency Operations Centers, 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.

5.6      Joint Information Center (JIC)

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

5.7      Corporate Assistance Center (CAC)

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

Coordination of the CAC is the responsibility of a Senior ERO Position member located at an unaffected FirstEnergy facility. The Senior ERO Position member oversees the

operation of the CAC and ensures that CAC activities are carried out in a manner that supports the requests made by the Emergency Director.

## 5.8 Supporting Emergency Organizations

### 5.8.1 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 Hospital
2. Mercy St. Charles Hospital
3. Carroll Township Emergency Medical Services
4. ProMedica 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.

### 5.8.2 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 Hospital, Port Clinton, Ohio; Mercy St. Charles Hospital, Oregon, Ohio; or ProMedica 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. General Plant Manager:

The General 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 H.B. Magruder Hospital, Mercy St. Charles Hospital or ProMedica 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 General 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.

### 5.8.3 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 facility, 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 Post-Shutdown Emergency Plans for DBNPS, and the emergency plans for the State of Ohio, Ottawa County and Lucas County, have been formulated to provide timely notification and close coordination with these agencies.
3. In the event of a HOSTILE ACTION at the site (including attack by air, land or water using guns, explosives, projectiles, vehicles or other devices to deliver destructive force), the Federal Bureau of Investigation (FBI) will be the lead federal agency to coordinate response to the emergency, as described in the Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency

Operations Plan, the Ottawa and Lucas County Radiological Emergency Response Plans, and existing letters of agreement.

4. 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 Ottawa County Emergency Management Agency (OCEMA)
  - d) Lucas County Sheriff's Office or the Lucas County Emergency Management Agency (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 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 the 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.

3. In the event of a HOSTILE ACTION at the site (including attack by air, land or water using guns, explosives, projectiles, vehicles or other devices to deliver destructive force), local agencies will provide appropriate response to the emergency (including law enforcement, fire, and medical support) as described in the Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan, the Ottawa and Lucas County Radiological Emergency Response Plans, and existing letters of agreement.

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 Job and Family 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 access 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 consists 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.

#### 5.8.4 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.~~
  - e) ~~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.~~

ba.      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.

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

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

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

ed. 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

Page 1 of 2

A. ONSHIFT MINIMUM STAFFING REQUIREMENTS

Functional Area	Major Tasks	Emergency Positions	Analysis Shift Staffing
1. Plant Operations and Assessment of Operational Aspects	Control Room Staff	Shift Manager (SRO)/ Certified Fuel Handler (CFH) Unit Supervisor (SRO) Shift Engineer (STA) Reactor Operator Non-Licensed Certified Operator (NCO) (EO3))	1 1 1 2 21
2. Emergency Direction and Control	Command and Control	Shift Manager	1(a)
3. Notification & Communication	Licensee	CAS Operator	1(a)
	Local/ State	NLO NCO or above	1(a)
	Federal	NLO NCO or above	1(a)
4. Radiological Assessment	Dose Assessment	Shift Engineer (STA) NCO or above	1(a)
	In-plant Surveys	RP Technician	1
	Onsite Surveys	RP Technician	1(a)
	Chemistry	Chemistry RP Technician	1(a)
5. Plant System Engineering, Repair, and Mitigative Actions	Technical Support – OPs – Core Damage	Shift Engineer (STA) NCO or above Shift Engineer (STA) NCO or above	1(a) 1(a)
	Repair and Mitigative Actions	Mechanical Repair Electrical Repair I&C Repair	1(a) 1(a) 1(a)
6. In-Plant PAs	Radiation Protection	RP Technician	21(a)
7. Fire Fighting	--	Fire Brigade Captain (RONCO/EO3) Fire Brigade Member	1(a) 4
8. 1 <sup>st</sup> Aid and Rescue	--	NLO NCO	1(a)
9. Site Access Control and Accountability	Security & Accountability	Security Shift Supervisor CAS Operator Security Personnel	1 1 (b)
<b>TOTAL:</b>			<b>1510</b>

Notes: Personnel assigned to the shift in excess of the minimum staffing listed above may be assigned to any of the emergency positions in functions 2 through 9 for which they are qualified.  
Appendix F, Davis-Besse Nuclear Power Station (DBNPS) ERO Post-Shutdown On-Shift

TABLE 5-1

MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES

Staffing Analysis Report, documents the minimum shift's ability to implement the emergency plan.

Operations personnel and ~~Chemistry Technicians~~ are qualified on survey instruments.

- (a) May be filled by someone filling another position having functional qualifications.
- (b) Per DBNPS Physical Security Plan.

TABLE 5-1

MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES

Page 2 of 2

B. AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS

UNUSUAL EVENT		ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY	
PERSONNEL	TIME	PERSONNEL	TIME
<b>CONTROL ROOM</b> Emergency Assistant Plant Manager (1) <sup>3</sup>	Alerted	<b>CONTROL ROOM</b> Emergency Assistant Plant Manager (1) <sup>3</sup>	Normal Hours: 30 minutes Off Hours: 60 minutes
<b>OPERATIONS SUPPORT CENTER</b> OSC Manager (1) OSC RP Coordinator (1)	Alerted	<b>OPERATIONS SUPPORT CENTER</b> OSC Manager (1) OSC RP Coordinator (1) Mechanical Maintenance (2) Instrument & controls (2) Electrical Maintenance (2) <div style="text-align: right;">Add      Total</div> RP Technician (1)      (2) Chemistry Technician (0)      (1) RP Technician (31)      (53) Chemistry Technician (1)      (2)	Normal Hours: 30 minutes - Off Hours: 60 minutes 1-2 hours
<b>TECHNICAL SUPPORT CENTER</b> TSC Engineering Manager (1)	Alerted	<b>TECHNICAL SUPPORT CENTER</b> TSC Engineering Manager (1) Core/Thermal/Hydraulic Engineer (1) TSC I&C Engineer (1) TSC Electrical Engineer (1) TSC Mechanical Engineer (1) <u>Call in as necessary</u>	As Required: Normal Hours: 30 minutes Off Hours: 60 minutes 1-2 hours
<b>EMERGENCY OPERATIONS FACILITY</b> Emergency Director (1) Emergency Offsite Manager (1)	Alerted	<b>EMERGENCY OPERATIONS FACILITY</b> Emergency Offsite Manager (1) Dose Assessment Coordinator (1) Emergency Planning Advisor (1) RMTs (3) Emergency Director (1) NRC Liaison (1) State/County Communicator (1)	As Required: Normal Hours: 60 minutes Off Hours: 60 minutes 30-60 minutes 1-2 hours

- NOTES: 1. All time requirements are based on optimum response conditions.  
 2. Figure 5-2, Emergency Response Organization, depicts functional levels beyond these augmented staffing requirements.  
 3. The Emergency Assistant Plant Manager may respond to the TSC.

FIGURE 5-1

ONSHIFT EMERGENCY ORGANIZATION

Page 1 of 1

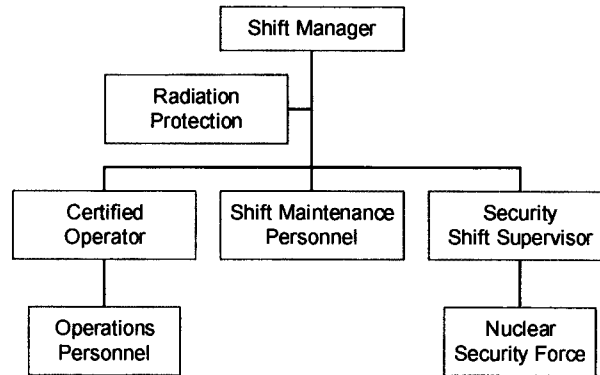


FIGURE 5-1

ONSHIFT EMERGENCY ORGANIZATION

Page 1 of 1

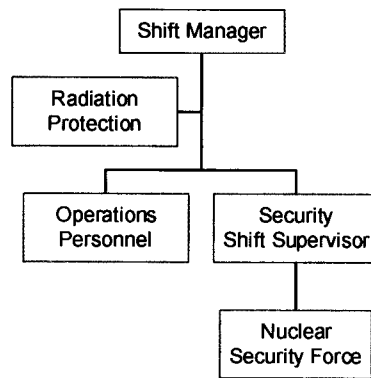


FIGURE 5-2

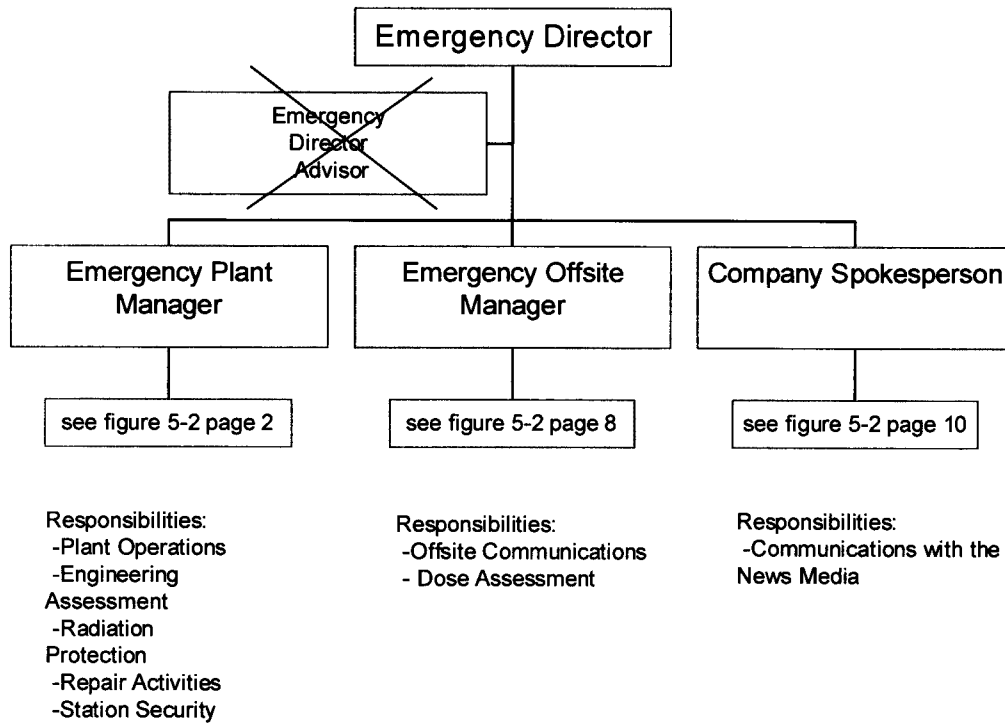
**Emergency Response Organization**  
Page 1 of 10

FIGURE 5-2

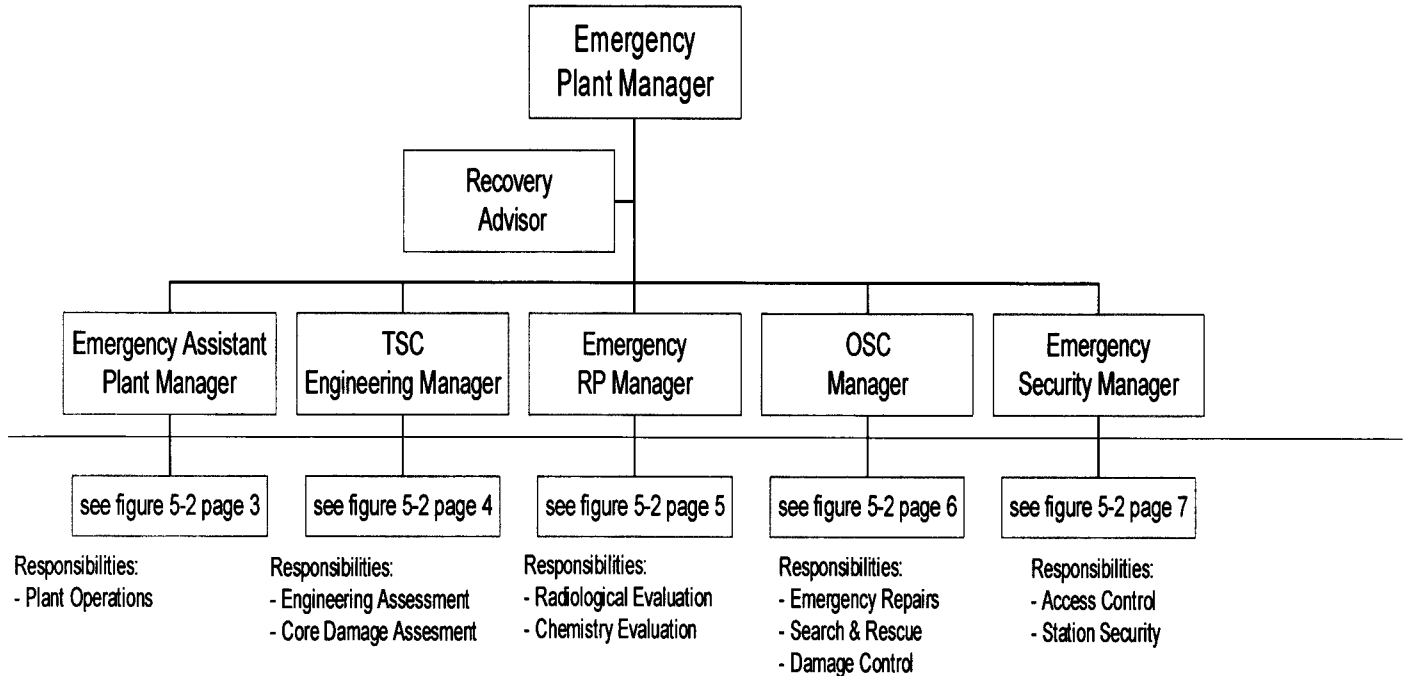
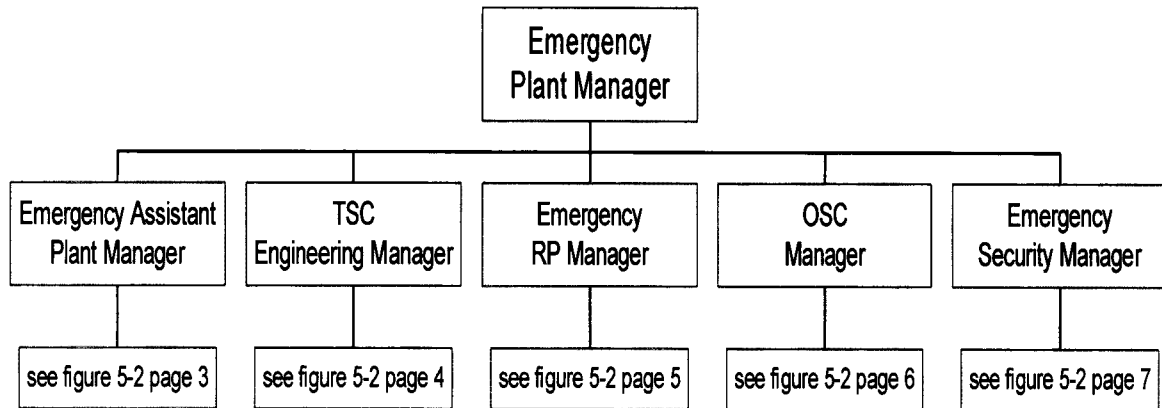
**Emergency Response Organization**  
Page 2 of 10

FIGURE 5-2



Responsibilities:  
- Plant Operations

Responsibilities:  
- Engineering Assessment

Responsibilities:  
- Radiological Evaluation  
- Chemistry Evaluation

Responsibilities:  
- Emergency Repairs  
- Search & Rescue  
- Damage Control

Responsibilities:  
- Access Control  
- Station Security



FIGURE 5-2

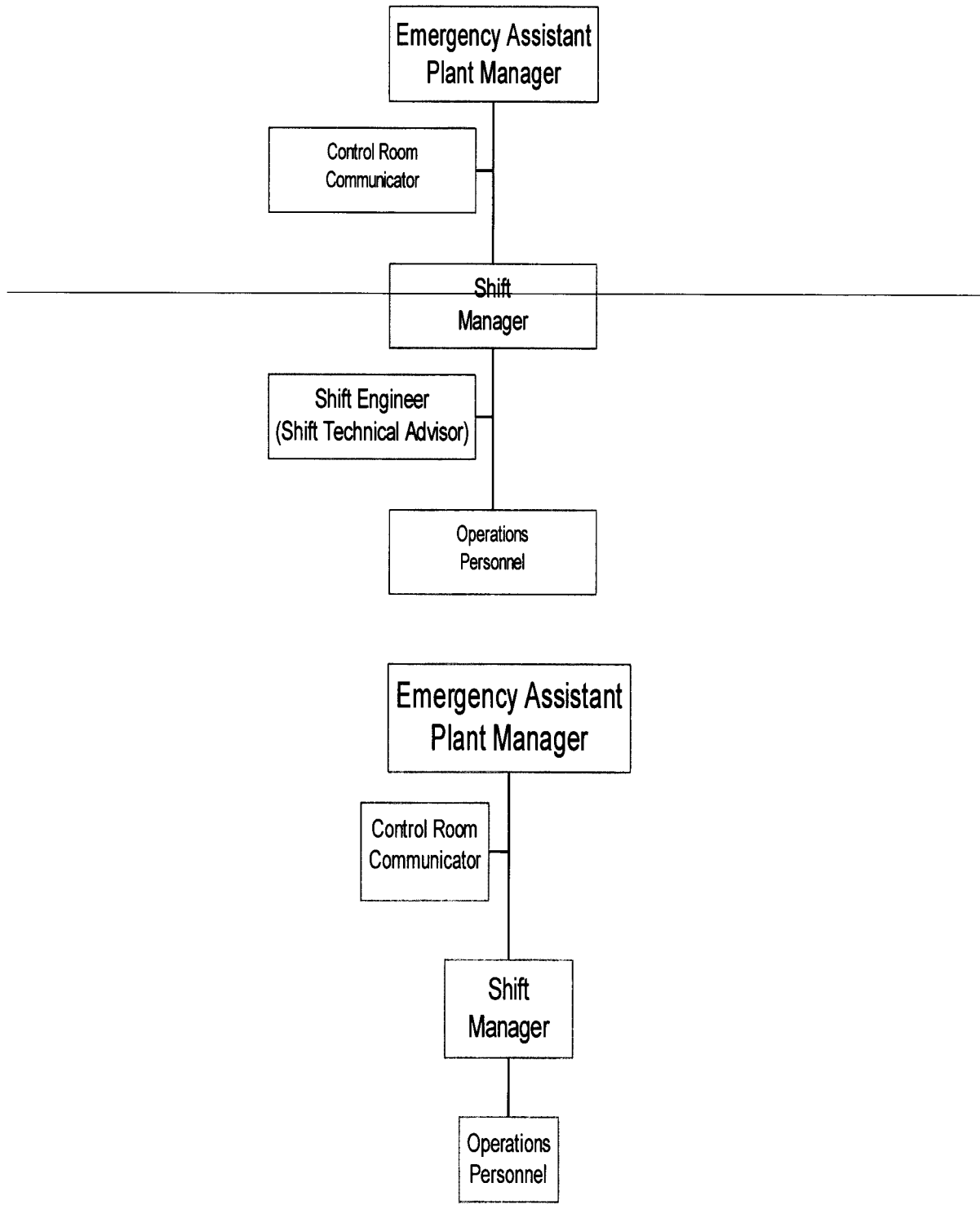
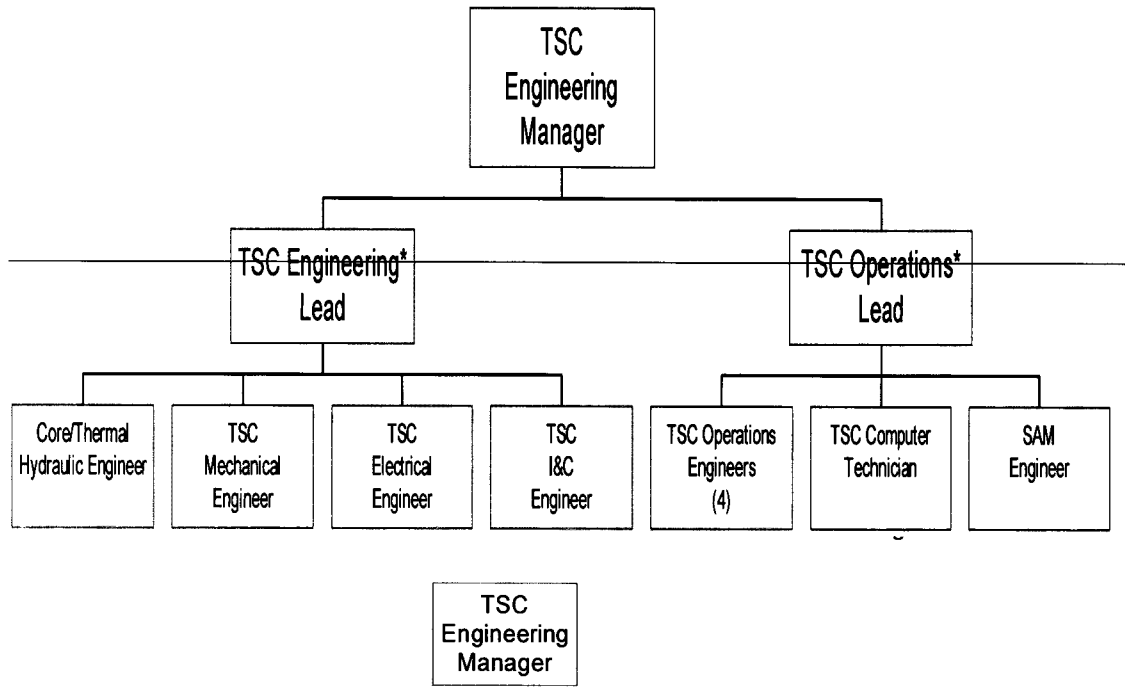
**Emergency Response Organization**  
Page 3 of 10

FIGURE 5-2

**Emergency Response Organization**  
Page 4 of 10

\*Optional position that may be staffed at the discretion of the TSC Engineering Manager.

FIGURE 5-2

Emergency Response Organization  
Page 5 of 10

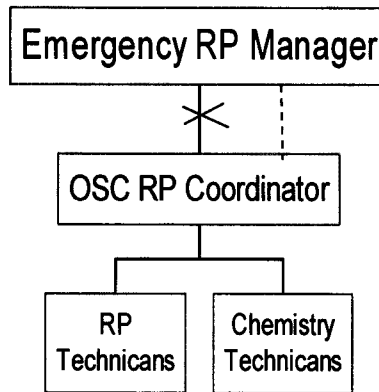


FIGURE 5-2

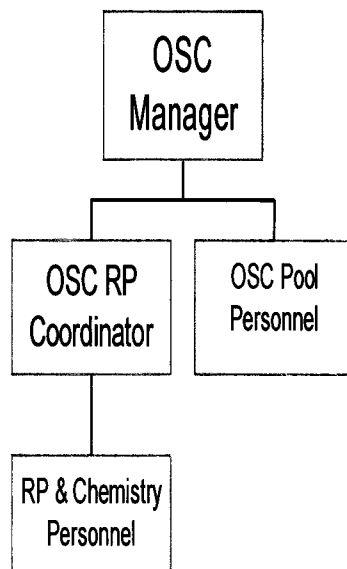
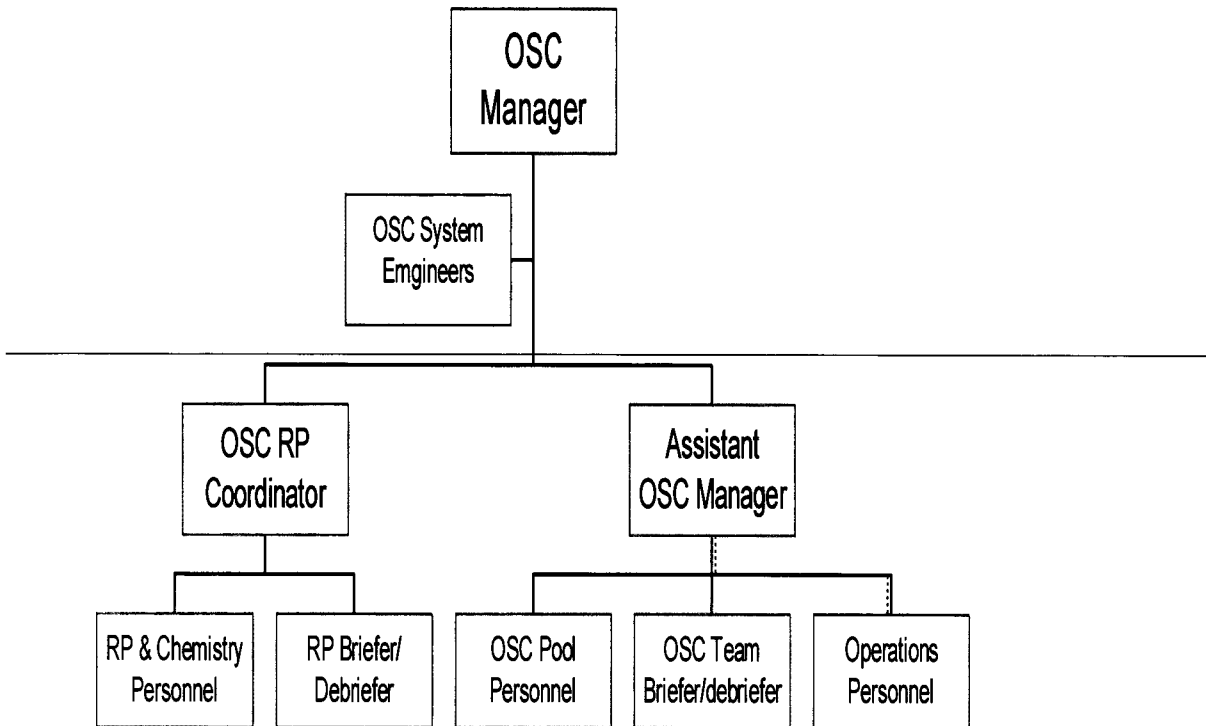
Emergency Response Organization  
Page 6 of 10

FIGURE 5-2

Emergency Response Organization  
Page 7 of 10

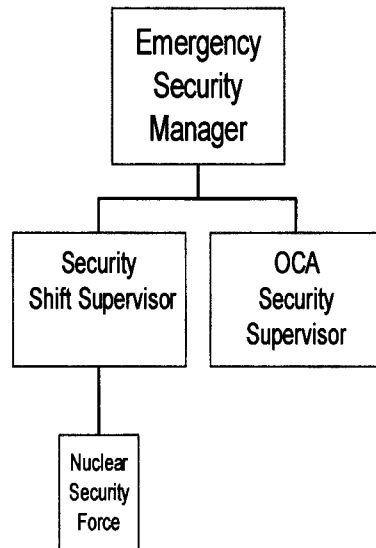


FIGURE 5-2

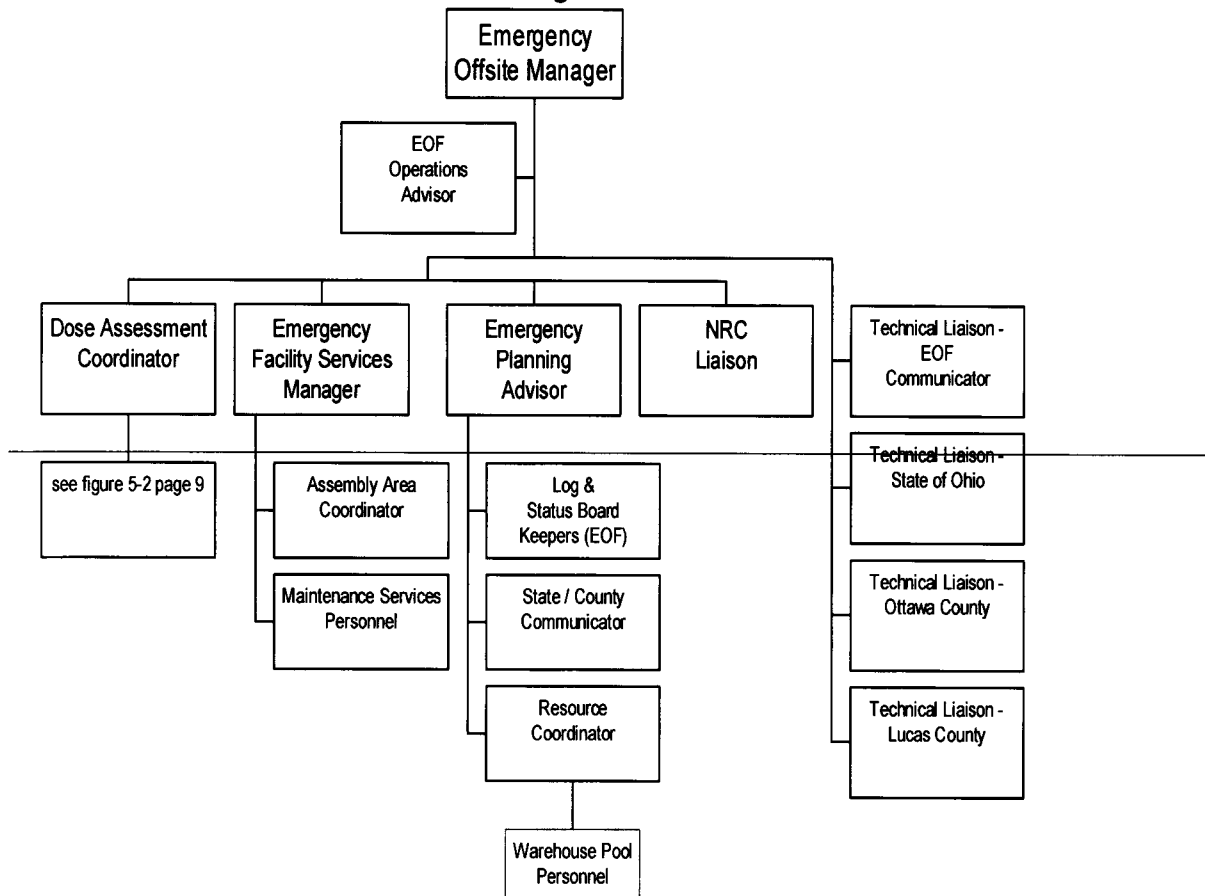
**Emergency Response Organization**  
Page 8 of 10

FIGURE 5-2

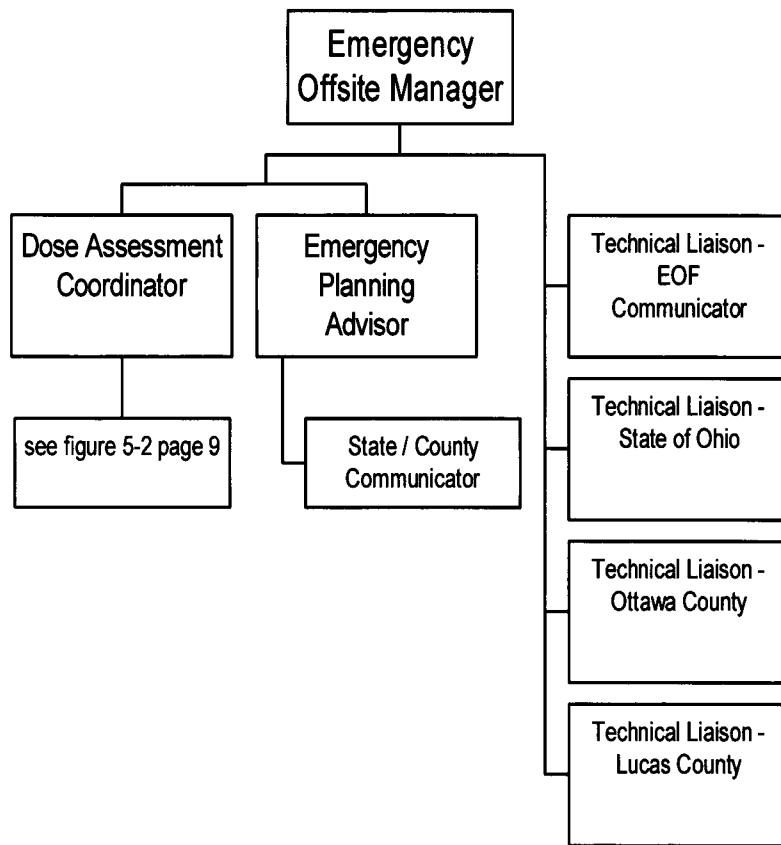


FIGURE 5-2

Emergency Response Organization  
Page 9 of 10

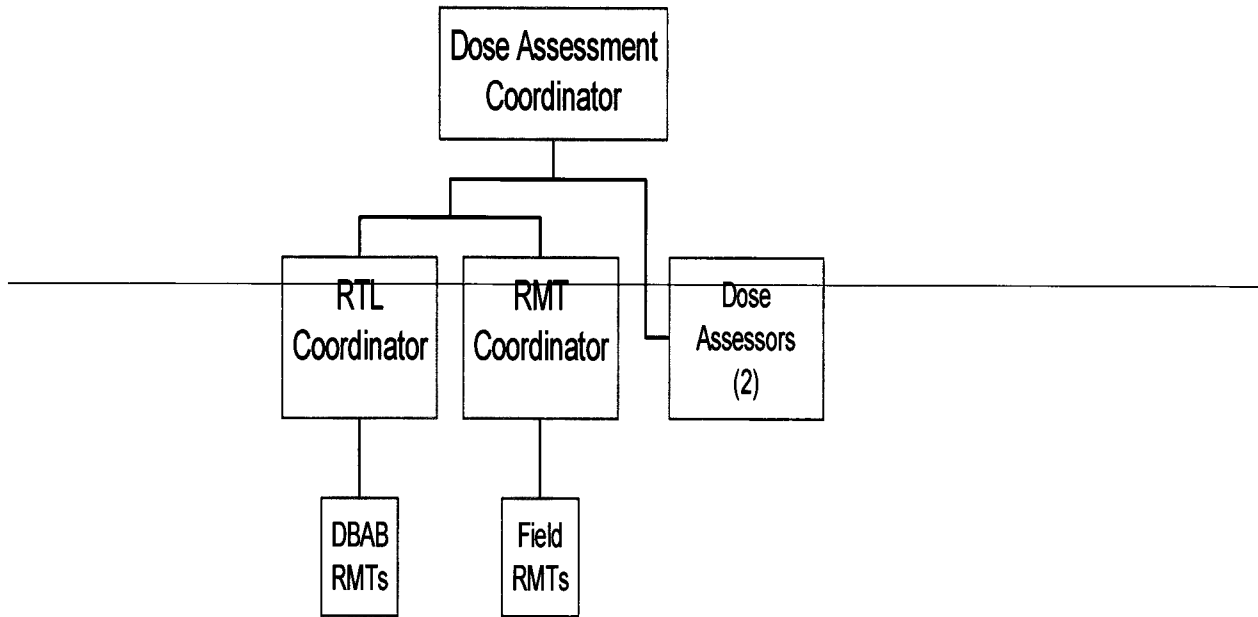




FIGURE 5-2

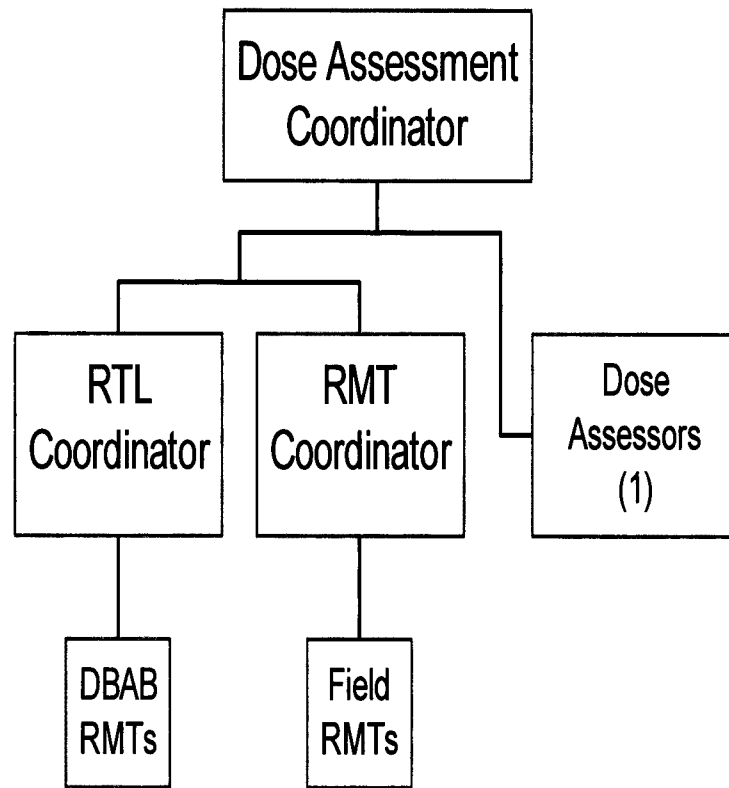


FIGURE 5-2

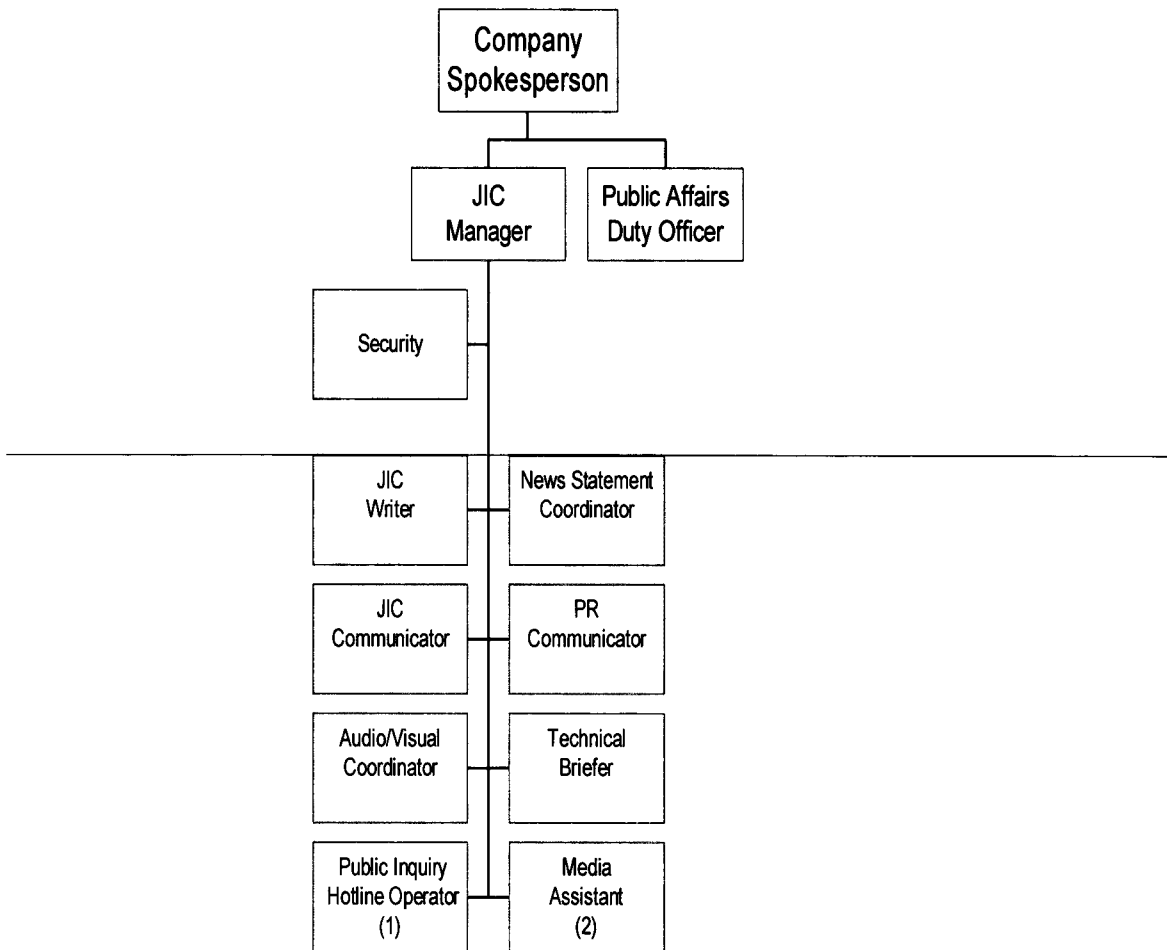
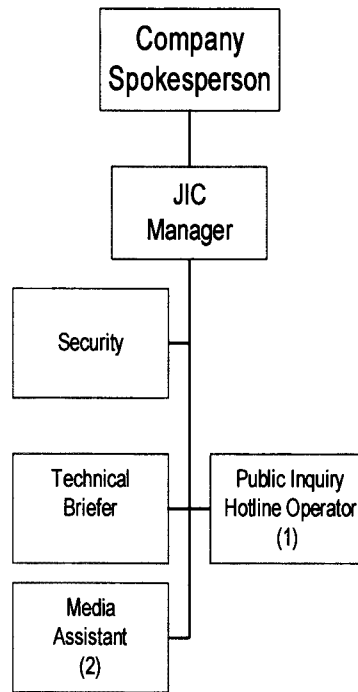
**Emergency Response Organization**  
Page 10 of 10

FIGURE 5-2



## 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. Mitigative 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.

When an emergency classification level is declared or upgraded, initial notifications are promptly made to offsite response organizations. Notification and mobilization of federal, state and local agency response personnel is performed in accordance with their applicable emergency plan and procedures.

- **State and Local Response Agencies**

State and local agencies receive within fifteen (15) minutes an initial notification message of an event declaration (initial or an escalation). General Emergency classifications also include Protective Action Recommendations (PARs) within that same 15 minutes. Any subsequent changes to PARs continue to be provided to the agencies within 15 minutes.

- **Nuclear Regulatory Commission (NRC)**

The NRC is notified immediately after notification of the appropriate state and local agencies and not later than one (1) hour after the time of initial event declaration, escalation to a higher classification level, emergency termination or entry into recovery.

The NRC is notified using the dedicated Emergency Notification System (ENS) by an individual knowledgeable of the event. If the ENS is inoperative, the required notifications are made via commercial telephone service. An open, continuous communication line is maintained with the NRC Operations Center upon request. An NRC Event Notification Worksheet (Form 361) may be utilized to assist in communicating event and plant-facility information to the NRC. For hostile action events, the NRC is notified immediately following or concurrent with state and local notifications.

Other event notifications related to emergency response capabilities not associated with an emergency classification level are performed in accordance with 10 CFR 50.72.

- Support Organizations

- Medical, rescue, and firefighting support services are notified for assistance as the situation dictates.

~~—The Institute of Nuclear Power Operations (INPO) is notified at an Alert or higher classification with requests for assistance as necessary.~~

- The American Nuclear Insurers (ANI) are notified at an Alert or higher classification with requests for assistance as necessary.
- Vendor and contractor support services are notified for assistance as the situation dictates.

Following the notifications made to the counties, state, and NRC; notifications will be made to the General 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 CAC 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~~Non-Certified Operator(s) and/or the Shift Manager will be made aware of the situation by alarms, instrument readings, reports, etc. The ~~Control Room~~Non-Certified 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~~SFP 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 plantSFP. 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 Post-Shutdown 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 SFP.
  - 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 CAC will be alerted.
  3. For a SITE AREA EMERGENCY or GENERAL EMERGENCY, the entire ERO, and the CAC 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 reference to the Radiological Assistance Program with the DOE to provide radiological assistance.

#### 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, a security threat to facility protection, 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~~ facility 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. If a security event is in progress, then the emergency organization will immediately implement procedures for security events or threats.

### 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~~ facility 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~~ facility 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.
- e. If a security event is in progress, then the emergency organization will immediately implement specific procedures for security events or threats.

### 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 ~~SFP~~ status, e.g., ~~in-core~~ 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.

- d. If a security event is in progress, then the emergency organization will immediately implement specific procedures for security events or threats.

### 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 Mitigative 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 facility in a safe condition, and taking necessary supplemental mitigative actions. In addition, ~~operations~~ personnel are trained in the operation of the plant-SFP systems and their associated procedures, and are therefore capable of taking appropriate mitigative 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 mitigative actions. Maintenance personnel will provide the necessary expertise to effect damage control and repair activities.

Mitigative actions will normally be planned events that are taken to gain control of, or terminate the emergency situation. Planned radioactive releases, or mitigative 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 Plant-Facility Site Protective Actions

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-Facility 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-Facility 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, ERO mobile device, or site public address system. Personnel may be instructed to report to the nearest assembly area as described below. At other site locations (i.e., Davis-Besse Training Center, Davis-Besse Administration Building and Annex, Warehouse), 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. Hostile-Action Based Protective Actions

Hostile-Action Based, or security related, emergencies offer different challenges to the site organization. Davis-Besse Nuclear Power Station has incorporated a range of protective actions for onsite personnel during a hostile action event, consistent with the possible threat (including land/water based, as well as airborne attacks). Generally, these protective actions may include considerations for:

- Site evacuation via normal exits

- Site evacuation via alternate means
- Dispersal of ~~plant operators~~ Shift Managers, Non-Certified Operators ~~Operations personnel~~, and essential ERO members
- Take Cover (sheltering in place for personnel onsite)

Arrangements for accounting for personnel after a hostile action have been made. When the site is secure, all personnel who were in the protected area when the hostile action occurred will be accounted for as promptly as possible while not interfering with critical safe reactor shutdown activities or known medical emergencies. The details of these protective actions are described in site implementing procedures.

#### 6.4.2 Offsite Protective Actions:

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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan (under a separate cover), and is implemented in conjunction with The Ottawa County Radiological Emergency Response Plan, and The Lucas County Radiological Emergency Response Plan (under separate covers).

At a General Emergency classification Davis-Besse, through the Emergency Director, shall make offsite protective action recommendations to state and local authorities, based on emergency conditions. The FENOC PAR determination process has been developed in accordance with NUREG-0654 Supplement 3 revision 1, and its PAR logic diagram. The process includes consideration of precautionary protective actions, wind persistence, rapidly progressing release scenarios, hostile-action based events, and termination of protective actions. It also includes considerations that embody Offsite Response Organizations input at the various decision points as identified in the guidance.

Offsite protective action recommendations will be made for affected predetermined subareas. (Refer to the Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan for description of the Davis-Besse 10-mile emergency planning zone subareas.) The preferred offsite protective action recommendation (PAR) is evacuation. A sheltering PAR will be considered when known roadway impediments impact the ability to evacuate a large portion of the Emergency Planning Zone, during a controlled short duration release, and during a Hostile-Action based event. Dose to the public from any actual or potential radiological release are evaluated prior to the determination of these sheltering recommendations.

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 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.

#### 6.4.3 Use of Onsite Protective Equipment and Supplies

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 direction and inhalation exposure afforded by structures. 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.

#### 6.4.4 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.

#### 6.4.5 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 mitigative/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. Mitigative/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, i.e., 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 RCA 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 Hospital, ProMedica Memorial Hospital, and Mercy St. Charles 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. Magruder Hospital; ProMedica Memorial Hospital; Mercy St. Charles 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 <sup>1</sup> )	1-5 rem <sup>2</sup>	Evacuation (or for some situations, sheltering <sup>1</sup> ) should normally be initiated at 1 rem.
Administration of stable iodine	25 rem <sup>3</sup>	Requires approval of State medical officials

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>Committed dose equivalent to the thyroid from radioiodine.

**Guidance on Dose Limits for Workers Performing Emergency Services**

Dose Limit <sup>1</sup> (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

<sup>1</sup>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 <sup>1</sup> (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 <sup>2</sup>  (4 to 48 hours)	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
LONG TERM PHASE <sup>3</sup>  (2 to 14 days)	Whole body exposure and inhalation	Relocation, decontamination, access control
	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
	Whole body exposure from deposition material or inhalation of resuspended material.	Relocation, access control, decontamination, fixing of contamination, deep plowing

<sup>1</sup>Emergency phase - Time period of major release and subsequent plume exposure.

<sup>2</sup>Intermediate phase - Time period of moderate continuous release with plume exposure and contamination of environment.

<sup>3</sup>Long Term Phase - Recovery period.

**TABLE 6-3**

**REPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE**

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

<sup>1</sup>The ratio of the dose received inside the structure to the dose that would be received outside the structure.

<sup>2</sup>A wood frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.

<sup>3</sup>This range is mainly due to different wall materials and different geometries.

<sup>4</sup>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 <sup>1</sup> 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 <sup>2</sup>	0.2-0.5
One and two-story block and brick house (no basement)	0.2 <sup>2</sup>	0.04-0.40
House basement, one or two walls fully exposed	0.1 <sup>2</sup>	0.03-0.15
One story, less than 2 ft of basement, walls exposed	0.05 <sup>2</sup>	0.03-0.07
Two stories, less than 2 ft of basement, walls exposed	0.03 <sup>2</sup>	0.02-0.05
Three- or four-story structures, 5000 to 10,000 ft <sup>2</sup> per floor		
First and second floors	0.05 <sup>2</sup>	0.01-0.08
Basement	0.01 <sup>2</sup>	0.001-0.07
Multistory structures, >10,000 sq. ft. per floor:		
Upper floors	0.01 <sup>2</sup>	0.001-0.02
Basement	0.005 <sup>2</sup>	0.001-0.015

<sup>1</sup>The ratio of dose received inside the structure to the dose that would be received outside the structure.<sup>2</sup>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 <sup>1</sup>	Cs-134 <sup>2</sup>	Cs-137 <sup>2</sup>	Sr-90	Sr-89
Initial Activity Area Deposition (μCi/m <sup>2</sup> )	0.13	2.0	3.0	0.5	8.0
Forage Concentration <sup>3</sup> (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

<sup>1</sup>The cumulative intake of Iodine-133 via milk is about 2 percent of Iodine-131 assuming equivalent deposition.

<sup>2</sup>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 two.

<sup>3</sup>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 <sup>3</sup> /Adult	Cs-134 <sup>2</sup> Infant <sup>4</sup> /Adult	Cs-137 Infant <sup>4</sup> /Adult	Sr-90 Infant <sup>4</sup> /Adult	Sr-89 Infant <sup>4</sup> /Adult
Initial Activity Area Deposition ( $\mu\text{Ci}/\text{m}^2$ )	1.3/18	20/40	30/50	5.0/20	80/1600
Forage Concentration <sup>5</sup> ( $\mu\text{Ci}/\text{kg}$ )	0.5/7.0	8.0/17	13/19	1.8/8.0	30/700
Peak Milk Activity ( $\mu\text{Ci}/\text{l}$ )	0.015/2.0	1.5/3.0	2.4/4.0	0.09/0.4	1.4/30
Total Intake ( $\mu\text{Ci}$ )	0.9/10	40/70	70/80	2.0/7.0	26/400

<sup>1</sup>The cumulative intake of Iodine-133 via milk is about 2 percent of Iodine-131 assuming equivalent deposition.

<sup>2</sup>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.

<sup>3</sup>Newborn infant, includes fetus (pregnant woman) as critical segment of population for Iodine-131.

<sup>4</sup>"Infant" refers to child less than 1 year of age.

<sup>5</sup>Fresh weight.

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



**Figure 6-1**

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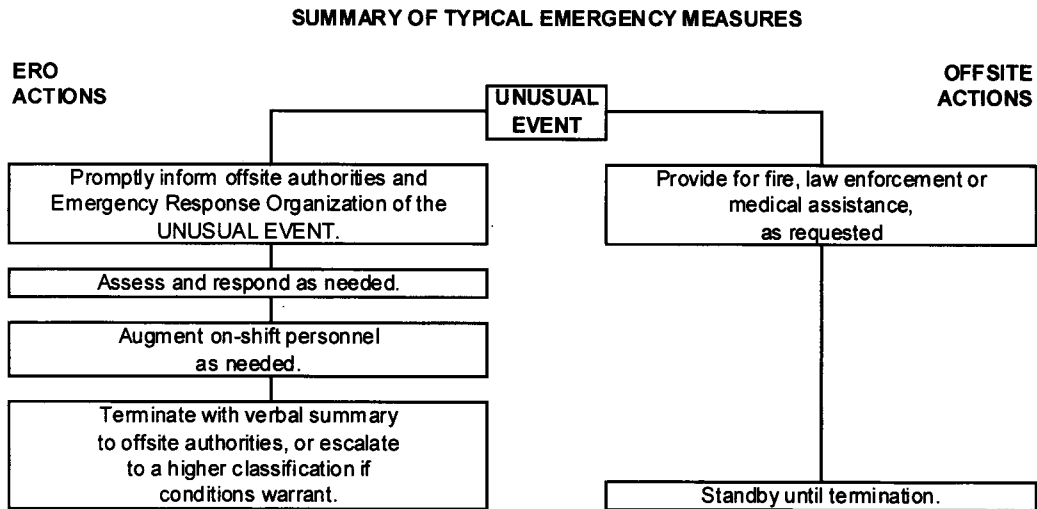


Figure 6-1

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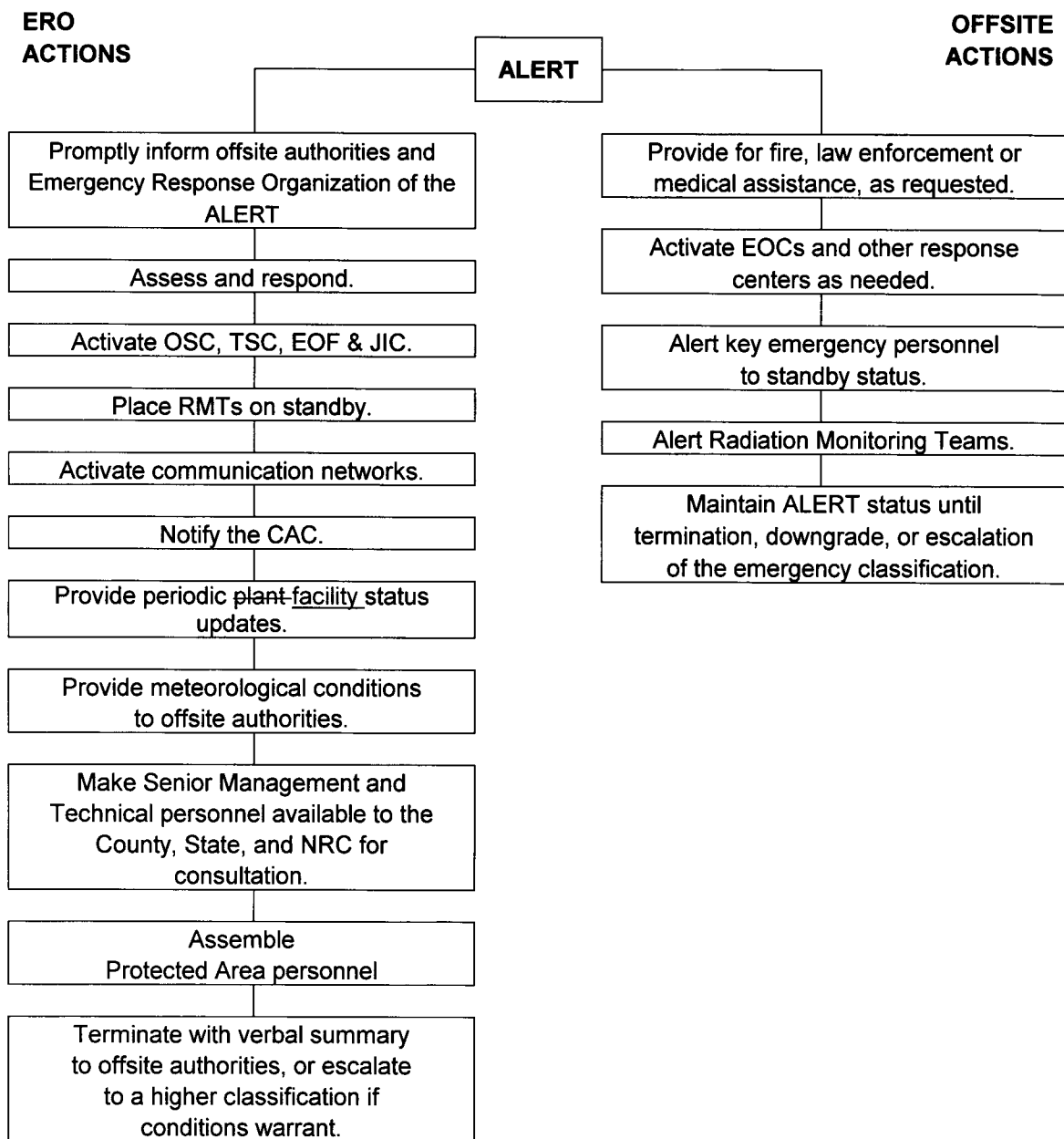
**SUMMARY OF TYPICAL EMERGENCY MEASURES**

Figure 6-1

Page 3 of 4

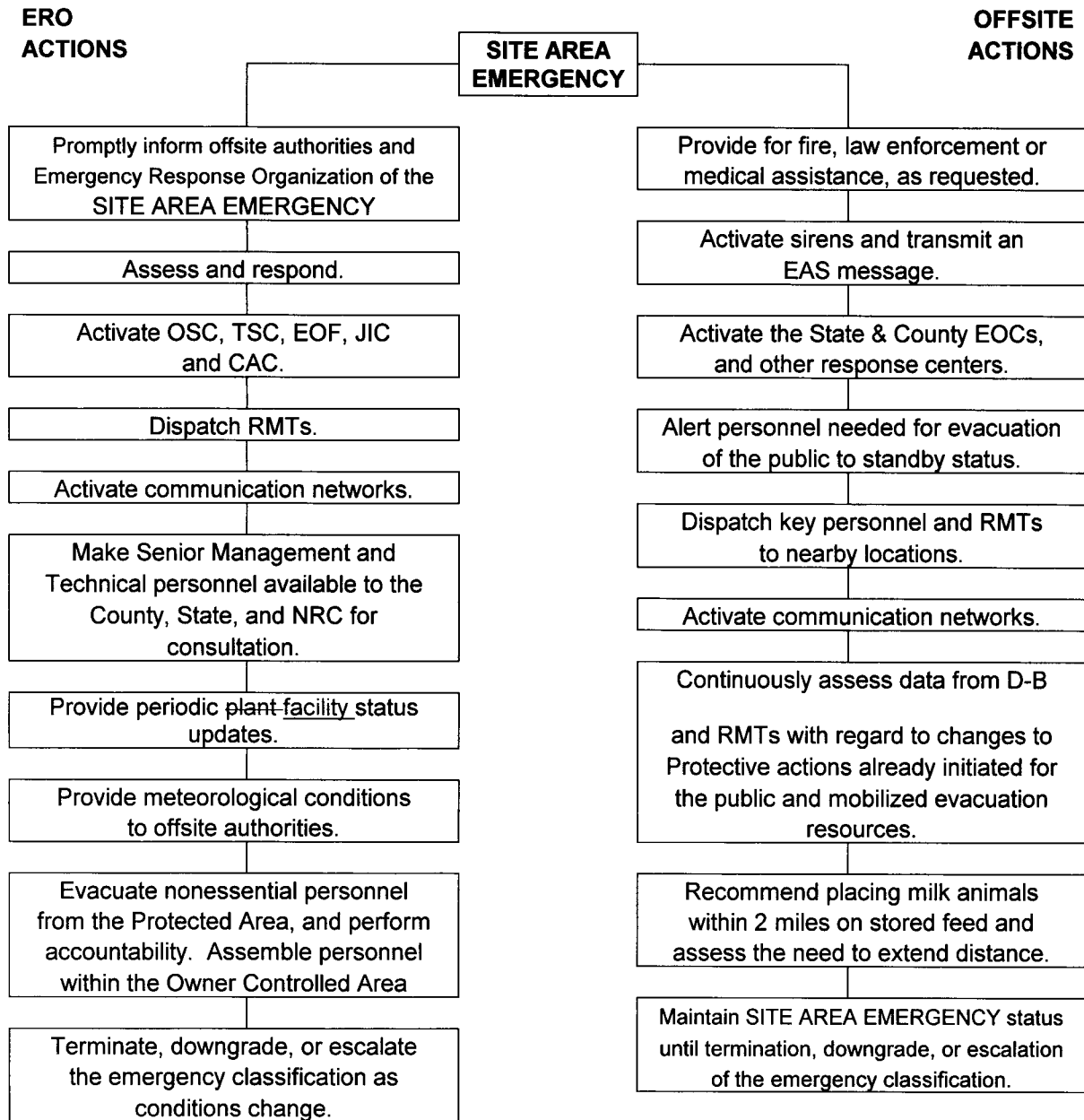
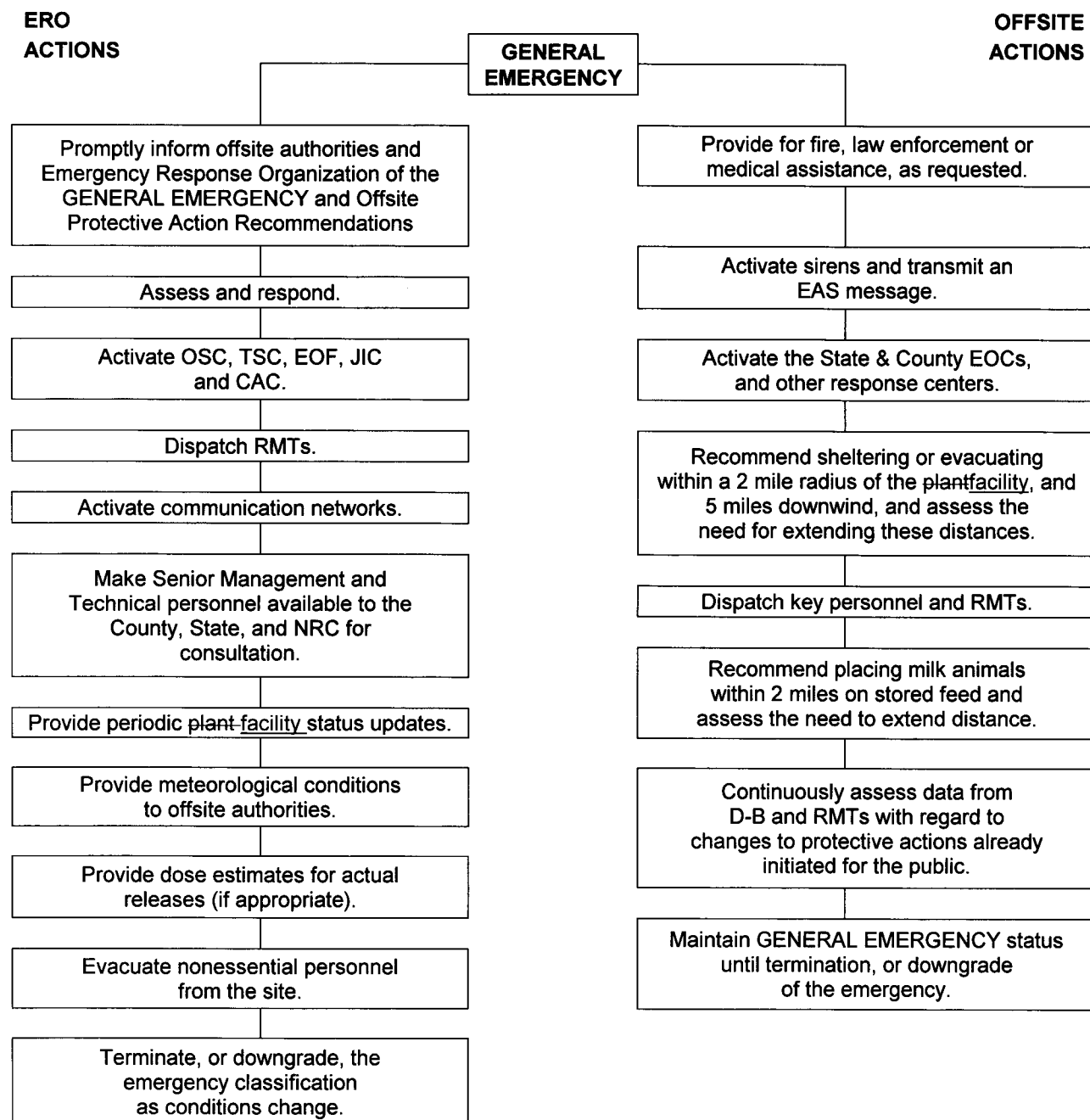
**SUMMARY OF TYPICAL EMERGENCY MEASURES**

Figure 6-1

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**SUMMARY OF TYPICAL EMERGENCY MEASURES**

**Figure 6-2**

Page 1 of 2

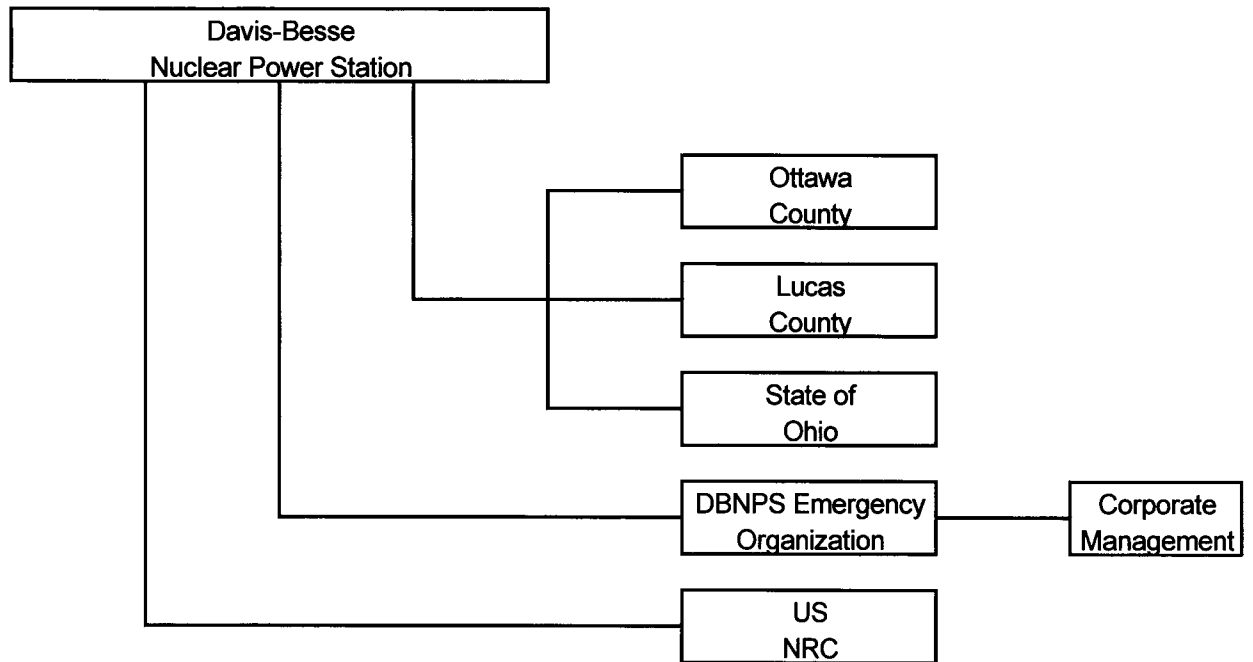
**EMERGENCY NOTIFICATION:  
UNUSUAL EVENT**

Figure 6-2

Page 2 of 2

**EMERGENCY NOTIFICATION:  
ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY**

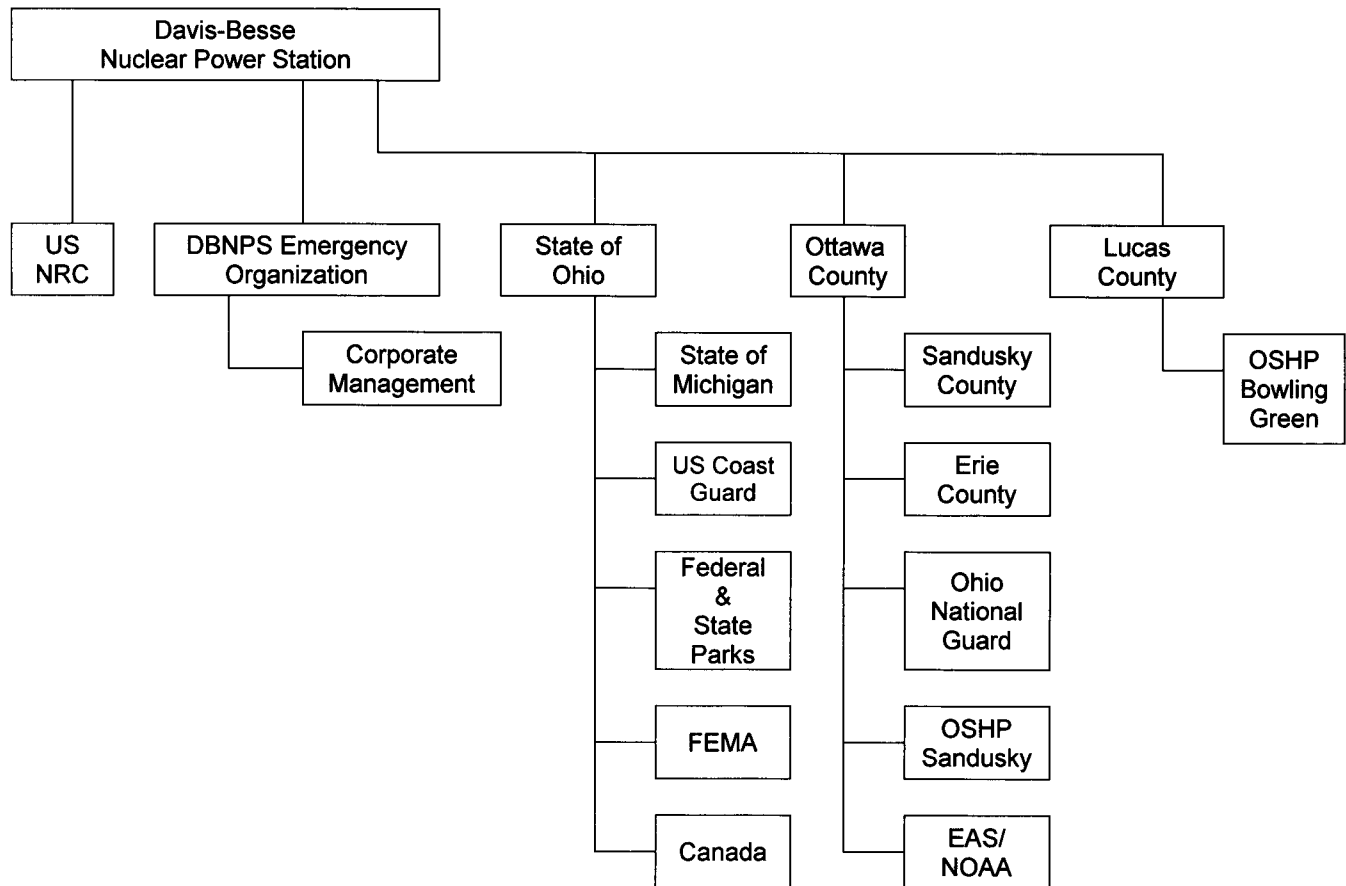
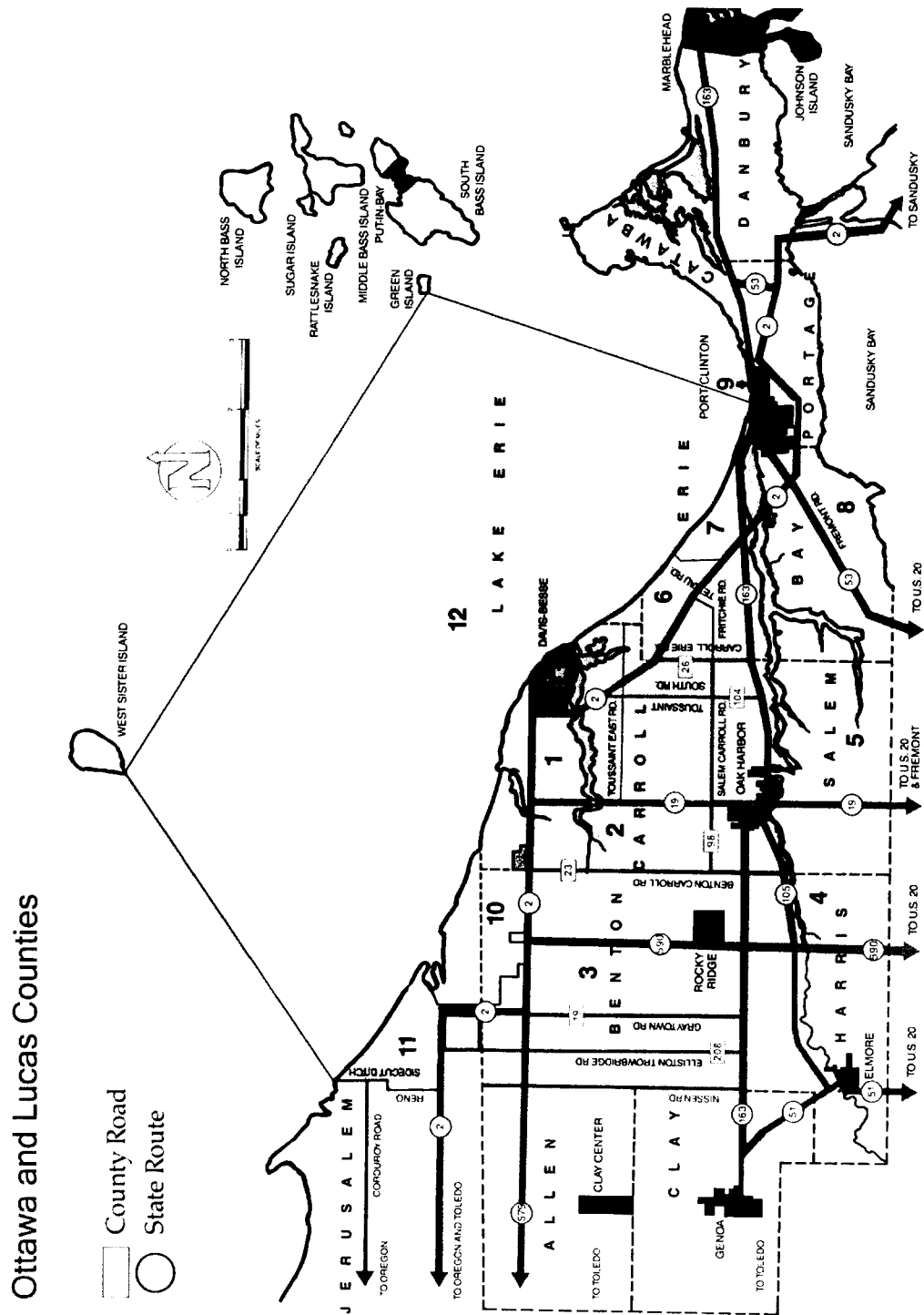


Figure 6-3

**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~~activities. 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~~SFP systems are monitored. It contains the instrumentation, controls, and displays for:

1. ~~Nuclear systems~~
2. ~~Reactor coolant systems~~
3. ~~Steam systems~~
41. Electrical systems
52. ~~Safety s~~Systems (including engineered safety features) associated with the SFP
63. Accident monitoring systems.

~~The operating on-shift is staffed is~~ in accordance with TS 5.2.2 and TRM 10.2.1 requirements. Control manipulations and the safe operation of the ~~plant~~SFP are directed by the ~~Senior Reactor Operator licensed Shift Manager (qualified as a Certified Fuel Handler (CFH)) and Unit Supervisor,~~ and are performed by ~~Non-Licensed~~Certified Reactor Operators.

- b. During abnormal operating conditions, the complexity of Station responsibilities increases significantly and the Control Room transforms into an emergency response center. These responsibilities include the following:
1. Diagnosing the abnormal conditions.
  2. Performing mitigative actions.
  3. Mitigation of abnormal conditions.
  4. Management of ~~plant~~SFP 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~~SFP 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 may 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~~ facility activities.

7.1.2 Operations Support Center (OSC)

The OSC is located on the third floor of the Containment Access Facility. 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~~ facility safety status.
2. Relieve the Control Room staff of peripheral duties and communications not directly related to ~~reactor-SFP~~ system manipulations.
3. Prevent congestion in the Control Room.
4. Provide assistance to the operators from technical personnel who have comprehensive ~~plant~~ facility 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 relevant ~~plant~~ facility 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, 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 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 Safety Parameters Display System (SPDS).

The SPDS 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 SPDS provides data communication to the EOF, TSC, and Control Room. Because the SPDS aids in the detection and monitoring of ~~plant~~ plant-facility transients and accidents, the SPDS 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.

Activation and operation of the TSC is contained in the Emergency Plan Procedures.

#### 7.2.2 Radiological Testing Laboratory (RTL)

The RTL is a facility near the TSC for equipping and dispatching Radiological Monitoring Teams; and for the receipt, counting, and disposition of potentially contaminated environmental samples. The RTL reports to the Dose Assessment Coordinator in the near site EOF.

The RTL is on the ground floor of the DBAB.

#### 7.2.3. 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.

#### 7.2.4 Equipment Rooms

The telephone equipment room contains communications equipment necessary to connect the site telephone system into company and external phone systems.

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 Near Site Emergency Response Facility

The near site emergency response facilities are located near Lindsey, Ohio at the corner of SR 20 and SR 590. The facility houses the Emergency Operations Facility, the Alternate TSC and a muster area for station personnel. The facility has access to station radio and public Address systems. The facility is equipped with an uninterruptable power system and an emergency diesel generator. The Near Site Emergency Response Facilities include the following:

#### 7.3.1 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 Safety Parameters Display System (SPDS). 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 provides space for at least 22 people.

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

#### 7.3.2 Alternate TSC

The Alternate TSC provides a location for the TSC in the event that the onsite TSC is not available. The Alternate TSC is equipped with those drawings, procedures, computer system and communications to be able to support the onsite response.

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

#### 7.3.3. Muster Area

A Muster Area for approximately 75 individuals is available for the staging of personnel in the event that the station is not accessible.

### 7.4 Other Company Emergency Facilities

#### 7.4.1 Joint Information Center (JIC)

The Joint Information Center (JIC) is the emergency facility for coordinating news statements and providing joint media briefings during an event at Davis-Besse. The Company, state, local and federal agencies represented at the JIC 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-facility status and emergency response actions. JIC facilities include news briefing areas for electronic and print media representatives. JIC support is available for any plant-facility emergency. However, facility activation is mandatory at (and above) the

Alert emergency classification level. The JIC is located at a FirstEnergy Corporation facility outside the 10-mile EPZ.

#### 7.4.2 Corporate Emergency Facilities

Company facilities located throughout the service districts are available to provide support for the Corporate Assistance Center (CAC). Certain Company facilities have been designated to support coordination of CAC activities and centralized management of Company resources. The primary company facility identified for Fleet Emergency Response Support is the Corporate Assistance Center (CAC), located at the unaffected FirstEnergy nuclear station/~~plant~~facility.

### 7.5 County and State Emergency Operations Centers

#### 7.5.1 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 a dedicated 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.

#### 7.5.2 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 a dedicated Emergency Operating Center (EOC) which meets the minimum federal criteria for space, communications, warning systems, and supplies.

The EOC is located in the Lucas County Emergency Services Building, 2144 Monroe Street, 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.

#### 7.5.3 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.

## 7.6 Communications Systems

### 7.6.1 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. Onsite Commercial telephone systems:

1. A Private Branch Exchange (PBX) is used by the station for telephone communications. The PBX system provides six in/out bound offsite communications paths.
  - 2 paths connect to the FirstEnergy company communications system.
  - 3 priority circuits travel to Toledo where then connect to the commercial telephone system.
  - 1 priority circuit connects directly into the local commercial telephone system.

The PBX system is self-contained to the Davis-Besse Nuclear Power Station and has backup power.

2. In addition to the company PBX system, there are also a limited number of lines that bypass the PBX system and are connected directly into the local phone company.”

b. Near site Commercial telephone systems:

1. Voice over IP service from the Akron Ohio West Akron Campus

c. 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~~ plant-facility channels, five maintenance channels, two switchyard maintenance channels, and four fuel handling channels. Access to the Gai-tronics system is available at the near site emergency response facilities.

d. 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.
  5. A channel is used by Operations personnel for normal day-to-day transmissions.
- e. Radiation Monitoring Teams communicate on a five-channel trunked 800 megahertz radio system. Cellular telephones are also available if needed.
  - f. ERO mobile devices are carried by key emergency responders to provide 24-hour a day coverage. Emergency classifications are communicated to emergency responders and can be used to communicate with other key personnel.
  - g. A Computerized Automated Notification System (CANS) is available to facilitate the notification process. The system is composed of a minimum of 26 phone lines. One telephone line is dedicated for system activation by the Control Room or Security, and the others are connected to the telephone network. The CANS is capable of sending notification messages to all ERO mobile devices and individually calling all emergency response personnel. The system communicates the emergency classification and logs personnel response times.

#### 7.6.2 Emergency Communications Systems

- a. The following phone systems are dedicated for emergency communications:
  1. The Davis-Besse 4-Way Phone including the State and County EOCs, the Ohio Highway Patrol Office, the Lucas County and Ottawa County Sheriff's dispatcher offices, the 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 press lines.
- b. DBNPS has also established two separate communication bridges between various ERFs to ensure reliable and timely exchange of information between the emergency organizations. These bridges consist of the following:
  1. Technical Data Bridge  
  
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 Bridge

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

### 7.6 .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 Emergency Response Manager. 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.

## 7.7 Alarms

There are three station alarms as follows:

- 7.7.1 FIRE - Rise and Fall Siren
- 7.7.2 ACCESS EVACUATION - Pulsed Tone Burst
- 7.7.3 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~~ facility areas (i.e., station office building, personnel shop facility, radiologically controlled area, fuel handling area, outdoor areas, primary access facility, etc.)



## 7.8 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:

- 7.8.1 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. Each siren is equipped with an independent battery backup which will allow operation during the loss of normal AC electrical power. 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.

The PNS sirens are tested from the Ottawa County Sheriff's Dispatch Center as follows:

- A three-minute audible test is performed at least once per year
- A one-minute audible test is performed at least monthly
- A three-minute, one-minute or a silent test is performed weekly

Back-up Alert and Notification Methods - Backup alert and notification for the Davis-Besse 10-mile EPZ is achieved through pre-planned route alerting. This method has been approved by the Federal Emergency Management Agency (FEMA). County emergency management agencies will be prepared to make special provisions such as back up route alerting for those areas with sirens out of service, in the event of an emergency. The route alerting system utilizes planned routes for each siren that is unable to be activated.

- 7.8.2 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).
- 7.8.3 NOAA National Weather Service alert monitors can be pulsed, and automatically turned on to disseminate emergency information.
- 7.8.4 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.
- 7.8.5 Commercial Paging System - A paging system, backed up by the local telephone service, is used to permit immediate contact of local officials.
- 7.8.6 Emergency Vehicles - Vehicles with loudspeakers can be dispatched to various remote locations to broadcast warning messages.

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

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~~facility 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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan.

7.9 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.

7.9.1 Radiation Monitoring System

The onsite Radiation Monitoring System contributes to personnel radiological protection within the ~~plant~~facility, 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.

#### 7.9.2 Area Radiation Monitoring

The Area Radiation Monitoring subsystem is comprised of area monitors located throughout the ~~plant~~ facility. 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 a~~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.

#### 7.9.3 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.

Portable atmospheric monitors are available for use during maintenance operations. These monitors are capable of monitoring particulate, iodines, and noble gases. The installed and portable atmospheric monitors provide both an audible alarm and visual indications when pre-determined setpoints are exceeded for airborne radioactivity.

#### 7.9.4 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.

#### 7.9.5 Radiation Monitoring Instruments and Equipment

Radiation Monitoring Instruments and Equipment includes those instruments and 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 dosimetry and equipment are shown in Table 7-1.

#### 7.9.6 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~~facility 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, Primary Access 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.

7.9.7 Seismic Monitoring System

The Seismic Monitoring System records (on local recorders for each accelerometer and in a personal computer within the central system in the control room) 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, 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, are networked together, and are connected by cables to the rack. (See the Technical Requirements Manual (TRM) for location of the sensors and triggers.)

The four low-level triaxial seismic triggers are networked together, so that any one accelerometer can also trigger the other devices, to turn on the system automatically during the buildup of the event vibrations. The one required seismic trigger (free-field) is set at approximately 0.010g (g=acceleration due to gravity). The recording system includes pre-event (i.e., pre-trigger) data in the event record. Recording continues without interruption for approximately 30 seconds after the last low-level trigger signal. Upon completion of the seismic event recording, data is retrievable from each accelerometer (through an analog-to-digital recorder and data storage memory) and a personal computer in the Control Room, which will provide time history response data and can be readily reviewed without need for conversion to hardcopy. A video display will provide quick, accurate determinations to be made based on the seismic event, ~~and to determine if a plant shutdown is required.~~

In keeping with the purposes of the system, loss of site power will not prevent system operation. Backup power is supplied from the ~~Station Battery, and also an internal battery~~ in the network control center and each recorder.

In addition to the components associated with the system rack, there are three peak recording accelerometers as listed in the TRM, Table 8.3.3-1, 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.

#### 7.9.8 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 ( $\Delta T$ ) 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).

#### 7.9.9 Control Room Instrumentation

Control Room Instrumentation measures appropriate parameters that are indicative of the status of various plant-SFP 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 facility conditions.

#### 7.9.10 Laboratory Facilities

The Davis-Besse laboratory facilities are equipped to provide the water chemistry and radiochemical analysis support required during normal plant-SFP 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. 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.~~

- e. ~~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.~~
- db. For station vent sampling, procedure guidance exists for sampling using either the normal or accident range station vent monitors. Provisions are included to replace and quantify radioactive particulate and iodine sampling media. 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  $\mu\text{Ci/cc}$ .

#### 7.9.11 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. The REMP is conducted under the guidance contained in the Davis-Besse Offsite Dose Calculation Manual (ODCM).

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.

#### 7.10 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 Post-Shutdown 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 facility. 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 (SCBAs) are located in the Control Room to permit continued occupancy if ventilation systems fail. Air-purifying respirators are available in the Radiologically Controlled Area and would be provided to Control Room personnel as needed. Additional SCBAs, protective clothing, and respirators are available at, or near, each onsite ERF, and are listed in applicable Radiation Protection Procedures and Emergency Plan Procedures.

Parts for the respirators and SCBAs, as well as additional protective clothing are available through the FENOC Supply Chain.

#### 7.11 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~~facility. 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.

#### 7.12 Damage Control Equipment

The DBNPS is extensively equipped to conduct preventive and mitigative 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 permanently shutdown and defueled 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**

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**Radiation Monitoring Instruments and Equipment**

A. Portable Radiation Survey Instruments

	Range	Type Detector	Quantity	Location
High Range Survey Instruments	0-1000		5	RTL
	mrad/hr-10 <sup>3</sup> rad/hr	GM	3	RP Area
	0-50 R/hr	Ion Chamber	6	RTL
Low Range Survey Instrument	0-5 rem/hr	Ion Chamber	2	RP Area
	0-5 x 10 <sup>5</sup> cpm	GM	4	RTL
Alpha Survey Meter	0-5 x 10 <sup>5</sup> cpm	Scintillator	1	RP Area
Neutron	0-5000 mrem/hr	BF <sub>3</sub>	2	RP Area

B. 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	RP Area
	Low Volume	2	RP Area

**TABLE 7-1**

Page 2 of 2

**Radiation Monitoring Instruments and Equipment (Continued)****C. Personnel Dosimetry and Equipment**

<u>Range</u>	
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**Self-Reading Dosimeters:**

Pocket Ion	0-10 rem or 0-100 rem
Chamber	0-1.5 rem or 0-5 rem
	0 – 200 mrem or 0-500 mrem

**OR**

Electronic Alarming Dosimeters	All ranges
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Dosimeter Charger	All ranges
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Thermoluminescent Dosimetry (TLD)	All ranges
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Radiation Monitor (Frisker)	0-50 kcpm
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Automatic Whole Body Contamination Monitors	N/A
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**Figure 7-1****EMERGENCY FACILITIES BY GENERAL LOCATION**

<b><u>SUPPORT AGENCIES</u></b>		<b><u>COMPANY</u></b>	
<b>(OFFSITE / GENERAL AREA)</b>		<b>(OFFSITE)</b>	<b>(ONSITE)</b>
<div>State of Ohio Emergency Operations Center (EOC)</div> <div>Ohio Emergency Management Agency Worthington, Ohio</div>		<div>Joint Information Center (JIC)</div> <div>Toledo Edison Plaza Toledo, Ohio</div>	<div>Control Room (CTRM)</div> <div>Davis-Besse 623' Elevation</div>
<div>County Emergency Operations Center (EOC)</div> <div>Ottawa County Courthouse Annex Port Clinton, Ohio</div> <div>Lucas County Emergency Services Bldg Toledo, Ohio</div>		<div>Corporate Assistance Center (CAC)</div> <div>FirstEnergy Corp. Facility</div>	<div>Operations Support Center (OSC)</div> <div>Containment Access Facility (CAF) Third Floor</div>
<div>Nuclear Regulatory Commission (NRC) Operations Center</div> <div>Rockville, Maryland</div>		<div>Emergency Operating Facility (EOF)</div> <div>Lindsey Emergency Response Facility Lindsey, Ohio</div>	<div>Technical Support Center (TSC)</div> <div>Radiological Testing Laboratory (RTL) Davis-Besse Administration Building First Floor (North)</div>
<div>Institute of Nuclear Power Operations Emergency Response Center (ERC)</div> <div>Atlanta, Georgia</div>			
<div>Incident Response Center (IRC)</div> <div>NRC Region III Lisle, Illinois</div>			
<div>Federal Emergency Operations Center</div> <div>DOE, COO Argon, Illinois</div>			
<div>Areva, NP</div> <div>Lynchburg, Virginia</div>			<div>Site Emergency Operations Center (SEOC)</div> <div>Davis-Besse Administration Building First Floor (Center)</div>
<div>Bechtel Power Corporation</div> <div>Gaithersburg, Maryland</div>			

## 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~~ General Plant Manager has been assigned the overall responsibility for emergency preparedness as related to the DBNPS. This responsibility includes not only maintenance of the DBNPS Post-Shutdown 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~~ General Plant Manager is also responsible for training of personnel who implement the Plan and Procedures. To assist the ~~Site Vice President—DB Nuclear~~ General Plant Manager in meeting these assigned responsibilities, an Emergency Response Manager, has been designated. The specific responsibilities of the Emergency Response Manager 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~~ General Plant Manager. This training program provides for the indoctrination of Company employees and contractors. In addition it provides specialized training for ~~licensed operators~~ CFHs, chemistry personnel, radiation protection personnel, and personnel assigned specific responsibilities in the ERO.

The ~~Vice President—Nuclear~~ General Plant Manager 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 Post-Shutdown Emergency Plan, includes the following:

- a. All DBNPS staff personnel requiring unescorted access will receive ~~will receive industry standard training for unescorted access to a nuclear power plant and any specific training determined by DBNPS post shutdown training related to Emergency Response. This training will be completed initially, prior to being granted unescorted access, and annually to maintain unescorted access.~~

~~With regard to Emergency Response, the following objectives have been established:~~

- ~~1. State the purpose of the Post Shutdown 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 Post Shutdown 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 Post-Shutdown 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 response 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 Post-Shutdown 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 Post-Shutdown 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 review of the DBNPS EALs will be performed annually by the Emergency Response Section with state and local governmental agencies. This EAL review

is directed toward offsite senior management personnel and may be performed through a mailing. This mailing includes an offer to receive training on the DBNPS EALs upon request.

- f. A coordinated program shall be conducted annually to acquaint the news media with the Post-Shutdown 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~~ facility 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 Post-Shutdown 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 Emergency Response Manager 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 General Plant Manager. ~~In addition, the Site Vice President, DB 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 Response 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 Emergency Response Manager 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 General Plant Manager (DB), ~~and the Site Vice President DB 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 Emergency Response Manager 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, vegetation, 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 Post-Shutdown 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 Emergency Response Manager by observers or participants. The Emergency Response Manager will submit such procedure revisions for review in accordance with Emergency Plan Administrative Procedure. Approved changes will be incorporated into the Emergency Response Program under the direction of the Emergency Response Manager.



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 Response 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 functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, event classification, notification of offsite authorities, assessment of the onsite and offsite impact of radiological releases, protective action recommendation development, protective action decision making, ~~plant facility~~ system repair and mitigative action implementation. 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. Radiological Monitoring Drills

- a) Radiological monitoring drills shall include, at least annually, collection and analysis of all samples (e.g., water, vegetation, soil, and air), and provisions for communications and record keeping.
- b) Radiation Monitoring Team (RMT) drills will be conducted semiannually which involve simulated elevated airborne samples and direct radiation measurements in the offsite environment.

6. Health Physics Drills

- a) Semiannual Health Physics drills will be conducted which involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment.
- b) ~~An annual drill will be conducted which includes an analysis of actual in-plant liquid samples (Reactor Coolant System) with simulated elevated radiation levels.~~

7. One exercise/drill in a 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.

8. 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 Emergency Response Manager

The Emergency Response Manager shall ensure that:

- a. Information, data, and procedures detailed in the Emergency Plan Procedures are consistent with the DBNPS Post-Shutdown 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 Post-Shutdown Emergency Plan and Emergency Plan Procedures with the:
  - 1. State Plans
  - 2. County Plans
  - 3. Davis-Besse Physical Security Plan
- d. Adequate staffing of the ERO is maintained.
- e. Emergency response related training documentation is sent to Nuclear Records Management.
- f. Emergency related drills and exercises are coordinated as described in this Plan.
- g. Periodic reviews and updates of the DBNPS Post-Shutdown 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 Post-Shutdown Emergency Plan and Emergency Plan Procedures

DBNPS maintains, as separate documents; this Post-Shutdown Emergency Plan, the Emergency Plan Implementing Procedures, Off-Normal Occurrence Procedures, the Emergency Plan Administrative Procedures, Fleet procedures to support station emergency plans, a Public Information Emergency Response Procedure, the Emergency Plan Telephone Directory, and the Evacuation Time Estimate (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 Post-Shutdown Emergency Plan, including appended letters of agreement and plans of offsite organizations and agencies will be reviewed annually and updated as required by the Emergency Response Section, under the direction of the Emergency Response Manager.

8.3.2      The DBNPS Post-Shutdown Emergency Plan will be reviewed annually by an independent group with no immediate responsibility for the emergency response program. This group is the FENOC Oversight organization. Results and recommendations from the review will be documented and sent to appropriate corporate and plant management, including the Company Nuclear Review Board (CNRB). The CNRB is responsible for auditing the Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan to verify compliance at least once every two years. The CNRB performs this function by reviewing the audits which are performed by the FENOC Oversight organization. The report on the adequacy of the interfaces between the DBNPS Post-Shutdown Emergency Plan and the state and local governments will be sent to the respective government agencies by the Emergency Response Section, and retained on file for at least five years.

Davis-Besse Oversight is responsible for auditing the DBNPS Post-Shutdown Emergency Plan at least annually to verify compliance with the company's internal rules and procedures, federal regulations, and operating license provisions. Personnel

performing audits of the DBNPS Post-Shutdown 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. Davis-Besse Oversight is responsible for auditing the fire protection program at least once per 24 months per the FENOC Quality Assurance Program Manual.

Results of each annual and biennial review and update (if needed) of the Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan and Emergency Plan procedures will be reported to the ~~Site Vice President~~ DB Nuclear General Plant Manager.

8.3.3 The Emergency Response Manager will provide an ongoing review of the Post-Shutdown 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 Response Program to DBNPS. Revisions to the DBNPS Post-Shutdown Emergency Plan will be similarly controlled.
- b. The Emergency Response Manager is responsible for coordinating the periodic review and audit of the DBNPS Post-Shutdown Emergency Plan and Emergency Plan Procedures. In addition, the Emergency Response Manager will, through letters, meetings, seminars, or other means available; ensure that appropriate elements of the emergency organization are informed of the DBNPS Post-Shutdown Emergency Plan and amendments thereto, and the Emergency Plan Procedures and revisions thereto.

8.4 Maintenance and Inventory of Emergency Equipment and Supplies

The Emergency Response Manager 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**

<b>Personnel Category</b>	<b>Involved Personnel</b>	<b>Training and Frequency</b>
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 <u>Certified</u> Fuel Handlers	Shift Managers Unit Supervisors Other licensed <u>Certified</u> staff members	Reactor Operators and Senior Reactor Operators <u>Certified</u> Fuel Handlers receive extensive on-the-job and formal training as scheduled and conducted by the operator requalification <u>CFH</u> training program. This program shall include a comprehensive review of the DBNPS <u>Post-Shutdown</u> 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 General Plant Manager who may act as OSC and TSC Managers  Other members of the Nuclear Group staff as designated by the Site Vice President—DB Nuclear.	Training will include the <u>Post-Shutdown</u> 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 <u>Post-Shutdown</u> Emergency Plan and <u>Emergency Plan</u> 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.
Personnel responsible for repair and damage control	Maintenance  Other personnel as designated by station management as Fire Brigade and First Aid	Periodic training is provided to Station maintenance personnel in troubleshooting techniques as described in the training program for the specific discipline.  Fire Brigade and First Aid training occurs as described in this table.

TABLE 8-1

Sheet 2 of 3

**PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL**

<b>Personnel Category</b>	<b>Involved Personnel</b>	<b>Training and Frequency</b>
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.
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 <u>Post-Shutdown Emergency Plan</u> , 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**

<b>Personnel Category</b>	<b>Involved Personnel</b>	<b>Training and Frequency</b>
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.
Offsite Medical Training	Medical Hospital and Ambulance Personnel	These personnel shall receive offsite medical training in accordance with the responsibilities and details contained in current state and local government plans and procedures.
Fleet Emergency Response Support Personnel	All Company personnel assigned duties and responsibilities in the Corporate Assistance Center (CAC) to support the DBNPS <u>Post-Shutdown</u> Emergency Plan	These personnel shall receive training at least on an annual basis. The program shall include a comprehensive review of Fleet procedures to support station emergency plans with specific attention and instruction given to their support role, responsibilities and duties.
Emergency Response Personnel	Emergency Response Manager and designated staff	Periodic classroom training and seminars on Emergency Response shall be provided on an as-needed basis and at the discretion of the Emergency Response Manager to these individuals from qualified outside organizations and documentation of this training maintained by the Emergency Response Section.



## 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 mitigative 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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan. 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~~facility 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:
- Determination of the initial required recovery operations.
  - Observation of hazards or potential hazards associated with the recovery operations.
  - Conducting comprehensive surveillance of ~~plant~~ facilities.
  - Isolating and posting of areas in the ~~plant~~ facility with appropriate warning signs and rope barriers, such as Radiation Areas, High Radiation Areas, High Airborne Activity Areas, and Contaminated Areas, etc.
  - 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 operationsstatus.

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:
- The conditions which caused the emergency have stabilized, are under control, and are unlikely to deteriorate further.
  - 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 Facility~~ 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 SFP is in a stable safe shutdown condition and long-term core spent fuel 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 SFP cooling, 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 significant damage to plant systems required to maintain safe shutdown of the reactor the SFP or damage to the spent fuel resulting in a radiological release, 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 facility 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~~ return to safe storage of spent fuel. 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. Outage Director:

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 Manager:

1. Reports to the Outage Director.
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~~-facility radiation surveys, sampling, and shielding in support of waste system processing, ~~plant~~-facility 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 Manager:

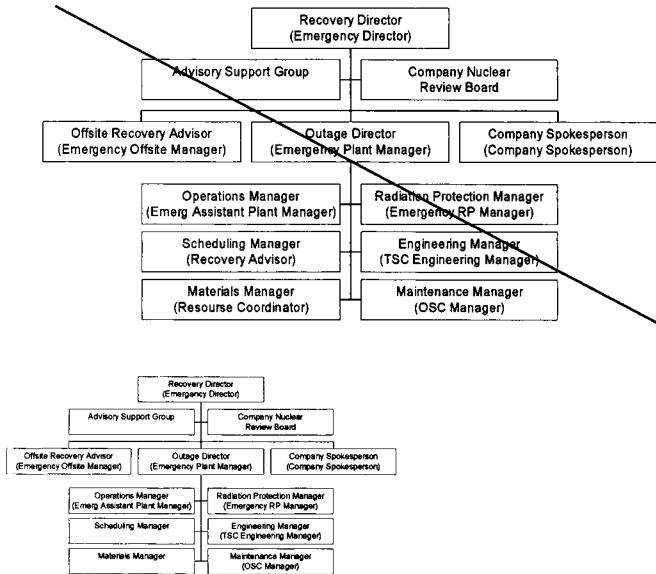
1. Reports to the Outage Director.
2. Coordinate the development of plans and procedures in support of ~~plant~~-SFP systems and ~~operation~~-activities.
3. Provide a central point for the collection, retention, retrieval and transmission of ~~plant~~-facility data.
4. Analyze problems, determine alternatives 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~~-facility.

## e. Operations Manager:

1. Reports to the Outage Director.
2. Direct recovery activities conducted by Operations personnel.
3. Provide recommendations to the Outage Director regarding ~~plant~~ SFP operations-related aspects of the recovery.

- f. Maintenance Manager:
  - 1. Reports to the Outage Director.
  - 2. Coordinate maintenance activities conducted in support of recovery.
  - 3. Designate members of the Reentry team, as appropriate to support maintenance.
  
- g. Offsite Recovery Advisor:
  - 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 public inquiry activities.
  - 6. Coordinates with Company Corporate Communications, as may be applicable.

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**

### **POST SHUTDOWN EMERGENCY PLAN**

#### **PROCEDURE AND RELATED DOCUMENT INDEX AND CROSS-REFERENCE**



**Post-Shutdown Emergency Plan**  
**Procedure and Related Document Index and Cross-Reference**

Page 1 of 6

<b><u>Implementing Procedures</u></b>	<b><u>Procedure Number</u></b>	<b><u>DBNPS Post-Shutdown Emergency Plan Section</u></b>
1. Emergency Classification	RA-EP-01500	4.1, 4.2
2. Unusual Event	RA-EP-01600	4.1.4
3. Alert	RA-EP-01700	4.1.3
4. Site Area Emergency	RA-EP-01800	4.1.2
5. General Emergency	RA-EP-01900	4.1.1
6. Emergency Management	RA-EP-02010	5.1, 5.2, 5.3
7. Emergency Notifications	RA-EP-02110	6.1.1, 7.6
8. EOF Activation and Response	RA-EP-02220	5.5.2, 6.1.2, 7.0, 7.2
9. Dose Assessment Center Activation and Response	RA-EP-02230	5.5.2, 7.2
10. FENOC MIDAS Dose Assessment Software	NOP-LP-5400	6.2
11. Davis-Besse MIDAS Dose Assessment Software	NOP-LP-5402	6.2
12. DBNPS MIDAS Multiple Accident Dose Assessment Software	NOP-LP-5412	6.2
13. Offsite Dose Assessment	RA-EP-02240	6.2
14. Protective Action Guidelines	RA-EP-02245	6.4
15. FENOC Field Monitoring Teams Radiation Monitoring Teams Field Surveys	NOP-LP-5015	6.2, 5.5.2
16. DBAB Radiation Monitoring Team Surveys	RA-EP-02252	6.2, 5.5.2
17. Radiological Controls in the DBAB	RA-EP-02260	6.4.1, 6.4.2, 7.2
18. Facilities Support	RA-EP-02270	7.0
19. TSC Activation and Response	RA-EP-02310	5.4.4, 7.2
20. Emergency Technical Assessment	RA-EP-02320	6.2
21. OSC Activation and Response	RA-EP-02410	5.4.5, 6.4.2, 7.1.2
22. Search and Rescue	RA-EP-02420	6.4.1
23. Emergency Security Activation and Response	RA-EP-02510	5.3.4, 5.4.4, 6.4.3
24. Assembly and Accountability	RA-EP-02520	6.4.1
25. Evacuation	RA-EP-02530	6.4.1
26. Offsite Personnel & Vehicle Monitoring & Decontamination	RA-EP-02550	6.4.1
27. Emergency RP Organization Activation and Response	RA-EP-02610	5.4.4, 5.4.5
28. Emergency Exposure Control and Potassium Iodide Distribution	RA-EP-02620	6.5.1, 6.5.2
29. Station Radiological Surveys and Controls During Emergencies	RA-EP-02640	5.4.5, 6.5
30. Reentry	RA-EP-02710	9.1
31. Recovery Organization	RA-EP-02720	9.2

**Post-Shutdown Emergency Plan**  
**Procedure and Related Document Index and Cross-Reference**

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<b><u>Off Normal Occurrence Procedures</u></b>	<b><u>Procedure Number</u></b>	<b><u>DBNPS <u>Post-Shutdown</u> Emergency Plan Section</u></b>
1. Medical Emergencies	RA-EP-02000	2.7, 5.8.2, 6.5.3
2. Preparation and Transport of Contaminated Injured Personnel	RA-EP-02800	2.7
3. Emergency Helicopter Landing Zone	RA-EP-02807	2.7
4. Tornado	RA-EP-02810	2.6.5, 2.7, 7.10
5. Earthquake	RA-EP-02820	2.6.5, 2.7, 7.10
6. Flooding	RA-EP-02830	2.6.5, 2.7, 7.10
7. Explosion	RA-EP-02840	2.6.5, 2.7, 7.10
8. Hazardous Chemical and Oil Spills	RA-EP-02850	2.6.5, 2.7, 7.10
9. Radiological Incidents	RA-EP-02861	2.6.5, 2.7, 7.10
<del>10. Containment Evacuation</del>	<del>RA-EP-02864</del>	<del>2.7, 6.4.1</del>
<del>11. Loss of Containment Integrity</del>	<del>RA-EP-02865</del>	<del>2.7</del>
<del>12.10. Station Isolation</del>	RA-EP-02870	2.6.5, 2.7, 7.10
<del>13.11. Internal Flooding</del>	RA-EP-02880	2.6.5, 2.7, 7.10
<del>14.12. ERO Response to Security Events or Threats</del>	RA-EP-02890	2.6.5, 2.7, 6.4.1
<b><u>Administrative Procedures</u></b>		
1. Emergency Plan Training Program	RA-EP-00100	2.7, 8.1.1
2. Emergency Response Organization Training Program	NOP-LP-5006	2.7, 8.1.1
3. Emergency Response Drill And Exercise Program	NOP-LP-5011	2.7, 8.1.2
4. Emergency Planning Activity Scheduling System	RA-EP-00300	2.7
5. FENOC Siren Testing And Maintenance Procedure	NOP-LP-5005	2.7, 7.8
6. Maintenance of Emergency Plan Telephone Directory	RA-EP-00510	2.7, 7.6.3
7. Emergency Response Organization	RA-EP-00520	2.7, 6.1
8. Computerized Automated Notification System	RA-EP-00550	2.7, 7.6.1
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

**Post-Shutdown Emergency Plan**  
**Procedure and Related Document Index and Cross-Reference**

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**Public Information Procedure**

- |                                |             |                           |
|--------------------------------|-------------|---------------------------|
| 1. JIC Activation and Response | RA-EP-02950 | 2.7, 4.3.3, 5.5, 7.2, 8.3 |
|--------------------------------|-------------|---------------------------|

**Supporting Documents**

- |  |              |                |
|--|--------------|----------------|
| 1. Fleet Support of Emergency Plans at FENOC<br>Nuclear Plants | NOBP-LP-5001 | 8.3, Table 8-1 |
|--|--------------|----------------|

**Post-Shutdown Emergency Plan**  
**Procedure and Related Document Index and Cross-Reference**

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<b>NUREG</b>	<b>to</b>	<b><u>DB Post-Shutdown Emergency: Plan Section</u></b>	<b>NUREG</b>	<b>to</b>	<b><u>DB Post-Shutdown Emergency: Plan Section</u></b>
<b><u>0654</u></b>			<b><u>0654</u></b>		
A 1a		2.8, 5.8, Table 2.1	F 1d		7.6
A 1b		5.1 - 5.8	F 1e		6.1.2, 7.6.1
A 1c		Table 2-1	F 1f		7.6
A 1d		5.2	F2		7.6.3, 7.8
A 1e		5.1.2, 5.1.3, Table 5.1	F 3		8.1.2
A 2a		N/A	G 1		8.2
A 2b		N/A	G 2		8.2
A 3		App. C	G 3a		7.3.4
A 4		5.0	G 3b		7.3.4
B 1		5.3	G 4a		5.2.4
B 2		5.2.1	G 4b		5.5, 7.3.4
B 3		5.2.1, 5.3.1-5.3.32	G 4c		7.3.4
B 4		5.2.1	G 5		8.1.1
B 5		5.0, Table 5-1	H 1		7.2, 7.2.2
B 6		Figure 6-2	H 2		7.2
B 7		Table 5-1, 5.6	H 3		N/A
B 7a		7.0	H 4		Table 5-1, 7.6.1
B 7b		7.2	H 5a		7.9
B 7c		7.2	H 5b		7.9.6, 7.9.8
B 7d		7.2	H 5c		7.9.9
B 8		5.8.4	H 5d		7.9.6
B 9		5.7, App. C	H 6a		7.9.8
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C 2b		5.5.2	H 9		7.10
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D 1		N/A (NEI 99-01)	H 12		7.9.10
D 2		N/A (NEI 99-01)	I 1		4.0
D 3		N/A			
D 4		N/A	I 2		7.9
E 1		6.1, 7.6.2	I 3a		4.0
E 2		6.1	I 3b		4.0
E 3		6.1	I 4		4.0
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E 5		N/A	I 6		7.9.8
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F 1a		7.6	I 9		7.9, Table 7-4
F 1b		7.6	I 10		7.9
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**Post-Shutdown Emergency Plan**  
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<b>NUREG</b>	<b><u>DB Post-Shutdown</u></b>	<b>NUREG</b>	<b><u>DB Post-Shutdown</u></b>
	<b><u>Emergency-</u></b>		<b><u>Emergency-</u></b>
<b><u>0654</u></b>	<b>to <u>Plan Section</u></b>	<b><u>0654</u></b>	<b>to <u>Plan Section</u></b>
J 1a	6.4.1	K 6c	6.4.3
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J 1 c	6.4.1	L 1	5.8.2, 6.5.4, 6.5.5
J 1d	6.4.1	L 2	6.5.3
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J 3	6.4.1, 6.4.3, 6.5.3	L 4	5.8.2, 6.5.4
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J 8	App. D	N 1a	8.1.2
J 9	N/A	N 1b	8.1.2
J 10a	App. D	N 2a	8.1.2
J 10b	App. D	N 2b	8.1.2
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J 10g	N/A	N 3a	8.1.2
J 10h	N/A	N 3b	8.1.2
J 10i	N/A	N 3c	8.1.2
J 10j	N/A	N 3d	8.1.2
J 10k	N/A	N 3e	8.1.2
J 10l	N/A	N 3f	8.1.2
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J 11	N/A	N 5	8.1.2
J 12	N/A	0 1	8.1.1
K 1a	6.5.3	0 1a	8.1.1
K 1b	6.5.1	0 1b	N/A
K 1c	6.5.1	0 2	8.1.1, 8.1.2
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K 1f	6.5.4	0 4b	8.1.1
K 1g	6.5.5	0 4c	8.1.1
K 2	5.2.1, 6.5.1	0 4d	8.1.1
K 3a	5.2.1	0 4e	8.1.1
K 3b	6.1	0 4f	8.1.1
K 4	N/A	0 4g	8.1.1
K 5a	6.5.3	0 4h	8.1.1
K 5b	6.5.3	0 4i	8.1.1
K 6a	6.4.3	04j	8.1.1
K 6b	6.4.3	0 5	8.1.1

**Post-Shutdown Emergency Plan**  
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<b>NUREG</b>		<b><u>DB Post-Shutdown</u></b>		<b>NUREG</b>		<b><u>DB Post-Shutdown</u></b>
		<b><u>Emergency:</u></b>				<b><u>Emergency:</u></b>
<b><u>0654</u></b>	<b>to</b>	<b><u>Plan Section</u></b>		<b><u>0654</u></b>	<b>to</b>	<b><u>Plan Section</u></b>
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		7.6.3

## **Appendix B**

### **Department of Energy Emergency Radiological Assistance Program (DOE O 153.1)**

**for**

**FirstEnergy Corporation**

**Davis-Besse Nuclear Power Station**

(Reference to DOE O 153.1 is available Online at: [www.directives.doe.gov](http://www.directives.doe.gov))

## **Appendix C**

### **LETTERS OF AGREEMENT**

#### **Contents**

Carroll Township EMS & Fire Service, Inc.

H. B. Magruder Hospital

Lucas County

ProMedica Memorial Hospital

Mercy St. Charles Hospital

~~Institute of Nuclear Power Operations~~

Ottawa County Commissioners

Ohio Department of Public Safety Emergency Management Agency



## **EMERGENCY RESPONSE AGREEMENT**

**This Agreement made and entered into by and between FirstEnergy (hereinafter "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 (24) hour emergency ambulance and fire protection for actual emergencies, including hostile action events at Davis Besse Power Station, 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 based upon the mutual agreement of the Utility and Service, Inc., 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 at the discretion of Service, Inc..**
- 3. Further, the Utility agrees to assume all expenses and costs of providing specialized training for participating personnel and support personnel as**

**Emergency Response Agreement****Page 2**

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. The Utility shall be liable for property damage to Service, Inc., equipment and any bodily injury to Service, Inc., personnel, including death, that is caused by exposure to radiation during the performance of obligations under the Agreement. The Utility shall be liable for non-radiation related injuries or damages to the extent caused by its own negligence. The Utility shall promptly repair or replace Service, Inc., equipment in order to avoid any interruption in fire or 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 property or non-radiation related bodily injury to the extent it is the result of the negligence of the Service, Inc..

**Emergency Response Agreement****Page 3**

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 non-radiological 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 active 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 \$200.00 per hour, for time from call until the ambulance is back in service, for emergency ambulance calls in excess of twelve (12) per year.
8. Service, Inc., agrees to provide a staging area for emergency equipment and personnel in the event the Utility (Davis Besse Nuclear Power Station) is involved in a security related event.
9. This Agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

## Emergency Response Agreement

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FirstEnergy

Carroll Township Emergency  
Medical and Fire Service, Inc.

By: Raymond A. Lieb  
Name: Raymond A. Lieb  
Position: Site Vice President  
Davis Besse Nuclear

By: John R. V. Fire Chief

By: Kathy Wagner Emschey

STATE OF OHIO )  
 ) SS:  
COUNTY OF OTTAWA)



VICKI A. WADSWORTH, NOTARY PUBLIC  
State of Ohio  
My Commission Expires March 22, 2016

Be it remembered that on this 29<sup>th</sup> day of September, 2014,  
before me a Notary Public in and for said County, personally came  
Raymond A. Lieb an Officer of FirstEnergy, who acknowledged the  
signing of the above Agreement as an Officer of First Energy, on behalf of First Energy,  
and by the authority of its Board of Directors, and that the Agreement is the voluntary act  
and deed of First Energy and Raymond A. Lieb, as such Officer, and the  
voluntary act and deed of First Energy, for the purposes stated therein.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed  
my seal this 29<sup>th</sup> day of September, 2014.

Vicki A. Wadsworth  
Notary Public - State of Ohio

## Emergency Response Agreement

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STATE OF OHIO       )  
                                  ) SS:  
COUNTY OF OTTAWA)

Be it remembered that on this 1<sup>st</sup> day of October, 2014,  
before me a Notary Public in and for said County, personally came  
John Brough and Kathy Bowyer, 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 John Brough and Kathy Bowyer,  
as such Officers, and the voluntary act and deed of Service, Inc., for the purposes stated  
therein.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed  
my seal this 1<sup>st</sup> day of October, 2014.

Michael W. Sandwich  
Notary Public - State of Ohio  
Michael W. Sandwich  
My Commission has No Expiration



615 Fulton Street  
Port Clinton, Ohio 43452  
419-734-3131

---

October 19, 2016

Mr. James Vetter  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 State Route 2, Mail Stop 3060  
Oak Harbor, Ohio 43449-9760

Dear Mr. Vetter:

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.

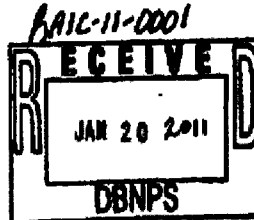
It is further understood that written procedures detailing the actions to be followed for the care of these patients will be implemented and that our personnel will continue to receive instructions regarding this plan of action and will make periodic "dry runs" as needed.

This agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

Sincerely,

J. Todd Almendinger  
President & CEO

JTA/pap

Rev. 23  
February, 2011

Board of County  
Commissioners  
Pete Gerken  
President  
Vince Stalder, Wendell  
Carol Conrad

Emergency Management  
Agency  
Joe Walker  
Director

January 11, 2011

Mr. James Vetter  
Emergency Response Manager  
Davis-Bease Nuclear Power Station  
5501 North State Route 2  
Oak Harbor, OH 43449

Dear Mr. Vetter,

The Lucas County Emergency Management Agency is the lead agency in Lucas County for the coordination of response to area wide emergencies within the County. As such, the Lucas County Emergency Management Agency would lead and coordinate Lucas County's response to an incident at the Davis-Bease Nuclear Power Station.

Lucas County has developed plans and guidelines to deal with an emergency at Davis-Bease Nuclear Power Station, and would implement these plans and guidelines to the best of its ability in the event of an incident at the plant.

The County intends to protect the health and welfare of the people in Lucas County through the implementation of its response plans and guidelines.

This agreement shall remain in effect until terminated in writing by either party, thirty (30) days prior to the effective date.

Sincerely,

Peter Urvagy  
County Administrator



Board of County  
Commissioners  
Carol Contrada  
*President*  
Tina Skeldon Wozniak  
Pete Gerken

Emergency Management  
Agency  
Matthew S. Heyrman  
*Director*

Mr. James Vetter  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 N. State Route 2  
Oak Harbor, Ohio 43449

February 6, 2014

Dear Mr. Vetter,

The following mutual aid agreements are available for Lucas County EMA in the event additional resources are needed to support a response to an incident, including hostile-action based, at the Davis-Besse Nuclear Power Station.

- The Ohio Intrastate Mutual Aid Compact (IMAC)
  - The purpose of IMAC is to develop and improve intrastate mutual aid capabilities for providing services and resources across local boundaries in response to and recovery from any disaster resulting in a formal declaration of emergency.
- Emergency Management Assistance Compact (EMAC)
  - This compact was established by states, for the states. It is not a federal program. There are, however, systems in the EMAC program which allow for close coordination with federal partners engaged in supporting affected states.
- Ohio Law Enforcement Response Plan (LERP)
  - The LERP is a tool for law enforcement agencies to acquire large quantities of law enforcement resources in the event of a domestic terrorist attack, major disaster, or other emergency.
- Ohio Fire Chief's Association Emergency Response Plan
  - Developed by the Ohio Fire Chief's Association as a plan to bring mutual aid to any area of the state in need of additional fire response resources.

Regards,

Matthew Heyrman  
Director





*Your health. Our mission.*

**MEMORIAL HOSPITAL**

Our Mission is to  
improve your health  
and well-being.

**November 28, 2017**

**Mr. James M. Vetter**  
**Manager – Emergency Preparedness**  
**Davis-Besse Nuclear Power Station**  
**5501 State Route 2, Mail Stop 3060**  
**Oak Harbor, Ohio 43449-9760**

Dear Mr. Vetter,

This letter reaffirms our commitment of June 30, 1998 that ProMedica 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,

A handwritten signature in black ink that reads 'Pam Jensen'.  
**Pam Jensen, President ProMedica Memorial Hospital**



Mercy St. Anne Hospital  
Mercy St. Charles Hospital  
Mercy St. Vincent Medical Center  
Mercy Children's Hospital  
Mercy Hospital of Doland  
Mercy Tiffin Hospital  
Mercy Wilford Hospice  
Mercy Medical Partners

July 29, 2015

**Mr. James M. Vetter**  
**Manager – Emergency Response**  
**Davis-Besse Nuclear Power Station**  
**5501 N. State Route 2, Mail Stop 3060**  
**Oak Harbor OH 43449-9760**

**Dear Mr. Vetter:**

This Letter of Agreement reaffirms our commitment, specified in our mutual agreement with First Energy, that Mercy 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,

Craig Albers, RN  
Vice President, Patient Care/CNO  
Mercy St. Charles Hospital

Agreed to:

  
James M. Vetter  
Manager, Emergency Response  
Davis-Besse Nuclear Power Station

8-3-15

Date



*Institute of  
Nuclear Power  
Operations*

*Suite 100  
700 Galleria Parkway, SE  
Atlanta, GA 30330-5943  
770-644-8000  
FAX 770-644-8548*

October 30, 2012

Dear Ladies and Gentlemen:

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

- coordinate technical information flow from the affected utility to the nuclear industry and government agencies
- coordinate the procurement and shipping of equipment and supplies
- locate personnel with technical expertise
- facilitate industry vendor and commercial supplier support
- obtain technical information and industry operating experience regarding plant components and systems
- provide an INPO liaison to facilitate interface

This agreement will remain in effect until terminated in writing. Should you have any questions, please call Steve Meng at (770) 644-8548 or e-mail at MengSW@inpo.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey T. Gasser", is written over a horizontal line.

Jeffrey T. Gasser  
Vice President  
Emergency Response

JTG:cjm



Ottawa County Emergency Management Agency  
315 Madison Street, Annex Basement  
Port Clinton, Ohio 43452-1936  
FRED PETERSEN, Director

Office: 419-734-6900  
Countywide: 800-788-8803  
Facsimile: 419-249-2361  
fpetersen@co.ottawa.oh.us

[www.co.ottawa.oh.us/ottawacoema](http://www.co.ottawa.oh.us/ottawacoema)

September 4, 2014

Mr. James Vetter,  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 North State Route 2  
Oak Harbor, OH 43449

Dear Mr. Vetter,

The Ottawa County Emergency Management Agency is the lead agency in Ottawa County for handling and coordinating response to area-wide emergencies within the County. As such, the Ottawa County Emergency Management Agency would lead and coordinate County response to an incident at the Davis-Besse Nuclear Power Station.

Ottawa County has developed plans and guidelines to deal with an emergency at Davis-Besse Nuclear Power Station, including hostile action, and would implement these plans and guidelines to the best of its ability in the event of an incident at the plant.

The County intends to protect the health and welfare of the people in Ottawa County through the implementation of its response plans and guidelines.

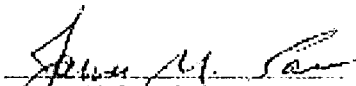
This letter of agreement is not intended, and shall not be construed as creating liability on the part of the County of Ottawa, and of its agencies, or of the officers, agents or employees thereof.

This agreement will be reviewed and, if necessary, revised on an annual basis in accordance with NUREG-0654. If no revisions are necessary, this agreement will remain in effect unless terminated by either party giving ninety (90) days advance, written notice of termination to the other party.

BOARD OF OTTAWA COUNTY COMMISSIONERS  
OTTAWA COUNTY EMERGENCY MANAGEMENT AGENCY

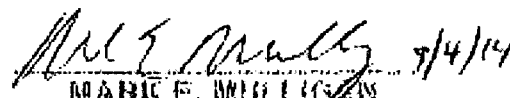
  
JoEllen Regal, President

  
Fred Petersen, EMA Director

  
James M. Sass, Commissioner

  
Steven M. Arndt, Commissioner

APPROVED AS TO FORM:

 7/4/14  
MARIE E. MULLIGAN  
Prosecuting Attorney  
Ottawa County, Ohio



OHIO DEPARTMENT  
OF PUBLIC SAFETY  
SAFETY • SERVICE • PROTECTION

- Bureau of Motor Vehicles
- Emergency Management Agency
- Emergency Medical Services
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



John R. Kasich, Governor  
John Born, Director  
Nancy J. Dragani  
Executive Director

Emergency Management Agency  
2865 West Dublin-Granville Road  
Columbus, Ohio 43235-2208  
(614) 868-7150  
[www.ema.ohio.gov](http://www.ema.ohio.gov)

December 2, 2013

Mr. Glenn McKee  
First Energy Nuclear Operating Company  
341 White Pond Drive (WAC B-1)  
Akron, Ohio 44320

Dear Mr. McKee:

In order for the State of Ohio to remain in compliance with Federal regulations, the established Memorandum of Understanding (MOU) between the State of Ohio and First Energy Nuclear Operating Company (FENOC) has been reviewed regarding the coordination of off-site response to nuclear incidents for Beaver Valley Power Station (BVPS), Davis-Besse Nuclear Power Station (DBNPS) and Perry Nuclear Power Plant (PNPP). The agreement is in accordance with the Nuclear Regulatory Commission (NRC) and Federal Emergency Management Agency (FEMA) guidance as outlined in NUREG-0654/FEMA-REP-1, Revision 1. Enclosed you will find a copy of the most recent document.

The purpose of this letter is to inform you the agreement between the State of Ohio and the FENOC was reviewed and remains in effect. The State further acknowledges the MOU will continue to remain in full force and effect until such time as either of the parties decides the agreement needs to be revised. Each year, the MOU will be reviewed for substantive changes and updated as necessary. Barring any substantive changes, the MOU will remain in effect. Signatory confirmation is not required.

If you do not agree with this review process or wish to make changes to the MOU, please contact Mr. Michael Bear of my staff at 614-799-3687. If the process is acceptable and you have no changes, you need to do nothing. Please let us know if you have any questions in this regard. Thank you.

Sincerely,

Nancy J. Dragani  
Executive Director

Enclosure

**LETTER OF AGREEMENT BETWEEN  
FIRST ENERGY NUCLEAR OPERATING COMPANY  
AND THE OHIO DEPARTMENT OF PUBLIC SAFETY  
EMERGENCY MANAGEMENT AGENCY**

This letter will serve as a written agreement that the First Energy Nuclear Operating Company (Davis-Besse Nuclear Power Station, Perry Nuclear Power Plant, and Beaver Valley Power Station) will provide the Ohio Department of Public Safety, Emergency Management Agency with the following equipment at the locations indicated during a drill or emergency involving a nuclear power plant.

**LOCATION: EQUIPMENT**

JPIC: Telephones, Facsimile Machine, Copier, Typewriter/Word Processor, Work Space, Status Boards, Maps, Administrative Support/Supplies

ECC/EOF: Telephones, Facsimile Machine, Copier, Work Space, Status Boards, Maps, Administrative Support/Supplies

**NOTE:** It is understood that this list is not all inclusive, but is representative of the level of support needed by responders to these facilities

A technical liaison will be dispatched by the FirstEnergy Nuclear Operating Company to the State Emergency Operations Center (EOC) upon or before the declaration of a Site Area Emergency at Davis-Besse Nuclear Power Station, Perry Nuclear Power Plant, or Beaver Valley Power Station as determined by individual plant procedures. The State will provide similar equipment to the technical liaison to ensure his/her duties may be performed. In the event of an incident where further degradation of the plant appears likely, the Ohio Emergency Management Agency may request that the technical liaison be dispatched to the State EOC prior to a Site Area Emergency declaration. The Ohio Emergency Management Agency will dispatch a liaison to the nuclear power plant of concern at the Alert level.

This agreement shall be reviewed annually and updated as necessary. The agreement will remain in effect until terminated by either party through the submission of a sixty (60) days written notice.

**SIGNED**

For the State of Ohio Emergency  
Management Agency




EXECUTIVE DIRECTOR

8/11/03

DATE

For the First Energy Nuclear  
Operating Company



CHIEF OPERATING OFFICER - FENOC

8/29/03

DATE

## **Appendix D**

### **Supporting Documents**

(Under Separate Cover)

#### EVACUATION TIME ESTIMATES

OHIO RADIOLOGICAL EMERGENCY PREPAREDNESS PLAN

OHIO RADIOLOGICAL EMERGENCY PREPAREDNESS (REP)  
-OPERATIONS MANUAL

OHIO EMERGENCY OPERATIONS PLAN,  
EMERGENCY SUPPORT FUNCTION #10,  
HAZARDOUS MATERIALS, TAB B – REP INCIDENT RESPONSE PLAN

OTTAWA COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN

LUCAS COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN

## **Appendix E**

(Under Separate Cover)

DBRM-EMER-1500 A, Davis-Besse Emergency Action Level  
Basis Document



## **Appendix F**

(Under Separate Cover)

Davis-Besse Nuclear Power Station (DBNPS) ERO  
Post-Shutdown On-Shift Staffing Analysis Report

**Attachment 3**

**Proposed Revisions to the DBNPS Emergency Plan, Revision 33  
(Clean Version)  
(183 Pages Follow)**

**DAVIS-BESSE**  
**NUCLEAR POWER STATION**  
**POST-SHUTDOWN**  
**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 Preparedness and Response in contributing to this safety as well as contributing to Station reliability is also recognized.

In accordance with this philosophy, this Post-Shutdown 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 TBD of the Post-Shutdown Emergency Plan meets the requirements of 10 CFR 50.54(q). Changes made in Revision TBD do not decrease its effectiveness. The Plan has been revised in accordance with NRC Safety Evaluation [TBD].

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

The Emergency Response Manager is hereby assigned the responsibility for emergency preparedness operations with authority as established in this Post-Shutdown Emergency Plan and outlined above. Day-to-day maintenance and implementation of the Emergency Response Program is the responsibility of the Emergency Response Manager and the Emergency Response Section.

---

Emergency Response Manager

---

Date

---

General Plant Manager

---

Date

**Davis-Besse Nuclear Power Station  
Post-Shutdown Emergency Plan  
Revision TBD**

Summary of Plan Changes

---

Full revision to address implementation of the Post-Shutdown Emergency Plan. No revision bars are used to identify the changes.

The changes to the on-shift and augmented Emergency Response Organization staffing support the permanent cessation of power operations of the Davis-Besse Nuclear Power Station and the permanent removal of fuel from the reactor vessel.

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## 1.0      DEFINITIONS

Listed below are terms and their definitions as used in the Post-Shutdown Emergency Plan. Defined terms associated with the Emergency Action Levels in Appendix E are shown in ALL UPPER CASE LETTERS.

- 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 the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.
- 1.3      Alternate Technical Support Center (ATSC) - An area within the Lindsey Emergency Response Facility, which has the capability to display and transmit facility status information to individuals who are knowledgeable of, and responsible for engineering and management support of SFP operations in the event of an emergency situation.
- 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 Davis-Besse Nuclear Power Station NRC Operating License No. NPF-3.
- 1.9      Compensatory Indications  
Plant Process Computer, SPDS, and PI Data (Process Book).
- 1.10     CONFINEMENT BOUNDARY  
The barrier(s) between spent fuel and the environment once the spent fuel is processed for dry storage. As related to the DBNPS Dry Fuel Storage Facility, CONFINEMENT BOUNDARY is defined as the Dry Shielded Canister (DSC).

- 1.11    Contaminated Area  
An area where removable contamination exists at levels in excess of 1000 dpm/100cm<sup>2</sup> beta gamma or 20 dpm/100cm<sup>2</sup> alpha.
- 1.12    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.
- 1.13    Controlled Release  
Any release of radioactive material from Davis-Besse Nuclear Power Station to the environment, which is planned, deliberate, monitored and regulated.
- 1.14    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.
- 1.15    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.
- 1.16    Drill  
A supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation.
- 1.17    EMERGENCY ACTION LEVEL (EAL)  
A pre-determined, site-specific, observable threshold for an Initiating Condition that, when met or exceeded, places the facility in a given emergency classification level.
- 1.18    EMERGENCY CLASSIFICATION LEVEL (ECL)  
One of a set of names or titles established by the US Nuclear Regulatory Commission (NRC) for grouping off-normal events or conditions according to (1) potential or actual effects or consequences, and (2) resulting onsite and offsite response actions. The emergency classification levels, in ascending order of severity, are:
- Unusual Event (UE)
  - Alert (A)
  - Site Area Emergency (SAE)
  - General Emergency (GE)
- 1.19    Emergency Operations Facility (EOF)  
An area located at 1240 South Main Street, Lindsey, Ohio, which is equipped to facilitate the control and coordination of emergency activities and assessments.
- 1.20    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.



- 1.21    Post-Shutdown Emergency Plan  
The document, which describes the Company philosophy and organization for implementation of regulations dealing with a response to a radiological accident at the Davis-Besse Nuclear Power Station.
- 1.22    Emergency Plan Procedures  
Those procedures which implement the Post-Shutdown Emergency Plan and are maintained by the Emergency Response Section. They include the Emergency Plan Implementing Procedures, Off-Normal Occurrence Procedures, and Administrative Procedures.
- 1.23    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 for a Plume Exposure Pathway; and the other, with a radius of 50 miles for an Ingestion Exposure Pathway. In these zones, predetermined Protective Action plans are needed.
- 1.24    EPA PROTECTIVE ACTION GUIDELINES  
Environment Protection Agency Protective Action Guidelines. The EPA PAGs are expressed in terms of dose commitment: 1 Rem TEDE or 5 Rem CDE Thyroid. Actual or projected offsite exposures in excess of the EPA PAGs requires DBNPS to recommend protective actions for the general public to offsite planning agencies.
- 1.25    Essential Personnel  
Those assigned specific emergency response duties as identified in the Post-Shutdown Emergency Plan.
- 1.26    Exclusion Area  
The area surrounding the facility in which the licensee has the authority to determine all activities including the exclusion or removal of persons and property. At the 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.
- 1.27    Exercise  
An event that tests the integrated capability and a major portion of the basic elements within the Post-Shutdown Emergency Plan.

1.28 EXPLOSION

A rapid, violent and catastrophic failure of a piece of equipment due to combustion, chemical reaction or overpressurization. A release of steam (from high energy lines or components) or an electrical component failure (caused by short circuits, grounding, arcing, etc.) should not automatically be considered an EXPLOSION. Such events may require a post-event inspection to determine if the attributes of an EXPLOSION are present.

1.29 FIRE

Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute FIRES. Observation of flame is preferred, but is not required if large quantities of smoke and heat are observed.

1.30 FLOODING

A condition where water is entering a room or area faster than installed equipment is capable of removal, resulting in a rise of water level within the room or area.

1.31 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)

1.32 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.

1.33 GENERAL EMERGENCY

Events are in progress or have occurred which involve actual or IMMINENT substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

1.34 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.

1.35 HOSTAGE

A person(s) held as leverage against the station to ensure that demands will be met by the station.

1.36 HOSTILE ACTION

An act toward a nuclear power plant or its personnel that includes the use of violent force

to destroy equipment, take HOSTAGES, and/or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, PROJECTILES, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power plant. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the OWNER CONTROLLED AREA).

1.37    HOSTILE FORCE

One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.

1.38    IMMINENT

The trajectory of events or conditions is such that an EAL will be met within a relatively short period of time regardless of mitigation or corrective actions.

1.39    IMPEDE(D)

Personnel access to a room or area is hindered to an extent that extraordinary measures are necessary to facilitate entry of personnel into the affected room/area (e.g., requiring use of protective equipment, such as SCBAs, that is not routinely employed).

1.40    INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)

A complex that is designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage.

1.41    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:

- Ingestion of contaminated drinking supplies, such as water or milk,
- Ingestion of contaminated food, such as fresh vegetables or aquatic foodstuffs.

1.42    INITIATING CONDITION (IC)

An event or condition that aligns with the definition of one of the four emergency classification levels by virtue of the potential or actual effects or consequences.

1.43    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 1985, the reference datum was revised upward by 0.57 feet.

1.44    Joint Information Center

A location for coordinating news statements 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.

- 1.45    Loss  
A state of inoperability in which Functional and Operable status cannot be maintained.
- 1.46    Low Population Zone  
The unrestricted area outside the OWNER CONTROLLED AREA, encompassed within a radius of 2 miles (approximately 3200 meters) from the site.
- 1.47    MAINTAIN  
Take appropriate action to hold the value of an identified parameter within specified limits.
- 1.48    Mitigative 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).
- 1.49    Modes of Discharge  
Discharge of radioactivity to the ground surface, surface water, atmosphere, or any combination thereof.
- 1.50    News Statement  
A detailed statement in printed format intended for public knowledge containing an announcement, supporting information, and usually some background information.
- 1.51    Non-essential Personnel  
Personnel who are not pre-assigned specific emergency response duties.
- 1.52    Normal Levels  
The highest reading in the past twenty-four hours excluding the current peak value.
- 1.53    Nuclear Group  
The functional area of the Company which operates and maintains all nuclear generating facilities owned by or licensed to the Company.
- 1.54    Offsite  
Any area outside the OWNER CONTROLLED AREA.
- 1.55    Onsite  
The area within the OWNER CONTROLLED AREA.
- 1.56    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).
- 1.57    Operations Support Center  
A location within the PROTECTED AREA where emergency response teams are assembled, briefed and coordinated during an emergency.

- 1.58    OWNER CONTROLLED AREA (OCA)  
The property associated with the station and owned by the company. Access is normally limited to persons entering for official business.
- 1.59    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)
- 1.60    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.].
- 1.61    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:
- Whole body external exposure to gamma radiation from the radioactive plume and from deposited material,
  - Inhalation exposure from the passing radioactive plume.
- 1.62    Population At Risk  
Those persons for whom Protective Actions are being or would be taken.
- 1.63    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.
- 1.64    PROJECTILE  
An object directed toward a nuclear power plant that could cause concern for its continued operability, reliability, or personnel safety.
- 1.65    PROTECTED AREA  
An area that normally encompasses all controlled areas within the security protected area fence.

- 1.66    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.
- 1.67    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 the Davis-Besse Nuclear Power Station, the State of Ohio, and both Ottawa and Lucas Counties.
- 1.68    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.
- 1.69    Radiation Work Permit  
A document which gives radiation protection requirements, authorization to enter the radiologically controlled area, and permission to receive radiation dose.
- 1.70    Radiologically Controlled Area (RCA)  
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.
- 1.71    Radiological Testing Laboratory  
A facility near the Technical Support Center 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.
- 1.72    Recovery Actions  
Those actions taken after an emergency to restore the station as nearly as possible to pre-emergency conditions.
- 1.73    Release  
A radiological release (airborne or liquid) to the outside environment attributable to the emergency event.
- 1.74    RESTORE  
Take the appropriate action required to return the value of an identified parameter to the applicable limits.
- 1.75    Safety Parameter Display System (SPDS) – A computer system that acquires and displays facility data. This system provides data to Operator Aids.
- 1.76    SECURITY CONDITION  
Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation

to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.

1.77 Shift Manager's Office

A facility that is located within the Control Room envelope and may be used by the Emergency Assistant Plant Manager during emergency conditions to observe and provide guidance to the Shift Manager for direction and control of facility activities.

1.78 SITE AREA EMERGENCY

Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that result in intentional damage or malicious acts: 1) toward site personnel or equipment that could lead to the likely failure of or; 2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

1.79 SITE BOUNDARY

Area as depicted in UFSAR Figure 1.2-12 Site Plan. The SITE BOUNDARY is defined at a minimum exclusion distance of 0.75 miles. This is the nearest distance from potential release points at which protective actions would be required for members of the public.

1.80 State

The State of Ohio.

1.81 Technical Support Center (TSC)

An area within the OWNER CONTROLLED AREA, which has the capability to display and transmit facility status information to individuals who are knowledgeable of, and responsible for engineering and management support of SFP operations in the event of an emergency situation.

1.82 Uncontrolled Release

Any release of radioactivity from Davis-Besse Nuclear Power Station to the surrounding environment which can be described by any one or combination of the following terms: unplanned, unintentional, and unregulated.

1.83 UNISOLABLE

An open or breached system line that cannot be isolated, remotely or locally.

1.84 UNPLANNED

A parameter change or an event that is not 1) the result of an intended evolution or 2) an expected facility response to a transient. The cause of the parameter change or event may be known or unknown.

1.85    UNUSUAL EVENT

Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

1.86    VALID

An indication, report, or condition, is considered to be VALID when it is verified by: 1) an instrument channel check, 2) indications on related or redundant indicators, or 3) by direct observation by facility personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

1.87    VISIBLE DAMAGE

Damage to a component or structure that is readily observable without measurements, testing, or analysis. The visual impact of the damage is sufficient to cause concern regarding the operability or reliability of the affected component or structure.

1.88    Vital Equipment

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**

AC	Alternating Current
ATSC	Alternate Technical Support Center
ALARA	As Low As is Reasonably Achievable
ARM	Area Radiation Monitor
B&W	Babcock and Wilcox
CA	Controls Area (in control room)
CAC	Corporate Assistance Center
CAM	Continuous Air Monitor
CANS	Computerized Automated Notification System
CAS	Central Alarm Station
CDE	Committed Dose Equivalent
CE	Combustion Engineering
CFH	Certified Fuel Handler
CFR	Code of Federal Regulations
CNRB	Company Nuclear Review Board
CRM	Containment Radiation Monitor
CTRM	Control Room
cpm	counts per minute
DADS	Data Acquisition and Display System
DBAB	Davis-Besse Administration Building
DBABA	Davis-Besse Administration Building Annex
DBNPS	Davis-Besse Nuclear Power Station
DC	Direct Current
DFSF	Dry Fuel Storage Facility
DOE	Department of Energy
DOT	Department of Transportation
DPM	Decades Per Minute
dpm	disintegration's per minute
E&C	Electrical and Controls
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
ED	Emergency Director

**TABLE 1-1**  
**ACRONYMS**

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
EPIP	Emergency Plan Implementing Procedure
EPZ	Emergency Planning Zone
ERO	Emergency Response Organization
FBI	Federal Bureau of Investigation
FE	FirstEnergy Corporation
FEMA	Federal Emergency Management Agency
FENOC	FirstEnergy Nuclear Operating Company
FSAR	Final Safety Analysis Report
GE	General Emergency
HPN	Health Physics Network
IC	Initiating Condition
I&C	Instrument and Control
IGLD	International Great Lakes Datum
ISFSI	Independent Spent Fuel Storage Installation
JIC	Joint Information Center
Keff	Effective Neutron Multiplication Factor
LCEMA	Lucas County Emergency Management Agency
LCO	Limiting Conditions for Operation
LDE	Lens Dose Equivalent
mR	milliRoentgen

**TABLE 1-1**  
**ACRONYMS**

MW	Megawatt
MWe	Megawatt electric
MWt	Megawatt thermal
NCO	Non-Certified Operator
NEI	Nuclear Energy Institute
NOAA	National Oceanographic and Atmospheric Administration
NOUE	Notification Of Unusual Event
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
OBE	Operating Basis Earthquake
OCA	Owner Controlled Area
OCEMA	Ottawa County Emergency Management Agency
ODCM/ODAM	Offsite Dose Calculation (Assessment) Manual
OEMA	Ohio Emergency Management Agency
ORO	Offsite Response Organization
OSHP	Ohio State Highway Patrol
OSC	Operations Support Center
PA	Protected Area
PAG	Protective Action Guide
PASS	Post Accident Sampling System (see ARCSS)
PNS	Prompt Notification System (siren system)
PSIG	Pounds per Square Inch Gauge
R	Roentgen
RCA	Radiologically Controlled Area
REM	Roentgen Equivalent Man
REMP	Radiological Environmental Monitoring Program
RMT	Radiation Monitoring Team
RP	Radiation Protection

**TABLE 1-1**  
**ACRONYMS**

RTL	Radiological Testing Lab
RWP	Radiation Work Permit
SAS	Secondary Alarm Station
SCBA	Self-Contained Breathing Apparatus
SDE	Shallow Dose Equivalent
SFP	Spent Fuel Pool
SPDS	Safety Parameter Display System
SSE	Safe Shutdown Earthquake
TEDE	Total Effective Dose Equivalent
TRM	Technical Requirements Manual
TSC	Technical Support Center
UE	Unusual Event
USAR	Updated Safety Analysis Report
VDC	Volts DC
WE	Westinghouse Electric
WOG	Westinghouse Owners Group

**TABLE 1-2**

**COMMUNICATIONS TEST FREQUENCIES**

Monthly - At least once per calendar month

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 Post-Shutdown 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 Post-Shutdown 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 Post-Shutdown Emergency Plan is not the primary working document to be used during an emergency. The purpose of the Post-Shutdown Emergency Plan is to describe the program established at DBNPS to satisfy regulatory requirements and to safeguard the public and facility 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 formerly employed a pressurized light water reactor steam supply system furnished by the Babcock & Wilcox Co. (now AREVA NP) to generate approximately 930 MWe. The reactor design core power was 2817 MWt. The reactor permanently ceased power operations on [DATE] and was permanently defueled on [DATE]. Spent Fuel is stored in the Spent Fuel Pool (SFP) and the Independent Spent Fuel Storage Installation (ISFSI).

The Station encompasses 954 acres, of which more than 700 acres is marsh land. A portion of the marsh land is 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. Four (4) all-weather roads provide access to the site from Ohio Route 2. Figure 2-1 shows the general site location.

Site meteorological data for 2007 indicates that the prevailing winds at 10 meters above ground level are from the south/southwest. The average wind velocity at this level is 9.42 miles per hour (4.21 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 Davis-Besse Nuclear Power Station Development of Evacuation Time Estimates, Final Report Revision 2, 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 2010 Census information is 20,403 people. Approximately 89% 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 Davis-Besse Nuclear Power Station Development of Evacuation Time Estimates, Final Report Revision 2, which has been prepared in accordance with NUREG 0654/FEMA Rev.-1, Appendix 4.

The EPZ permanent resident population is reviewed annually. If at any time during the decennial period the EPZ permanent resident population increases such that it causes the longest ETE value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas, or for the entire 10-mile EPZ to increase by 25 percent or 30 minutes, whichever is less, from the currently NRC approved or updated ETE, FENOC updates the ETE analysis to reflect the impact of that population increase. The updated ETE analysis is submitted to the NRC under 10 CFR 50.4 no later than 365 days after

FENOC determines the criteria for updating the ETE have been met and at least 180 days before using it to form protective action recommendations and providing it to state and local governmental authorities for use in developing offsite protective action strategies.

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 or sheltering 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 and in NEI 99-01, Methodology for Development of Emergency Action Levels, Revision 6.

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

## 2.5 Objectives of Emergency Response

- 2.5.1 The objective of the Emergency Response Section 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 Post-Shutdown 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 Physical Security Plan and Procedures and this plan are coordinated to ensure that appropriate emergency actions can be taken. For example, the Physical 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 and Radiation Protection Nuclear Operating 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., AREVA NP, Bechtel, etc.).

2.7      Emergency Plan Procedures, Station Procedures and Fleet Business Practice

Detailed Emergency Plan Procedures direct the implementation of this Post-Shutdown Emergency Plan. Detailed Station procedures prescribe appropriate courses of action necessary to place the facility in a safe condition and limit the consequences for each classification of incident and/or emergency. Other Emergency Plan Procedures and a Fleet business practice detail maintenance of the Emergency Preparedness Program, Off Normal Occurrence Procedures (i.e. floods, tornadoes, etc.), Fleet emergency response support, and Public Relations. An index of these procedures and Fleet business practices are 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 Radiological Emergency Preparedness Plan, which includes the Ohio Radiological Emergency Preparedness (REP) Operations Manual and Ohio Emergency Operations Plan, Emergency Support Function #10, Hazardous Materials, Tab B – REP Incident Response Plan.
- 2.8.2 Ottawa County, The Ottawa County Radiological Emergency Response Plan
- 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 Post-Shutdown 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)
SFP 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 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 Health Department  
Lucas County Engineer  
H.B. Magruder Hospital  
ProMedica Memorial Hospital  
Mercy 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

Areva, NP  
Bechtel Power Corp.

#### OTHER SUPPORT

American Nuclear Insurers  
Nuclear Mutual Limited

Figure 2-1

DBNPS General Site Location

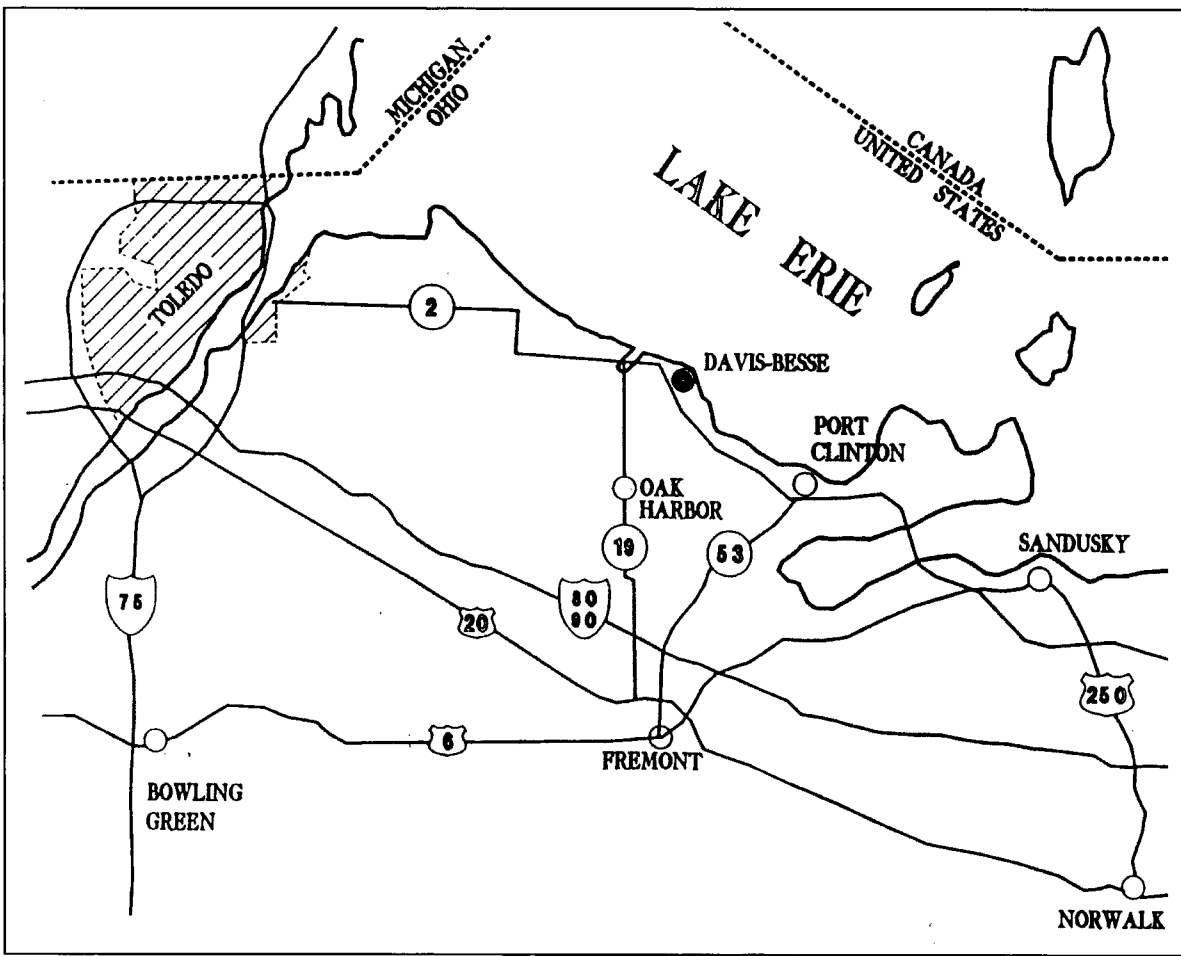
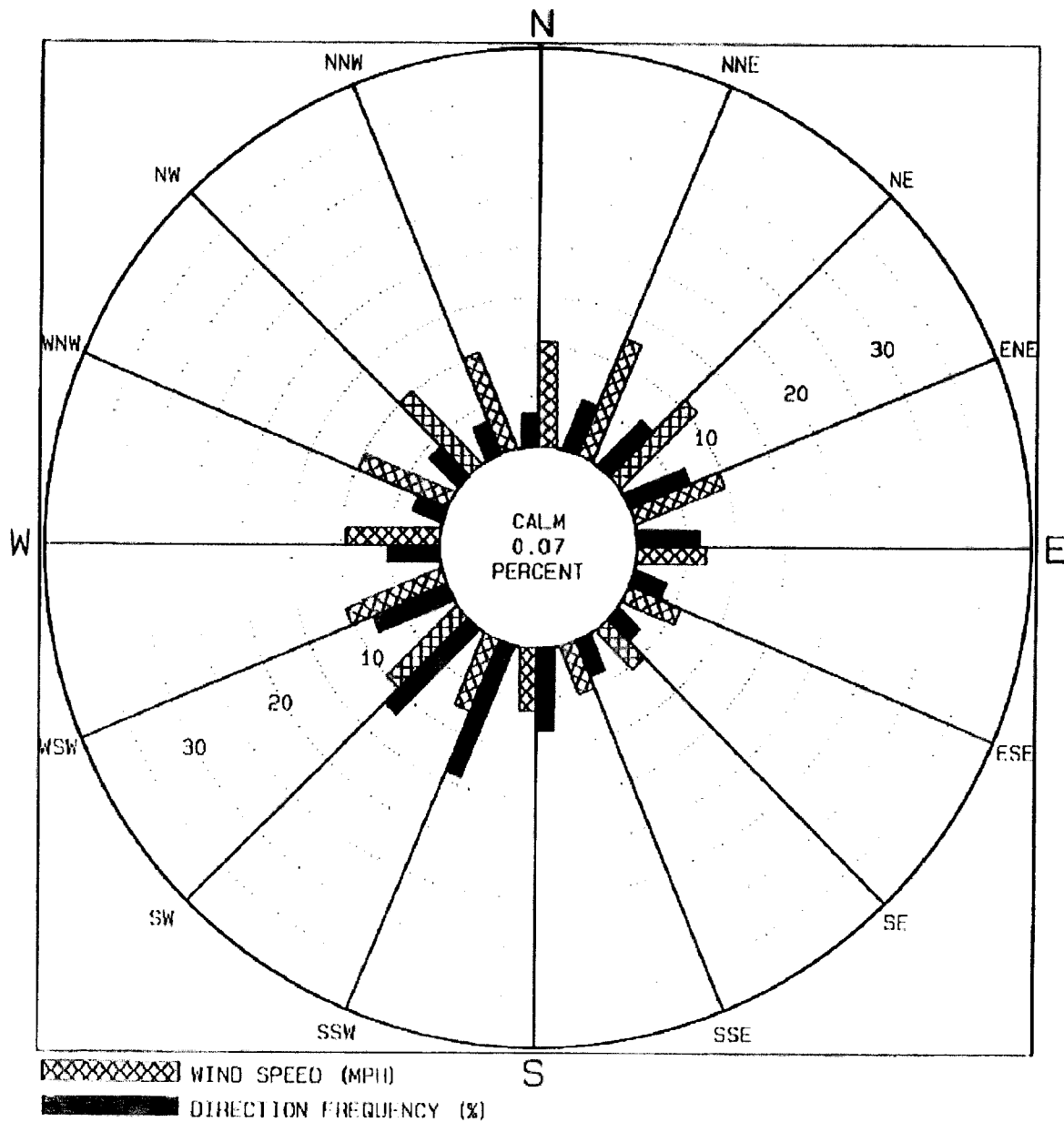


Figure 2-2  
DBNPS Site  
Annual Wind Distributions  
At the 10 Meter Level



DAVIS-BESSE  
ANNUAL 2011  
10M LEVEL

Figure 2-3

DBNPS 10-Mile Emergency Planning Zone

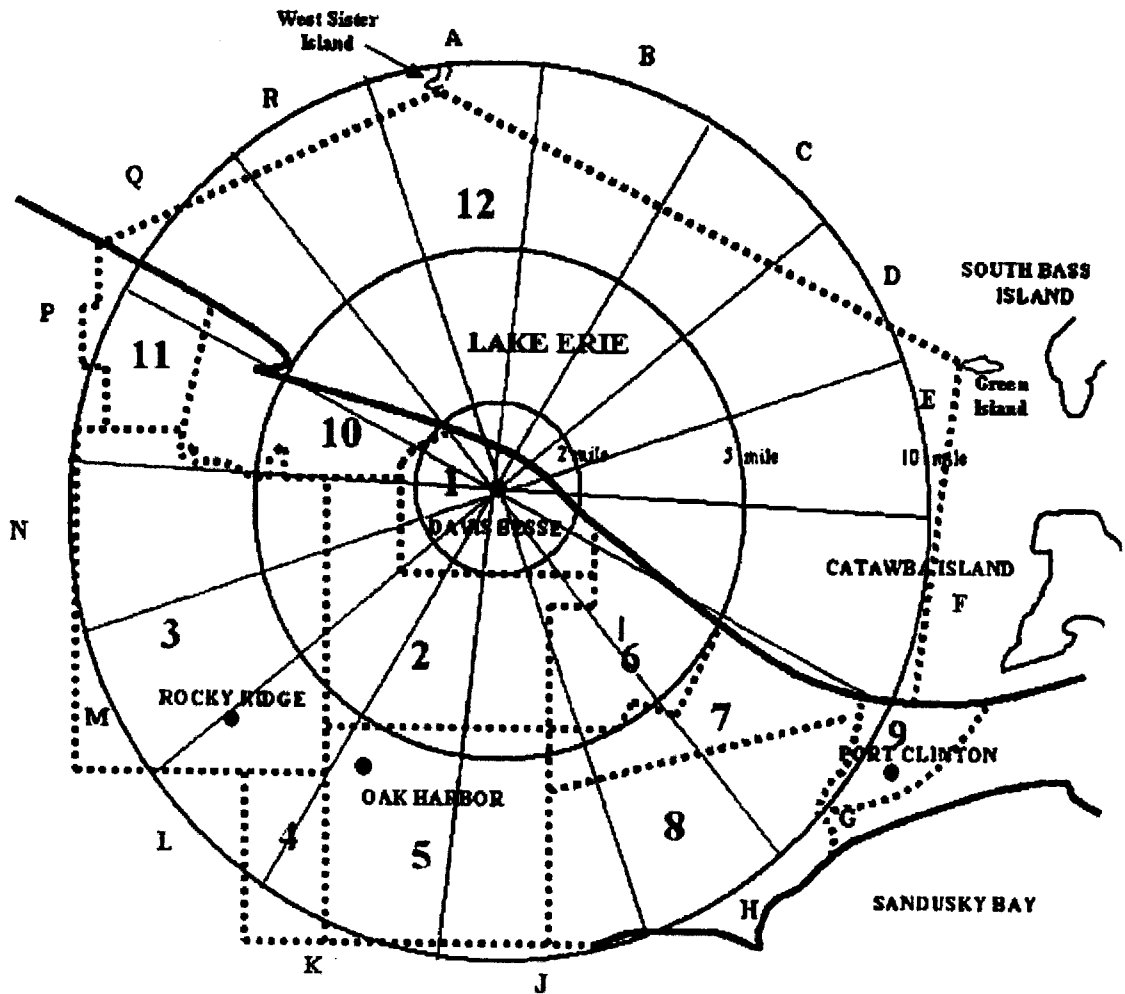
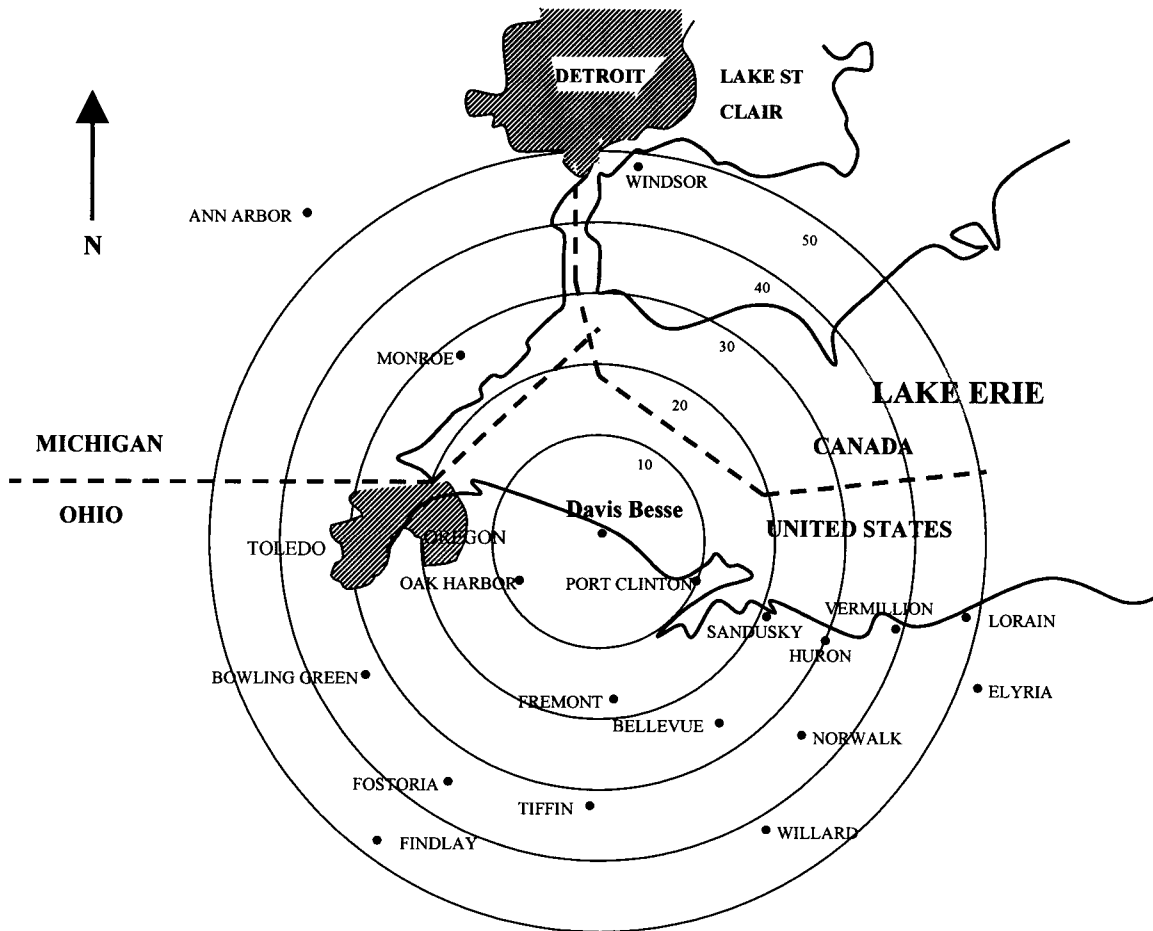


Figure 2-4

## DBNPS 50-Mile Emergency Planning Zone





### 3.0 SUMMARY OF THE POST-SHUTDOWN EMERGENCY PLAN

The DBNPS Post-Shutdown 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 Post-Shutdown Emergency Plan will be put into effect whenever a radiological emergency or other potentially hazardous situation is identified. The details of the Post-Shutdown 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 Post-Shutdown 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 Post-Shutdown Emergency Plan Steps

In general, the Post-Shutdown 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 mitigative 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 Post-Shutdown 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 another qualified member of the on-shift staff. The Emergency Plant Manager or Emergency Assistant Plant Manager may assume the Emergency Director position upon arrival in the Control Room or TSC.

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

The on-shift crew is responsible for implementing emergency procedures in accordance with assigned response functions. Emergency response functions are also assigned to off-shift facility 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 Fleet Emergency Response Organization. Fleet emergency response 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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan.

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 Radiological Emergency Response Plan.

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 Mitigative Actions <sup>1</sup>	Participation By Various Organizations		
				DBNPS		Offsite Agencies
	Onsite	Offsite		Onsite	Fleet Support	
Unusual Event	Possible	None	Possible	Notification Status <sup>2</sup>	Notification Status	Notification Status
Alert	Possible	Possible	Possible	Action	Standby Status <sup>3</sup>	Standby Status <sup>3</sup>
Site Area Emergency	Required	Possible	Probable	Action	Action	Action
General Emergency	Required	Required	Required	Action	Action	Action

<sup>1</sup>Action might include local fire support, ambulance service, medical assistance, or radiological assessment.

<sup>2</sup>Notification Status: Organization informed of situation onsite.

<sup>3</sup>Standby Status: Organization staffs preplanned centers, establishes communications, and assembles emergency teams, as required.

## 4.0 EMERGENCY CONDITIONS

### 4.1 Emergency Classification Levels (ECLs)

The Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan emergencies are divided into four Emergency Classification Levels (ECLs): GENERAL EMERGENCY, SITE AREA EMERGENCY, ALERT, and UNUSUAL EVENT.

The ECLs are arranged from most severe to least severe according to relative threat to the health and safety of the public and emergency workers. An ECL is determined to be met by identifying abnormal conditions and then comparing them to INITIATING CONDITIONS (ICs) through EMERGENCY ACTION LEVELS (EAL) and threshold values as discussed below. When multiple EALs are met, event declaration is based in the highest ECL reached. Post-Shutdown Emergency Plan, Section 6.0, Emergency Measures, summarizes the emergency measures to be taken by both the Onsite and corporate emergency response organizations.

#### 4.1.1 GENERAL EMERGENCY

Events are in progress or have occurred which involve actual or IMMINENT substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

#### 4.1.2 SITE AREA EMERGENCY

Events are in progress or have occurred which involve an actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts: 1) toward site personnel or equipment that could lead to the likely failure of or, 2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

#### 4.1.3 ALERT

Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

#### 4.1.4 UNUSUAL EVENT

Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

#### 4.1.5 RECOVERY

Recovery may be entered prior to returning to a normal organization and operation. Recovery provides dedicated resources and organizational structure in support of restoration and communication activities following the termination of the emergency event. Recovery phase is discussed in Section 9.0 of the Post-Shutdown Emergency Plan.

#### 4.2 EMERGENCY CLASSIFICATION

The Davis-Besse Nuclear Power Station maintains the capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications that an EAL has been exceeded. The 15-minute criterion commences when facility instrumentation, facility alarms, computer displays, or incoming verbal reports that correspond to an EAL first become available to any facility personnel.

#### 4.3 INITIATING CONDITION (ICs)

The INITIATING CONDITION (IC) and EMERGENCY ACTION LEVELS (EALs) with their related basis information are located in Appendix E of the Post-Shutdown Emergency Plan. The ICs provide a general description of emergency conditions that are organized beneath the broader categories of the ECLs. The IC can be a continuous, measurable function that is outside Technical Specifications, or encompass events such as FIRES or system/equipment failures.

Each IC is given a unique identification code consisting of four characters. The first character (letter) identifies the recognition category, the second character (letter) identifies the ECL, the third character (number) identifies the subcategory, and the fourth character (number) identifies the numerical sequence within the subcategory.

##### 4.3.1 Recognition Category Codes

- R designates Abnormal Rad Levels / Rad Effluent
- H designates Hazards and Other Conditions Affecting Plant Safety
- S designates System Malfunctions
- C designates Cold Shutdown / Refueling System Malfunction
- E designates Dry Fuel Storage Facility (DFSF)

##### 4.3.2 Emergency Classification Level (ECL) Codes

- G designates GENERAL EMERGENCY
- S designates SITE AREA EMERGENCY
- A designates ALERT
- U designates UNUSUAL EVENT

The specific details on Initiating Conditions and their use are found in RA-EP-01500, Emergency Classification. The basis for the Emergency Action Levels is contained in Appendix E, DBRM-EMER-1500 A, Davis-Besse Emergency Action Levels Basis Document.

#### 4.4 EMERGENCY ACTION LEVELS (EALs)

EMERGENCY ACTION LEVELS (EALs) are predetermined, site specific, observable conditions within the ICs that place the state of the facility in a given ECL (Reference Post-Shutdown Emergency Plan, Appendix E).

EALs are individually identified by the IC identification code followed by the EAL number, such as RG1.1 for major effluent release or HU3.1 for tornado.

4.4.1 Deleted

4.4.2 Deleted

For EALs that contain time imbedded criterion, the Emergency Director should not wait until the applicable time period has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.



#### 4.4.3 Deleted

#### 4.4.4 Treatment of Multiple Events and Classification Level Upgrading

When multiple simultaneous events occur, the emergency classification level is based on the highest EAL reached. For example, two ALERTS remain in the ALERT category; or, an ALERT and a SITE AREA EMERGENCY is a SITE AREA EMERGENCY.

Although the majority of the EALs provide very specific thresholds, the Emergency Director must remain alert to events or conditions that lead to the conclusion that exceeding the EAL is IMMINENT. If, in the judgment of the Emergency Director, an IMMINENT situation is at hand, the classification should be made as if the threshold has been exceeded. While this is particularly prudent at the higher emergency classification levels (as the early classification may provide for more effective implementation of protective measures), it is nonetheless applicable to all emergency classification levels. Figure 6-1 illustrates the scheme for upgrading emergency classification based on current conditions.

#### 4.4.5 Emergency Classification Level Downgrading

Another important aspect of usable EAL guidance is the consideration of what to do when the risk posed by an emergency is clearly decreasing. A combination approach involving recovery from a GENERAL EMERGENCY and some SITE AREA EMERGENCIES and termination from UNUSUAL EVENTS, ALERTS, and certain SITE AREA EMERGENCIES causing no long term facility damage appears to be the best choice. Downgrading to lower emergency classification levels adds notifications but may have merit under certain circumstances. Figure 6-1 illustrates the options for downgrading or termination of events based on current facility conditions. Recovery phase is discussed in Section 9.2.

#### 4.4.6 Classifying Transient Events

For some events, the condition may be corrected before a declaration has been made. The key consideration in this situation is to determine whether or not further facility damage occurred while the mitigative actions were being taken. In some situations, this can be readily determined, in other situations, further analyses may be necessary. Classify the event as indicated and terminate the emergency once assessment shows that there were no consequences from the event and other termination criteria are met.

Existing guidance for classifying transient events addresses the period of time of event recognition and classification (15 minutes). However, in cases when EAL declaration criteria may be met momentarily during the normal expected response of the facility, declaration requirements should not be considered to be met when the conditions are a part of the designed facility response, or result from appropriate operator actions.

There may be cases in which a facility condition that exceeded an EAL was not recognized at the time of occurrence but is identified well after the condition has occurred (e.g., as a result of routine log or record review), and the condition no longer exists. In these cases, an emergency should not be declared.

Reporting requirements of 10 CFR 50.72 are applicable and the guidance of NUREG-1022, Event Reporting Guidelines, 10 CFR 50.72 and 50.73, should be applied.

## 5.0 ORGANIZATIONAL CONTROL OF EMERGENCIES

In planning for emergencies the availability of the normally present on shift 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 Post-Shutdown 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 Near Site Emergency Response Organization
- 5.6 Joint Information Center (JIC)
- 5.7 Corporate Assistance Center (CAC)
- 5.8 Supporting Emergency Organizations

### 5.1 DBNPS Organization

Spent fuel storage and engineering activities at DBNPS are under the control of the – General Plant Manager.

DBNPS has engineering service contracts with 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 Facility Management and Administrative Organization

The General Plant Manager directs and supervises all administrative, technical and maintenance activities in connection with the continuous, efficient and safe storage of spent fuel at the DBNPS.

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

### 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 Fleet Emergency Response Organization.

The Onshift Operations Group conforms with ANSI N18.1, and includes both management and operations personnel. Figure 5-1, Onshift Emergency Organization, shows the functional levels. Other continuous duty, 24 hours-per-day organizations include Operations, Radiation Protection and Security. Maintenance personnel and the various Engineering organizations are onsite during normal work hours, Monday through Friday, excluding holidays.

### 5.1.3 Normal Facility Shift Staffing

The facility's operating staff meets or exceeds the requirements of Technical Specification 5.2.2. Table 5-1 MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES, A. ONSHIFT MINIMUM STAFFING REQUIREMENTS describes the minimum on shift staffing utilized to support the Post-Shutdown Emergency Plan.

In addition, the facility is continuously staffed with a minimum shift complement consisting of the following:

- |   |   |
|---|---|
| 1 | Radiation Protection Technician                   |
| 5 | Fire Brigade Members (may have other assignments) |
| * | Nuclear Security Force                            |
|   | *safeguards information                           |

An established duty roster system provides access to facility 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 and verifies that their work is performed according to approved procedures. Ultimate authority for directing all phases of SFP operations always lies with the Shift Manager. The Shift Manager becomes the Emergency Director upon classification of an emergency at DBNPS.

Non-Certified Operators, who are assigned to each shift, assist the Shift Manager by following his directives in controlling station equipment. During an emergency, the Non-Certified Operators may also function as emergency maintenance personnel or to assist fire brigade team members. An appropriately qualified Non-Certified Operator could assume the role of Shift Manager, including Emergency Director duties, should the Shift Manager become incapacitated.

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

## 5.2      DBNPS Emergency Management

In the event of a declared ALERT or higher level emergency, the Onsite and Near Site 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, or the Emergency Operations Facility (EOF).

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

- 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.      Another qualified on-shift individual

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 or TSC.

#### 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 storage of spent fuel in the SFP, facility assessment, emergency classification associated with facility parameters, and onsite actions taken to mitigate the emergency situation. The Emergency Plant Manager reports to and advises the Emergency Director on facility 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 onsite, 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 Information Center (JIC), conferring with the Emergency Director concerning facility status, reviewing news statements with the Emergency Director, conferring with the JIC Manager concerning media response status, and acting as company spokesperson during media briefings.

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

#### 5.2.5    Deleted

### 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 facility 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 Deleted

5.3.3 Deleted

5.3.4 Security Shift Supervisor

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

5.3.5 Deleted

## 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 General Plant Manager. However, the Emergency Response Manager 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 staffing to satisfy emergency response requirements.

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

a.      Control Room

Control Room staff will control the operation of the SFP during both normal and emergency conditions.

b.      Technical Support Center (TSC)

TSC staff will assess facility 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.

In the event that the onsite TSC is not accessible TSC personnel will utilize the Alternate TSC at the Lindsey Emergency Response Facility.

c.      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 and Near Site 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 and Near Site Emergency Response Organization is to relieve the Control Room staff of those duties and responsibilities not directly related to the safe storage of spent fuel in the SFP.

#### 5.4.3 Control Room

In the Control Room, the Onsite Emergency Response Organization is the same as the Onshift Emergency Response Organization.

#### 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 responsible for coordination and interface between the TSC emergency organization and the facility. The Emergency Assistant Plant Manager advises the Emergency Plant Manager on facility 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 assessment and surveys are conducted within the Protected Area. The Emergency Radiation Protection Manager coordinates facility 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 facility 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 facility 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 performing an engineering assessment of facility conditions and/or actions needed to mitigate damage to the facility, continuously evaluate the need for engineering resources, and 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.

Other augmented, qualified engineering resources that may be requested report to the TSC Engineering Manager.

d. 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.

e.      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. The OSC Radiation Protection Coordinator reports to the OSC Manager.

b.      The OSC Radiation Protection Coordinator

The OSC Radiation Protection Coordinator dispatches 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 testers not specifically assigned other responsibilities within the emergency organization.

c.      Rad Data Technician

The Rad Data Technician is an RP technician 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.

d. OSC Pool Personnel

The OSC Pool Personnel 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 OSC Manager.

## 5.5 Near Site Emergency Response Organization

### 5.5.1 Overview

During an emergency, a Near Site Emergency Response Organization will be activated at an Alert or higher emergency classification. The assignment of responsibilities in the Near Site Emergency Response Organization is ultimately the responsibility of the General Plant Manager. However, the Emergency Response Manager is responsible for establishing and maintaining a predefined Near Site Emergency Response Organization. Alternate assignments to various positions are specified to provide for timely, automatic, and unambiguous staffing to satisfy emergency response requirements.

In general, the Near Site Emergency Response Organization will be housed at the Lindsey Emergency Response Facility. The Lindsey Emergency Response Facility houses the following three facilities:

#### a. Emergency Operations Facility (EOF)

EOF staff will assess conditions in the Owner Controlled Area and the Plume Exposure Pathway Emergency Planning Zone and provide protective action recommendation to the Emergency Director. The EOF will provide communications between Davis-Besse to external organizations/agencies.

##### 1. Dose Assessment Center

The Dose Assessment Center is located at Lindsey Emergency Response Facility and is responsible for evaluation of conditions in the Owner Controlled Area and the Plume Exposure Pathway Emergency Planning Zone, and making recommendations to the EOF.

##### 2. Radiological Testing Lab (RTL)

The RTL is located onsite in the DBAB and is the primary assembly point for Radiation Monitor Team personnel who evaluate habitability conditions in the Owner Controlled Area and perform radiological surveys in the Plume Exposure Pathway Emergency Planning Zone. Collected field survey information is communicated to the Dose Assessment Center.

#### b. Alternate Technical Support Center (TSC)

In the event that the onsite TSC is not accessible TSC personnel will utilize the Lindsey Emergency Response Facility and perform those tasks as described in Section 5.4.4.

#### c. Mustering Point for the Operations Support Center (OSC)



In the event that the station is not accessible, OSC personnel will muster at the Lindsey Emergency Response Facility and standby to support the facility mitigation strategy.

#### 5.5.2 Emergency Operations Facility (EOF) Organization

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

##### a. 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 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 facility 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.

b. 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 is responsible for the procurement of personnel and equipment.

The EOF Communications Staff report to the Emergency Planning Advisor.

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 Assistance Center (CAC), and the Nuclear Regulatory commission (NRC). A member of the EOF communications staff will be present at meetings between the ERO and the NRC. The EOF Communications staff may be augmented by additional personnel to assist in communications, Nuclear Network transmissions, and operations of support equipment.

c. County and State Technical Liaisons

A technical liaison is dispatched to each of the Ottawa County, Lucas County, and the State Emergency Operations Centers, 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.

5.6 Joint Information Center (JIC)

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

5.7 Corporate Assistance Center (CAC)

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

Coordination of the CAC is the responsibility of a Senior ERO Position member located at an unaffected FirstEnergy facility. The Senior ERO Position member oversees the operation of the CAC and ensures that CAC activities are carried out in a manner that supports the requests made by the Emergency Director.

## 5.8 Supporting Emergency Organizations

### 5.8.1 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 Hospital
2. Mercy St. Charles Hospital
3. Carroll Township Emergency Medical Services
4. ProMedica 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.

### 5.8.2 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 Hospital, Port Clinton, Ohio; Mercy St. Charles Hospital, Oregon, Ohio; or ProMedica 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. General Plant Manager:

The General 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 H.B. Magruder Hospital, Mercy St. Charles Hospital or ProMedica 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 General 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.

### 5.8.3 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 facility, 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 Post-Shutdown Emergency Plan for DBNPS, and the emergency plans for the State of Ohio, Ottawa County and Lucas County, have been formulated to provide timely notification and close coordination with these agencies.
3. In the event of a HOSTILE ACTION at the site (including attack by air, land or water using guns, explosives, projectiles, vehicles or other devices to deliver destructive force), the Federal Bureau of Investigation (FBI) will be the lead federal agency to coordinate response to the emergency, as described in the Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency

Operations Plan, the Ottawa and Lucas County Radiological Emergency Response Plans, and existing letters of agreement.

4. 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 Ottawa County Emergency Management Agency (OCEMA)
  - d) Lucas County Sheriff's Office or the Lucas County Emergency Management Agency (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 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 the 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.

3.      In the event of a HOSTILE ACTION at the site (including attack by air, land or water using guns, explosives, projectiles, vehicles or other devices to deliver destructive force), local agencies will provide appropriate response to the emergency (including law enforcement, fire, and medical support) as described in the Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan, the Ottawa and Lucas County Radiological Emergency Response Plans, and existing letters of agreement.

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 Job and Family 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 access 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 consists 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.

#### 5.8.4 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. 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.

b. Architect/Engineer Support

The Architect/ Engineer (A/E) for construction of the Davis-Besse facility was the Bechtel Power Corporation. This firm can be called on during emergency situations to provide the technical analysis and engineering support necessary to mitigate abnormal facility conditions.

c. 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**  
Page 1 of 2

**A. ONSHIFT MINIMUM STAFFING REQUIREMENTS**

Functional Area	Major Tasks	Emergency Positions	Analysis Shift Staffing
1. Plant Operations and Assessment of Operational Aspects	Control Room Staff	Shift Manager / Certified Fuel Handler (CFH)	1
		Non-Certified Operator (NCO)	2
2. Emergency Direction and Control	Command and Control	Shift Manager	1 (a)
3. Notification & Communication	Licensee	CAS Operator	1 (a)
	Local/ State	NCO or above	1 (a)
	Federal	NCO or above	1 (a)
4. Radiological Assessment	Dose Assessment	NCO or above	1 (a)
	In-plant Surveys	RP Technician	1
	Onsite Surveys	RP Technician	1 (a)
	Chemistry	RP Technician	1 (a)
5. Plant System Engineering, Repair, and Mitigative Actions	Technical Support – OPs –	NCO or above	1 (a)
	Repair and Mitigative Actions	Mechanical Repair Electrical Repair I&C Repair	1 (a) 1 (a) 1 (a)
6. In-Plant PAs	Radiation Protection	RP Technician	1 (a)
7. Fire Fighting	--	Fire Brigade Captain (NCO) Fire Brigade Member	1 (a) 4
8. 1 <sup>st</sup> Aid and Rescue	--	NCO	1 (a)
9. Site Access Control and Accountability	Security & Accountability	Security Shift Supervisor	1
		CAS Operator	1
		Security Personnel	(b)
TOTAL:			10

Notes: Personnel assigned to the shift in excess of the minimum staffing listed above may be assigned to any of the emergency positions in functions 2 through 9 for which they are qualified.  
Appendix F, Davis-Besse Nuclear Power Station (DBNPS) ERO Post-Shutdown On-Shift Staffing Analysis Report, documents the minimum shift's ability to implement the emergency plan.

Operations personnel are qualified on survey instruments.

- (a) May be filled by someone filling another position having functional qualifications.
- (b) Per DBNPS Physical Security Plan.

TABLE 5-1

MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES

Page 2 of 2

B. AUGMENTED EMERGENCY RESPONSE STAFFING REQUIREMENTS

UNUSUAL EVENT		ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY	
PERSONNEL	TIME	PERSONNEL	TIME
<u>CONTROL ROOM</u> Emergency Assistant Plant Manager (1) <sup>3</sup>	Alerted	<u>CONTROL ROOM</u> Emergency Assistant Plant Manager (1) <sup>3</sup>	Normal Hours: 30 minutes Off Hours: 60 minutes
<u>OPERATIONS SUPPORT CENTER</u> OSC Manager (1) OSC RP Coordinator (1)	Alerted	<u>OPERATIONS SUPPORT CENTER</u> OSC Manager (1) OSC RP Coordinator (1) Mechanical Maintenance (1)  Electrical Maintenance (1) RP Technician (1) <span style="float:right">Add Total</span> RP Technician (1) (2)	Normal Hours: 30 minutes  Off Hours: 60 minutes
		RP Technician (1) (3)	1-2 hours
<u>TECHNICAL SUPPORT CENTER</u> TSC Engineering Manager (1)	Alerted	<u>TECHNICAL SUPPORT CENTER</u> TSC Engineering Manager (1)	As Required: Normal Hours: 30 minutes Off Hours: 60 minutes
		TSC I&C Engineer TSC Electrical Engineer TSC Mechanical Engineer <span style="float:right">Call in as necessary</span>	1-2 hours
<u>EMERGENCY OPERATIONS FACILITY</u> Emergency Director (1) Emergency Offsite Manager (1)	Alerted	<u>EMERGENCY OPERATIONS FACILITY</u> Emergency Offsite Manager (1) Dose Assessment Coordinator (1) Emergency Planning Advisor (1)	As Required: Normal Hours: 60 minutes Off Hours: 60 minutes
		RMTs (3)	30-60 minutes
		Emergency Director (1)	1-2 hours
		State/County Communicator (1)	

- NOTES: 1. All time requirements are based on optimum response conditions.  
2. Figure 5-2, Emergency Response Organization, depicts functional levels beyond these augmented staffing requirements.  
3. The Emergency Assistant Plant Manager may respond to the TSC.



FIGURE 5-1

ONSHIFT EMERGENCY ORGANIZATION

Page 1 of 1

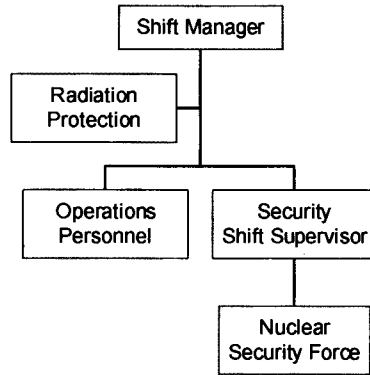


FIGURE 5-2

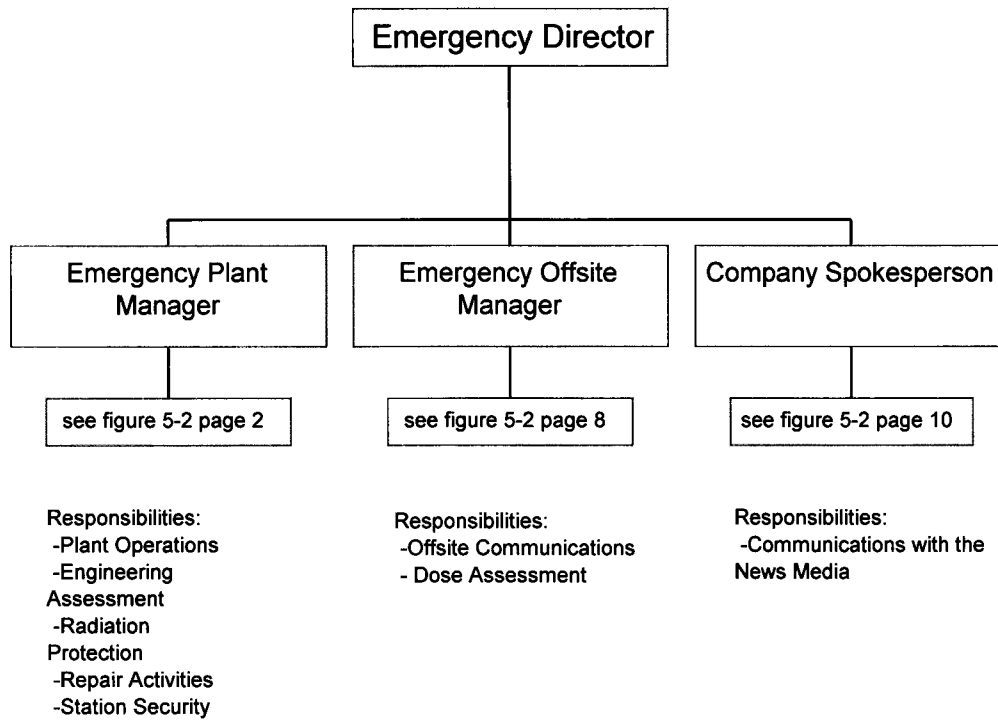
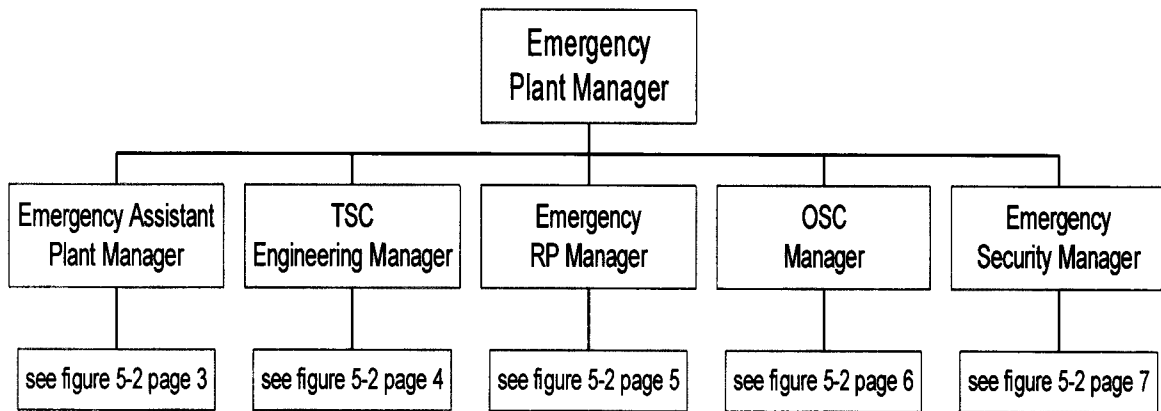
**Emergency Response Organization**  
Page 1 of 10

FIGURE 5-2

**Emergency Response Organization**  
Page 2 of 10

Responsibilities:  
- Plant Operations

Responsibilities:  
- Engineering Assessment

Responsibilities:  
- Radiological Evaluation  
- Chemistry Evaluation

Responsibilities:  
- Emergency Repairs  
- Search & Rescue  
- Damage Control

Responsibilities:  
- Access Control  
- Station Security

FIGURE 5-2

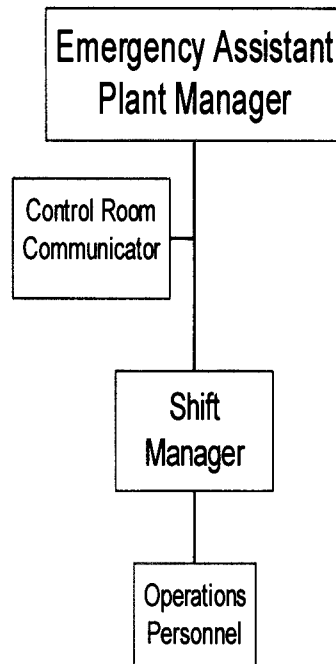
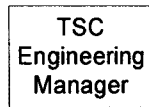
**Emergency Response Organization**  
Page 3 of 10

FIGURE 5-2

**Emergency Response Organization**  
Page 4 of 10

TSC  
Engineering  
Manager

FIGURE 5-2

Emergency Response Organization  
Page 5 of 10

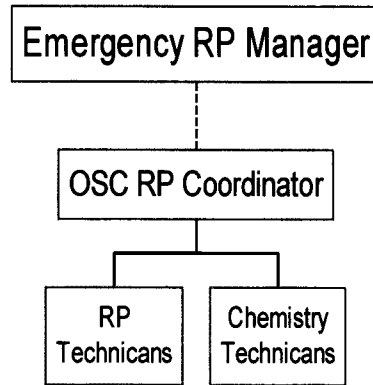


FIGURE 5-2

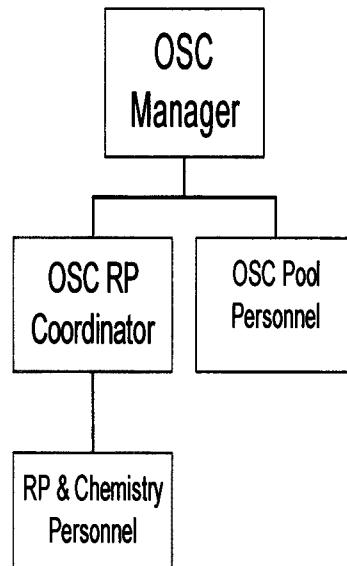
**Emergency Response Organization**  
Page 6 of 10

FIGURE 5-2

Emergency Response Organization  
Page 7 of 10

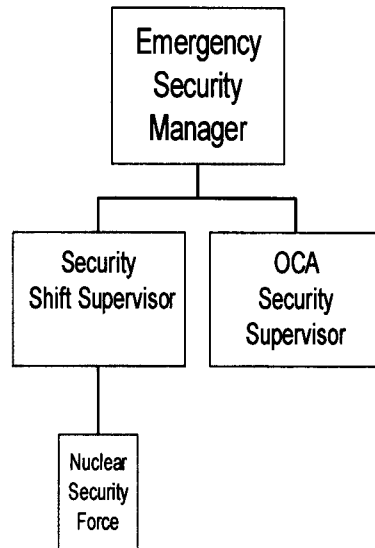




FIGURE 5-2

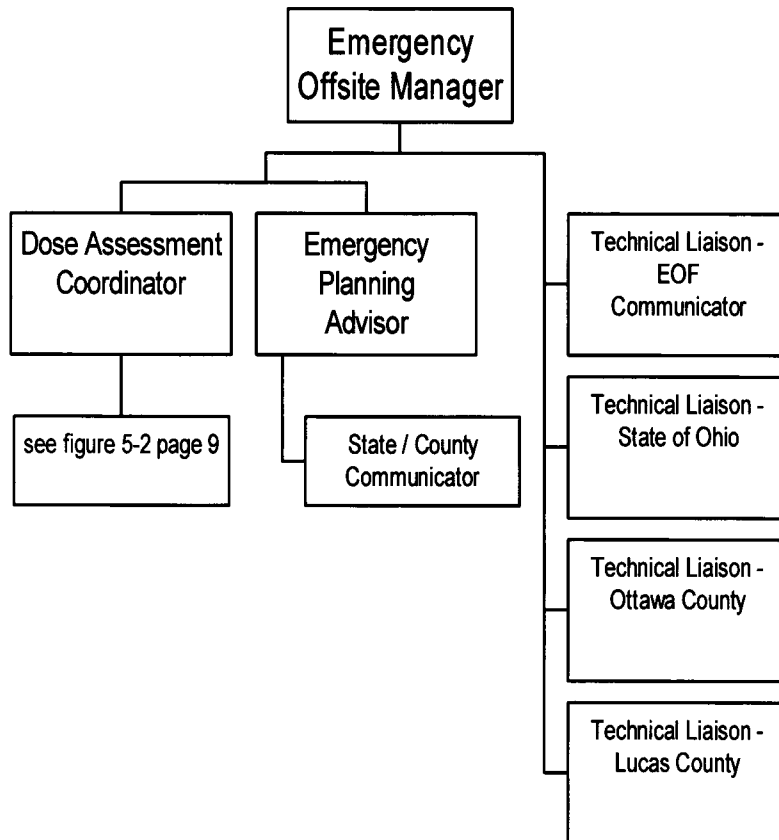
**Emergency Response Organization**  
Page 8 of 10

FIGURE 5-2

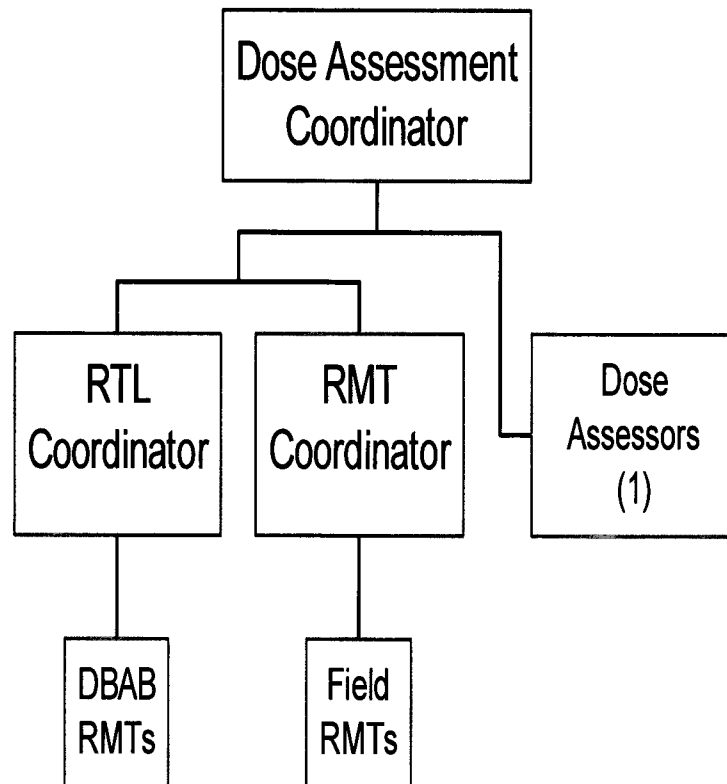
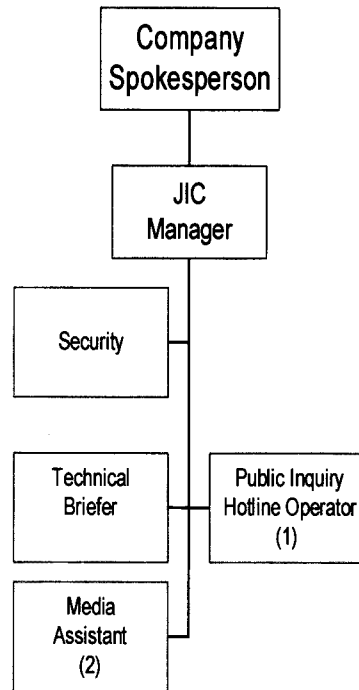
Emergency Response Organization  
Page 9 of 10

FIGURE 5-2

**Emergency Response Organization**  
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## 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.      Mitigative 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.

When an emergency classification level is declared or upgraded, initial notifications are promptly made to offsite response organizations. Notification and mobilization of federal, state and local agency response personnel is performed in accordance with their applicable emergency plan and procedures.

- State and Local Response Agencies

State and local agencies receive within fifteen (15) minutes an initial notification message of an event declaration (initial or an escalation). General Emergency classifications also include Protective Action Recommendations (PARs) within that same 15 minutes. Any subsequent changes to PARs continue to be provided to the agencies within 15 minutes.

- Nuclear Regulatory Commission (NRC)

The NRC is notified immediately after notification of the appropriate state and local agencies and not later than one (1) hour after the time of initial event declaration, escalation to a higher classification level, emergency termination or entry into recovery.

The NRC is notified using the dedicated Emergency Notification System (ENS) by an individual knowledgeable of the event. If the ENS is inoperative, the required notifications are made via commercial telephone service. An open, continuous communication line is maintained with the NRC Operations Center upon request. An NRC Event Notification Worksheet (Form 361) may be utilized to assist in communicating event and facility information to the NRC.

For hostile action events, the NRC is notified immediately following or concurrent with state and local notifications.

Other event notifications related to emergency response capabilities not associated with an emergency classification level are performed in accordance with 10 CFR 50.72.

- Support Organizations

- Medical, rescue, and firefighting support services are notified for assistance as the situation dictates.
- The American Nuclear Insurers (ANI) are notified at an Alert or higher classification with requests for assistance as necessary.
- Vendor and contractor support services are notified for assistance as the situation dictates.

Following the notifications made to the counties, state, and NRC; notifications will be made to the General 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 CAC will be mobilized as detailed below:

#### 6.1.1 Shift Manager/Control Room Operations

- a. Should emergency conditions arise, it is expected that the Non-Certified Operator(s) and/or the Shift Manager will be made aware of the situation by alarms, instrument readings, reports, etc. The Non-Certified 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., systems and SFP status, radiological conditions, etc.) in the following manner:
  1. Determine the immediate actions to be taken to ensure the safe and proper operation of the SFP.
  2. If the situation requires implementation of the DBNPS Post-Shutdown 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 SFP.
  - 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 CAC will be alerted.
  3. For a SITE AREA EMERGENCY or GENERAL EMERGENCY, the entire ERO, and the CAC 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 reference to the Radiological Assistance Program with the DOE to provide radiological assistance.

#### 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, a security threat to facility protection, 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 facility 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. If a security event is in progress, then the emergency organization will immediately implement procedures for security events or threats.

### 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 facility 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 facility 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.
- e. If a security event is in progress, then the emergency organization will immediately implement specific procedures for security events or threats.

### 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 SFP status,)
- 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.

- d. If a security event is in progress, then the emergency organization will immediately implement specific procedures for security events or threats.

### 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 Mitigative Actions

Detailed operating procedures are available for use during emergencies, as well as during normal operations. Specific procedures are provided to assist the operators in placing the facility in a safe condition, and taking necessary supplemental mitigative actions. In addition, Operations personnel are trained in the operation of the SFP systems and their associated procedures, and are therefore capable of taking appropriate mitigative 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 mitigative actions. Maintenance personnel will provide the necessary expertise to effect damage control and repair activities.

Mitigative actions will normally be planned events that are taken to gain control of, or terminate the emergency situation. Planned radioactive releases, or mitigative 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 Facility Site Protective Actions

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. Facility 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. Facility 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, ERO mobile device, or site public address system. Personnel may be instructed to report to the nearest assembly area as described below. At other site locations (i.e., Davis-Besse Training Center, Davis-Besse Administration Building and Annex, Warehouse), 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. Hostile-Action Based Protective Actions

Hostile-Action Based, or security related, emergencies offer different challenges to the site organization. Davis-Besse Nuclear Power Station has incorporated a range of protective actions for onsite personnel during a hostile action event, consistent with the possible threat (including land/water based, as well as airborne attacks). Generally, these protective actions may include considerations for:

- Site evacuation via normal exits
- Site evacuation via alternate means
- Dispersal of Operations personnel, and essential ERO members

- Take Cover (sheltering in place for personnel onsite)

Arrangements for accounting for personnel after a hostile action have been made. When the site is secure, all personnel who were in the protected area when the hostile action occurred will be accounted for as promptly as possible while not interfering with critical safe reactor shutdown activities or known medical emergencies. The details of these protective actions are described in site implementing procedures.

#### 6.4.2      Offsite Protective Actions:

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

At a General Emergency classification Davis-Besse, through the Emergency Director, shall make offsite protective action recommendations to state and local authorities, based on emergency conditions. The FENOC PAR determination process has been developed in accordance with NUREG-0654 Supplement 3 revision 1, and its PAR logic diagram. The process includes consideration of precautionary protective actions, wind persistence, rapidly progressing release scenarios, hostile-action based events, and termination of protective actions. It also includes considerations that embody Offsite Response Organizations input at the various decision points as identified in the guidance.

Offsite protective action recommendations will be made for affected predetermined subareas. (Refer to the Ohio Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan for description of the Davis-Besse 10-mile emergency planning zone subareas.) The preferred offsite protective action recommendation (PAR) is evacuation. A sheltering PAR will be considered when known roadway impediments impact the ability to evacuate a large portion of the Emergency Planning Zone, during a controlled short duration release, and during a Hostile-Action based event. Dose to the public from any actual or potential radiological release are evaluated prior to the determination of these sheltering recommendations.

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 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.

#### 6.4.3 Use of Onsite Protective Equipment and Supplies

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 direction and inhalation exposure afforded by structures. 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.

#### 6.4.4 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.

#### 6.4.5 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 mitigative/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. Mitigative/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, i.e., 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 RCA 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 Hospital, ProMedica Memorial Hospital, and Mercy St. Charles 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. Magruder Hospital; ProMedica Memorial Hospital; Mercy St. Charles 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 <sup>1</sup> )	1-5 rem <sup>2</sup>	Evacuation (or for some situations, sheltering <sup>1</sup> ) should normally be initiated at 1 rem.
Administration of stable iodine	25 rem <sup>3</sup>	Requires approval of State medical officials

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>Committed dose equivalent to the thyroid from radioiodine.

**Guidance on Dose Limits for Workers Performing Emergency Services**

Dose Limit <sup>1</sup> (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

<sup>1</sup>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 <sup>1</sup> (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
	Ingestion of milk	Take cows off pasture, prevent cows from drinking surface water, discard contaminated milk, or divert to stored products such as cheese
INTERMEDIATE PHASE <sup>2</sup>  (4 to 48 hours)	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
	Whole body exposure and inhalation	Relocation, decontamination, access control
LONG TERM PHASE <sup>3</sup>  (2 to 14 days)	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
	Whole body exposure from deposition material or inhalation of resuspended material.	Relocation, access control, decontamination, fixing of contamination, deep plowing

<sup>1</sup>Emergency phase - Time period of major release and subsequent plume exposure.

<sup>2</sup>Intermediate phase - Time period of moderate continuous release with plume exposure and contamination of environment.

<sup>3</sup>Long Term Phase - Recovery period.

**TABLE 6-3**

**REPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE**

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

<sup>1</sup>The ratio of the dose received inside the structure to the dose that would be received outside the structure.

<sup>2</sup>A wood frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.

<sup>3</sup>This range is mainly due to different wall materials and different geometries.

<sup>4</sup>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 <sup>1</sup> 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 <sup>2</sup>	0.2-0.5
One and two-story block and brick house (no basement)	0.2 <sup>2</sup>	0.04-0.40
House basement, one or two walls fully exposed	0.1 <sup>2</sup>	0.03-0.15
One story, less than 2 ft of basement, walls exposed	0.05 <sup>2</sup>	0.03-0.07
Two stories, less than 2 ft of basement, walls exposed	0.03 <sup>2</sup>	0.02-0.05
Three- or four-story structures, 5000 to 10,000 ft <sup>2</sup> per floor		
First and second floors	0.05 <sup>2</sup>	0.01-0.08
Basement	0.01 <sup>2</sup>	0.001-0.07
Multistory structures, >10,000 sq. ft. per floor:		
Upper floors		
Basement	0.01 <sup>2</sup> 0.005 <sup>2</sup>	0.001-0.02 0.001-0.015

<sup>1</sup>The ratio of dose received inside the structure to the dose that would be received outside the structure.

<sup>2</sup>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 <sup>1</sup>	Cs-134 <sup>2</sup>	Cs-137 <sup>2</sup>	Sr-90	Sr-89
Initial Activity Area Deposition ( $\mu\text{Ci}/\text{m}^2$ )	0.13	2.0	3.0	0.5	8.0
Forage Concentration <sup>3</sup> ( $\mu\text{Ci}/\text{kg}$ )	0.05	0.8	1.3	0.18	3.0
Peak Milk Activity ( $\mu\text{Ci}/\text{l}$ )	0.015	0.15	0.24	0.009	0.14
Total Intake ( $\mu\text{Ci}$ )	0.09	4.0	7.0	0.2	2.6

<sup>1</sup>The cumulative intake of Iodine-133 via milk is about 2 percent of Iodine-131 assuming equivalent deposition.

<sup>2</sup>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 two.

<sup>3</sup>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 <sup>3</sup> /Adult	Cs-134 <sup>2</sup> Infant <sup>4</sup> /Adult	Cs-137 Infant <sup>4</sup> /Adult	Sr-90 Infant <sup>4</sup> /Adult	Sr-89 Infant <sup>4</sup> /Adult
Initial Activity Area Deposition ( $\mu\text{Ci}/\text{m}^2$ )	1.3/18	20/40	30/50	5.0/20	80/1600
Forage Concentration <sup>5</sup> ( $\mu\text{Ci}/\text{kg}$ )	0.5/7.0	8.0/17	13/19	1.8/8.0	30/700
Peak Milk Activity ( $\mu\text{Ci}/\text{l}$ )	0.015/2.0	1.5/3.0	2.4/4.0	0.09/0.4	1.4/30
Total Intake ( $\mu\text{Ci}$ )	0.9/10	40/70	70/80	2.0/7.0	26/400

<sup>1</sup>The cumulative intake of Iodine-133 via milk is about 2 percent of Iodine-131 assuming equivalent deposition.

<sup>2</sup>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.

<sup>3</sup>Newborn infant, includes fetus (pregnant woman) as critical segment of population for Iodine-131.

<sup>4</sup>"Infant" refers to child less than 1 year of age.

<sup>5</sup>Fresh weight.

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



**Figure 6-1**

Page 1 of 4

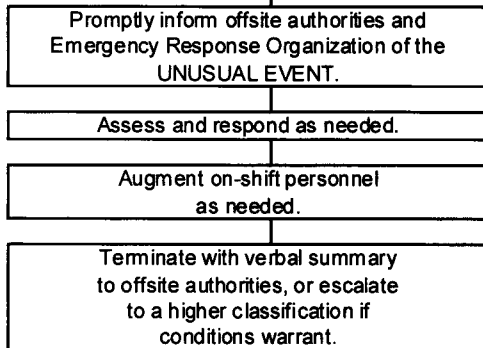
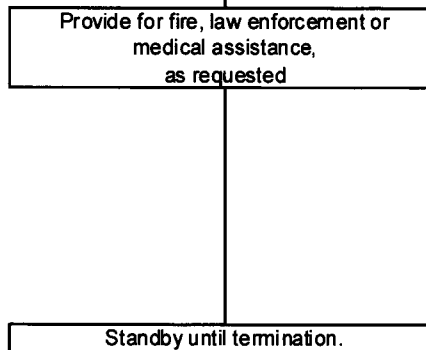
**SUMMARY OF TYPICAL EMERGENCY MEASURES****ERO  
ACTIONS****UNUSUAL  
EVENT****OFFSITE  
ACTIONS**

Figure 6-1

Page 2 of 4

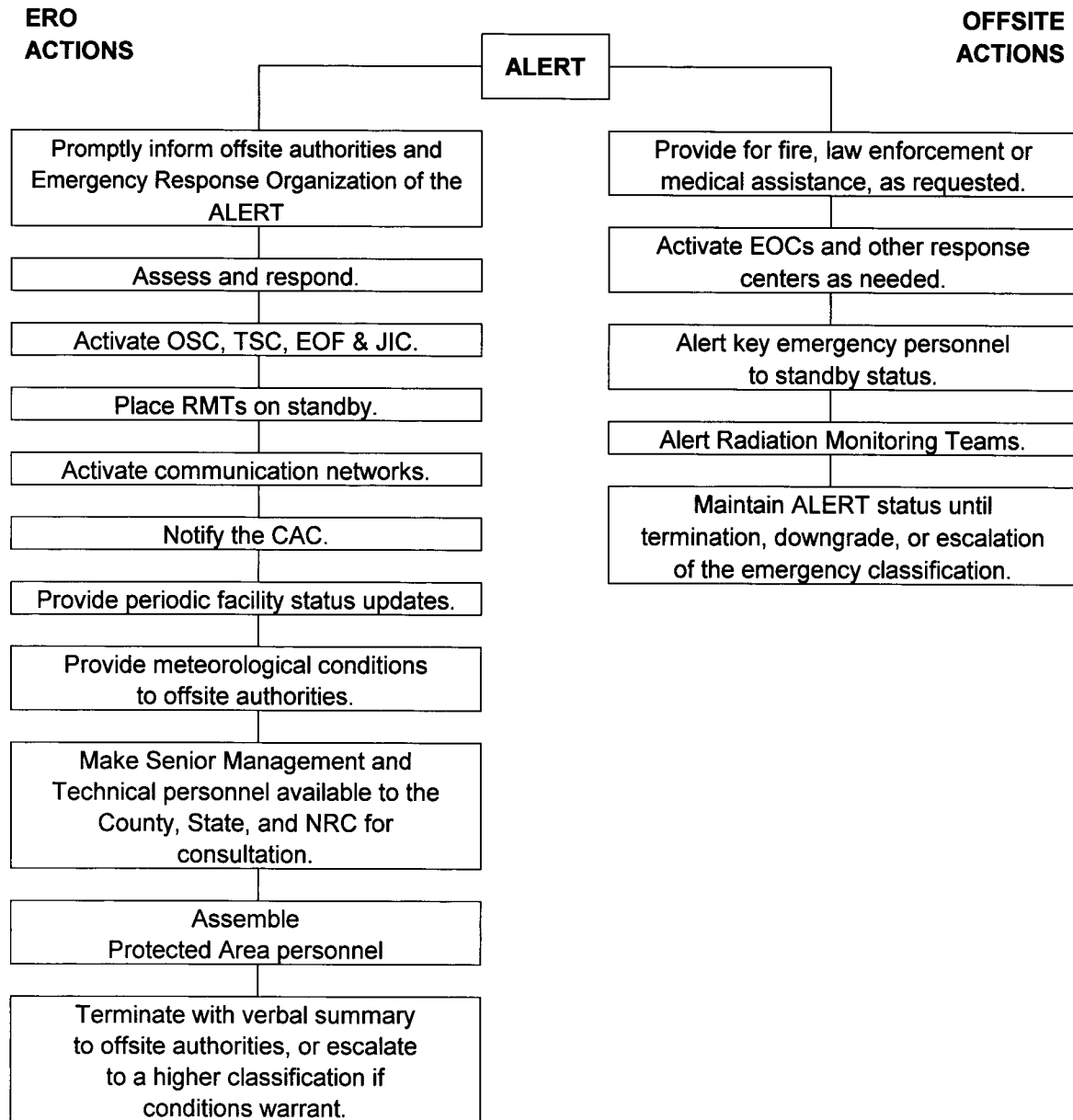
**SUMMARY OF TYPICAL EMERGENCY MEASURES**

Figure 6-1

Page 3 of 4

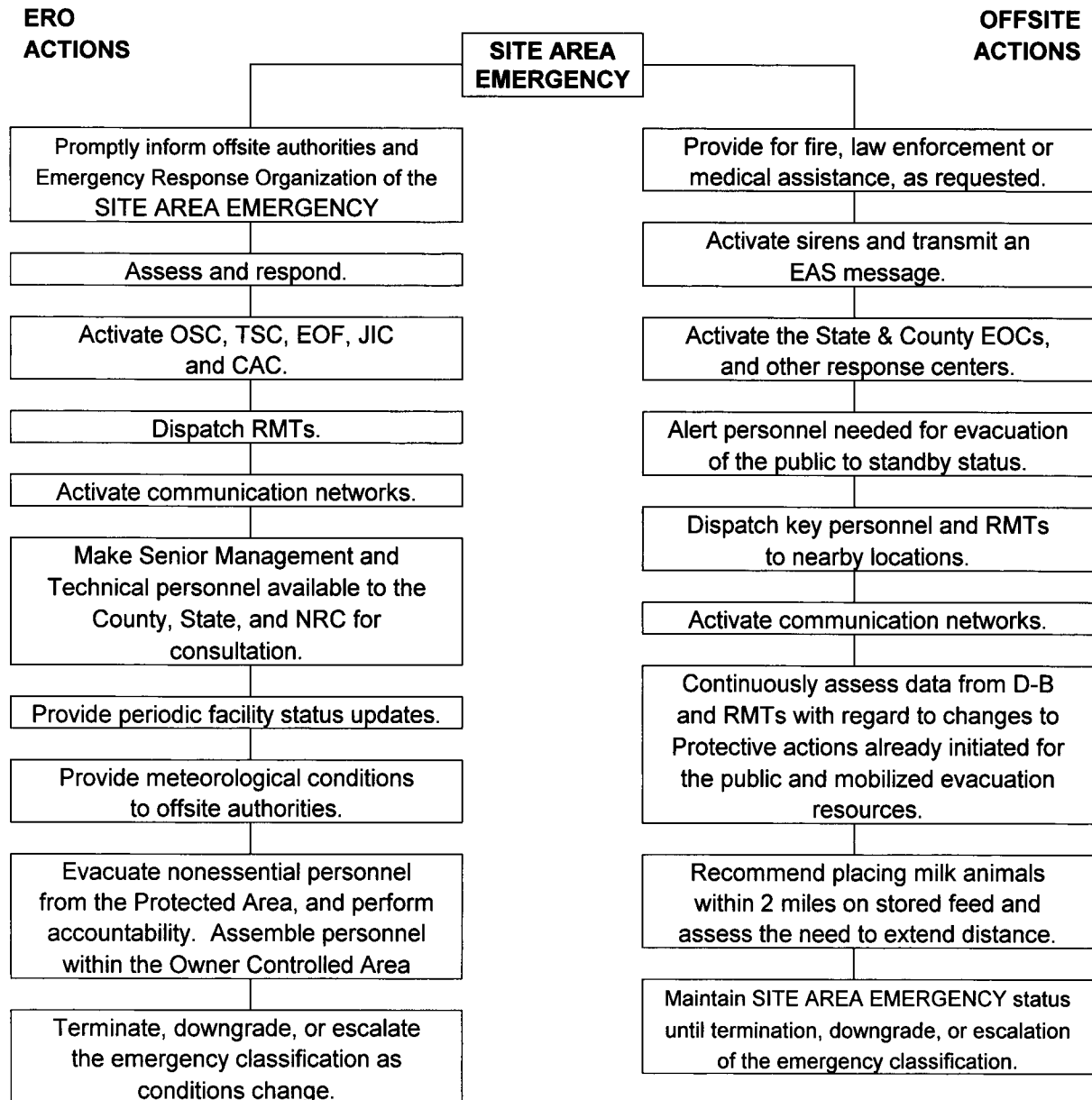
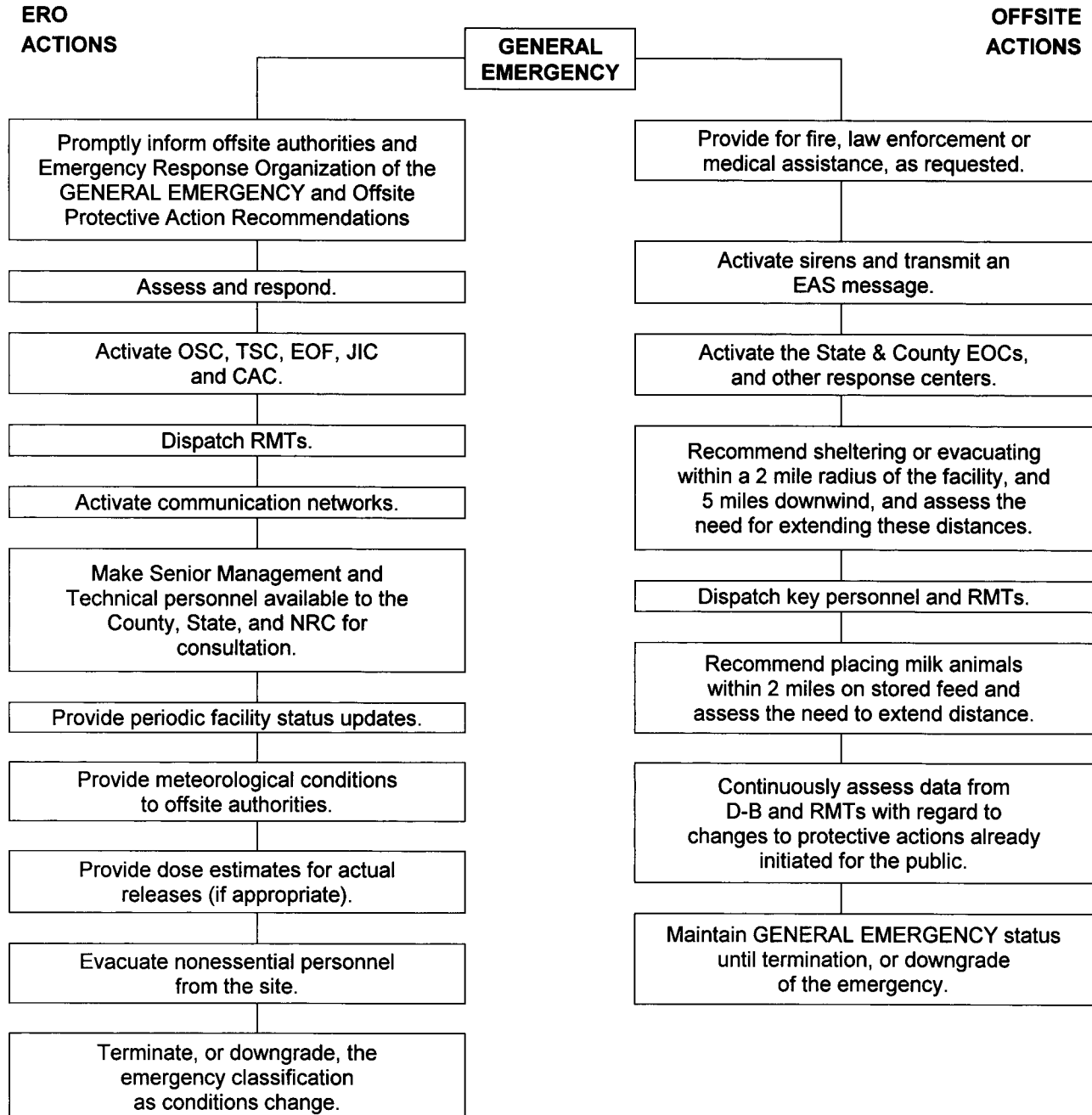
**SUMMARY OF TYPICAL EMERGENCY MEASURES**

Figure 6-1

Page 4 of 4

**SUMMARY OF TYPICAL EMERGENCY MEASURES**

**Figure 6-2**

Page 1 of 2

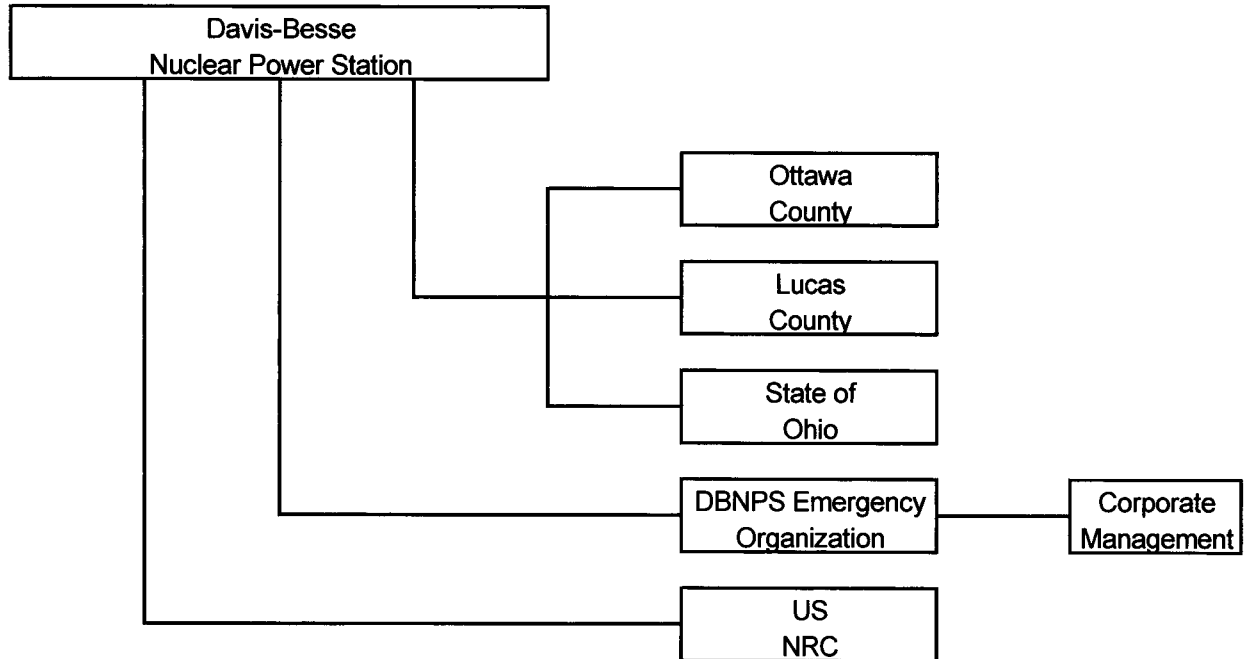
**EMERGENCY NOTIFICATION:  
UNUSUAL EVENT**

Figure 6-2

Page 2 of 2

**EMERGENCY NOTIFICATION:  
ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY**

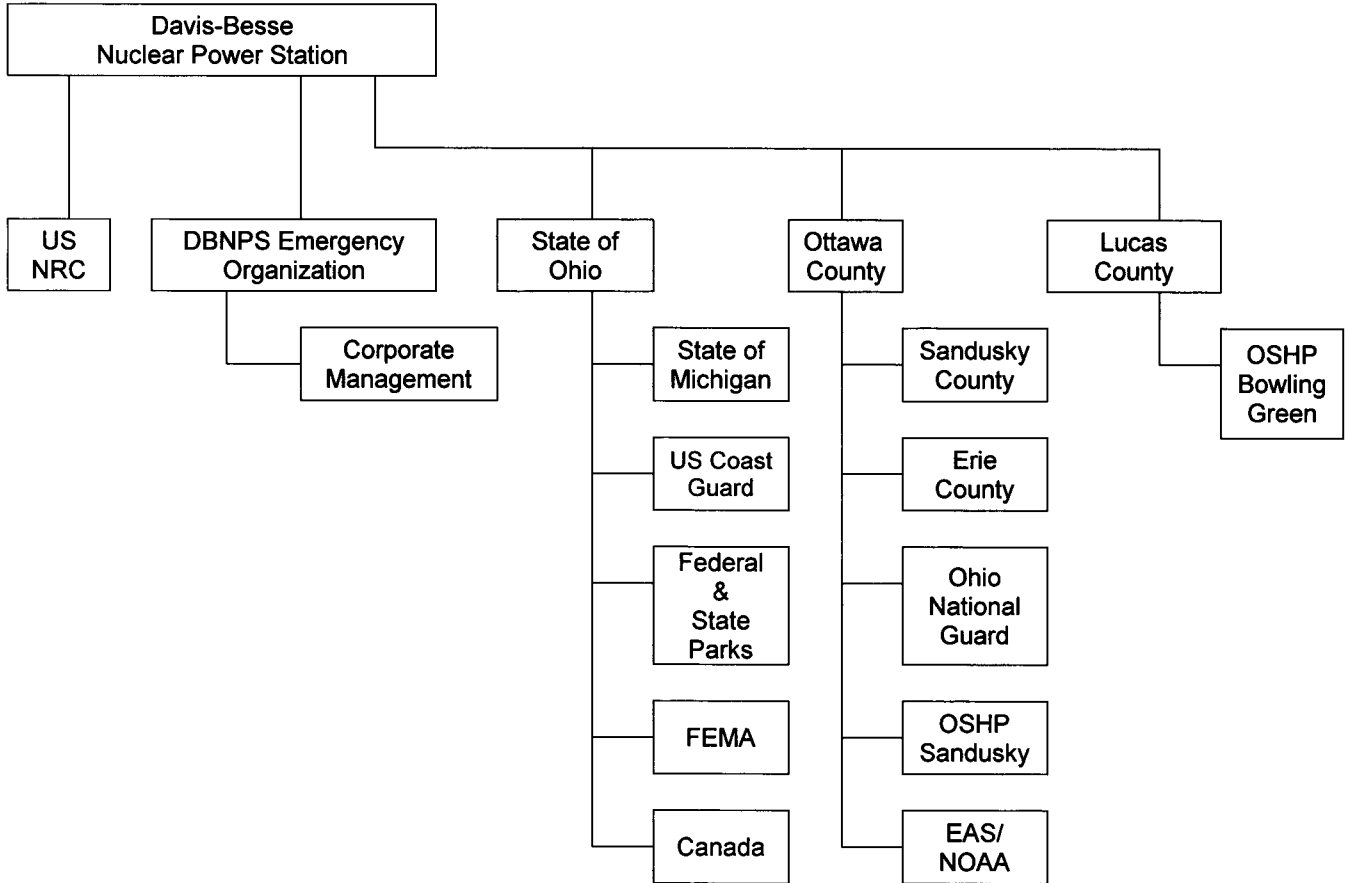
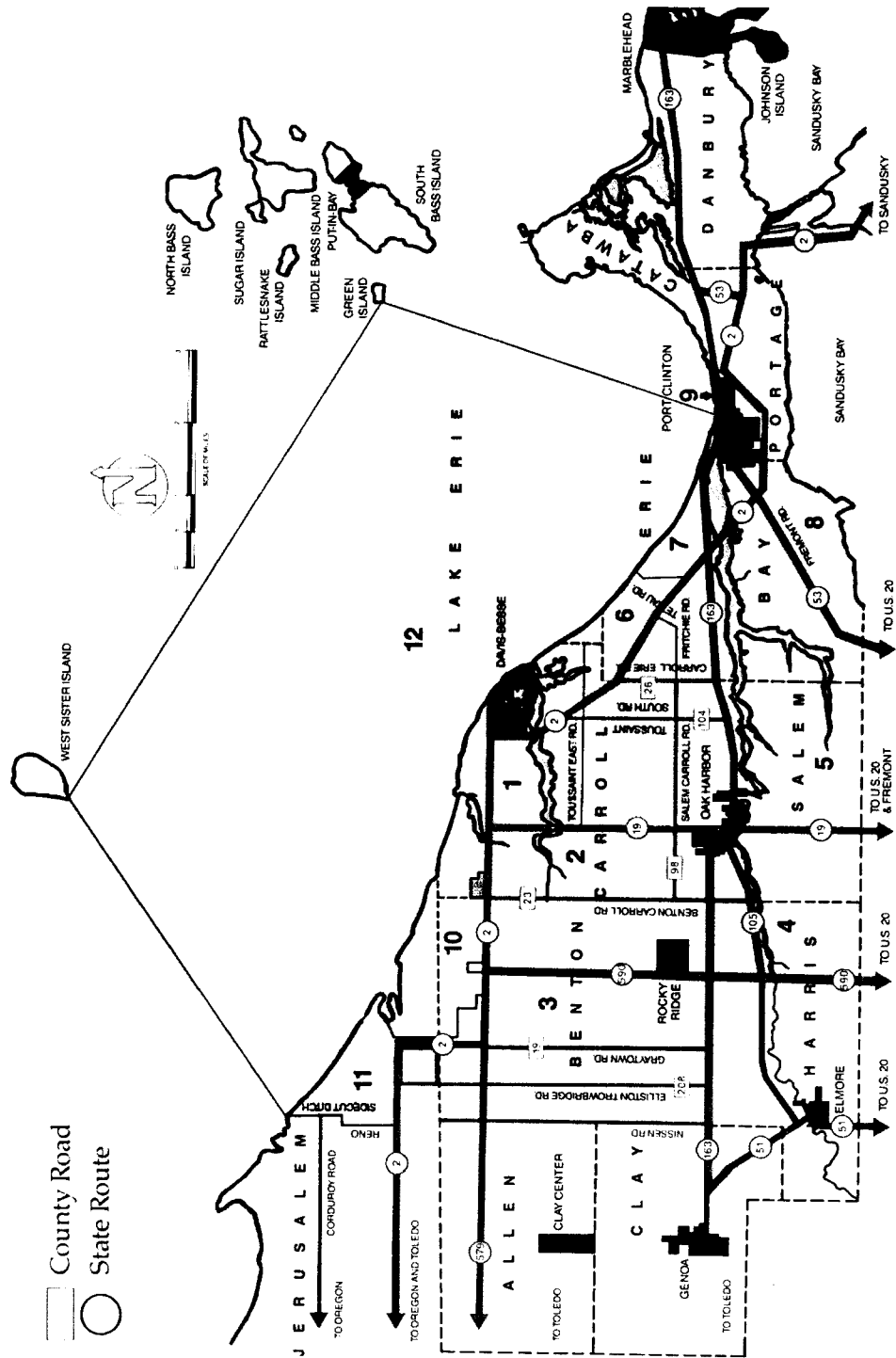


Figure 6-3

**OFFSITE EMERGENCY EVACUATION ROUTES**

Ottawa and Lucas Counties



## 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 activities. 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 SFP systems are monitored. It contains the instrumentation, controls, and displays for:

1. Electrical systems
2. Systems associated with the SFP
3. Accident monitoring systems.

The on-shift staff is in accordance with TS 5.2.2. Control manipulations and the safe operation of the SFP are directed by the Shift Manager (qualified as a Certified Fuel Handler (CFH)) and are performed by Non-Certified Operators.

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

1. Diagnosing the abnormal conditions.
2. Performing mitigative actions.
3. Mitigation of abnormal conditions.
4. Management of SFP 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 SFP 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 may use 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 facility activities.

#### 7.1.2 Operations Support Center (OSC)

The OSC is located on the third floor of the Containment Access Facility. 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 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 facility safety status.
2. Relieve the Control Room staff of peripheral duties and communications not directly related to SFP system manipulations.
3. Prevent congestion in the Control Room.
4. Provide assistance from technical personnel who have comprehensive facility 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 relevant facility data to the NRC for its analysis of 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, 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 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 Safety Parameters Display System (SPDS).

The SPDS 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 SPDS provides data communication to the EOF, TSC, and Control Room. Because the SPDS aids in the detection and monitoring of facility transients and accidents, the SPDS 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.

Activation and operation of the TSC is contained in the Emergency Plan Procedures.

#### 7.2.2 Radiological Testing Laboratory (RTL)

The RTL is a facility near the TSC for equipping and dispatching Radiological Monitoring Teams; and for the receipt, counting, and disposition of potentially contaminated environmental samples. The RTL reports to the Dose Assessment Coordinator in the near site EOF.

The RTL is on the ground floor of the DBAB.

#### 7.2.3. 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.

#### 7.2.4 Equipment Rooms

The telephone equipment room contains communications equipment necessary to connect the site telephone system into company and external phone systems.

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 Near Site Emergency Response Facility

The near site emergency response facilities are located near Lindsey, Ohio at the corner of SR 20 and SR 590. The facility houses the Emergency Operations Facility, the Alternate TSC and a muster area for station personnel. The facility has access to station radio and public address systems. The facility is equipped with an uninterruptable power system and an emergency diesel generator. The Near Site Emergency Response Facilities include the following:

#### 7.3.1 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 Safety Parameters Display System (SPDS). 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 provides space for at least 22 people.

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

#### 7.3.2 Alternate TSC

The Alternate TSC provides a location for the TSC in the event that the onsite TSC is not available. The Alternate TSC is equipped with those drawings, procedures, computer system and communications to be able to support the onsite response.

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

#### 7.3.3. Muster Area

A Muster Area for approximately 75 individuals is available for the staging of personnel in the event that the station is not accessible.

### 7.4 Other Company Emergency Facilities

#### 7.4.1 Joint Information Center (JIC)

The Joint Information Center (JIC) is the emergency facility for coordinating news statements and providing joint media briefings during an event at Davis-Besse. The Company, state, local and federal agencies represented at the JIC 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 facility status and emergency response actions. JIC facilities include news briefing areas for electronic and print media representatives. JIC support is available for any facility emergency. However, facility activation is mandatory at (and above) the Alert

emergency classification level. The JIC is located at a FirstEnergy Corporation facility outside the 10-mile EPZ.

#### 7.4.2 Corporate Emergency Facilities

Company facilities located throughout the service districts are available to provide support for the Corporate Assistance Center (CAC). Certain Company facilities have been designated to support coordination of CAC activities and centralized management of Company resources. The primary company facility identified for Fleet Emergency Response Support is the Corporate Assistance Center (CAC), located at the unaffected FirstEnergy nuclear station/facility.

### 7.5 County and State Emergency Operations Centers

#### 7.5.1 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 a dedicated 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.

#### 7.5.2 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 a dedicated Emergency Operating Center (EOC) which meets the minimum federal criteria for space, communications, warning systems, and supplies.

The EOC is located in the Lucas County Emergency Services Building, 2144 Monroe Street, 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.

#### 7.5.3 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.

## 7.6 Communications Systems

### 7.6.1 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. Onsite Commercial telephone systems:

1. A Private Branch Exchange (PBX) is used by the station for telephone communications. The PBX system provides six in/out bound offsite communications paths.
  - 2 paths connect to the FirstEnergy company communications system.
  - 3 priority circuits travel to Toledo where then connect to the commercial telephone system.
  - 1 priority circuit connects directly into the local commercial telephone system.

The PBX system is self-contained to the Davis-Besse Nuclear Power Station and has backup power.

2. In addition to the company PBX system, there are also a limited number of lines that bypass the PBX system and are connected directly into the local phone company.”

b. Near site Commercial telephone systems:

1. Voice over IP service from the Akron Ohio West Akron Campus

c. 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 facility channels, five maintenance channels, two switchyard maintenance channels, and four fuel handling channels. Access to the Gai-tronics system is available at the near site emergency response facilities.

d. 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.
  5. A channel is used by Operations personnel for normal day-to-day transmissions.
- e. Radiation Monitoring Teams communicate on a five-channel trunked 800 megahertz radio system. Cellular telephones are also available if needed.
  - f. ERO mobile devices are carried by key emergency responders to provide 24-hour a day coverage. Emergency classifications are communicated to emergency responders and can be used to communicate with other key personnel.
  - g. A Computerized Automated Notification System (CANS) is available to facilitate the notification process. The system is composed of a minimum of 26 phone lines. One telephone line is dedicated for system activation by the Control Room or Security, and the others are connected to the telephone network. The CANS is capable of sending notification messages to all ERO mobile devices and individually calling all emergency response personnel. The system communicates the emergency classification and logs personnel response times.

#### 7.6.2 Emergency Communications Systems

- a. The following phone systems are dedicated for emergency communications:
  1. The Davis-Besse 4-Way Phone including the State and County EOCs, the Ohio Highway Patrol Office, the Lucas County and Ottawa County Sheriff's dispatcher offices, the 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.
  3. Media press lines.
- b. DBNPS has also established two separate communication bridges between various ERFs to ensure reliable and timely exchange of information between the emergency organizations. These bridges consist of the following:
  1. Technical Data Bridge  
  
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 Bridge

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

7.6 .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 Emergency Response Manager. 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.

7.7      Alarms

There are three station alarms as follows:

- 7.7.1    FIRE - Rise and Fall Siren
- 7.7.2    ACCESS EVACUATION - Pulsed Tone Burst
- 7.7.3    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 facility areas (i.e., station office building, personnel shop facility, radiologically controlled area, fuel handling area, outdoor areas, primary access facility, etc.)



## 7.8 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:

- 7.8.1 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. Each siren is equipped with an independent battery backup which will allow operation during the loss of normal AC electrical power. 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.

The PNS sirens are tested from the Ottawa County Sheriff's Dispatch Center as follows:

- A three-minute audible test is performed at least once per year
- A one-minute audible test is performed at least monthly
- A three-minute, one-minute or a silent test is performed weekly

Back-up Alert and Notification Methods - Backup alert and notification for the Davis-Besse 10-mile EPZ is achieved through pre-planned route alerting. This method has been approved by the Federal Emergency Management Agency (FEMA). County emergency management agencies will be prepared to make special provisions such as back up route alerting for those areas with sirens out of service, in the event of an emergency. The route alerting system utilizes planned routes for each siren that is unable to be activated.

- 7.8.2 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).
- 7.8.3 NOAA National Weather Service alert monitors can be pulsed, and automatically turned on to disseminate emergency information.
- 7.8.4 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.
- 7.8.5 Commercial Paging System - A paging system, backed up by the local telephone service, is used to permit immediate contact of local officials.
- 7.8.6 Emergency Vehicles - Vehicles with loudspeakers can be dispatched to various remote locations to broadcast warning messages.

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

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 facility 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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan.

7.9 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.

7.9.1 Radiation Monitoring System

The onsite Radiation Monitoring System contributes to personnel radiological protection within the facility, 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. Radiation monitors are powered from the essential instrument distribution panels. The non-essential radiation monitors are powered from the uninterruptible instrument distribution panels.
- d. 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.

#### 7.9.2 Area Radiation Monitoring

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

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

#### 7.9.3 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.

Portable atmospheric monitors are available for use during maintenance operations. These monitors are capable of monitoring particulate, iodines, and noble gases. The installed and portable atmospheric monitors provide both an audible alarm and visual indications when pre-determined setpoints are exceeded for airborne radioactivity.

#### 7.9.4 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.

#### 7.9.5 Radiation Monitoring Instruments and Equipment

Radiation Monitoring Instruments and Equipment includes those instruments and 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 dosimetry and equipment are shown in Table 7-1.

#### 7.9.6 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 facility 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, Primary Access 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.

7.9.7    Seismic Monitoring System

The Seismic Monitoring System records (on local recorders for each accelerometer and in a personal computer within the central system in the control room) 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, 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, are networked together, and are connected by cables to the rack. (See the Technical Requirements Manual (TRM) for location of the sensors and triggers.)

The four low-level triaxial seismic triggers are networked together, so that any one accelerometer can also trigger the other devices, to turn on the system automatically during the buildup of the event vibrations. The one required seismic trigger (free-field) is set at approximately 0.010g (g=acceleration due to gravity). The recording system includes pre-event (i.e., pre-trigger) data in the event record. Recording continues without interruption for approximately 30 seconds after the last low-level trigger signal. Upon completion of the seismic event recording, data is retrievable from each accelerometer (through an analog-to-digital recorder and data storage memory) and a personal computer in the Control Room, which will provide time history response data and can be readily reviewed without need for conversion to hardcopy. A video display will provide quick, accurate determinations to be made based on the seismic event.

In keeping with the purposes of the system, loss of site power will not prevent system operation. Backup power is supplied from an internal battery in the network control center and each recorder.

In addition to the components associated with the system rack, there are three peak recording accelerometers as listed in the TRM, Table 8.3.3-1, 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.

#### 7.9.8 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 ( $\Delta T$ ) 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).

#### 7.9.9 Control Room Instrumentation

Control Room Instrumentation measures appropriate parameters that are indicative of the status of various SFP systems.

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

#### 7.9.10 Laboratory Facilities

The Davis-Besse laboratory facilities are equipped to provide the water chemistry and radiochemical analysis support required during normal SFP operations. This equipment can also be utilized in the analysis of abnormal events 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. Its primary functions are to act as a staging area for Radiation Monitoring Teams and provide a handling area for environmental samples.
- b. For station vent sampling, procedure guidance exists for sampling using either the normal or accident range station vent monitors. Provisions are included to replace and quantify radioactive particulate and iodine sampling media. 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  $\mu\text{Ci/cc}$ .

#### 7.9.11 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. The REMP is conducted under the guidance contained in the Davis-Besse Offsite Dose Calculation Manual (ODCM).

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.

#### 7.10 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 Post-Shutdown 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 facility. 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 (SCBAs) are located in the Control Room to permit continued occupancy if ventilation systems fail. Air-purifying respirators are available in the Radiologically Controlled Area and would be provided to Control Room personnel as needed. Additional SCBAs, protective clothing, and respirators are available at, or near, each onsite ERF, and are listed in applicable Radiation Protection Procedures and Emergency Plan Procedures.

Parts for the respirators and SCBAs, as well as additional protective clothing are available through the FENOC Supply Chain.

#### 7.11 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 facility. 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.

7.12    Damage Control Equipment

The DBNPS is extensively equipped to conduct preventive and mitigative 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 permanently shutdown and defueled 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**

Page 1 of 2

**Radiation Monitoring Instruments and Equipment**

A. Portable Radiation Survey Instruments

	Range	Type Detector	Quantity	Location
High Range Survey Instruments	0-1000	GM	5	RTL
	mrad/hr-10 <sup>3</sup> rad/hr		3	RP Area
	0-50 R/hr	Ion Chamber	6	RTL
Low Range Survey Instrument	0-5 rem/hr	Ion Chamber	2	RP Area
	0-5 x 10 <sup>5</sup> cpm	GM	4	RTL
Alpha Survey Meter	0-5 x 10 <sup>5</sup> cpm	Scintillator	1	RP Area
Neutron	0-5000 mrem/hr	BF <sub>3</sub>	2	RP Area

B. 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	RP Area
	Low Volume	2	RP Area

**TABLE 7-1**

Page 2 of 2

**Radiation Monitoring Instruments and Equipment (Continued)**

C. Personnel Dosimetry and Equipment

<u>Range</u>	
<u>Self-Reading Dosimeters:</u>	
Pocket Ion Chamber	0-10 rem or 0-100 rem 0-1.5 rem or 0-5 rem 0 – 200 mrem or 0-500 mrem
 <b><u>OR</u></b>	
Electronic Alarming Dosimeters	All ranges
Dosimeter Charger	All ranges
Thermoluminescent Dosimetry (TLD)	All ranges
Radiation Monitor (Frisker)	0-50 kcpm
Automatic Whole Body Contamination Monitors	N/A

**Figure 7-1****EMERGENCY FACILITIES BY GENERAL LOCATION**

SUPPORT AGENCIES		COMPANY									
(OFFSITE / GENERAL AREA)		(OFFSITE)	(ONSITE)								
<table><tr><td colspan="2">State of Ohio Emergency Operations Center (EOC)</td></tr><tr><td colspan="2">Ohio Emergency Management Agency Worthington, Ohio</td></tr></table>		State of Ohio Emergency Operations Center (EOC)		Ohio Emergency Management Agency Worthington, Ohio		<table><tr><td>Joint Information Center (JIC)</td></tr><tr><td>Toledo Edison Plaza Toledo, Ohio</td></tr></table>	Joint Information Center (JIC)	Toledo Edison Plaza Toledo, Ohio	<table><tr><td>Control Room (CTRM)</td></tr><tr><td>Davis-Besse 623' Elevation</td></tr></table>	Control Room (CTRM)	Davis-Besse 623' Elevation
State of Ohio Emergency Operations Center (EOC)											
Ohio Emergency Management Agency Worthington, Ohio											
Joint Information Center (JIC)											
Toledo Edison Plaza Toledo, Ohio											
Control Room (CTRM)											
Davis-Besse 623' Elevation											
<table><tr><td colspan="2">County Emergency Operations Center (EOC)</td></tr><tr><td>Ottawa County Courthouse Annex Port Clinton, Ohio</td><td>Lucas County Emergency Services Bldg Toledo, Ohio</td></tr></table>		County Emergency Operations Center (EOC)		Ottawa County Courthouse Annex Port Clinton, Ohio	Lucas County Emergency Services Bldg Toledo, Ohio	<table><tr><td>Corporate Assistance Center (CAC)</td></tr><tr><td>FirstEnergy Corp. Facility</td></tr></table>	Corporate Assistance Center (CAC)	FirstEnergy Corp. Facility	<table><tr><td>Operations Support Center (OSC)</td></tr><tr><td>Containment Access Facility (CAF) Third Floor</td></tr></table>	Operations Support Center (OSC)	Containment Access Facility (CAF) Third Floor
County Emergency Operations Center (EOC)											
Ottawa County Courthouse Annex Port Clinton, Ohio	Lucas County Emergency Services Bldg Toledo, Ohio										
Corporate Assistance Center (CAC)											
FirstEnergy Corp. Facility											
Operations Support Center (OSC)											
Containment Access Facility (CAF) Third Floor											
<table><tr><td colspan="2">Nuclear Regulatory Commission (NRC) Operations Center</td></tr><tr><td colspan="2">Rockville, Maryland</td></tr></table>		Nuclear Regulatory Commission (NRC) Operations Center		Rockville, Maryland		<table><tr><td>Emergency Operating Facility (EOF)</td></tr><tr><td>Lindsey Emergency Response Facility Lindsey, Ohio</td></tr></table>	Emergency Operating Facility (EOF)	Lindsey Emergency Response Facility Lindsey, Ohio	<table><tr><td>Technical Support Center (TSC)</td></tr><tr><td>Radiological Testing Laboratory (RTL) Davis-Besse Administration Building First Floor (North)</td></tr></table>	Technical Support Center (TSC)	Radiological Testing Laboratory (RTL) Davis-Besse Administration Building First Floor (North)
Nuclear Regulatory Commission (NRC) Operations Center											
Rockville, Maryland											
Emergency Operating Facility (EOF)											
Lindsey Emergency Response Facility Lindsey, Ohio											
Technical Support Center (TSC)											
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<table><tr><td>Incident Response Center (IRC)</td></tr><tr><td>NRC Region III Lisle, Illinois</td></tr></table>		Incident Response Center (IRC)	NRC Region III Lisle, Illinois		<table><tr><td>Site Emergency Operations Center (SEOC)</td></tr><tr><td>Davis-Besse Administration Building First Floor (Center)</td></tr></table>	Site Emergency Operations Center (SEOC)	Davis-Besse Administration Building First Floor (Center)				
Incident Response Center (IRC)											
NRC Region III Lisle, Illinois											
Site Emergency Operations Center (SEOC)											
Davis-Besse Administration Building First Floor (Center)											
<table><tr><td>Federal Emergency Operations Center</td></tr><tr><td>DOE, COO Argon, Illinois</td></tr></table>		Federal Emergency Operations Center	DOE, COO Argon, Illinois								
Federal Emergency Operations Center											
DOE, COO Argon, Illinois											
<table><tr><td>Areva, NP</td></tr><tr><td>Lynchburg, Virginia</td></tr></table>		Areva, NP	Lynchburg, Virginia	<table><tr><td>Bechtel Power Corporation</td></tr><tr><td>Gaithersburg, Maryland</td></tr></table>	Bechtel Power Corporation	Gaithersburg, Maryland					
Areva, NP											
Lynchburg, Virginia											
Bechtel Power Corporation											
Gaithersburg, Maryland											

## 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 –General Plant Manager has been assigned the overall responsibility for emergency preparedness as related to the DBNPS. This responsibility includes not only maintenance of the DBNPS Post-Shutdown 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 –General Plant Manager is also responsible for training of personnel who implement the Plan and Procedures. To assist the General Plant Manager in meeting these assigned responsibilities, an Emergency Response Manager, has been designated. The specific responsibilities of the Emergency Response Manager 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 General Plant Manager. This training program provides for the indoctrination of Company employees and contractors. In addition it provides specialized training for CFHs, chemistry personnel, radiation protection personnel, and personnel assigned specific responsibilities in the ERO.

The General Plant Manager 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 Post-Shutdown Emergency Plan, includes the following:

- a. All DBNPS staff personnel requiring unescorted access will receive industry standard training for unescorted access to a nuclear power plant and any specific training determined by DBNPS post shutdown.
- b. Personnel assigned to the DBNPS ERO with specific Post-Shutdown 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 response 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 Post-Shutdown 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 Post-Shutdown 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 review of the DBNPS EALs will be performed annually by the Emergency Response Section with state and local governmental agencies. This EAL review is directed toward offsite senior management personnel and may be performed through a mailing. This mailing includes an offer to receive training on the DBNPS EALs upon request.
- f. A coordinated program shall be conducted annually to acquaint the news media with the Post-Shutdown 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/facility 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 Post-Shutdown 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 Emergency Response Manager 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 General Plant Manager.

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 Response 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 Emergency Response Manager 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 General Plant Manager (DB).
  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 Emergency Response Manager 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, vegetation, 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 Post-Shutdown 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 Emergency Response Manager by observers or participants. The Emergency Response Manager will submit such procedure revisions for review in accordance with Emergency Plan Administrative Procedure. Approved changes will be incorporated into the Emergency Response Program under the direction of the Emergency Response Manager.



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 Response 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 functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, event classification, notification of offsite authorities, assessment of the onsite and offsite impact of radiological releases, protective action recommendation development, protective action decision making, facility system repair and mitigative action implementation. 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. Radiological Monitoring Drills

- a) Radiological monitoring drills shall include, at least annually, collection and analysis of all samples (e.g., water, vegetation, soil, and air), and provisions for communications and record keeping.
- b) Radiation Monitoring Team (RMT) drills will be conducted semiannually which involve simulated elevated airborne samples and direct radiation measurements in the offsite environment.

6. Health Physics Drills

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

7. One exercise/drill in a 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.

8. 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 Emergency Response Manager

The Emergency Response Manager shall ensure that:

- a. Information, data, and procedures detailed in the Emergency Plan Procedures are consistent with the DBNPS Post-Shutdown 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 Post-Shutdown Emergency Plan and Emergency Plan Procedures with the:
  - 1. State Plans
  - 2. County Plans
  - 3. Davis-Besse Physical Security Plan
- d. Adequate staffing of the ERO is maintained.
- e. Emergency response related training documentation is sent to Nuclear Records Management.
- f. Emergency related drills and exercises are coordinated as described in this Plan.
- g. Periodic reviews and updates of the DBNPS Post-Shutdown 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 Post-Shutdown Emergency Plan and Emergency Plan Procedures

DBNPS maintains, as separate documents; this Post-Shutdown Emergency Plan, the Emergency Plan Implementing Procedures, Off-Normal Occurrence Procedures, the Emergency Plan Administrative Procedures, Fleet procedures to support station emergency plans, a Public Information Emergency Response Procedure, the Emergency Plan Telephone Directory, and the Evacuation Time Estimate (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).

- 8.3.1    The DBNPS Post-Shutdown Emergency Plan, including appended letters of agreement and plans of offsite organizations and agencies will be reviewed annually and updated as required by the Emergency Response Section, under the direction of the Emergency Response Manager.
- 8.3.2    The DBNPS Post-Shutdown Emergency Plan will be reviewed annually by an independent group with no immediate responsibility for the emergency response program. This group is the FENOC Oversight organization. Results and recommendations from the review will be documented and sent to appropriate corporate and plant management, including the Company Nuclear Review Board (CNRB). The CNRB is responsible for auditing the Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan to verify compliance at least once every two years. The CNRB performs this function by reviewing the audits which are performed by the FENOC Oversight organization. The report on the adequacy of the interfaces between the DBNPS Post-Shutdown Emergency Plan and the state and local governments will be sent to the respective government agencies by the Emergency Response Section, and retained on file for at least five years.

Davis-Besse Oversight is responsible for auditing the DBNPS Post-Shutdown Emergency Plan at least annually to verify compliance with the company's internal rules and procedures, federal regulations, and operating license provisions. Personnel

performing audits of the DBNPS Post-Shutdown 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. Davis-Besse Oversight is responsible for auditing the fire protection program at least once per 24 months per the FENOC Quality Assurance Program Manual.

Results of each annual and biennial review and update (if needed) of the Davis-Besse Nuclear Power Station Post-Shutdown Emergency Plan and Emergency Plan procedures will be reported to the General Plant Manager.

- 8.3.3 The Emergency Response Manager will provide an ongoing review of the Post-Shutdown 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 Response Program to DBNPS. Revisions to the DBNPS Post-Shutdown Emergency Plan will be similarly controlled.
  - b. The Emergency Response Manager is responsible for coordinating the periodic review and audit of the DBNPS Post-Shutdown Emergency Plan and Emergency Plan Procedures. In addition, the Emergency Response Manager will, through letters, meetings, seminars, or other means available; ensure that appropriate elements of the emergency organization are informed of the DBNPS Post-Shutdown Emergency Plan and amendments thereto, and the Emergency Plan Procedures and revisions thereto.

8.4 Maintenance and Inventory of Emergency Equipment and Supplies

The Emergency Response Manager 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**

<b>Personnel Category</b>	<b>Involved Personnel</b>	<b>Training and Frequency</b>
Certified Fuel Handlers	Shift Managers Other Certified staff members	Certified Fuel Handlers receive extensive on-the-job and formal training as scheduled and conducted by the CFH training program. This program includes a comprehensive review of the DBNPS Post-Shutdown Emergency Plan and the Emergency Plan Procedures.
Personnel responsible for assessment of emergencies	Emergency Director, Emergency Plant Manager, Emergency Offsite Manager, Shift Managers, Key Emergency Response Personnel  Staff personnel designated by the General Plant Manager who may act as OSC and TSC Managers	Training will include the Post-Shutdown 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 Post-Shutdown Emergency Plan and Emergency Plan 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.
Personnel responsible for repair and damage control	Maintenance  Other personnel as designated by station management as Fire Brigade and First Aid	Periodic training is provided to Station maintenance personnel in troubleshooting techniques as described in the training program for the specific discipline.  Fire Brigade and First Aid training occurs as described in this table.

TABLE 8-1

Sheet 2 of 3

**PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL**

<b>Personnel Category</b>	<b>Involved Personnel</b>	<b>Training and Frequency</b>
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.

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 Post-Shutdown 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**

<b>Personnel Category</b>	<b>Involved Personnel</b>	<b>Training and Frequency</b>
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.
Offsite Medical Training	Medical Hospital and Ambulance Personnel	These personnel shall receive offsite medical training in accordance with the responsibilities and details contained in current state and local government plans and procedures.
Fleet Emergency Response Support Personnel	All Company personnel assigned duties and responsibilities in the Corporate Assistance Center (CAC) to support the DBNPS Post-Shutdown Emergency Plan	These personnel shall receive training at least on an annual basis. The program shall include a comprehensive review of Fleet procedures to support station emergency plans with specific attention and instruction given to their support role, responsibilities and duties.
Emergency Response Personnel	Emergency Response Manager and designated staff	Periodic classroom training and seminars on Emergency Response shall be provided on an as-needed basis and at the discretion of the Emergency Response Manager to these individuals from qualified outside organizations and documentation of this training maintained by the Emergency Response Section.



## 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 mitigative 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 Radiological Emergency Preparedness Plan and the Ohio Emergency Operations Plan. 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 facility 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 facilities.
  - d. Isolating and posting of areas in the facility 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 status.

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. Facility 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.
- g. The SFP is in a stable safe condition and long-term spent fuel 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 systems required to maintain SFP cooling, 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 significant damage to the SFP or damage to the spent fuel resulting in a radiological release, 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 facility 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 return to safe storage of spent fuel. This program will include a detailed incident analysis. Determinations will be made as to the repair work required to perform needed modifications to equipment and/or 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

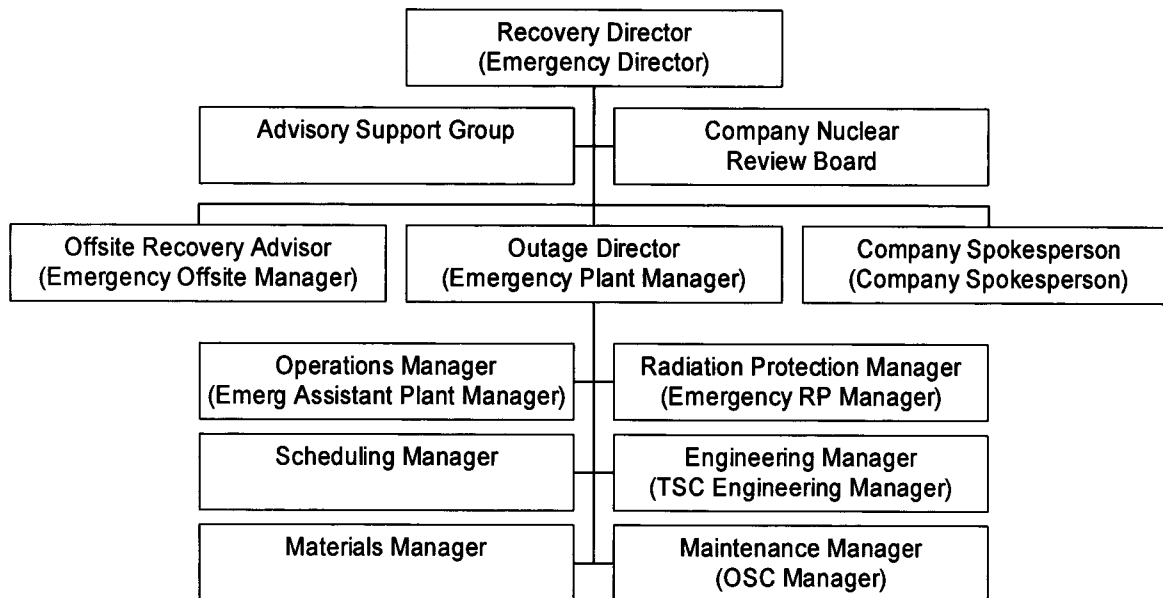
The Recovery Director is responsible for directing the activities of the Recovery Organization, including the following:

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. Outage Director:
  - 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 Manager:
  - 1. Reports to the Outage Director.
  - 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 facility radiation surveys, sampling, and shielding in support of waste system processing, facility 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 Manager:
  - 1. Reports to the Outage Director.
  - 2. Coordinate the development of plans and procedures in support of SFP systems and activities.
  - 3. Provide a central point for the collection, retention, retrieval and transmission of facility 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 facility.
- e. Operations Manager:
  - 1. Reports to the Outage Director.
  - 2. Direct recovery activities conducted by Operations personnel.
  - 3. Provide recommendations to the Outage Director regarding SFP operations-related aspects of the recovery.

- f. Maintenance Manager:
  - 1. Reports to the Outage Director.
  - 2. Coordinate maintenance activities conducted in support of recovery.
  - 3. Designate members of the Reentry team, as appropriate to support maintenance.
  
- g. Offsite Recovery Advisor:
  - 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 public inquiry activities.
  - 6. Coordinates with Company Corporate Communications, as may be applicable.

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**

### **POST SHUTDOWN EMERGENCY PLAN**

#### **PROCEDURE AND RELATED DOCUMENT INDEX AND CROSS-REFERENCE**



**Post-Shutdown Emergency Plan  
Procedure and Related Document Index and Cross-Reference**

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<b><u>Implementing Procedures</u></b>	<b><u>Procedure Number</u></b>	<b><u>DBNPS Post-Shutdown Emergency Plan Section</u></b>
1. Emergency Classification	RA-EP-01500	4.1, 4.2
2. Unusual Event	RA-EP-01600	4.1.4
3. Alert	RA-EP-01700	4.1.3
4. Site Area Emergency	RA-EP-01800	4.1.2
5. General Emergency	RA-EP-01900	4.1.1
6. Emergency Management	RA-EP-02010	5.1, 5.2, 5.3
7. Emergency Notifications	RA-EP-02110	6.1.1, 7.6
8. EOF Activation and Response	RA-EP-02220	5.5.2, 6.1.2, 7.0, 7.2
9. Dose Assessment Center Activation and Response	RA-EP-02230	5.5.2, 7.2
10. FENOC MIDAS Dose Assessment Software	NOP-LP-5400	6.2
11. Davis-Besse MIDAS Dose Assessment Software	NOP-LP-5402	6.2
12. DBNPS MIDAS Multiple Accident Dose Assessment Software	NOP-LP-5412	6.2
13. Offsite Dose Assessment	RA-EP-02240	6.2
14. Protective Action Guidelines	RA-EP-02245	6.4
15. FENOC Field Monitoring Teams Radiation Monitoring Teams Field Surveys	NOP-LP-5015	6.2, 5.5.2
16. DBAB Radiation Monitoring Team Surveys	RA-EP-02252	6.2, 5.5.2
17. Radiological Controls in the DBAB	RA-EP-02260	6.4.1, 6.4.2, 7.2
18. Facilities Support	RA-EP-02270	7.0
19. TSC Activation and Response	RA-EP-02310	5.4.4, 7.2
20. Emergency Technical Assessment	RA-EP-02320	6.2
21. OSC Activation and Response	RA-EP-02410	5.4.5, 6.4.2, 7.1.2
22. Search and Rescue	RA-EP-02420	6.4.1
23. Emergency Security Activation and Response	RA-EP-02510	5.3.4, 5.4.4, 6.4.3
24. Assembly and Accountability	RA-EP-02520	6.4.1
25. Evacuation	RA-EP-02530	6.4.1
26. Offsite Personnel & Vehicle Monitoring & Decontamination	RA-EP-02550	6.4.1
27. Emergency RP Organization Activation and Response	RA-EP-02610	5.4.4, 5.4.5
28. Emergency Exposure Control and Potassium Iodide Distribution	RA-EP-02620	6.5.1, 6.5.2
29. Station Radiological Surveys and Controls During Emergencies	RA-EP-02640	5.4.5, 6.5
30. Reentry	RA-EP-02710	9.1
31. Recovery Organization	RA-EP-02720	9.2

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<b><u>Off Normal Occurrence Procedures</u></b>	<b><u>Procedure Number</u></b>	<b><u>DBNPS Post-Shutdown Emergency Plan Section</u></b>
1. Medical Emergencies	RA-EP-02000	2.7, 5.8.2, 6.5.3
2. Preparation and Transport of Contaminated Injured Personnel	RA-EP-02800	2.7
3. Emergency Helicopter Landing Zone	RA-EP-02807	2.7
4. Tornado	RA-EP-02810	2.6.5, 2.7, 7.10
5. Earthquake	RA-EP-02820	2.6.5, 2.7, 7.10
6. Flooding	RA-EP-02830	2.6.5, 2.7, 7.10
7. Explosion	RA-EP-02840	2.6.5, 2.7, 7.10
8. Hazardous Chemical and Oil Spills	RA-EP-02850	2.6.5, 2.7, 7.10
9. Radiological Incidents	RA-EP-02861	2.6.5, 2.7, 7.10
10. Station Isolation	RA-EP-02870	2.6.5, 2.7, 7.10
11. Internal Flooding	RA-EP-02880	2.6.5, 2.7, 7.10
12. ERO Response to Security Events or Threats	RA-EP-02890	2.6.5, 2.7, 6.4.1
<b><u>Administrative Procedures</u></b>		
1. Emergency Plan Training Program	RA-EP-00100	2.7, 8.1.1
2. Emergency Response Organization Training Program	NOP-LP-5006	2.7, 8.1.1
3. Emergency Response Drill And Exercise Program	NOP-LP-5011	2.7, 8.1.2
4. Emergency Planning Activity Scheduling System	RA-EP-00300	2.7
5. FENOC Siren Testing And Maintenance Procedure	NOP-LP-5005	2.7, 7.8
6. Maintenance of Emergency Plan Telephone Directory	RA-EP-00510	2.7, 7.6.3
7. Emergency Response Organization	RA-EP-00520	2.7, 6.1
8. Computerized Automated Notification System	RA-EP-00550	2.7, 7.6.1
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

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**Public Information Procedure**

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|--------------------------------|-------------|---------------------------|
| 1. JIC Activation and Response | RA-EP-02950 | 2.7, 4.3.3, 5.5, 7.2, 8.3 |
|--------------------------------|-------------|---------------------------|

**Supporting Documents**

- |  |              |                |
|--|--------------|----------------|
| 1. Fleet Support of Emergency Plans at FENOC<br>Nuclear Plants | NOBP-LP-5001 | 8.3, Table 8-1 |
|--|--------------|----------------|

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A 1a	2.8, 5.8, Table 2.1	F 1d	7.6
A 1b	5.1 - 5.8	F 1e	6.1.2, 7.6.1
A 1c	Table 2-1	F 1f	7.6
A 1d	5.2	F2	7.6.3, 7.8
A 1e	5.1.2, 5.1.3, Table 5.1	F 3	8.1.2
A 2a	N/A	G 1	8.2
A 2b	N/A	G 2	8.2
A 3	App. C	G 3a	7.3.4
A 4	5.0	G 3b	7.3.4
B 1	5.3	G 4a	5.2.4
B 2	5.2.1	G 4b	5.5, 7.3.4
B 3	5.2.1, 5.3.1-5.3.2	G 4c	7.3.4
B 4	5.2.1	G 5	8.1.1
B 5	5.0, Table 5-1	H 1	7.2, 7.2.2
B 6	Figure 6-2	H 2	7.2
B 7	Table 5-1, 5.6	H 3	N/A
B 7a	7.0	H 4	Table 5-1, 7.6.1
B 7b	7.2	H 5a	7.9
B 7c	7.2	H 5b	7.9.6, 7.9.8
B 7d	7.2	H 5c	7.9.9
B 8	5.8.4	H 5d	7.9.6
B 9	5.7, App. C	H 6a	7.9.8
C 1a	5.2.1, 6.1.6	H 6b	7.9.11
C 1b	5.8.3	H 6c	7.9.10
C 1c	7.6, 7.9	H 7	7.9.11
C 2a	N/A	H 8	7.9.6
C 2b	5.5.2	H 9	7.10
C 3	7.9.10-7.9.12	H 10	7.12, 8.1.3
C 4	5.8, App. C	H 11	6.4.2, 7.12
D 1	N/A (NEI 99-01)	H 12	7.9.10
D 2	N/A (NEI 99-01)	I 1	4.0
D 3	N/A	I 2	7.9
D 4	N/A	I 3a	4.0
E 1	6.1, 7.6.2	I 3b	4.0
E 2	6.1	I 4	4.0
E 3	6.1	I 5	7.2, 7.9.8
E 4	6.0	I 6	7.9.8
E 5	N/A	I 7	7.9.11
E 6	6.4`	I 8	7.9
E 7	6.4	I 9	7.9, Table 7-4
F 1a	7.6	I 10	7.9
F 1b	7.6	I 11	N/A
F 1c	7.6		

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J 1a	6.4.1	K 6c	6.4.3
J 1b	6.4.1	K 7	6.5.3
J 1 c	6.4.1	L 1	5.8.2, 6.5.4, 6.5.5
J 1d	6.4.1	L 2	6.5.3
J 2	6.4.1	L 3	N/A
J 3	6.4.1, 6.4.3, 6.5.3	L 4	5.8.2, 6.5.4
J 4	6.4.1, 6.5.3	M 1	9.1, 9.2
J 5	6.4.1	M 2	9.2, Figure 9-1
J 6a	7.9	M 3	9.2
J 7	6.4.1	M 4	9.2.3.c.3
J 8	App. D	N 1a	8.1.2
J 9	N/A	N 1b	8.1.2
J 10a	App. D	N 2a	8.1.2
J 10b	App. D	N 2b	8.1.2
J 10c	7.7	N 2c	8.1.2
J 10d	N/A	N 2d	8.1.2
J 10e	N/A	N 2 e(1)	8.1.2
J 10f	N/A	N 2e (2)	8.1.2
J 10g	N/A	N 3a	8.1.2
J 10h	N/A	N 3b	8.1.2
J 10i	N/A	N 3c	8.1.2
J 10j	N/A	N 3d	8.1.2
J 10k	N/A	N 3e	8.1.2
J 10l	N/A	N 3f	8.1.2
J 10m	6.4.1, Table 6-1 thru 6-6	N 4	8.1.2
J 11	N/A	N 5	8.1.2
J 12	N/A	0 1	8.1.1
K 1a	6.5.3	0 1a	8.1.1
K 1b	6.5.1	0 1b	N/A
K 1c	6.5.1	0 2	8.1.1, 8.1.2
K 1d	6.5.3	0 3	8.1.1, Table 8-1
K 1e	6.5.3	0 4a	8.1.1
K 1f	6.5.4	0 4b	8.1.1
K 1g	6.5.5	0 4c	8.1.1
K 2	5.2.1, 6.5.1	0 4d	8.1.1
K 3a	5.2.1	0 4e	8.1.1
K 3b	6.1	0 4f	8.1.1
K 4	N/A	0 4g	8.1.1
K 5a	6.5.3	0 4h	8.1.1
K 5b	6.5.3	0 4i	8.1.1
K 6a	6.4.3	04j	8.1.1
K 6b	6.4.3	0 5	8.1.1

**Post-Shutdown Emergency Plan  
Procedure and Related Document Index and Cross-Reference**

Page 6 of 6

<b>NUREG</b>		<b>DB Post-Shutdown Emergency</b>		<b>NUREG</b>		<b>DB Post-Shutdown Emergency</b>
<b><u>0654</u></b>	<b>to</b>	<b><u>Plan Section</u></b>		<b><u>0654</u></b>	<b>to</b>	<b><u>Plan Section</u></b>
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		7.6.3

## **Appendix B**

### **Department of Energy Emergency Radiological Assistance Program (DOE O 153.1)**

**for**

**FirstEnergy Corporation**

**Davis-Besse Nuclear Power Station**

(Reference to DOE O 153.1 is available Online at: [www.directives.doe.gov](http://www.directives.doe.gov))

## **Appendix C**

### **LETTERS OF AGREEMENT**

#### **Contents**

Carroll Township EMS & Fire Service, Inc.

H. B. Magruder Hospital

Lucas County

ProMedica Memorial Hospital

Mercy St. Charles Hospital

Ottawa County Commissioners

Ohio Department of Public Safety Emergency Management Agency



## **EMERGENCY RESPONSE AGREEMENT**

This Agreement made and entered into by and between FirstEnergy (hereinafter "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 (24) hour emergency ambulance and fire protection for actual emergencies, including hostile action events at Davis Besse Power Station, 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 based upon the mutual agreement of the Utility and Service, Inc., 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 at the discretion of Service, Inc..
3. Further, the Utility agrees to assume all expenses and costs of providing specialized training for participating personnel and support personnel as

**Emergency Response Agreement****Page 2**

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. The Utility shall be liable for property damage to Service, Inc., equipment and any bodily injury to Service, Inc., personnel, including death, that is caused by exposure to radiation during the performance of obligations under the Agreement. The Utility shall be liable for non-radiation related injuries or damages to the extent caused by its own negligence. The Utility shall promptly repair or replace Service, Inc., equipment in order to avoid any interruption in fire or 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 property or non-radiation related bodily injury to the extent it is the result of the negligence of the Service, Inc..

**Emergency Response Agreement****Page 3**

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 non-radiological 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 active 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 \$200.00 per hour, for time from call until the ambulance is back in service, for emergency ambulance calls in excess of twelve (12) per year.
8. Service, Inc., agrees to provide a staging area for emergency equipment and personnel in the event the Utility (Davis Besse Nuclear Power Station) is involved in a security related event.
9. This Agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

## Emergency Response Agreement

Page 4

FirstEnergy

Carroll Township Emergency  
Medical and Fire Service, Inc.By: Raymond A. LiebName: Raymond A. Lieb  
Position: Site Vice President  
Davis Besse NuclearBy: John R. V. Fire ChiefBy: Kathyburger EmscheySTATE OF OHIO )  
 ) SS:  
COUNTY OF OTTAWA)VICKI A. WADSWORTH, NOTARY PUBLIC  
State of Ohio  
My Commission Expires March 22, 2016

Be it remembered that on this 29<sup>th</sup> day of September, 2014,  
before me a Notary Public in and for said County, personally came  
Raymond A. Lieb an Officer of FirstEnergy, who acknowledged the  
signing of the above Agreement as an Officer of First Energy, on behalf of First Energy,  
and by the authority of its Board of Directors, and that the Agreement is the voluntary act  
and deed of First Energy and Raymond A. Lieb, as such Officer, and the  
voluntary act and deed of First Energy, for the purposes stated therein.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed  
my seal this 29<sup>th</sup> day of September, 2014.

Vicki A. Wadsworth  
Notary Public - State of Ohio

## Emergency Response Agreement

Page 5

STATE OF OHIO       )  
                              ) SS:  
COUNTY OF OTTAWA)

Be it remembered that on this 1<sup>st</sup> day of October, 2014,  
before me a Notary Public in and for said County, personally came  
John Brough and Kathy Bowyer, 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 John Brough and Kathy Bowyer,  
as such Officers, and the voluntary act and deed of Service, Inc., for the purposes stated  
therein.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed  
my seal this 1<sup>st</sup> day of October, 2014.

Michael W. Sandwich  
Notary Public - State of Ohio  
Michael W. Sandwich  
My Commission has No Expiration



615 Fulton Street  
Port Clinton, Ohio 43452  
419-734-3131

---

October 19, 2016

Mr. James Vetter  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 State Route 2, Mail Stop 3060  
Oak Harbor, Ohio 43449-9760

Dear Mr. Vetter:

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.

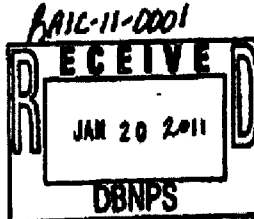
It is further understood that written procedures detailing the actions to be followed for the care of these patients will be implemented and that our personnel will continue to receive instructions regarding this plan of action and will make periodic "dry runs" as needed.

This agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

Sincerely,

J. Todd Almendinger  
President & CEO

JTA/pap

Rev. 23  
February, 2011

Board of County  
Commissioners  
Pete Gerben  
President  
Tim Shelden Wendish  
Carol Conrad

Emergency Management  
Agency  
Joe Walker  
Director

January 11, 2011

Mr. James Vetter  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 North State Route 2  
Oak Harbor, OH 43449

Dear Mr. Vetter,

The Lucas County Emergency Management Agency is the lead agency in Lucas County for the coordination of response to area wide emergencies within the County. As such, the Lucas County Emergency Management Agency would lead and coordinate Lucas County's response to an incident at the Davis-Besse Nuclear Power Station.

Lucas County has developed plans and guidelines to deal with an emergency at Davis-Besse Nuclear Power Station, and would implement these plans and guidelines to the best of its ability in the event of an incident at the plant.

The County intends to protect the health and welfare of the people in Lucas County through the implementation of its response plans and guidelines.

This agreement shall remain in effect until terminated in writing by either party, thirty (30) days prior to the effective date.

Sincerely,

Peter Urvagi  
County Administrator



**Board of County  
Commissioners**  
Carol Contrada  
*President*  
Tina Skeldon Wozniak  
Pete Gerken

**Emergency Management  
Agency**  
Matthew S. Heyman  
*Director*

Mr. James Vetter  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 N. State Route 2  
Oak Harbor, Ohio 43449

February 6, 2014

Dear Mr. Vetter,

The following mutual aid agreements are available for Lucas County EMA in the event additional resources are needed to support a response to an incident, including hostile-action based, at the Davis-Besse Nuclear Power Station.

- The Ohio Intrastate Mutual Aid Compact (IMAC)
  - The purpose of IMAC is to develop and improve intrastate mutual aid capabilities for providing services and resources across local boundaries in response to and recovery from any disaster resulting in a formal declaration of emergency.
- Emergency Management Assistance Compact (EMAC)
  - This compact was established by states, for the states. It is not a federal program. There are, however, systems in the EMAC program which allow for close coordination with federal partners engaged in supporting affected states.
- Ohio Law Enforcement Response Plan (LERP)
  - The LERP is a tool for law enforcement agencies to acquire large quantities of law enforcement resources in the event of a domestic terrorist attack, major disaster, or other emergency.
- Ohio Fire Chief's Association Emergency Response Plan
  - Developed by the Ohio Fire Chief's Association as a plan to bring mutual aid to any area of the state in need of additional fire response resources.

Regards,

Matthew Heyman  
Director



A large black rectangular redaction box covering the top right portion of the page.

*Your health. Our mission.*

**MEMORIAL HOSPITAL**

Our Mission is to  
improve your health  
and well-being.

**November 28, 2017**

**Mr. James M. Vetter**  
**Manager – Emergency Preparedness**  
**Davis-Besse Nuclear Power Station**  
**5501 State Route 2, Mail Stop 3060**  
**Oak Harbor, Ohio 43449-9760**

Dear Mr. Vetter,

This letter reaffirms our commitment of June 30, 1998 that ProMedica 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,

A handwritten signature in cursive script that reads 'Pam Jensen'.

Pam Jensen, President ProMedica Memorial Hospital



Mercy St. Anne Hospital  
Mercy St. Charles Hospital  
Mercy St. Vincent Medical Center  
Mercy Children's Hospital  
Mercy Hospital of Dolansville  
Mercy Tiffin Hospital  
Mercy Wilford Hospital  
Mercy Medical Partners

July 29, 2015

**Mr. James M. Vetter**  
**Manager – Emergency Response**  
**Davis-Besse Nuclear Power Station**  
**5501 N. State Route 2, Mail Stop 3060**  
**Oak Harbor OH 43449-9760**

**Dear Mr. Vetter:**

This Letter of Agreement reaffirms our commitment, specified in our mutual agreement with First Energy, that Mercy 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,

Craig Albers, RN  
Vice President, Patient Care/CNO  
Mercy St. Charles Hospital

Agreed to:

  
James M. Vetter  
Manager, Emergency Response  
Davis-Besse Nuclear Power Station

8-3-15

Date





Ottawa County Emergency Management Agency  
315 Madison Street, Annex Basement  
Port Clinton, Ohio 43452-1936  
FRED PETERSEN, Director

Office: 419-734-6900  
Countywide: 800-788-8803  
Facsimile: 419-249-2361  
fpetersen@co.ottawa.oh.us

[www.co.ottawa.oh.us/ottawacoema](http://www.co.ottawa.oh.us/ottawacoema)  
September 4, 2014

Mr. James Vetter,  
Emergency Response Manager  
Davis-Besse Nuclear Power Station  
5501 North State Route 2  
Oak Harbor, OH 43449

Dear Mr. Vetter,

The Ottawa County Emergency Management Agency is the lead agency in Ottawa County for handling and coordinating response to area-wide emergencies within the County. As such, the Ottawa County Emergency Management Agency would lead and coordinate County response to an incident at the Davis-Besse Nuclear Power Station.

Ottawa County has developed plans and guidelines to deal with an emergency at Davis-Besse Nuclear Power Station, including hostile action, and would implement these plans and guidelines to the best of its ability in the event of an incident at the plant.

The County intends to protect the health and welfare of the people in Ottawa County through the implementation of its response plans and guidelines.

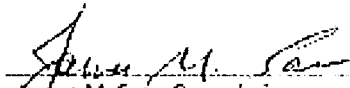
This letter of agreement is not intended, and shall not be construed as creating liability on the part of the County of Ottawa, and of its agencies, or of the officers, agents or employees thereof.

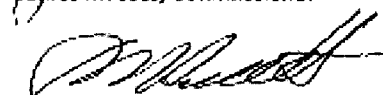
This agreement will be reviewed and, if necessary, revised on an annual basis in accordance with NUREG-0654. If no revisions are necessary, this agreement will remain in effect unless terminated by either party giving ninety (90) days advance, written notice of termination to the other party.

BOARD OF OTTAWA COUNTY COMMISSIONERS  
OTTAWA COUNTY EMERGENCY MANAGEMENT AGENCY

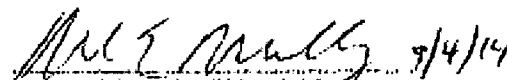
  
JoEllen Regal, President

  
Fred Petersen, EMA Director

  
James M. Sass, Commissioner

  
Steven M. Arndt, Commissioner

APPROVED AS TO FORM:

 9/4/14  
MARIE E. MULLIGAN  
Prosecuting Attorney  
Ottawa County, Ohio



OHIO DEPARTMENT  
OF PUBLIC SAFETY  
SAFETY • SERVICE • PROTECTION

- Bureau of Motor Vehicles
- Emergency Management Agency
- Emergency Medical Services
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



John R. Kasich, Governor  
John Born, Director  
Nancy J. Dragani  
Executive Director

Emergency Management Agency  
2965 West Dublin-Granville Road  
Columbus, Ohio 43226-2206  
(614) 888-7150  
[www.ema.ohio.gov](http://www.ema.ohio.gov)

December 2, 2013

Mr. Glenn McKee  
First Energy Nuclear Operating Company  
341 White Pond Drive (WAC B-1)  
Akron, Ohio 44320

Dear Mr. McKee:

In order for the State of Ohio to remain in compliance with Federal regulations, the established Memorandum of Understanding (MOU) between the State of Ohio and First Energy Nuclear Operating Company (FENOC) has been reviewed regarding the coordination of off-site response to nuclear incidents for Beaver Valley Power Station (BVPS), Davis-Besse Nuclear Power Station (DBNPS) and Perry Nuclear Power Plant (PNPP). The agreement is in accordance with the Nuclear Regulatory Commission (NRC) and Federal Emergency Management Agency (FEMA) guidance as outlined in NUREG-0654/FEMA-REP-1, Revision 1. Enclosed you will find a copy of the most recent document.

The purpose of this letter is to inform you the agreement between the State of Ohio and the FENOC was reviewed and remains in effect. The State further acknowledges the MOU will continue to remain in full force and effect until such time as either of the parties decides the agreement needs to be revised. Each year, the MOU will be reviewed for substantive changes and updated as necessary. Barring any substantive changes, the MOU will remain in effect. Signatory confirmation is not required.

If you do not agree with this review process or wish to make changes to the MOU, please contact Mr. Michael Bear of my staff at 614-799-3687. If the process is acceptable and you have no changes, you need to do nothing. Please let us know if you have any questions in this regard. Thank you.

Sincerely,

Nancy J. Dragani  
Executive Director

Enclosure

**LETTER OF AGREEMENT BETWEEN  
FIRST ENERGY NUCLEAR OPERATING COMPANY  
AND THE OHIO DEPARTMENT OF PUBLIC SAFETY  
EMERGENCY MANAGEMENT AGENCY**

This letter will serve as a written agreement that the First Energy Nuclear Operating Company (Davis-Besse Nuclear Power Station, Perry Nuclear Power Plant, and Beaver Valley Power Station) will provide the Ohio Department of Public Safety, Emergency Management Agency with the following equipment at the locations indicated during a drill or emergency involving a nuclear power plant.

**LOCATION: EQUIPMENT**

JPIC: Telephones, Facsimile Machine, Copier, Typewriter/Word Processor, Work Space, Status Boards, Maps, Administrative Support/Supplies

ECC/EOF: Telephones, Facsimile Machine, Copier, Work Space, Status Boards, Maps, Administrative Support/Supplies

NOTE: It is understood that this list is not all inclusive, but is representative of the level of support needed by responders to these facilities

A technical liaison will be dispatched by the FirstEnergy Nuclear Operating Company to the State Emergency Operations Center (EOC) upon or before the declaration of a Site Area Emergency at Davis-Besse Nuclear Power Station, Perry Nuclear Power Plant, or Beaver Valley Power Station as determined by individual plant procedures. The State will provide similar equipment to the technical liaison to ensure his/her duties may be performed. In the event of an incident where further degradation of the plant appears likely, the Ohio Emergency Management Agency may request that the technical liaison be dispatched to the State EOC prior to a Site Area Emergency declaration. The Ohio Emergency Management Agency will dispatch a liaison to the nuclear power plant of concern at the Alert level.


This agreement shall be reviewed annually and updated as necessary. The agreement will remain in effect until terminated by either party through the submission of a sixty (60) days written notice.

SIGNED


+

For the State of Ohio Emergency  
Management Agency

For the First Energy Nuclear  
Operating Company



EXECUTIVE DIRECTOR



CHIEF OPERATING OFFICER - FENOC

8/11/03

DATE

8/29/03

DATE

## **Appendix D**

### **Supporting Documents**

(Under Separate Cover)

EVACUATION TIME ESTIMATES

OHIO RADIOLOGICAL EMERGENCY PREPAREDNESS PLAN

OHIO RADIOLOGICAL EMERGENCY PREPAREDNESS (REP)  
OPERATIONS MANUAL

OHIO EMERGENCY OPERATIONS PLAN,  
EMERGENCY SUPPORT FUNCTION #10,  
HAZARDOUS MATERIALS, TAB B – REP INCIDENT RESPONSE PLAN

OTTAWA COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN

LUCAS COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN

## **Appendix E**

(Under Separate Cover)

DBRM-EMER-1500 A, Davis-Besse Emergency Action Level  
Basis Document



## **Appendix F**

(Under Separate Cover)

Davis-Besse Nuclear Power Station (DBNPS) ERO  
Post-Shutdown On-Shift Staffing Analysis Report

## **Attachment 4**

### **Emergency Response Organization Task Analysis (11 Pages Follow)**

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
<b>EMERGENCY OPERATIONS FACILITY</b>								
Emergency Director	F1. Supervises timely assessment of plant status. F2. Supervises recognition and appropriate classification of the given situation. F3. Supervises augmentation of the Onshift Emergency Response Organization, as appropriate. F4. Supervises initial notification of offsite agencies. F5. Supervises termination or mitigation of the emergency situation. F6. Supervises protective action recommendations for the general public and Station personnel. F7. Supervises authorization of emergency radiation doses. F8. Determine protective action recommendations. F9. Transfer Emergency Director command and control. F10. Develop and conduct Emergency Director turnover. F11. Communicate within and between emergency facilities during an emergency event. F12. Direct emergency actions for plant operations outside of design basis (SAMG, EDMG, 50.54(x)). F13. Determine event classification in accordance with Emergency Plan and implementing procedures. F14. Perform responsibilities associated with the notification processes (review/approve form, state and local, NRC). F15. Integrate offsite responders with onsite response efforts when required. F16. Perform the responsibilities associated with onsite protective actions (assembly/evacuation/accountability; search and rescue; radiological controls). F17. Authorize emergency exposures and potassium iodide (KI) issuance. F18. Terminate the event in accordance with procedures. F19. Direct recovery actions. F20. Establish facility command and control; direct activities; and establish priorities. F21. Communicate event information to offsite organizations. F22. Perform reportability actions.	N/A	No	N/A	No	Yes	E-Plan Table 1-1 E-Plan 3.2 E-Plan 4.4.2 E-Plan 4.4.4 E-Plan 5.1.3 E-Plan 5.2 E-Plan 5.2.1-5.2.5 E-Plan 5.3.1-5.3.3 E-Plan 5.4.1.b E-Plan 5.5.1.a E-Plan 5.7 E-Plan Table 5-1 E-Plan Figure 5-2 E-Plan 6.1, 6.1.1, 6.1.2 E-Plan 6.2.2, 6.2.3 E-Plan 6.3 E-Plan 6.4.1 E-Plan 6.5.1, 6.5.2 E-Plan Table 8-1 E-Plan 9.2, 9.2.1 E-Plan Figure 9-1 RA-EP-00520 RA-EP-01500 RA-EP-01600 RA-EP-01700 RA-EP-01800 RA-EP-01900 RA-EP-02010 RA-EP-02110 RA-EP-02220 RA-EP-02230	NUREG 0654 II.A.1.b/II.A.1.d/II.A.1.e NUREG 0654 II.B.1/II.B.2/II.B.3/II.B.4/II.B.5/II.B.7/II.B.9 NUREG 0654 II.C.1.a NUREG 0654 II.E.1/II.E.2/II.E.3 NUREG 0654 II.F.1.e NUREG 0654 II.G.4.a NUREG 0654 II.H.1 NUREG 0654 II.J.1.a, b, c, d /II.J.2/II.J.3/II.J.4/II.J.5/II.J.7/II.J.10.m NUREG 0654 II.K.1.b, c/II.K.2/II.K.3.a, b NUREG 0654 II.M.1/II.M.2/II.M.3/II.M.4 NUREG 0654 II.O.3 NUREG 0654 II.P.1
Emergency Offsite Manager	F1. Operations of the EOF. F2. Coordination of radiological dose assessment activities and protective action recommendations. F3. Control and coordination of communication and interface with corporate, offsite and regulatory agencies. F4. Tracking parameters associated with EALs for radiological releases. F5. Making recommendations to the Emergency Director concerning appropriate offsite protective actions, and/or changes to the emergency classification level. F6. Interfacing with the Emergency Plant Manager, Company Spokesperson, and regulatory and governmental officials. F7. Determine protective action recommendations. F8. Activate the EOF. F9. Develop and conduct senior manager turnover for the EOF. F10. Communicate within and between emergency facilities during an emergency event. F11. Determine event classification in accordance with Emergency Plan and implementing procedures. F12. Perform responsibilities associated with the notification processes (review/approve form; state and local; NRC). F13. Integrate offsite responders with onsite response efforts when required. F14. Balance oversight of on-shift activities during plant emergencies (radiological, medical, natural disasters, security). F15. Perform the responsibilities associated with on-site protective actions (assembly/evacuation/accountability; radiological controls). F16. Terminate the event in accordance with procedures. F17. Direct recovery actions. F18. Establish facility command and control; direct activities and set priorities. F19. Communicate event information to offsite organizations. F20. Perform reportability actions. F21. Perform the responsibilities for dose assessment.	F2 - task from Emergency Director Advisor F3 - task from Emergency Director Advisor F1 - task from Public Relations Communicator F1 - task from EOF Operations Advisor F1 - task from Resource Communicator	No	N/A	Yes	Yes	E-Plan 5.2 E-Plan 5.2.1.b.1 E-Plan 5.2.2 E-Plan 5.2.3 E-Plan 5.4.4.g E-Plan 5.5.2, 5.5.2.b, 5.5.2.e E-Plan Table 5-1 E-Plan Figure 5-2 E-Plan Table 8-1 E-Plan 9.2 E-Plan 9.2.1 E-Plan Figure 9-1 RA-EP-00520 RA-EP-01600 RA-EP-01700 RA-EP-01800 RA-EP-01900 RA-EP-02010 RA-EP-02110 RA-EP-02220 RA-EP-02230 RA-EP-02252 RA-EP-02260 RA-EP-02270 RA-EP-02310 RA-EP-02410 RA-EP-02510 RA-EP-02520 RA-EP-02550 RA-EP-02610	NUREG 0654 II.A.1.b/II.A.1.d NUREG 0654 II.B.2/II.B.3/II.B.4/II.B.5/II.B.7 NUREG 0654 II.C.1.a NUREG 0654 II.C.2.b NUREG 0654 II.H.4 NUREG 0654 II.K.2/II.K.3.a NUREG 0654 II.M.1/II.M.2/II.M.3/II.M.4 NUREG 0654 II.O.3 NUREG 0654 II.P.1

Current ERO Position	Tasks (#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
Dose Assessment Coordinator	F1. Provide radiological assessment and guidance for protective action recommendations. F2. Determine the necessity for KI issuance. F3. Coordinate the administration of KI. F4. Determine event conditions and the exposure potential for ERO members. F5. Monitor habitability of Emergency Response Facility (ERF). F6. Direct the activation of the ventilation filtration system. F7. Recommend evacuation based on environmental conditions. F8. Provide radiological guidance and support for ERF evacuation. F9. Monitor and control personnel exposures. F10. Determine exposure controls based on event status. F11. Ensure dosimetry issue for responding ERO members. F12. Direct offsite monitoring. F13. Supervise the development of a plume tracking strategy. F14. Supervise the deployment of offsite RMTs to predetermined locations as dictated by radiological conditions. F15. Discuss radiological conditions with State and local agencies. F16. Direct dose assessment activities. F17. Recognize the differences in dose projections generated by NRC, State and utility models. F18. Oversee dose assessment collection and evaluation activities. F19. Direct possible predictive and worst-case dose projections. F20. Evaluate dose assessment results and recommendations. F21. Communicate dose assessment results to the Emergency Director to determine appropriate PAIRs. F22. Ensure Radiological Status Board reflects current radiological conditions. F23. Develop an environmental sampling plan. F24. Dispatch RMT members to assist in personnel monitoring and decontamination of personnel and equipment.	N/A	No	N/A	Yes	Yes	E-Plan 5.4.4.b E-Plan 5.5.2.c E-Plan Table 5-1 E-Plan Figure 5-2 E-Plan 7.2.2 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02220 RA-EP-02230 RA-EP-02240 RA-EP-02245 RA-EP-02252 RA-EP-02260 RA-EP-02270 RA-EP-02310 RA-EP-02320 RA-EP-02510 RA-EP-02550 RA-EP-02610 RA-EP-02620	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7/II.B.7.b, c, d NUREG 0654 II.C.2.b NUREG 0654 II.G.4.b NUREG 0654 II.H.1/II.H.2/II.H.4 NUREG 0654 II.I.5
State/County Communicator	F1. Provide communications between DBNPS EOF and the Ottawa County Emergency Operations Center, the Lucas County Emergency Operations Center, and the State of Ohio, to transmit plant information related to the declaration of emergency classifications and Protective Action Recommendations made by the utility. F2. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS).	N/A	No	N/A	Yes	No	E-Plan 5.5.2.d E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02220	NUREG 0654 II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4
Emergency Planning Advisor	F1. Coordination of the Emergency Operations Facility (EOF) physical operating requirements. F2. Assess facility readiness. F3. Supervise offsite communications. F4. Perform applicable notification equipment operability. F5. Prepare the notification form. F6. Perform emergency notifications within 15 minutes of classification. F7. Prepare the NRC worksheet. F8. Perform NRC notification. F9. Prepare follow-up notification form. F10. Perform follow-up notification. F11. Perform back-up notifications if primary method fails. F12. Provide for round-the-clock staffing during extended emergency situations. F13. Interfaces with the Emergency Facility Services Manager for the procurement of personnel and equipment. F14. Verify proper operations of CANS. F15. Verify proper operation of the offsite sirens. F16. Interact with the liaisons that arrive at the EOF from the State of Ohio, and Ottawa and Lucas Counties. F17. Synchronize the EOF Digital Clock. F18. Establish initial siren system status. F19. Monitor the status of ANS Emergency Planning Zone sirens, including verification of operation following sounding. F20. Activate the ANS Emergency Planning Zone sirens if directed by Ottawa County. F21. Activate CANS and/or group page, as directed.		No	N/A	Yes	Yes	E-Plan 5.5.2.d E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02030 RA-EP-02110 RA-EP-02220	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.C.2.b NUREG 0654 II.H.4 NUREG 0654 II.I.5
Emergency Director Advisor	F1. Assess the need to upgrade or downgrade the emergency classification. F2. Brief and assist the Emergency Director concerning procedural requirements relating to the emergency. F3. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS). F4. Assist the Emergency Director in turnover of responsibilities from the Control Room. F5. Act as a liaison between the Emergency Director and Company Spokesperson. F6. Review notifications for completeness, as appropriate.	Eliminate Position F1 - eliminate task (ED & EOM already responsible for this) F4 - eliminate task F5 - eliminate task F6 - eliminate task (ED & EOM do this)	Yes	F2 - Emergency Offsite Manager F3 - Emergency Offsite Manager	No	No	E-Plan 5.2.1.b.4 E-Plan 5.2.5 E-Plan Figure 5-2 RA-EP-00520 RA-EP-01500 RA-EP-02010 RA-EP-02110 RA-EP-02220	NUREG 0654 II.A.1.b NUREG 0654 II.B.2/II.B.3/II.B.4 NUREG 0654 II.C.1.a NUREG 0654 II.K.2/II.K.3.a
EOF Log and Status Board Keeper (2)	F1. Access WebEOC to perform the task tracking. F2. Update ERF status boards and ensure information is maintained current. F3. Energize the facility projectors.	Eliminate position	Yes	F1 - Technical Liaison - EOF Comm F2 - Technical Liaison - EOF Comm F3 - Technical Liaison - EOF Comm	No	No	E-Plan 5.5.2.d E-Plan Figure 5-2 RA-EP-00520	N/A

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
EOF Technical Liaison (EOF Communicator)	F1. Provide interface between State of Ohio, Ottawa County, or Lucas County Emergency Operations Centers and DBNPS to interpret events that occur at the station.	F1 - task from EOF Log & Status Bd Kpr F2 - task from EOF Log & Status Bd Kpr F3 - task from EOF Log & Status Bd Kpr F1 - task from NRC Liaison F2 - task from NRC Liaison F4 - task from NRC Liaison F5 - task from NRC Liaison	No	N/A	No	No	E-Plan 5.5.2.d E-Plan 5.5.2.e E-Plan Figure 5-2 RA-EP-00520	NUREG 0654 II.A.1.b NUREG 0654 II.C.2.b
Emergency Facilities Services Manager (Reports to EOM, resides in TSC)	F1. Coordinate with emergency response facility management to ensure sufficient personnel to support the operations of the DBAB and EOF. F2. Procure equipment in support of DBAB and EOF operations during an emergency, such as food and sleeping supplies, road maintenance, (e.g., snow removal), phone service, onsite transportation. F3. Operate DBAB systems such as the emergency ventilation system, the potable water system and the emergency power systems, during an emergency. F4. Establish and maintain communications with the Assembly Area Coordinator in the OCA during Owner-Controlled Area (OCA) Assembly. F5. Inform the Emergency Director of location and number of personnel assembled during Owner-Controlled Area (OCA) Assembly. F6. Update the Site and DBAB Conditions Status Board.	Eliminate position	Yes	F1 - EAPM F2 - EAPM F3 - EAPM F4 - EAPM F5 - EAPM F6 - EAPM	No	No	E-Plan 5.4.4.g E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02220 RA-EP-02230 RA-EP-02270 RA-EP-02520 RA-EP-02530	NUREG 0654 II.A.1.b
Public Relations Communicator (IIC position assigned to the EOF)	F1. Provide communications between DBNPS and the Joint Information Center in order to communicate information such as plant conditions, emergency classification, Protective Action recommendations, and information pertinent to media releases, during emergency events.	Eliminate position	Yes	F1 - EOM	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02950	N/A
Dose Assessor (2)	F1. Evaluate plant and meteorological parameters associated with a potential or ongoing radiological release. F2. Perform dose calculations to evaluate the impact of radiological releases from within the Owner Controlled Area and offsite. F3. Assist in the development of Protective Action Recommendations. F4. Interface with the RMT Coordinator and Rad Data Technician. F5. Recognize the differences in dose projections generated by NRC, state and utility models. F6. Perform possible predictive and worst-case dose projections. F7. Determine dose consequences. F8. Monitor instrument parameters to detect changes that effect dose assessment. F9. Communicate the results to determine appropriate PARs. F10. Perform dose assessment using back-up methods.	N/A	No (reduce to 1)	N/A	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02230	N/A
Radiation Monitoring Team Coordinator	F1. Coordinate the activities of the RMTs while they are in the field. F2. Assess current and projected meteorological conditions and position the RMTs to track the radiological release. F3. Record data gathered in the field by the RMTs and forward to the Dose Assessment Staff for evaluation. F4. Coordinate radiological surveys of the Owner Controlled Area (outside the Protected Area) to track the radiological release. F5. Coordinate radiological surveys offsite to track the radiological release. F6. Coordinate environmental sampling (water, soil, vegetation) within the Owner Controlled Area (outside of the Protected Area) and offsite to assist in evaluating the impact of radiological releases. F7. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS). F8. Monitor RMT radiation exposure.	N/A	No	N/A	No	No	E-Plan 5.5.2.c E-Plan Figure 5-2 RA-EP-00520 RA-EP-02110 RA-EP-02230 RA-EP-02252	NUREG 0654 II.A.1.b NUREG 0654 II.C.2.b
Technical Liaisons (State /County) (3)	F1. Provide interface between State of Ohio, Ottawa County, or Lucas County Emergency Operations Centers and DBNPS to interpret events that occur at the station.	N/A	No	N/A	No	No	E-Plan 5.5.2.e E-Plan Figure 5-2 E-Plan 7.5.1 E-Plan 7.5.2 E-Plan 7.5.3 RA-EP-00520 RA-EP-02010	NUREG 0654 II.A.1.b NUREG 0654 II.C.2.b

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
Radiation Monitoring Team (at RTL)	F1. Perform radiological surveys of the Owner-Controlled Area (outside of the Protected Area). F2. Perform radiological surveys offsite to track the radiological release. F3. Perform environmental sampling (water, soil, vegetation) within the Owner-Controlled Area (outside of the Protected Area) and offsite to assist in evaluating the impact of radiological releases. F4. Distribute dosimetry to essential personnel within the Owner-Controlled Area (outside of the Protected Area). F5. Perform radiological habitability surveys of the DBAB. F6. Set up of contamination survey equipment at points of entry and exit to the DBAB ERF. F7. Assist with decontamination of individuals and equipment within the DBAB. F8. Assist with the monitoring and decontamination of personnel and vehicles evacuated from DBNPS.	N/A	No	N/A	Yes (3 at RTL)	No	E-Plan Table 1-1 E-Plan 5.5.2.c E-Plan Table 5-1 E-Plan Figure 5-2 E-Plan 6.1.5 E-Plan 6.2.3 E-Plan Figure 6-1 E-Plan 7.2.2 E-Plan 7.3.1 E-Plan 7.9.10 E-Plan 7.9.11 E-Plan 8.1.2 E-Plan Table 8-1 RA-EP-00520 RA-EP-02010 RA-EP-02230 RA-EP-02240 RA-EP-02245 RA-EP-02252 RA-EP-02260	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7/II.B.7.b, c, d NUREG 0654 II.C.1.c/II.C.3 NUREG 0654 II.E.1/II.E.2/II.E.3 NUREG 0654 II.F.3 NUREG 0654 II.G.4.b NUREG 0654 II.H.1/II.H.4/II.H.5.a/II.H.6.b, c/II.H.7/II.H.12 NUREG 0654 II.I.2/II.I.7/II.I.8/II.I.9/II.I.10 NUREG 0654 II.J.6.a NUREG 0654 II.K.3.b NUREG 0654 II.N.1.a, b/II.N.2.a, b, c, d, e(1), e(2)/II.N.3.a, b, c, d, e, f/II.N.4/II.N.5 NUREG 0654 II.Q.3 NUREG 0654 II/9/1
Radiation Testing Lab Coordinator (at RTL)	F1. Coordinate the activation and response of the Radiological Testing Lab, including oversight of RMTs before they are dispatched for field monitoring. F2. Set up of contamination survey equipment at points of entry and exit to the DBAB ERF. F3. Coordinate routine radiological habitability surveys of the DBAB. F4. Decontaminate individuals and equipment within the DBAB. F5. Analyze environmental samples gathered by the RMTs. F6. Provide personnel and vehicle monitoring/decontamination for personnel evacuated from DBNPS.	N/A	No	N/A	No	No	E-Plan 5.5.2.c E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02230 RA-EP-02252 RA-EP-02260 RA-EP-02270 RA-EP-02410 RA-EP-02510	NUREG 0654 II.A.1.b NUREG 0654 II.C.2.b
EOF Operations Advisor	F1. Monitor key plant parameters using Safety Parameter Display System (SPDS). F2. Provide updates to ERF on plant status, conditions and prognosis. F3. Interface between Operations representatives and the Emergency Response Facilities.	Eliminate position F2 - eliminate task (ED/EOM do this) F3 - eliminate task (ED/EOM do this)	Yes	F1 - EOM	No	No	E-Plan 5.5.2.b E-Plan 5.5.2.c E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010	NUREG 0654 II.A.1.b NUREG 0654 II.C.2.b
NRC Liaison	F1. Establish and maintain communication between the DBNPS and the Nuclear Regulatory Commission (NRC) during an emergency event. F2. Provide necessary plant information and documentation, as requested by the NRC. F3. Provide assistance and support to NRC Incident Response teams responding to DBNPS. F4. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS). F5. Verify ERDS is transmitting data to the NRC.	Eliminate position	Yes	F1 - Technical Liaison - EOF Comm F2 - Technical Liaison - EOF Comm F3 - Technical Liaison - EOF Comm F4 - Technical Liaison - EOF Comm F5 - Technical Liaison - EOF Comm	Yes	No	E-Plan 5.5.2.a E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02220 RA-EP-02270 RA-EP-02310 RA-EP-02510	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.C.2.b NUREG 0654 II.G.4.b NUREG 0654 II.H.4
Resource Coordinator	F1. Provide communications to assist coordination of corporate resources with on-site response during an emergency. F2. Ensure the warehouse is adequately staffed to provide the procurement and delivery of spare parts, equipment, and supplies to support the needs of the ERO during an emergency event. F3. Supervise and coordinate the onsite procurement of spare parts, equipment and supplies in response to the needs of the ERO during an emergency event. F4. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS).	Eliminate position	Yes	F1 - EOM F2 - OSC Manager F3 - OSC Manager F4 - OSC Manager	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02220 RA-EP-02410	N/A
Assembly Area Coordinator	F1. Receive and disseminate event information to assembled personnel.	Eliminate position	Yes	N/A	No	No	E-Plan 6.4.1 E-Plan Figure 5-2 RA-EP-05220 RA-EP-02270 RA-EP-02520 RA-EP-02530 RA-EP-02550	NUREG 0654 II.E.6/II.E.7 NUREG 0654 II.I.1.a, b, c, d II.I.2/II.I.3/II.I.4/II.I.5/II.I.7

Current ERO Position	Tasks (#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
<b>TECHNICAL SUPPORT CENTER</b>								
Emergency Plant Manager	F1. Determine protective action recommendations. F2. Activate the TSC. F3. Transfer command and control. F4. Develop and conduct turnover. F5. Communicate within and between emergency facilities during an emergency event. F6. Direct emergency action for plant operations outside of design basis (SAMS, EDMG, 50.54(k)). F7. Determine event classification in accordance with Emergency Plan and implementing procedures. F8. Perform the responsibilities associated with the notification processes (review/approve form; state and local; NRC). F9. Ensure ERDS is functional. F10. Integrate offsite responders with onsite response efforts when required. F11. Balance oversight of on-shift activities during plant emergencies. F12. Perform the responsibilities associated with onsite protective actions (assembly/evacuation/accountability; search and rescue; radiological controls). F13. Authorize emergency exposures and potassium iodide (KI) issuance. F14. Terminate the event in accordance with procedures. F15. Direct recovery actions. F16. Establish command and control; direct activities and set priorities. F17. Communicate event information to offsite organizations. F18. Perform reportability actions.	N/A	No	N/A	No	Yes	E-Plan 3.2 E-Plan 5.2 E-Plan 5.2.1.b.2 E-Plan 5.2.1.c.1 E-Plan 5.2.2.e E-Plan 5.2.3 E-Plan 5.4.4 E-Plan 5.4.4.a, b, c, f E-Plan 5.4.5.a E-Plan Figure 5-2 E-Plan 6.5.2 E-Plan Table 8-1 E-Plan 9.1 E-Plan 9.2 E-Plan 9.2.1 E-Plan Figure 9-1 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02220 RA-EP-02270 RA-EP-02310 RA-EP-02330 RA-EP-02410 RA-EP-02420 RA-EP-02510 RA-EP-02520 RA-EP-02610 RA-EP-02620	NUREG 0654 IIA.1.b/IIA.1.d NUREG 0654 IIB.2/II.B.3 NUREG 0654 IIC.1.a NUREG 0654 IIC.2/II.K.3.a NUREG 0654 IIM.1/II.M.2/II.M.3 NUREG 0654 IIO.3 NUREG 0654 IIP.1
Emergency Security Manager	F1. Direct the Emergency Security Organization in controlling access to DBNPS site, Protected Area, onsite and near-site ERFs. F2. Direct the Emergency Security Organization assisting in offsite emergency responders. F3. Direct the Emergency Security Organization during assembly and accountability of site personnel. F4. Direct the Emergency Security Organization in response to security or hostile action related incidents. F5. Provide immediate input to the Emergency Director for security related Emergency Action Levels (EALs). F6. Notify the Emergency Plant Manager of any security concerns or problems. F7. Ensure the Control Room has implemented DB-OP-02544, Security Events or Threats in the event that a site-specific credible threat exists.	N/A	No	N/A	No	No	E-Plan 5.3.4 E-Plan 5.4.4.b, f, h E-Plan 5.5.2.d E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02220 RA-EP-02230 RA-EP-02252 RA-EP-02260 RA-EP-02270 RA-EP-02310 RA-EP-02410 RA-EP-02510 RA-EP-02530 RA-EP-02610	NUREG 0654 IIA.1.b NUREG 0654 IIB.1 NUREG 0654 IIG.4.b
OCA Security Supervisor	F1. Control and monitor access to the Owner Controlled Area. F2. Control and monitor access to the DBAB Restricted Area and the DBAB Emergency Response Facilities. F3. Provide direction to Security personnel performing functions within the OCA.	N/A	No	N/A	No	No	E-Plan 5.4.4.h E-Plan Figure 5-2 RA-EP-00520 RA-EP-02252 RA-EP-02260 RA-EP-02510	NUREG 0654 IIA.1.b
Recovery Advisor	F1. Maintain a log of equipment issues identified by the TSC staff. F2. Coordinate the development and maintain the recovery schedule(s) and plan. F3. Review Operations Support Center (OSC), Emergency Team Briefing/Debriefing Forms to determine if there are any follow-up maintenance actions on work performed by the OSC. F4. Verify the Outage Control Center is setup for a forced outage during Recovery. F5. Ensure Scheduler support is available during Recovery. F6. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS). F7. Assist the Emergency Plant Manager as directed. F8. Collect plant and equipment status in preparation for entering the recovery phase.	Eliminate position F7 - eliminate task (EAPM does this)	Yes	F1 - EAPM F2 - EAPM F3 - EAPM F4 - EAPM F5 - EAPM F6 - EAPM F8 - EAPM	No	No	E-Plan Figure 5-2 E-Plan Figure 9-1 RA-EP-00520 RA-EP-02110 RA-EP-02310 RA-EP-02720	NUREG IIM.2
TSC Engineering Lead (optional position)	F1. Assist the TSC Engineering Manager in coordinating the TSC Engineering group.	Eliminate position F1 - eliminate task (optional)	Yes	N/A			E-Plan 5.4.4.d E-Plan 5.4.4.e E-Plan Figure 5-2	NUREG 0654 IIA.1.b
TSC Operations Lead (optional position)	F1. Assist the TSC Engineering Manager in coordinating and supervising the TSC Operations Engineering group.	Eliminate position F1 - eliminate task (optional)	Yes	N/A			E-Plan 5.4.4.d E-Plan 5.4.4.e E-Plan Figure 5-2	NUREG 0654 IIA.1.b

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC P1?	Procedure(s) E-Plan section	Regulatory Requirement
TSC Operations Engineers (4)	F1. Monitor key plant parameters using Safety Parameter Display System (SPDS). F2. Provide updates to ERF on plant status, conditions and prognosis. F3. Advise ERF staff with respect to current or potential plant situations, Technical Specifications requirements and actions, Emergency Action Levels. F4. Provide input to ERF staff regarding off normal operations, such as actions necessary to stabilize the plant, plant system restorations, configuration control. F5. Interface between Operations representatives and the Emergency Response Facilities. F6. Update the plant status input display.	Eliminate position	Yes	F1 - TSC Engineering Manager F2 - TSC Engineering Manager F3 - TSC Engineering Manager F4 - TSC Engineering Manager F5 - TSC Engineering Manager F6 - TSC Engineering Manager	Yes	No	E-Plan 5.4.4.e E-Plan Figure 5-2 RA-EP-00520 RA-EP-02240 RA-EP-02310 RA-EP-02320 RA-EP-02610	NUREG 0654 II.A.1.b
SAM Engineer	F1. Monitor key plant parameters using Safety Parameter Display System (SPDS). F2. Provide recommendations to the TSC staff, consistent with Severe Accident Management Guidelines during an emergency event.	Eliminate position F1 - eliminate task F2 - eliminate task	Yes	N/A	Yes	No	E-Plan Figure 5-2 RA-EP-02240 RA-EP-02310 RA-EP-02320 RA-EP-02610	N/A
TSC Computer Technician	F1. Provide technical support and assistance related to computer equipment, computer software, and printers during an emergency event.	Eliminate position F1 - eliminate task (use Help Desk)	Yes	N/A	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02220 RA-EP-02310	N/A
Radiation Data Technician (TSC)	F1. Establish and maintain TSC communications with Radiation Protection personnel in the Control Room and Emergency Response Facilities. F2. Interface with Radiation Protection personnel in the Control Room and Emergency Response Facilities, regarding radiation conditions and data. F3. Advise the Emergency Radiation Protection Manager of radiological conditions in the plant, as reported by the Control Room or other Emergency Response Facilities.	N/A	No	N/A	No	No	E-Plan 5.4.5.d E-Plan 5.5.2.c RA-EP-02230	NUREG 0654 II.A.1.b NUREG 0654 II.C.2.b NUREG 0654 II.G.4.b
Emergency Assistant Plant Manager	F1. Responsible for coordination and interface between the TSC emergency organization and the plant. F2. Advise the Emergency Plant Manager on plant status and trends, and their potential impact on protective action recommendations and emergency classification. F3. Determine protective action recommendations. F4. Activate the TSC. F5. Transfer command and control. F6. Develop and conduct turnover. F7. Communicate within and between emergency facilities during an emergency event. F8. Direct emergency action for plant operations outside of design basis (SAMG, EDMG, 50.54(x)). F9. Determine event classification in accordance with Emergency Plan and implementing procedures. F10. Perform the responsibilities associated with the notification processes (review/approve form; state and local; NRC). F11. Ensure ERDS is functional. F12. Integrate offsite responders with onsite response efforts when required. F13. Balance oversight of on-shift activities during plant emergencies. F14. Perform the responsibilities associated with onsite protective actions (assembly/evacuation/accountability; search and rescue; radiological controls). F15. Authorize emergency exposures and potassium iodide (KI) issuance. F16. Terminate the event in accordance with procedures. F17. Direct recovery actions. F18. Establish command and control; direct activities and set priorities. F19. Communicate event information to offsite organizations. F20. Perform reportability actions. F21. Communicate with the Control Room. F22. Perform accident assessment activities. F23. Provide input on event classification. F24. Determine potential operational support needs. F25. Recommend changes in plant priorities.	F1 - task from Emergency Facility Svcs Mgr F2 - task from Emergency Facility Svcs Mgr F3 - task from Emergency Facility Svcs Mgr F4 - task from Emergency Facility Svcs Mgr F5 - task from Emergency Facility Svcs Mgr F6 - task from Emergency Facility Svcs Mgr F1 - task from Recovery Advisor F2 - task from Recovery Advisor F3 - task from Recovery Advisor F4 - task from Recovery Advisor F5 - task from Recovery Advisor F6 - task from Recovery Advisor F8 - task from Recovery Advisor	No	N/A	No	Yes	E-Plan 1.85 E-Plan 3.2 E-Plan 5.2.1.c.2 E-Plan 5.4.4.a,c E-Plan 5.4.5.a E-Plan Table 5-1 E-Plan Figure 5-2 E-Plan 6.1 E-Plan 7.1.1 E-Plan Table 8-1 E-Plan Figure 9-1 RA-EP-00520 RA-EP-01500 RA-EP-01600 RA-EP-01700 RA-EP-01800 RA-EP-01900 RA-EP-02010 RA-EP-02110 RA-EP-02310 RA-EP-02410 RA-EP-02510 RA-EP-02720	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.2/II.B.3/II.B.4/II.B.5/II.B.7 NUREG 0654 II.C.1.a NUREG 0654 II.E.1/II.E.2/II.E.3 NUREG 0654 II.H.4 NUREG 0654 II.K.2/II.K.3.a, b NUREG 0654 II.M.2 NUREG 0654 II.O.3 NUREG 0654 II.P.1



Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
Emergency Radiation Protection Manager	<p>F1. Ensures radiological assessment and surveys are conducted within the Protected Area.</p> <p>F2. Coordinates plant protective action and health physics support for emergency activities.</p> <p>F3. Interprets data to provide health physics and chemistry input to engineering assessments.</p> <p>F4. Interfaces with the Dose Assessment Coordinator to provide data on plant radiological status and trends.</p> <p>F5. Provides recommendations to the Emergency Plant Manager for emergency personnel doses, and the issuance of Potassium Iodide to plant personnel.</p> <p>F6. Coordinate health physics activities including onsite radiological assessment, personnel exposure control and radiation protection programs.</p> <p>F7. Provide radiological guidance and support for site evacuation and emergency teams.</p> <p>F8. Deploy onsite RMTs to survey radiation levels and sample for radioactive contamination.</p> <p>F9. Monitor and support OSC activities.</p> <p>F10. Coordinate the transport of potentially contaminated or highly exposed personnel to offsite medical facilities.</p> <p>F11. Establish radiological controls for personnel responding to the station.</p> <p>F12. Provide radiological assessment and guidance for protective action recommendations.</p> <p>F13. Determine the necessity for KI issuance.</p> <p>F14. Coordinate the administration of KI.</p> <p>F15. Determine event condition and the exposure potential for ERO members.</p> <p>F16. Monitor habitability of the TSC.</p> <p>F17. Direct activation of the ventilation filtration system.</p> <p>F18. Recommend evacuation based on environmental conditions.</p> <p>F19. Provide radiological guidance and support for ERF evacuation.</p> <p>F20. Monitor and control personnel exposures.</p> <p>F21. Determine personnel exposure controls based on event status.</p> <p>F22. Recommend emergency exposure limits.</p> <p>F23. Ensure dosimetry issue for responding ERO members.</p> <p>F24. Manage HPN communication.</p> <p>F25. Discuss radiological conditions with State and local agencies.</p> <p>F26. Authorize and direct offsite personnel and vehicle monitoring and decontamination.</p> <p>F27. Assist in recovery activities.</p>	N/A	No	N/A	No	Yes	<p>E-Plan 5.4.4.a-f</p> <p>E-Plan 5.4.5.a, c, d</p> <p>E-Plan 5.5.2.c</p> <p>E-Plan Figure 5-2</p> <p>E-Plan Figure 9-1</p> <p>RA-EP-00520</p> <p>RA-EP-02010</p> <p>RA-EP-02110</p> <p>RA-EP-02220</p> <p>RA-EP-02230</p> <p>RA-EP-02240</p> <p>RA-EP-02260</p> <p>RA-EP-02310</p> <p>RA-EP-02320</p> <p>RA-EP-02410</p> <p>RA-EP-02510</p> <p>RA-EP-02520</p> <p>RA-EP-02530</p> <p>RA-EP-02550</p> <p>RA-EP-02610</p> <p>RA-EP-02620</p> <p>RA-EP-02640</p> <p>RA-EP-02710</p> <p>RA-EP-02720</p>	<p>NUREG 0654 II.A.1.b</p> <p>NUREG 0654 II.C.2.b</p> <p>NUREG 0654 II.G.4.b</p> <p>NUREG 0654 II.M.2</p>

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
TSC Engineering Manager	F1. Coordination and supervision of TSC engineering activities associated with development of emergency procedures to terminate or mitigate the emergency situation. F2. Ensures timely updating, accurate record-keeping, and complete documentation of the event for historical purposes. F3. Advises the Emergency Plant Manager on information pertinent to emergency classification, from the technical standpoint. F4. Activation and management of the TSC. F5. Ensure callouts of the emergency response organization are being performed as specified in the DBNPS Emergency Telephone Directory upon failure of the Computerized Automated Notification System (CANS). F6. Verify ERDS is functioning. F7. Ensure the Technical Data Conference Bridge is staffed. F8. Assign personnel to operate/monitor SPDS. F9. Ensure key TSC objectives and activities are tracked on the TSC Task Board. F10. Assist in recovery actions. F11. Activation and management of the ATSC.	F1 - F6 tasks from TSC Ops Engineer F1 - F9 tasks from Mechanical Engineer F1 - F9 tasks from Electrical Engineer F1 - F9 tasks from I&C Engineer	No	N/A	Yes	Yes	E-Plan 5.4.4.a-e, 8 E-Plan Table 5-1 E-Plan Figure 5-2 E-Plan Figure 9-1 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02310 RA-EP-02320 RA-EP-02510 RA-EP-02610 RA-EP-02720	NUREG 0654 I.L.A.1.b/I.L.A.1.e NUREG 0654 I.L.B.5/I.L.B.7 NUREG 0654 I.L.H.4 NUREG 0654 I.L.M.2
TSC Core/Thermal Hydraulics Engineer	F1. Determine plant parameters critical to monitoring plant status. F2. Direct tracking and trending of parameters. F3. Verify event classification. F4. Evaluate plant data to determine potential event escalation paths. F5. Recommend changes in plant priorities. F6. Provide technical guidance to support repair activities. F7. Direct development of emergency repair procedures to support emergency teams. F8. Direct the tracking of plant configuration changes. F9. Recommend strategies and actions to prevent severe core damage and containment failure, and reduce radiological releases. F10. Determine and provide estimation of core damage.	Eliminate position Eliminate all tasks - no reactor tasks remain	Yes	N/A	Yes	Yes	E-Plan 5.4.4.d E-Plan 5.4.5.g E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02110 RA-EP-02240 RA-EP-02310 RA-EP-02320 RA-EP-02610	NUREG 0654 I.L.A.1.b/I.L.A.1.e NUREG 0654 I.L.B.5/I.L.B.7 NUREG 0654 I.L.H.4
TSC I&C Engineer	F1. Determine plant parameters critical to monitoring plant status. F2. Direct tracking and trending of parameters. F3. Verify event classification. F4. Evaluate plant data to determine potential event escalation paths. F5. Recommend changes in plant priorities. F6. Provide technical guidance to support repair activities. F7. Direct development of emergency repair procedures to support emergency teams. F8. Direct the tracking of plant configuration changes. F9. Support recovery actions.	Eliminate position	Yes	F1-F9 - TSC Engineering Manager	Yes	Yes	E-Plan 5.4.4.d E-Plan 5.4.5.g E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02110 RA-EP-02240 RA-EP-02310 RA-EP-02320 RA-EP-02610	NUREG 0654 I.L.A.1.b/I.L.A.1.e NUREG 0654 I.L.B.5/I.L.B.7 NUREG 0654 I.L.H.4
TSC Electrical Engineer	F1. Determine plant parameters critical to monitoring plant status. F2. Direct tracking and trending of parameters. F3. Verify event classification. F4. Evaluate plant data to determine potential event escalation paths. F5. Recommend changes in plant priorities. F6. Provide technical guidance to support repair activities. F7. Direct development of emergency repair procedures to support emergency teams. F8. Direct the tracking of plant configuration changes. F9. Support recovery actions.	Eliminate position	Yes	F1-F9 - TSC Engineering Manager	Yes	Yes	E-Plan 5.4.4.d E-Plan 5.4.5.g E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02240 RA-EP-02310 RA-EP-02320 RA-EP-02510	NUREG 0654 I.L.A.1.b/I.L.A.1.e NUREG 0654 I.L.B.5/I.L.B.7 NUREG 0654 I.L.H.4
TSC Mechanical Engineer	F1. Determine plant parameters critical to monitoring plant status. F2. Direct tracking and trending of parameters. F3. Verify event classification. F4. Evaluate plant data to determine potential event escalation paths. F5. Recommend changes in plant priorities. F6. Provide technical guidance to support repair activities. F7. Direct development of emergency repair procedures to support emergency teams. F8. Direct the tracking of plant configuration changes. F9. Support recovery actions.	Eliminate position	Yes	F1-F9 - TSC Engineering Manager	Yes	Yes	E-Plan 5.4.4.d E-Plan 5.4.5.g E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02240 RA-EP-02310 RA-EP-02320 RA-EP-02510 RA-EP-02610	NUREG 0654 I.L.A.1.b/I.L.A.1.e NUREG 0654 I.L.B.5/I.L.B.7 NUREG 0654 I.L.H.4

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
OPERATIONS SUPPORT CENTER								
OSC Manager	<p>F1. Coordinate and/or prioritize assessment and corrective actions with the TSC.</p> <p>F2. Assemble damage control teams.</p> <p>F3. Brief teams prior to deployment.</p> <p>F4. Dispatch damage control teams.</p> <p>F5. Monitor team status.</p> <p>F6. Communicate with deployed emergency teams at regular intervals.</p> <p>F7. Provide periodic briefs (plant status, priorities, EALS) within the OSC.</p> <p>F8. Identify and retain necessary OSC personnel throughout the event.</p> <p>F9. Debrief returning emergency teams.</p> <p>F10. Identify and request equipment and supplies to support the OSC.</p> <p>F11. Coordinate movement of OSC personnel to habitable location if conditions degrade.</p> <p>F12. On failure of CANS, call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory.</p> <p>F13. Synchronize the OSC clocks.</p> <p>F14. Direct isolation of the Containment Access Facility (CAF) ventilation system.</p> <p>F15. Ensure OSC status boards are continually updated to reflect current plant conditions.</p> <p>F16. Assist in recovery actions.</p> <p>F17. Initiate search and rescue.</p>	<p>F5 - task from Asst OSC Manager</p> <p>F1 - task from Resource Coordinator</p> <p>F2 - task from Resource Coordinator</p> <p>F3 - task from Resource Coordinator</p>	No	N/A	Yes	Yes	<p>E-Plan 5.3.4</p> <p>E-Plan 5.4.3</p> <p>E-Plan 5.4.4.a-c, f</p> <p>E-Plan 5.4.5.a-c, e, g</p> <p>E-Plan Table 5-1</p> <p>E-Plan Figure 5-2</p> <p>E-Plan 6.4.1</p> <p>E-Plan 9.1</p> <p>E-Plan Figure 9-1</p> <p>RA-EP-00520</p> <p>RA-EP-02010</p> <p>RA-EP-02110</p> <p>RA-EP-02310</p> <p>RA-EP-02410</p> <p>RA-EP-02420</p> <p>RA-EP-02510</p> <p>RA-EP-02520</p> <p>RA-EP-02610</p> <p>RA-EP-02640</p> <p>RA-EP-02710</p>	<p>NUREG 0654 II.A.1.b/II.A.1.e</p> <p>NUREG 0654 II.B.1/II.B.5/II.B.7</p> <p>NUREG 0654 II.E.6/II.E.7</p> <p>NUREG 0654 II.H.4</p> <p>NUREG 0654 II.J.1.a, b, c, d /II.J.2/II.J.3/II.J.4/II.J.5</p> <p>NUREG 0654 II.M.1</p>
Assistant OSC Manager	<p>F1. Interface with the OSC Materials Manager to ensure adequate emergency equipment and supplies are available to support Emergency Response Team (ERT) corrective actions.</p> <p>F2. Assign essential personnel to ERTs, as needed, in order to respond to necessary in-plant responses during an emergency event.</p> <p>F3. Ensure the ERTs are adequately briefed prior to leaving from, and debriefed when returning to, the OSC including items such as: personnel/equipment/radiological safety, task to be performed, communications, configuration control, clearance control.</p> <p>F4. Ensure the ERTs are adequately debriefed when they return from performing corrective actions, including items such as: results of corrective actions, problems and conditions encountered during performance of task.</p> <p>F5. Interface with the OSC RP Coordinator to ensure radiological support for ERTs.</p> <p>F6. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS).</p> <p>F7. Assist in recovery activities.</p>	<p><b>Eliminate position</b></p> <p>F1 - eliminate task (already done by OSCM)</p> <p>F2 - eliminate task (already done by OSCM)</p> <p>F3 - eliminate task (already done by OSCM)</p> <p>F4 - eliminate task (already done by OSCM)</p> <p>F6 - eliminate task (already done by OSCM)</p>	Yes	F5 - OSC Manager	No	No	<p>E-Plan 5.4.5.a, b, f</p> <p>E-Plan Figure 5-2</p> <p>RA-EP-00520</p> <p>RA-EP-02410</p> <p>RA-EP-02710</p>	NUREG 0654 II.A.1.b
OSC RP Coordinator	<p>F1. Supervise and direct Radiation Protection activities within the protected area to survey, sample, and analyze various systems and/or areas to determine the emergency radiological conditions.</p> <p>F2. Provides radiological support for emergency repair teams, the fire brigade, and first aid teams.</p> <p>F3. Supervise, direct, and dispatch Chemistry technicians within the protected area to survey, sample, and analyze various systems and/or areas to determine the emergency radiological conditions.</p> <p>F4. Interface with the Emergency RP Manager on radiological conditions and corrective actions within the Protected Area.</p> <p>F5. Call out emergency staff as specified in the call tree section of the DBNPS Emergency Plan Telephone Directory upon a failure of the Computerized Automated Notification System (CANS).</p> <p>F6. Assist with recovery activities.</p>	N/A	No	N/A	Yes	No	<p>E-Plan 5.3.4</p> <p>E-Plan 5.4.5.a, c, d</p> <p>E-Plan Table 5-1</p> <p>E-Plan Figure 5-2</p> <p>RA-EP-00520</p> <p>RA-EP-02010</p> <p>RA-EP-02110</p> <p>RA-EP-02310</p> <p>RA-EP-02410</p> <p>RA-EP-02420</p> <p>RA-EP-02510</p> <p>RA-EP-02530</p> <p>RA-EP-02610</p> <p>RA-EP-02640</p> <p>RA-EP-02710</p>	NUREG 0654 II.A.1.b
OSC RP Technician/Tester (Pool Personnel)	<p>F1. Perform radiological and habitability surveys as directed by the OSC RP Coordinator to support OSC activities in accordance with approved procedures.</p> <p>F2. Provide RP support, as necessary, for emergency response teams to keep exposure As Low As Reasonably Achievable.</p> <p>F3. Obtain area radiation data from the Control Room panels and communicate to the OSC RP Coordinator and Emergency RP Manager. (Acting as TSC Radiation Data Technician)</p> <p>F4. Provide dosimetry to offsite EMS personnel responding to DBNPS for contaminated, injured personnel.</p> <p>F5. Provide radiological surveys of injured personnel including radiation and contamination surveys.</p> <p>F6. Provide decontamination assistance for contaminated injured personnel, if required.</p> <p>F7. Perform surveying, decontamination, and releasing of EMS personnel and equipment.</p> <p>F8. Perform surveying, decontamination, and releasing of hospital equipment and areas.</p> <p>F9. Perform personnel monitoring and decontamination, as directed.</p> <p>F10. Perform radiological surveys for repair and corrective action teams, search and rescue and fire-fighting activities.</p> <p>F11. Provide health physics coverage for repair and corrective action teams, search and rescue and fire-fighting activities.</p> <p>F12. Provide dosimetry issue for repair and corrective action teams, search and rescue and fire-fighting activities.</p> <p>F13. Recommend dosimetry and radiation exposure controls guidance to Control Room personnel.</p>	F1 from OSC Chemistry Tech/Tester	No - reduced numbers	N/A	Yes	No	<p>E-Plan 5.1.3</p> <p>E-Plan 5.4.5.c</p> <p>E-Plan Table 5-1</p> <p>E-Plan Figure 5-1</p> <p>E-Plan Figure 5-2</p> <p>RA-EP-00520</p> <p>RA-EP-02251</p> <p>RA-EP-02410</p> <p>RA-EP-02530</p> <p>RA-EP-02550</p> <p>RA-EP-02610</p> <p>RA-EP-02640</p>	<p>NUREG 0654 II.A.1.b/II.A.1.f</p> <p>NUREG 0654 II.B.5/II.B.7</p> <p>NUREG 0654 II.H.4</p>

Current ERO Position	Tasks (F#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC P1?	Procedure(s) E-Plan section	Regulatory Requirement
OSC Chemistry Technicians/Tester (Pool Personnel)	F1. Sample and analyze various plant systems, including Reactor Coolant and Containment Atmosphere samples, when directed.	N/A	Yes	F1 - OSC RP Technician/Tester	Yes	No	E-Plan 5.1.3 E-Plan 5.4.5.c E-Plan Table 5-1 E-Plan Figure 5-1 E-Plan Figure 5-2 E-Plan Table 8-1 RA-EP-00520 RA-EP-02240 RA-EP-02410	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4 NUREG 0654 II.O.3 NUREG 0654 II.P.1
OSC Electrical On-Call Responder (reduce from 2 to 1)	F1. Provide initial response to the OSC for technical support and repair activities until Electrical craft personnel (pool) respond during an emergency event. F2. Provide technical support and oversight for emergency repair teams.	N/A	No - reduced numbers	N/A	Yes	No	E-Plan Table 5-1 E-Plan Figure 5-1 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02310 RA-EP-02410 RA-EP-02510	NUREG 0654 II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4
I&C On-Call Responder	F1. Provide initial response to the OSC for technical support and repair activities until I&C craft personnel (pool) respond during an emergency event. F2. Provide technical support and oversight for emergency repair teams.	Eliminate position F1 - eliminate task F2 - eliminate task	Yes	N/A	Yes	No	E-Plan Table 5-1 E-Plan Figure 5-1 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02310 RA-EP-02410 RA-EP-02510	NUREG 0654 II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4
Mechanical On-Call Responder (Reduce from 2 to 1)	F1. Provide initial response to the OSC for technical support and repair activities until Mechanical craft personnel (pool) respond during an emergency event. F2. Provide technical support and oversight for emergency repair teams.	N/A	No - reduced numbers	N/A	Yes	No	E-Plan Table 5-1 E-Plan Figure 5-1 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02310 RA-EP-02410 RA-EP-02510	NUREG 0654 II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4
OSC E&C System Engineer	F1. Interface with the various emergency repair teams, the OSC staff, and the TSC engineers, to provide technical assistance related to electrical and control systems, during an emergency event.	Eliminate position F1 - eliminate task	Yes	N/A	No	No	E-Plan 5.4.5.g E-Plan Figure 5-2 RA-EP-00520 RP-EP-02410	NUREG 0654 II.A.1.b
OSC Primary/Secondary System Engineer (2)	F1. Interface with the various emergency repair teams, the OSC staff, and the TSC engineers, to provide technical assistance related to primary and secondary systems, during an emergency event.	Eliminate position F1 - eliminate task	Yes	N/A	No	No	E-Plan 5.4.5.g E-Plan Figure 5-2 RA-EP-00520 RP-EP-02410	NUREG 0654 II.A.1.b
OSC Communicator	F1. Monitor and provide communications between the OSC and the Emergency Response Facilities.	Eliminate position F1 - eliminate task (OSCM Does)	Yes	N/A	No	No	RA-EP-00520 RA-EP-02410	N/A
OSC Team/RP Briefers/Debriefers (2)	F1. Provide briefings to ERTs before every corrective action, including items such as: personnel/equipment/radiological safety, task to be performed, communications, configuration control, clearance control. F2. Debrief ERTs returning from performing corrective actions, including items such as: results of corrective actions, problems and conditions encountered during performance of the task. F3. Assist in recovery activities.	Eliminate position F1 - eliminate task (OSCM does) F2 - eliminate task (OSCM does)	Yes	N/A	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02410 RA-EP-02610 RA-EP-02710	N/A
OSC Pool Personnel (Operations - NLOs)	F1. Perform plant system and equipment operations and support, as directed. F2. Perform Search and Rescue of personnel, as directed. F3. Perform duties as First Aid Team member, as directed. F4. Perform duties as Fire Brigade member, as directed.	N/A	No - reduced numbers	N/A	No	No	E-Plan 5.4.5.b, f E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02410 RA-EP-02640	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4
OSC Pool Personnel (Electrical, I&C, Mechanical, Maintenance Services)	F1. Provide technical support and perform emergency repair activities during an emergency event.	N/A	No - call in as necessary	N/A	No	No	E-Plan 5.4.5.b, f E-Plan Table 5-1 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02410 RA-EP-02640	NUREG 0654 II.A.1.b/II.A.1.e NUREG 0654 II.B.5/II.B.7 NUREG 0654 II.H.4
JOINT INFORMATION CENTER								

Current ERO Position	Tasks (#)	Implementing Actions	Position eliminated?	Task Assigned to?	Min Staffing?	Key NRC PI?	Procedure(s) E-Plan section	Regulatory Requirement
Company Spokesperson	F1. Provide direction for the overall operation of the Joint Information Center (JIC) and is the senior management of Emergency Public Information. F2. Coordinate company-related news information with official offsite agencies. F3. Confer with Emergency Director regarding plant status. F4. Confer with JIC Manager regarding media interests. F5. Review DBNPS information gathered by the JIC Manager and the JIC Communicator. F6. Provide information concerning Davis-Besse status to the public and media representatives. F7. Review and approves JIC News Statements. F8. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS). F9. Assist in recovery actions.	F1 - task from JIC Writer	No	N/A	Yes	No	E-Plan 5.2 E-Plan 5.2.1.b.3 E-Plan 5.2.2.e E-Plan 5.2.4 E-Plan 5.6 E-Plan Figure 5-2 E-Plan 9.2.2.h E-Plan Figure 9-1 RA-EP-00520 RA-EP-02010 RA-EP-02110 RA-EP-02220 RA-EP-02720	NUREG 0654 II.A.1.b/II.A.1.d NUREG 0654 II.B.2/II.B.3/II.B.4/II.B.7. NUREG 0654 II.G.4.a NUREG 0654 II.K.2/II.K.3a NUREG 0654 II.M.2
JIC Manager	F1. Provide overall management of the JIC, including facility and staffing. F2. Coordinate JIC staff activities with responding federal, state, and county governmental agencies. F3. Supervise the timely production of, and approve (when required), Chronologies and News Statements. F4. Advise FirstEnergy corporate officers of overall Emergency Public Information activities. F5. Ensure the local media is notified of JIC operations via the Public Affairs Duty Officer (PAO) or the Emergency Plan Telephone Directory (EPTD). F6. Coordinate provisions of security for the JIC. F7. Call out emergency staffing as specified in the call tree section of the Emergency Plan Telephone Directory, upon failure of the Computerized Automated Notification System (CANS). F8. Develop a JIC relief staff roster. F9. Contact and notify JIC relief staff of reporting time and location.	F1 - task from News Statement Coord F2 - task from News Statement Coord F3 - task from News Statement Coord	No	N/A	Yes	No	E-Plan 5.2.4 E-Plan 5.6 E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02950	NUREG 0654 II.A.1.b/II.A.1.d NUREG 0654 II.G.4.a
Technical Briefer	F1. Provide clarification of plant technical information to the media during briefings and interviews.	F1 - task from JIC Communicator F2 - task from JIC Communicator F3 - task from JIC Communicator	No	N/A	Yes	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02950	N/A
JIC Writer	F1. Develop Chronologies and News Statements in accordance with approved procedures and guidance.	Eliminate position	Yes	F1 - Company Spokesperson	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02950	N/A
JIC Communicator	F1. Maintain communications with the Public Relations (PR) Communicator in the Emergency Operations Facility (EOF) as needed to obtain current plant information. F2. Document major events utilizing the JIC Company Workroom Plant Status Boards and the official JIC log. F3. Provide current information to the JIC Writer and assist in production of Chronologies and News Statements in accordance with approved procedures and guidance.	Eliminate position	Yes	F1 - Technical Briefer (modify to remove PR Comm) F2 - Technical Briefer F3 - Technical Briefer (modify to remove JIC Writer)	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02950	N/A
News Statement Coordinator	F1. Maintain administrative control and processing of Chronologies and News Statements. F2. Coordinate administrative support for governmental organizations as requested. F3. Distribute Backgrounds, Frequently Asked Questions (FAQs) and approved Chronologies/News Statement to governmental and regulatory agencies.	Eliminate position	Yes	F1 - JIC Manager F2 - JIC Manager F3 - JIC Manager	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02950	N/A
Media Assistant (2)	F1. Provide support to arriving media representatives, such as general orientation of the JIC facility, staff support capabilities, registration and badging. F2. Ensure adequate supplies of media information materials are available at the reception desk. F3. Distribute Backgrounds, FAQs and approved Chronologies/News Statements to media representatives. F4. Inform the JIC Manager of similar media questions/trends. F5. Refer technical questions to the JIC Technical Briefer.	F1 - task from A/V Coord F2 - task from A/V Coord F3 - task from A/V Coord F4 - task from A/V Coord	No	N/A	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02950	N/A
Public Inquiry Hotline Operator (2)	F1. Respond to telephone inquiries from employees, citizens and news media when the JIC is activated. F2. Identify and inform the JIC Manager of misinformation, rumors, and trends from telephone inquiries, in order they may be addressed during future media briefings and/or in News Statements. F3. Refer callers to state or local governmental agencies as appropriate.	N/A	No - reduce to 1	N/A	Yes	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02950	N/A
Audio/Visual Coordinator (2)	F1. Set up and maintain the audio and video equipment at the JIC. F2. Record JIC media briefings and media interviews with the Company Spokesperson, the Technical Briefer and/or the PAO. F3. Monitor selected television stations for announcements concerning the Davis-Besse Nuclear Power Station or FirstEnergy. F4. Identify misinformation or rumors in media broadcasts to the JIC Manager so the misinformation/rumors may be addressed during future media briefings and/or in News Statements.	Eliminate position	Yes	F1 - Media Assistant F2 - Media Assistant F3 - Media Assistant F4 - Media Assistant	No	No	E-Plan Figure 5-2 RA-EP-00520 RA-EP-02010 RA-EP-02950	N/A
Public Affairs Duty Officer	F1. Handling public relations activities and media inquiries on a day-to-day basis. F2. During an emergency, providing media communication until the JIC is activated. F3. When JIC is activated, acting as Company Spokesperson or assisting as a panel moderator during the conduct of media briefings and providing interviews when requested.	Eliminate position F1 - eliminate task F2 - eliminate task F3 - eliminate task	Yes	N/A	No	No	E-Plan Figure 5-2 RA-EP-02010 RA-EP-02950	N/A

## Attachment 5

List of Regulatory Commitments  
(One Page Follows)

## List of Regulatory Commitments

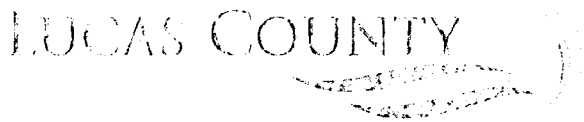
The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for the Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only as information and are not Regulatory Commitments. Please notify Mr. Thomas Lentz, Manager, FENOC Nuclear Licensing and Regulatory Affairs, at (330) 315-6810 of any questions regarding this document or associated Regulatory Commitments.

REGULATORY COMMITMENT	TYPE		SCHEDULED COMPLETION DATE
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
1. Plant activities that could cause mechanical damage will require the radiation monitor listed in gaseous effluent emergency action levels (EALs) be in service or that a Chemistry Technician be onsite, thereby alleviating any reliance on a potentially delayed sample analysis to determine EAL applicability. Applicable fuel handling procedures will be revised to require that the radiation monitor listed in gaseous effluent EALs be in service or that a Chemistry Technician be onsite as a prerequisite prior to fuel handling activities.	X		Prior to permanent removal of fuel from the DBNPS reactor vessel.
2. To validate the results of the proposed changes to the ERO described within this amendment request, FENOC will perform a drill to confirm the ability of the Post Shutdown on-shift and augmented emergency response organization to perform the necessary functions of each emergency response facility and to utilize the post-shutdown procedures being developed, depicting the revised assignment of duties. The drill will evaluate the ability to accomplish the stated mission of each ERF and ensure that the planning standard functions are preserved with no degradation in time sensitive activities or in the ability to communicate with offsite response organizations. State and local response organizations will be provided the opportunity to participate, and the NRC and FEMA will be provided advance notice and the opportunity to observe drill activities.	X		Prior to implementation of the Post-Shutdown Emergency Plan

Enclosure B  
L-18-271

State and County Reviews  
(Three Pages Follow)





**Board of County  
Commissioners**  
**Pete Gerken**  
*President*  
**Tina Skeldon Wozniak**  
**Carol Contrada**

**Emergency Management Agency**  
**Patricia R. Moomey**  
*Director*

December 3, 2018

Mr. Sean Zalesny  
Manager  
Fleet Emergency Preparedness  
FirstEnergy Nuclear Operating Company  
341 White Pond Drive  
Akron, Ohio 44320

**SUBJECT: Davis-Besse Nuclear Plant Post-Shutdown Emergency Plan**

Based on our discussions during our meeting on November 29, 2018, concerning FENOC's Post Shutdown Emergency Plan License Amendment Request for Davis-Besse Nuclear Power Station, we are satisfied we understand the changes proposed and we are satisfied that these changes will not impact the ability of Lucas County Emergency Management Agency to effectively implement our FEMA approved REP plans.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia R. Moomey", followed by a large, stylized circular flourish.

Patricia R. Moomey  
Director  
Lucas County EMA



Ottawa County Emergency Management Agency  
315 Madison Street, Annex Basement  
Port Clinton, Ohio 43452-1936  
FRED PETERSEN, Director

Office: 419-734-6900  
Countywide: 800-788-8803  
Facsimile: 419-249-2361

<http://www.co.ottawa.oh.us/ottawacoema/index.html>

December 6, 2018

Mr. Sean Zalesny  
Manager, Fleet Emergency Preparedness  
FirstEnergy Nuclear Operating Company  
341 White Pond Drive  
Akron, OH 44320

Dear Mr. Zalesny,

Based on our discussions during our meeting on November 29, 2018, concerning FENOC's Post Shutdown Emergency Plan License Amendment Request for Davis-Besse Nuclear Power Station, we are satisfied we understand the changes proposed and we are satisfied that these changes will not impact the ability of Ottawa County Emergency Management to effectively implement our FEMA approved REP Plans.

Sincerely,

A handwritten signature in black ink, appearing to read "Fred Petersen".

Fred Petersen, Director  
Ottawa County Emergency Management Agency