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		Document		Sht/Sec	Changes	Rev	Status
TOC 1	TOC 2	Type	Number				
old	EPIC	PROC	RA-EP-02610			0003	APPROVED
new	EPIC	PROC	RA-EP-02610			0004	APPROVED
old	EPOC	EPON	PROC	RA-EP-02830		0000	APPROVED
new	EPOC	EPON	PROC	RA-EP-02830		0001	APPROVED

Davis-Besse Nuclear Power Station

EMERGENCY PLAN IMPLEMENTING PROCEDURE

RA-EP-02610

EMERGENCY RADIATION PROTECTION ORGANIZATION  
ACTIVATION AND RESPONSE

REVISION 04

Prepared by: Paul F Timmerman

Procedure Owner: Manager - Security

Effective Date: FEB 25 2003

Procedure Classification:

- Safety Related
- Quality Related
- Non-Quality Related

**LEVEL OF USE:  
IN-FIELD REFERENCE**

TABLE OF CONTENTS

	<u>Page</u>
1.0 PURPOSE.....	3
2.0 REFERENCES.....	3
3.0 DEFINITIONS.....	4
4.0 RESPONSIBILITIES.....	4
5.0 INITIATING CONDITIONS.....	5
6.0 PROCEDURE.....	6
6.1 Emergency RP Manager.....	6
6.2 RP Senior Onshift Person.....	9
6.3 OSC RP Coordinator.....	9
7.0 FINAL CONDITIONS.....	12
8.0 RECORDS.....	12
ATTACHMENT 1 Emergency Habitability Criteria.....	13
ATTACHMENT 2 PASS Checklist.....	15
COMMITMENTS.....	20

## 1.0 PURPOSE

This procedure outlines the steps necessary for activation, operation and deactivation of the Emergency Radiation Protection (RP) Organization.

## 2.0 REFERENCES

### 2.1 Developmental

- 2.1.1 Federal Register (Vol. 45, No. 37) Friday, February 22, 1980
- 2.1.2 Federal Register, Food & Drug Administration, 21 CFR Part 1090, December 15, 1978, "Potassium Iodide as a Thyroid Blocking Agent in a Radiation Emergency"
- 2.1.3 NCRP Report 55, "Protection of the Thyroid Gland in the Event of Releases of Radioiodine"
- 2.1.4 Blahd, William M.D.; Nuclear Medicine, McGraw-Hill Book Company, New York, New York, 1971

### 2.2 Implementation

- 2.2.1 DB-CH-06000, Post Accident Sampling System Operation & Analysis
- 2.2.2 DB-CH-06001, Emergency Containment Atmosphere Grab Sampling System Operation & Analysis
- 2.2.3 DB-CH-00007, Post Accident Radiological Sampling and Analysis
- 2.2.4 DB-HP-04007, Emergency Supply Checklists
- 2.2.5 NG-NA-00702, Corrective Action Program
- 2.2.6 RA-EP-00600, Emergency Facilities and Equipment Maintenance Program
- 2.2.7 RA-EP-02320, Emergency Technical Assessment
- 2.2.8 RA-EP-02410, OSC Activation and Response
- 2.2.9 RA-EP-02420, Search and Rescue
- 2.2.10 RA-EP-02520, Assembly and Accountability
- 2.2.11 RA-EP-02530, Evacuation
- 2.2.12 RA-EP-02620, Emergency Exposure Controls and Potassium Iodide Distribution

- 2.2.13 RA-EP-02800, Transport of Contaminated Injured Personnel
- 2.2.14 RA-EP-02640, Station Radiological Surveys and Controls During Emergencies
- 2.2.15 RA-EP-02710, Reentry

### 3 0 DEFINITIONS

- 3.1 EMERGENCY RADIATION PROTECTION (RP) ORGANIZATION - Comprised of RP personnel who provide the necessary radiological support during emergency situations.
- 3.2 POST ACCIDENT SAMPLING SYSTEM (PASS) - A system designed to obtain highly radioactive samples from Containment Building atmosphere, pressurizer liquid space, letdown system, decay heat loops 1 and 2, and a Reactor Coolant System cold leg.

### 4 0 RESPONSIBILITIES

- 4.1 The Emergency Radiation Protection(RP) Manager shall be responsible for:
  - 4.1.1 Ensuring that dosimetry is issued to all personnel in the Protected Area when a Site Area Emergency or General Emergency has been declared.
  - 4.1.2 Ensuring that radiological assessments are conducted within the Protected Area.
  - 4.1.3 Coordinating plant protective measures and RP support.
  - 4.1.4 Providing the Emergency Plant Manager with recommendations for:
    - a. Emergency personnel exposure
    - b. Issuance of potassium iodide (KI) to plant personnel
    - c. PASS sampling
  - 4.1.5 Reporting to the Emergency Plant Manager and cooperating with the following:
    - a. Operations Support Center (OSC) Manager
    - b. Dose Assessment Coordinator
  - 4.1.6 Providing the Technical Support Center (TSC) personnel with Protected Area radiological updates as required.

- 4.2 The OSC RP Coordinator shall be responsible for:
  - 4.2.1 Answering to the OSC Manager.
  - 4.2.2 Informing and receiving advisement from the Emergency RP Manager on radiological conditions, and corrective actions.
  - 4.2.3 Interfacing with the Assistant OSC Manager.
  - 4.2.4 Supervising and directing RP activities and supporting OSC activities.
- 4.3 The RP Senior Onshift Person shall assume the duties of the OSC RP Coordinator during the activation of the Emergency RP Organization until relieved.
- 4.4 RP personnel shall be responsible for:
  - 4.4.1 Performing radiological and habitability surveys as directed by the OSC RP Coordinator to support OSC activities in accordance with RA-EP-02640, Station Radiological Surveys and Controls During Emergencies.
  - 4.4.2 Providing RP support, as necessary, for emergency response teams to keep exposure As Low As Reasonably Achievable (ALARA).

## 5.0 INITIATING CONDITIONS

- 5.1 This procedure shall be activated:
  - 5.1.1 At the discretion of the Emergency Director.
  - 5.1.2 At the declaration of an Alert or higher classification.

6 0 PROCEDURE6 1 Emergency RP Manager

## 6.1.1 Activation

The Emergency RP Manager shall:

- a. Report to the TSC and sign in on the status board.
- b. Notify the Emergency Plant Manager of arrival at the TSC and receive a briefing.
- c. Obtain a briefing from the RP Senior Onshift Person.
- d. Request a Rad Loop communicator from the OSC RP Coordinator when needed.

## 6.1.2 Operation

The Emergency RP Manager shall:

- a. Discuss the following with the OSC RP Coordinator:
  1. Current plant radiological status.
  2. Appropriate and adequate RP response
  3. Evaluate the need for additional RP support.
- b. Promptly review all radiation monitoring readings which have been faxed to the TSC, and ensure the transfer of data to the dose assessment area.
- c. Provide plant radiological assessments to the Emergency Plant Manager.
- d. Based on periodic radiological surveys, make recommendations to the Emergency Plant Manager concerning Protected Area habitability according to Emergency Habitability Criteria, Attachment 1.
- e. Maintain radiological conditions necessary to keep personnel exposure ALARA.
- f. Evaluate personnel exposures with the changing radiological conditions in accordance with RA-EP-02620, Emergency Exposure Control and Potassium Iodide Distribution.
- g. Ensure that the OSC RP Coordinator oversees distribution of dosimetry to all personnel in the Protected Area when a Site Area Emergency or General Emergency has been declared.

- h Ensure the OSC RP Coordinator dispatches RP personnel during radiologically related emergencies to:
  - 1. Accompany security personnel and conduct direct radiation measurements in accordance with RA-EP-02520, Assembly and Accountability and RA-EP-02530, Evacuation.
  - 2. Accompany Search and Rescue Teams to provide RP coverage in accordance with RA-EP-02420, Search and Rescue.
  - 3. Accompany First Aid Teams to provide RP coverage in accordance with RA-EP-02800, Preparation and Transportation of Contaminated Injured Personnel.
  - 4. Assist contaminated personnel at the Personnel Processing Facility exit during the accountability or evacuation processing in accordance with RA-EP-02520, Assembly and Accountability and RA-EP-02530, Evacuation.
  - 5. Direct and conduct the monitoring and decontamination of personnel and equipment at the designated offsite assembly area when requested by the Emergency Offsite Manager in accordance with RA-EP-02520, Assembly and Accountability.
- i Report any problems or unusual occurrences to the Emergency Plant Manager.
- j Provide the TSC personnel with radiological updates as required.
- k Advise the Emergency Plant Manager on the use of the Post Accident Sampling System (PASS) based on a completed PASS Checklist, Attachment 2.

#### 6.1.3 Deactivation

The Emergency RP Manager shall:

- a. When directed by the Emergency Plant Manager, return the RP section to normal operation.
- b. Review records created during the emergency for completeness and forward to the Supervisor - Emergency Preparedness.
- c. Document and report any deficiencies in emergency planning equipment or procedures to the Supervisor - Emergency Preparedness.

## 6.2 RP Senior Onshift Person

The RP Senior Onshift Person shall:

- 6.2.1 Contact the Shift Manager to provide RP coverage for immediate corrective actions.
- 6.2.2 Assume the responsibilities of the OSC RP Coordinator until relieved.

## 6.3 OSC RP Coordinator

### 6.3.1 Activation

The OSC RP Coordinator shall:

- a. Report to the OSC Manager and supervise RP support activities.
- b. Receive a briefing by the RP Senior Onshift Person, OSC Manager, and the Emergency RP Manager on radiological conditions, actions that have been taken, and actions that need to be taken.
- c. Assign a Rad Loop Communicator to the TSC to assist the Emergency RP Manager, as needed.
- d. Relocate RP operations to the OSC, as necessary.
- e. Contact the Supervisor - Security Shift to ensure dosimetry is issued to all security personnel in the Protected Area when an Alert or higher classification has been declared.

NOTE 6.3.1.f

All persons in the Protected Area at a Site Area Emergency or General Emergency shall have either a Normal Plant TLD or an Emergency TLD.

- f. Ensure dosimetry is issued to all personnel in the Control Room, OSC, and Protected Area when a Site Area Emergency or General Emergency has been declared.
- g. Assess radiological conditions in occupied areas to determine habitability and ALARA routes to work locations.
- h. Suspend Radiation Work Permits (RWPs) if emergency radiological conditions exist.
- i. Use the DBNPS Emergency Plan Telephone Directory (Section 3) to meet the following minimum staffing requirements:
  - 1 One RP Tester shall respond immediately.

2. A total of two RP Testers shall respond within 30 minutes during normal working hours (60 minutes off-hours).
  3. A total of five RP Testers shall respond within 1 to 2 hours.
- j. Notify the OSC Manager and the Emergency RP Manager that the Emergency RP organization is activated. The minimum staffing requirement for activating the Emergency RP organization shall be:
1. One OSC RP Coordinator.
  2. Two RP Testers.
- k. Refer to DB-HP-04007, Emergency Supply Checklists to obtain RP emergency equipment locations, and verify equipment operability.
- l. Ensure that the Emergency RP Organization has access to appropriate emergency radiological equipment.
- m. Assign a Rad Loop Communicator to assist the OSC RP Coordinator.
- n. Assign a RP Tester to observe the Radiation Monitoring System (RMS) in the Control Room and transmit readings to the OSC and TSC.
- o. Assign an RP Log/Status Board Keeper in the OSC to record ongoing activities and update the RP status boards.

NOTE 6.3.1.p

The RP Briefer/Debriefer and the OSC Briefer/Debriefer should conduct briefings together for corrective actions that are impacted by radiological conditions.

- p. Assign an OSC RP Briefer/Debriefer to brief and debrief Emergency Response Survey Teams and Emergency Response Teams on radiological conditions.

### 6.3.2 Operation

The OSC RP Coordinator shall:

- a. Maintain sufficient staffing to support the radiological activities for the emergency. This support shall:
  1. Provide the necessary RP support to OSC personnel (fire brigade, emergency repair, first aid teams; etc.) during the emergency in accordance with RA-EP-02410, OSC Activation and Response.
  2. Monitor plant conditions for determining the emergency status.

3. Ensure dosimetry has been issued to all personnel within the Protected Area when a Site Area Emergency or General Emergency has been declared.
  4. Conduct periodic airborne, contamination and radiation surveys of the OSC, Control Room and other facilities within the Protected Area.
  5. Review survey results and refer to the Emergency Habitability Criteria, Attachment 1.
- b. Ensure the OSC Manager and Emergency RP Manager are periodically updated on the following in the Protected Area:
1. Radiological Conditions
  2. Actions that have been taken to protect station personnel
- c. Inform the OSC Manager and Emergency RP Manager of conditions that may require following protective actions according to the habitability criteria listed in Attachment 1:
1. Sheltering
  2. Administering KI
  3. Evacuating or relocating
- d. Ensure that the RP Status Boards are current.
- e. Maintain exposure records of all emergency response workers.
- f. Use the survey maps in the OSC to determine ALARA routes to work or Emergency Response locations.
- g. Brief emergency response teams on required radiological actions in accordance with RA-EP-02410, OSC Activation and Response, Emergency Team Briefing Sheet.

- h. Dispatch RP personnel during radiological emergencies to:
  - 1. Accompany security personnel and conduct direct radiation measurements during sweeps and announcements in accordance with RA-EP-02520, Assembly and Accountability and RA-EP-02530, Evacuation.
  - 2. Accompany Search and Rescue Teams to provide RP coverage in accordance with RA-EP-02420, Search and Rescue.
  - 3. Accompany First Aid Teams to provide RP coverage in accordance with RA-EP-02800, Preparation and Transportation of Contaminated Injured Personnel.
  - 4. Assist contaminated personnel at the Personnel Processing Facility Exit during the accountability or evacuation processing in accordance with RA-EP-02520 and RA-EP-02530.
  - 5. Direct and conduct the monitoring and decontamination of personnel and equipment at the designated offsite assembly area when requested by the Emergency Offsite Manager in accordance with RA-EP-02520, Assembly and Accountability.
- i. Refer to the PASS Checklist, Attachment 2 if the TSC Engineering Staff requests information on a containment atmosphere or RCS liquid sample.
- j. Refer to RA-EP-02710, Reentry, for guidelines and techniques when reentry is authorized by the Emergency Plant Manager and directed by the OSC Manager.

### 6.3.3 Deactivation

The OSC RP Coordinator shall:

- a. Deactivate the Emergency RP Organization when directed by the OSC Manager.
- b. Return all emergency equipment to its proper storage location and inventory in accordance with RA-EP-00600, Emergency Facilities and Equipment Maintenance Program.
- c. Forward all records generated during the emergency to the Emergency RP Manager.
- d. Document and report any procedural or equipment deficiencies to the Supervisor - Emergency Preparedness.

## 7.0 FINAL CONDITIONS

This procedure shall be deactivated when:

- 7.1 The entire Emergency RP Organization has been relieved of duties for emergency operations of the plant.
- 7.2 Records generated during the emergency are forwarded to the Supervisor - Emergency Preparedness by the Emergency RP Manager.
- 7.3 Emergency equipment has been inventoried and deficiencies identified and reported to the Supervisor - Emergency Preparedness.
- 7.4 Procedural deficiencies have been identified and reported to the Supervisor - Emergency Preparedness.
- 7.5 Individuals who have received excessive exposures are identified for evaluation and reported using the corrective action process, Reference NG-NA-00702, Corrective Action Program.

## 8.0 RECORDS

- 8.1 The following quality assurance records are completed by this procedure and shall be listed on the Nuclear Records List, captured, and submitted to Nuclear Records Management in accordance with NG-NA-00106:
  - 8.1.1 None
- 8.2 The following non-quality assurance records are completed by this procedure and may be captured and submitted to Nuclear Records Management, in accordance with NG-NA-00106:
  - 8.2.1 PASS Checklist, Attachment 2

ATTACHMENT 1: EMERGENCY HABITABILITY CRITERIA

Page 1 of 2

Area Direct RadiationNOTE

For evacuation criteria refer to RA-EP-02530, Evacuation.

Nonessential Personnel Limits:

- I. The Total Effective Dose Equivalent (TEDE) shall not exceed 100 mrem in a year.
- II. Areas shall not be occupied where the dose rate exceeds 2.0 mrem/hr.

Essential Personnel Limits:

<u>Sustained Level<sup>1</sup></u>	<u>Action</u>
I. (>5 but <25) mrem/hr for <24 hours.	<ol style="list-style-type: none"> <li>1. Increased radiation surveys, identify and terminate source.</li> <li>2. Continue to man all emergency response centers to support the emergency.</li> </ol>
II. (>5 but <25) mrem/hr for >24 hours. Source reduction not projected.	<ol style="list-style-type: none"> <li>1. Planned evacuation of the area within 24 hours.</li> <li>2. Essential OSC personnel report to habitable areas as directed.</li> </ol>
III. (>25 but <100) mrem/hr for >1 hour.	<ol style="list-style-type: none"> <li>1. Evacuate the area within 4 hours.</li> <li>2. Essential OSC personnel report to habitable areas as directed.</li> </ol>
IV. (>100 but <1000) mrem/hr.	<ol style="list-style-type: none"> <li>1. Evacuate the area within 1 hour.</li> <li>2. Essential OSC personnel report to habitable areas as directed.</li> </ol>
V. >1000 mrem/hr.	<ol style="list-style-type: none"> <li>1. Immediate evacuation as directed.</li> </ol>

<sup>1</sup>Based on 12 hours per day occupancy for 30 days.

ATTACHMENT 1: EMERGENCY HABITABILITY CRITERIA

Page 2 of 2

Airborne Iodine 131NOTE

For Potassium Iodide Criteria refer to RA-EP-02620,  
Emergency Exposure Controllers KI Distribution.

<u>Iodine 131 Concentration</u>	<u>Equivalent I-131 Exposure for Accident Duration</u>	<u>Equivalent I-131 Thyroid Dose for Accident Duration<sup>2</sup></u>	<u>Action</u>
I. <sup>1</sup> >6.0E-09 $\mu\text{Ci/cc}$ but <1.0E-08 $\mu\text{Ci/cc}$	110 DAC Hours 320 DAC Hours	3 rem 8 rem	1. Increased radiological surveillance 2. Identify and terminate source
II. <sup>1</sup> >1.0E-08 $\mu\text{Ci/cc}$ but <3.0E-08 $\mu\text{Ci/cc}$	320 DAC Hours 540 DAC Hours	8 rem 14 rem	1. Use respiratory protection only if this will result in TEDE being ALARA. 2. Consider recommending KI if source reduction is not expected within 24 hours.
III. <sup>1</sup> >3.0E-08 $\mu\text{Ci/cc}$	540 DAC Hours	14 rem	1. Recommend KI if source reduction is not expected within 6 hours. 2. Evacuate non-essential personnel within 12 hours if unable to reduce or terminate the source within 24 hours. 3. Essential OSC personnel report to habitable areas as directed.
IV $\geq 2.0\text{E-}5$ $\mu\text{Ci/cc}$ for one hour or $2.0\text{E-}6$ $\mu\text{Ci/cc}$ for ten hours	1000 DAC Hours	25 rem	1. Recommend KI

<sup>1</sup>Based on 12 hours per day occupancy for 30 days.<sup>2</sup>Committed Dose Equivalent (CDE)

ATTACHMENT 2: PASS CHECKLIST

Page 1 of 5

Checklist for PASS Liquid SampleNOTE

Refer to RA-EP-02620, Emergency Exposure control and KI Distribution, if the decision to take the sample results in operator exposure  $\geq 1250$  mRem.

The TSC shall determine the radiological hazards associated with obtaining a PASS liquid sample in accordance with DB-CH-06000, Post Accident Sampling System Operation and Analysis and DB-CH-00007, Post Accident Radiological Sampling and Analysis, by:

1. Requesting the OSC to obtain current radiological conditions in appropriate areas.
2. Performing an evaluation based on projected dose rates after sampling.
3. Determination of operator dose shall be made as follows:

Activity	Area Dose Rate (mRem/hr)	Time (hrs)	Calc. Dose (mRem)
a. Dress out in preparation for obtaining the liquid PASS samples, including briefing.	____(x)	0.50	_____
b. Transit to PASS skid from Chem. Lab.	____(x)	0.04	_____
c. Initial PASS system checkout and lineup	____(x)	0.57	_____
d. PASS System sample purge up to sample cave isolation.	____(x)	0.17	_____
e. Degas sample, collect gaseous and liquid samples in vials and put vials in transport containers.	____(x)	0.17	_____
f. Demineralized water flush of sample cave and sample needles.	____(x)	0.20	_____

ATTACHMENT 2: PASS CHECKLIST

Page 2 of 5

Checklist For Pass Liquid Sample (Continued)

<u>Activity</u>	<u>Area Dose Rate (mRem/hr)</u>	<u>Time (hrs)</u>	<u>Calc. Dose (mRem)</u>
g. PASS skid and mimic board sample valve lineup check.	_____ (x)	0.03	_____
h. Transit to lab with transport container.	_____ (x)	0.07	_____
i. Preparation of liquid and gaseous gamma spectroscopy samples.	_____ (x)	0.07	_____
j. Gamma spectroscopy samples analysis.	_____ (x)	0.17	_____
k. Boron analysis.	_____ (x)	0.83	_____
l. Store remaining samples and waste.	_____ (x)	0.03	_____

Total \_\_\_\_\_mRem

If the total projected calculated dose to the operator from area dose rates is less than 1250 mRem, recommend a sample be taken and obtain the Emergency Plant Manager's approval to draw the sample.

If the projected calculated dose exceeds 1250 mRem, recommend a sample not be taken until the dose rates are reduced.

ATTACHMENT 2: PASS CHECKLIST  
Page 3 of 5

Checklist For Pass Containment Atmospheric Sample

NOTE

Refer to RA-EP-02620, Emergency Exposure Control and KI Distribution, if the decision to take the sample will result in operator exposure  $\geq 1250$  mRem.

CAUTION

Containment (CTMT) Gas Grab Sampling should be the initial method for obtaining a CTMT air PASS Sample.

If a measurable iodine concentration exists in the previous containment air grab sample, an iodine cartridge sample should not be necessary. Iodine cartridge samples during subsequent sampling should be requested only after the evaluation of radiological hazards associated with the handling of the Iodine cartridge and the effect of iodine present in the sampling on the gas analysis.

CAUTION

Expect Auxiliary Building Train Bay radiation levels to increase when placing the Post Accident Gas Sample Pump (P218) in service.

When containment pressure is greater than Auxiliary Building pressure, and aligned to this pump, the open end seal is a secondary containment leakage pathway.

The TSC shall determine the radiological hazards associated with obtaining a containment atmosphere grab sample utilizing DB-CH-00007, Post Accident Radiological Sampling and Analysis, and DB-CH-06001, Emergency Containment Atmosphere Grab Sampling System Operation and Analysis by:

1. Requesting the OSC to obtain current radiological conditions in appropriate areas.
2. Performing an evaluation based on projected dose rates after sampling.

ATTACHMENT 2- PASS CHECKLIST

Page 4 of 5

Checklist For Pass Containment Atmospheric Sample

3. Determination of operator dose shall be made as follows:

<u>Activity</u>	<u>Area Dose Rate (mRem/hr)</u>	<u>Time (hrs)</u>	<u>Calc. Dose (mRem)</u>
a. Dress out area in preparation for sampling	_____ (x)	0.33 (=)	_____
b. Transit To Grab Sampling Station	_____ (x)	0.10 (=)	_____
c. Containment Air Grab Sampling Station (Rm. 300)	_____ (x)	0.20 (=)	_____
d. Doorway leading to #3 and #4 MPR Hallway (Door 303)	_____ (x)	0.03 (=)	_____
e. Lowest background area in Train Bay	_____ (x)	0.25 (=)	_____
f. Chemistry Hot Lab	_____ (x)	0.5 (=)	_____
g. Counting Room	_____ (x)	0.5 (=)	_____
Total			_____mRem

Radiological hazards associated with Iodine Cartridge Samples evaluated:                      YES                      NO

Brief Description of Radiological Hazards:

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4. If the calculated dose exceeds 1250 mRem, recommend a sample not be taken.

ATTACHMENT 2: PASS CHECKLIST

Page 5 of 5

Checklist For Pass Containment Atmospheric SampleOTHER CONSIDERATIONS FOR PASS SAMPLING

5. The following items shall be considered prior to obtaining a PASS liquid or a containment atmosphere grab sample:
  - a. Is there adequate power at the PASS?
  - b. Is the Ventilation System functioning at the PASS and labs? If not, SCBAs shall be required.
  - c. Are the sample lines' isolation valves open?
  - d. Is the Component Cooling Water restored if it has been isolated?
  - e. Is the Demineralized Water restored if it had been isolated?
  - f. Is there adequate lighting at the PASS and the labs?
  - g. Is the containment atmosphere grab sample to include Iodine? If not, ensure that a blank cartridge holder is used in the sampler.
  
6. If the total calculated dose to the operator from area dose rates is less than 1250 mRem, recommend a sample to be taken and obtain the Emergency Plant Manager's approval to draw the sample.

COMMITMENTS

<u>Section</u>	<u>Reference</u>	<u>Comments</u>
6 0	TERMS Q 03111	Entire Procedure
6.1.1.d 6.3.2 b 6.3.2 c	TERMS O 14984	Improve TSC and OSC Radiological Control's information sharing capability
6.1.2 g 6.3.1.e 6.3 1 f 6 3 2.a.3	TERMS O 15207	Emergency personnel exposure monitoring
6 3.2.a.4	TERMS O 15155	OSC Habitability Surveys should include air and swipe samples
6.3.2.a 4	TERMS O 15156	Greater emphasis on habitability criteria for relocation of the OSC
Attachment 2	TERMS O 06882	SCBAs shall be used for PASS sampling if the ventilation system is not available.
Attachment 2	PCAQR 96-0510 PCAQR 96-0704	Potential leak path through the atmospheric sample pump.

Davis-Besse Nuclear Power Station

EMERGENCY PLAN OFF NORMAL OCCURRENCE PROCEDURE

RA-EP-02830

FLOODING

REVISION 01

Prepared by: Dennis J. Gordon

Procedure Owner: Manager - Security

Effective Date: FEB 25 2003

Procedure Classification:

Safety Related

Quality Related

Non-Quality Related

**LEVEL OF USE:  
IN-FIELD REFERENCE**

TABLE OF CONTENTS

	<u>Page</u>
1.0 PURPOSE .....	3
2.0 REFERENCES.....	3
3.0 DEFINITIONS .....	3
4.0 RESPONSIBILITIES .....	3
5.0 INITIATING CONDITIONS .....	3
6.0 PROCEDURE .....	4
6.1 Flood Watch.....	4
6.2 Flood Warning .....	4
6.3 Flood Emergency .....	6
7.0 FINAL CONDITIONS .....	7
8.0 RECORDS .....	7
ATTACHMENT 1 DBNPS Elevation Profile .....	8
COMMITMENTS .....	9

## 1.0 PURPOSE

This procedure describes the action levels and procedures which shall be followed if flooding is imminent or has occurred at or near the Davis-Besse Nuclear Power Station (DBNPS).

## 2.0 REFERENCES

### 2.1 Developmental

2.1.1 DBNPS USAR Section 2, Site Characteristics

2.1.2 Davis-Besse Nuclear Power Station Emergency Plan

### 2.2 Implementation

2.2.1 RA-EP-1500, Emergency Classification

2.2.2 RA-EP-02870, Station Isolation

## 3.0 DEFINITIONS

3.1 FLOOD WATCH - Lake water elevations between 574' and 576'.

3.2 FLOOD WARNING - Lake water elevations between 576' and 578'.

3.3 FLOOD EMERGENCY - Lake water elevations greater than 578'.

## 4.0 RESPONSIBILITIES

4.1 The On-call Emergency Offsite Manager shall:

4.1.1 Ensure the availability of transportation to provide limited access to the station during flood emergency conditions.

4.1.2 Maintain and, as conditions warrant, update the Davis-Besse Employee Information Hotline to provide information regarding viable access routes to the Davis-Besse Site.

4.2 The Shift Manager shall notify the station of flood watches, warnings, and emergencies and activate RA-EP-02870, Station Isolation, as required.

## 5.0 INITIATING CONDITIONS

This procedure shall be used when lake levels have exceeded 574' and weather conditions are favorable for flooding.

60 PROCEDURE

6.1 Flood Watch - Lake level between elevation 574' and 576', causing local flooding of the marshes and low areas around the station and water covering low portions of access roads.

6.1.1 The Shift Manager shall:

- a. Make an announcement over the Gai-tronics System that a Flood Watch is in effect.
- b. Notify the On-call Emergency Offsite Manager of the Flood Watch.
- c. Take immediate action to ensure that flood barriers are in place for the Service Water Pumps, Cooling Tower Makeup Pumps and the Diesel Fire Pump (whether utilizing the pumps themselves or temporary closures.) Also close any unisolated breaches in associated equipment located in the pump rooms when a Flood Watch is declared.

6.1.2 The On-call Emergency Offsite Manager shall:

- a. Consult with the Ottawa County Sheriff and the Ottawa County Emergency Management Agency Director to assess road conditions.
- b. Record an appropriate message for the Davis-Besse Employee Information Hotline.
- c. Monitor the lake level.
- d. Modify the recorded message as needed to insure the information on the Employee Information Hotline is current.

6.2 Flood Warning - Lake level between elevation 576' and 578' causing closing of the lower access roads, leaving only Duff-Washa and other higher roads available for access to the Station.

6.2.1 The Shift Manager shall:

- a. Make an announcement over the Gai-tronics System that a Flood Warning is in effect.
- b. Notify the On-call Emergency Offsite Manager of the Flood Warning.
- c. Consult the Plant Manager and decide whether or not to activate RA-EP-02870, Station Isolation.
- d. Notify the following individuals of the flooding situation
  - Manager - Davis-Besse Operations
  - Manager - Davis-Besse Maintenance
  - Manager - Radiation Protection
  - Supervisor - Security Shift

6.2.2 The On-call Emergency Offsite Manager shall:

- a. Consult with the Ottawa County Sheriff and Ottawa County Emergency Management Agency Director to assess road conditions.
- b. Prepare a taped message for the Davis-Besse Employee Information Hotline.
- c. Activate all group pagers to call the Davis-Besse Employee Information Hotline.
- d. Ensure transportation is available to transport personnel to the station should conditions deteriorate. Transportation resources should be considered in the following order:
  1. Station resources
    - 4-Wheel Drive Vehicles
    - Various Trucks
  2. Toledo Edison resources
    - Materials/Fleet Management - Toledo Fleet and Garage
  3. First Energy resources
    - Materials/Fleet Management Director
- e. Monitor the lake level.
- f. Modify the taped message as needed to insure the information on the Davis-Besse Employee Information Hotline is current.

NOTE 6 3

Since the station will be isolated by flooded roadways at Lake levels over 578', a minimal workforce should be scheduled for essential operating and emergency activities.

- 6 3 Flood Emergency - Lake levels over elevation 578' causing access to the Station to be limited to rail, boat and helicopter.
- 6.3.1 The Shift Manager shall.
- a. Notify the station that a Flood Emergency exists and with the concurrence of the Plant Manager (if available) declare RA-EP-02870, Station Isolation in effect
  - b. Notify the On-Call Emergency Offsite Manager of the Flood Emergency.
  - c. Determine the proper emergency classification and take actions in accordance with RA-EP-01500, Emergency Classification
  - d. Station operation shall be maintained by essential operating and staff personnel until a shutdown is determined to be necessary by the Plant Manager, the Manager - Davis-Besse Operations, and/or the Shift Manager
- 6.3 2 The On-call Emergency Offsite Manager shall:
- a. Record an appropriate message for the Davis-Besse Employee Information Hotline
  - b. Activate all group pagers to call the Davis-Besse Employee Information Hotline.
  - c. Provide transportation for essential Station personnel. Transportation resources should be considered in the following order:
    1. Station resources
      - 4-Wheel Drive Vehicles
      - Various Trucks
    2. Toledo Edison resources
      - Materials/Fleet Management - Toledo Fleet and Garage
    3. First Energy resources
      - Materials/Fleet Management Director
  - d. Monitor the lake level.
  - e. Modify the recorded message as needed to ensure the information on the Davis-Besse Employee Information Hotline is current

## 6.3.3 Supervisors shall:

- a Identify essential personnel when requested by the Shift Manager or Plant Manager.
- b Obtain a recommended location for assembly from the On-Call Emergency Offsite Manager.
- c Communicate to essential personnel where they should assemble.

6.3.4 Overnight accommodations for all isolated personnel shall be made in accordance with RA-EP-02870, Station Isolation.

7.0 FINAL CONDITIONS

Water level has receded to below 574' and access by road has been restored to the site.

8.0 RECORDS

8.1 The following quality assurance records are completed by this procedure and shall be listed on the Nuclear Records List, captured, and submitted to Nuclear Records Management in accordance with NG-NA-00106:

8.1.1 None

8.2 The following non-quality assurance records are completed by this procedure and may be captured and submitted to Nuclear Records Management, in accordance with NG-NA-00106:

8.2.1 None

ATTACHMENT 1: DBNPS ELEVATION PROFILE

Page 1 of 1

LAND SIDE		LAKE SIDE
<u>591' Top of Dike</u> \\ \\ \\ \\ \\ \\		
590'		
<u>585' Sta Floor Level</u> \\ \\ \\ \\ \\ \\	<u>SITE AREA EMERGENCY</u>	<u>&gt;584.0'</u>
	<u>ALERT</u>	<u>584.0'</u>
580'	<u>UNUSUAL EVENT</u>	<u>580.0'</u>
<u>579' DBAB Floor Level</u> \\ \\ \\ \\ \\ \\	<u>FLOOD EMERGENCY</u>	<u>578.0'</u>
	<u>FLOOD WARNING</u>	<u>576.0'</u>
	<u>FLOOD WATCH</u>	<u>574.0'</u>
570'		
	<u>UNUSUAL EVENT</u>	<u>562.0'</u>
560'	<u>ALERT</u>	<u>560.0'</u>
	<u>SITE AREA EMERGENCY</u>	<u>558.0'</u>
551'		<u>Bedrock Line</u>

COMMITMENTS

<u>Section</u>	<u>Reference</u>	<u>Comments</u>
Entire Procedure	TERMS Q 00070	Acts of nature procedure
6.1.1.c	CA 02-07714-1	Closure of breached barriers due to maintenance