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Distribution Date:

6/28/17 JG

Procedure Number	Revision
13.11.7	037/003
13.13.2	017/001

Procedure Number	Revision

Procedure Number	Revision


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Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037
Title: Radiological Emergency Manager Duties		Minor Rev: 003
		Page: 1 of 14

PLANT PROCEDURES MANUAL	PCN#: N/A
 13.11.7	Effective Date: 06/28/17

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037
Title: Radiological Emergency Manager Duties		Minor Rev: 003
		Page: 2 of 14

DESCRIPTION OF CHANGES

Justification (required for major revision)
Reformat procedure to conform to SWP-PRO-03, Procedure Writer's Manual and to standardize EPIP procedure sections. As more than 30% of numbering changed, Revision Bars are not used in this revision of the procedure.

Page(s)	Description (including summary, reason, initiating document, if applicable)
	Moved procedural steps for Radiological Emergency Manager and Staff to stand alone checklists (forms). Removed attachment containing Total Population within the 10 Mile EPZ and referred REM to Evacuation Time Estimate data provided in Emergency Plan.
	Minor Rev. 001 - Editorial change to Attachment 7.2 corrects FT Sample Storage room number, and reference to Attachment 7.3.
5,9	Minor Rev 002 - Editorial change replaces QEDPS with "dose assessment software". URI is the new offsite dose assessment software used at Columbia. (AR259708)
7	Updated procedure names to current
4	Minor Rev 003 Changed RPM to Radiation Protection Manager to match EPlan, vice Radiological Program Manager. This is an editorial change.

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037
Title: Radiological Emergency Manager Duties		Minor Rev: 003
		Page: 3 of 14

TABLE OF CONTENTS

		<u>Page</u>
1.0	PURPOSE	4
2.0	DISCUSSION.....	4
3.0	RESPONSIBILITIES	4
3.1	All ERO Members	4
3.2	Radiological Emergency Manager.....	5
3.3	Dose Projection Health Physicist.....	5
3.4	Health Physics Network (HPN) Communicator.....	6
3.5	Health Physics Center (HPC) Staff.....	6
4.0	PROCEDURE	7
4.1	Radiological Emergency Manager.....	7
4.2	Dose Projection Health Physicist.....	7
4.3	Health Physics Network (HPN) Communicator.....	7
4.4	Health Physics Center (HPC) Staff.....	7
5.0	REFERENCES	7
6.0	DOCUMENTATION	8
7.0	ATTACHMENTS	8
7.1	Comparison of Field Data with Dose Projection	9
7.2	Typical Setup for HP Center Receiving Area.....	10
7.3	Typical Setup for Alternate HP Center Control Point	11
7.4	EOF HVAC Automatic and Manual Operation	12
7.5	Dose Assessment Center Leadership Transfer Guide.....	14

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037
Title: Radiological Emergency Manager Duties		Minor Rev: 003
		Page: 4 of 14

1.0 PURPOSE

This procedure describes the emergency responsibilities and duties of the Emergency Operations Facility (EOF) Radiological Emergency Manager (REM) and EOF Radiological Support Staff.

2.0 DISCUSSION

2.1 The EOF Radiological Staff duties include:

- Environmental Field Team activities;
- Offsite Dose Projection activities;
- Protective Action Recommendation (PAR) coordination with the Emergency Director;
- Coordinating any offsite monitoring and decontamination activities;
- Health Physics Center (HPC) activities; and
- Coordination of offsite reentry and Ingestion Pathway activities with Washington State Department of Health (WADOH) personnel.

2.2 As necessary, portions of the REM duties may be delegated to staff members. The Technical Support Center (TSC) Radiation Protection Manager (RPM) should assist the REM in determining if a release is in progress, but only the REM should make the official declaration of a radiological release.

2.3 Upon arrival of WADOH representatives and/or the U.S. Department of Energy, Richland Field Office (DOE/RL) representatives, certain REM duties will be administered according to the jurisdictional authority of each agency, with the REM ensuring full cooperation and support to all agencies.

3.0 RESPONSIBILITIES

3.1 All ERO Members

- 3.1.1 Perform position turnover for protracted events
- 3.1.2 Respond as directed when notified of a declared event
- 3.1.3 Maintain personal event logs and records in support of the after action report
- 3.1.4 Restore area and materials upon event termination
- 3.1.5 Apply fundamental ERO knowledge in the performance of your ERO duties

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 5 of 14
Title: Radiological Emergency Manager Duties		

- 3.1.6 Properly use ERO procedures and checklists in the performance of your ERO duties
- 3.1.7 Acquire & maintain qualification in your assigned ERO position
- 3.1.8 Apply human performance error reduction techniques in the performance of your ERO duties

3.2 Radiological Emergency Manager

- 3.2.1 Manage and direct the radiological assessment activities of the MUDAC staff
- 3.2.2 Assign an individual to man the HPN line when requested by the NRC
- 3.2.3 Coordinate the receipt, analysis, storage and transfer of field monitoring samples
- 3.2.4 Monitor conditions and determine the start & termination of any release of radioactivity
- 3.2.5 Perform dose assessment using dose assessment software
- 3.2.6 Oversee the performance and evaluate the results of dose projection activities
- 3.2.7 Oversee the performance and evaluate the results of Field Monitoring Team activities
- 3.2.8 Provide support and logistics for site evacuation activities
- 3.2.9 Ensure proper use of KI for Energy Northwest personnel
- 3.2.10 Determine appropriate Protective Action Recommendations
- 3.2.11 Ensure center habitability is established and maintained
- 3.2.12 Ensure proper emergency exposure controls are taken for Energy Northwest personnel
- 3.2.13 Coordinate radiological support activities for transport of contaminated injured personnel
- 3.2.14 Provide for ongoing operations of the MUDAC during recovery
- 3.2.15 Provide input for facility briefs and updates

3.3 Dose Projection Health Physicist

- 3.3.1 Perform dose assessment using dose assessment software
- 3.3.2 Monitor and evaluate conditions involving any release of radioactivity

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 6 of 14
Title: Radiological Emergency Manager Duties		

3.4 Health Physics Network (HPN) Communicator

Provide event data and plant information to the NRC via the HPN

3.5 Health Physics Center (HPC) Staff

3.5.1 Coordinate the receipt, analysis, storage and transfer of field monitoring samples

3.5.2 Establish (set-up) and operate the Health Physics Center

3.5.3 Perform habitability monitoring in emergency centers

3.5.4 Perform monitoring and decontamination of personnel and samples

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 7 of 14
Title: Radiological Emergency Manager Duties		

4.0 PROCEDURE

4.1 Radiological Emergency Manager

Perform appropriate actions using guidance in form 26546, Radiological Emergency Manager Checklist, upon declaration of an emergency.

4.2 Dose Projection Health Physicist

Perform appropriate actions using guidance in form 26547, Dose Projection Health Physicist Checklist, upon declaration of an emergency.

4.3 Health Physics Network (HPN) Communicator

Perform appropriate actions using guidance in form 26552, Health Physics Network (HPN) Communicator Checklist, upon declaration of an emergency.

4.4 Health Physics Center (HPC) Staff

Perform appropriate actions using guidance in form 26553, Health Physics Center (HPC) Staff Checklist, upon declaration of an emergency.

5.0 REFERENCES

5.1 Regulatory / Licensing Documents

FSAR, Chapter 13.3, Emergency Plan, Sections 2 and 6

5.2 Procedures

5.2.1 PPM 1.9.14, Onsite Medical Emergencies

5.2.2 PPM 11.2.9.31, Operation of MG DMC-2000 Electronic Dosimeters

5.2.3 PPM 13.2.1, Emergency Exposure Levels/Protective Actions Guides

5.2.4 PPM 13.2.2, Determining Protective Action Recommendations

5.2.5 PPM 13.5.1, Local, Protected Area or Site Evacuation

5.2.6 PPM 13.7.5, Offsite Assembly Area Operations

5.2.7 PPM 13.8.1, Emergency Dose Projection System Operations

5.2.8 PPM 13.9.1, Environmental Field Monitoring Operations

5.2.9 PPM 13.9.5, Environmental Sample Collection

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 8 of 14
Title: Radiological Emergency Manager Duties		

5.2.10 PPM 13.13.3, Intermediate Phase MUDAC Operations

5.2.11 PPM 13.13.4, After Action Reporting

5.3 Forms

5.3.1 Radiological Emergency Checklist, Form 26546

5.3.2 Dose Projection Health Physicist Checklist, Form 26547

5.3.3 Health Physics Network (HPN) Communicator Checklist, Form 26552

5.3.4 Health Physics Center (HPC) Staff Checklist, Form 26553

5.3.5 Sample Receipt Log, Form 26498

5.3.6 Emergency Operations Facility (EOF) Briefing Guidelines, Form 26028

5.3.7 Emergency Response Log, Form 23895

5.3.8 Ten Mile EPZ Field Team Summary Map, Form 25130

6.0 DOCUMENTATION

All logs, forms and records completed as the result of implementing this procedure during an actual declared event shall be retained as permanent plant records. Transmit documents to the Permanent Plant File under DIC 2304.2.

A sub-set of documents generated during drills shall be maintained in the Emergency Preparedness Department files, as necessary, to support completion of drill/exercise commitments.

7.0 ATTACHMENTS

7.1 Comparison of Field Data with Dose Projections

7.2 Typical Setup for HP Center Receiving Area

7.3 Typical Setup for Alternate HP Center Control Point

7.4 EOF HVAC Automatic and Manual Operation

7.5 Dose Assessment Center Leadership Transfer Guide

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 9 of 14
Title: Radiological Emergency Manager Duties		

COMPARISON OF FIELD DATA WITH DOSE PROJECTION

1. Exposure Rate Readings

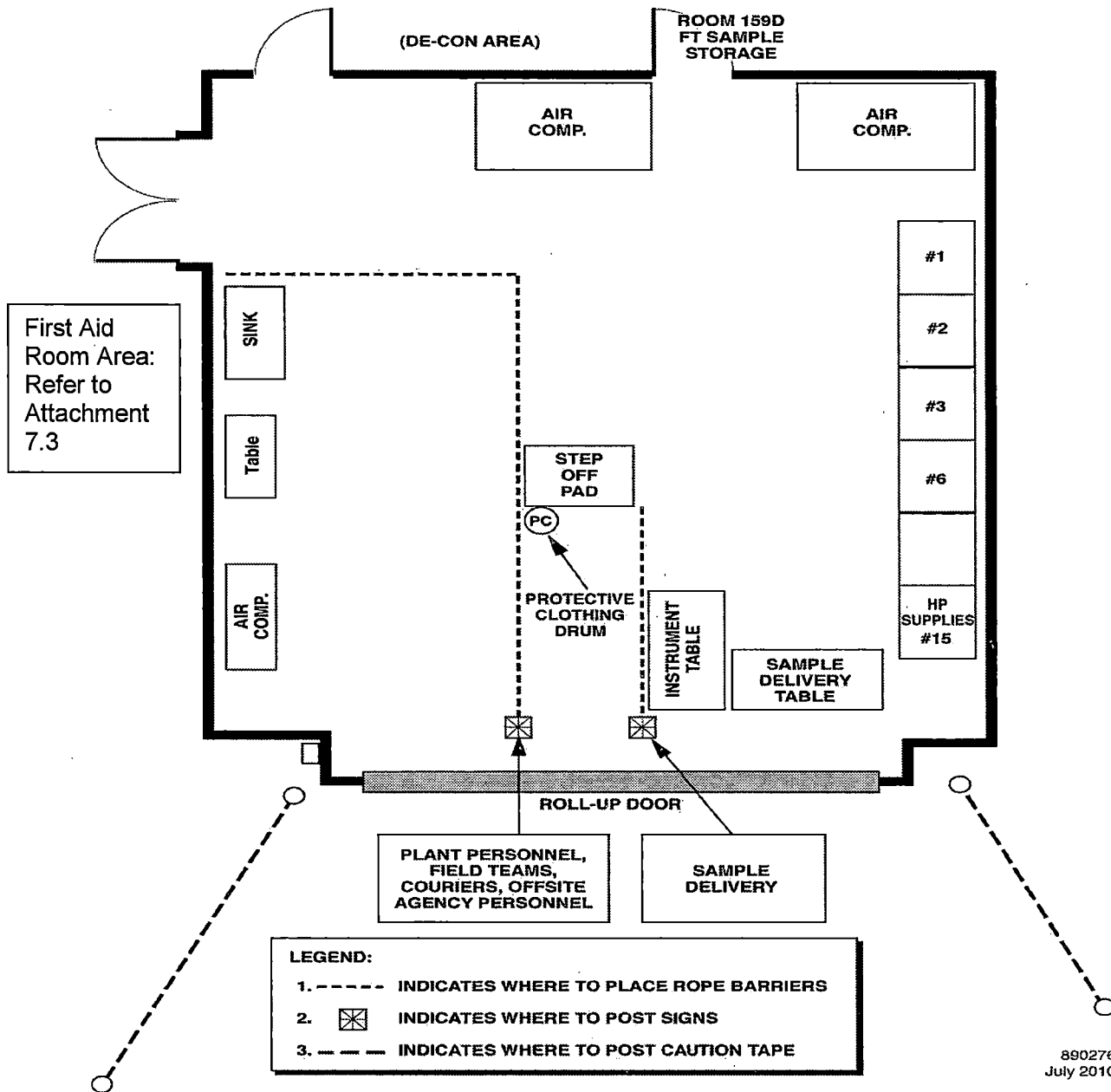
- a. Using dose assessment software, input field team air sample results or dose rates and compare resultant TEDE values at various distances with TEDE values from a projection based on plant monitor readings.
- b. Compare exposure rate measurements reported by field teams to a projected External Dose Rate for the same downwind distance.
- c. Consider the following in making your comparison:
 - 1) The time that the field measurement was made vs. the time that the projected release would reach the downwind distance based on wind speed.
 - 2) If release rates change significantly, then consider the time it would take the lower or higher effluent concentrations to reach the field team measurement location based on wind speed.
 - 3) Changes in sampling time, wind speed, wind direction, and stability class will cause field team readings to differ from dose projections.

2. Iodine Concentrations

- a. Using dose assessment software, input field team air sample results and compare resultant Thyroid CDE values at various distances with Thyroid CDE from a projection based on plant monitor readings.
 - 1) To convert field team air sample results to μ curies/cc, select either the particulate or cartridge icon on the Windows Desktop. When the program is active, enter the field team results to calculate the necessary value.
 - 2) Compare the Thyroid CDE rate based on field team data to a projected Thyroid CDE rate for the same downwind distance.
- b. Consider the items from Step 1.C of this Attachment when making your comparison.

END

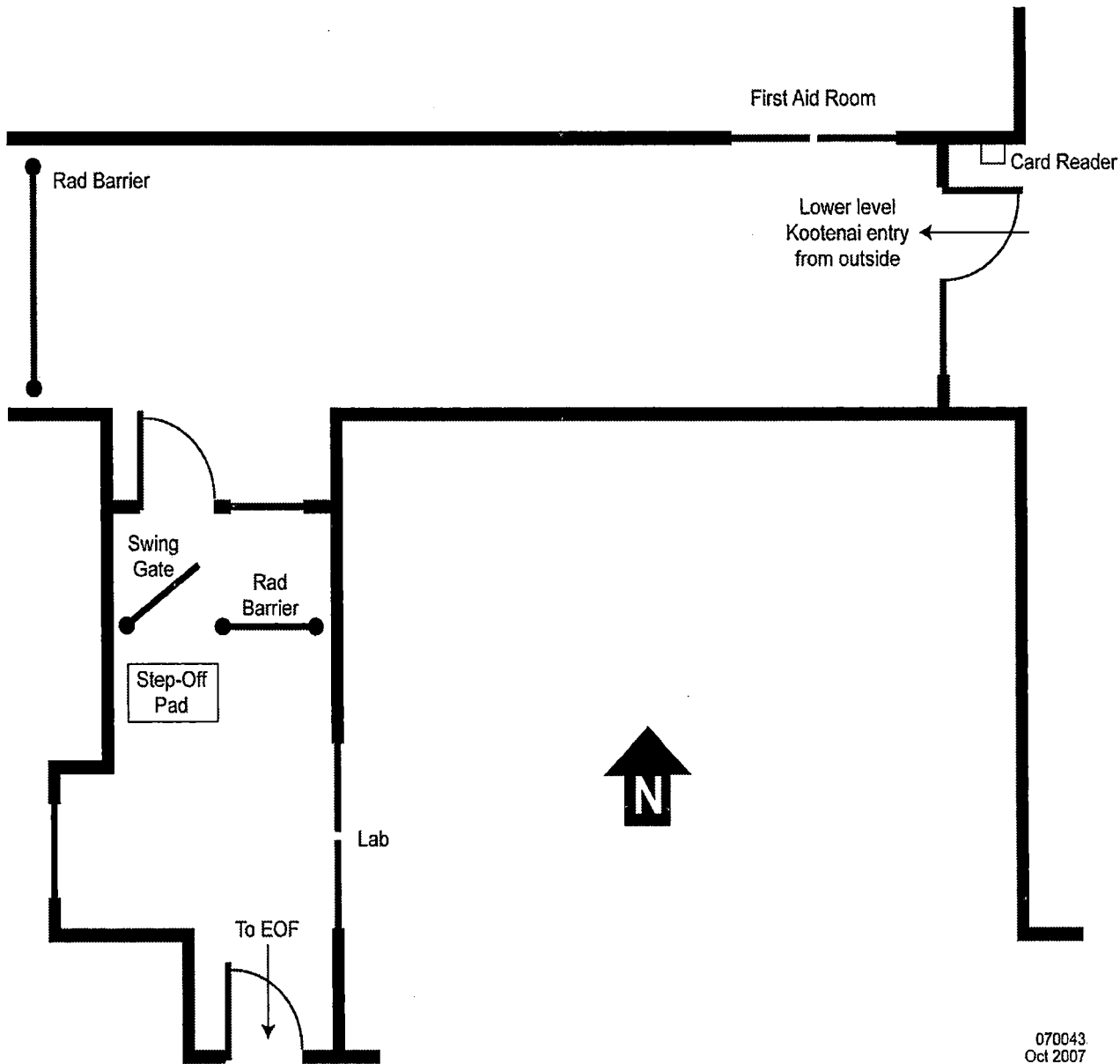
TYPICAL SETUP FOR HP CENTER RECEIVING AREA



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Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037
Title: Radiological Emergency Manager Duties		Minor Rev: 003
Page: 11 of 14		

TYPICAL SETUP FOR ALTERNATE HP CENTER CONTROL POINT



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Number: 13:11.7	Use Category: REFERENCE	Major Rev: 037
Title: Radiological Emergency Manager Duties		Minor Rev: 003
		Page: 12 of 14

EOF HVAC AUTOMATIC AND MANUAL OPERATION

Normal Operation:

The HVAC panel in Room 121 will indicate as follows:

AHU-1:	off	AHU-2:	off	Misc.:	off
EOF ISOL.:	off	AD4B:	off	SF3:	lighted

MODE 1 - Kootenai Building Isolation

If outside air activity causes the intake air radiation monitor on AHU-1 to trip at 100 mR/hr, the HVAC panel in Room 121 will indicate as follows:

AHU-1:	lighted	AHU-2:	lighted	Misc.:	lighted
EOF ISOL.:	off	AD4B:	off	SF3:	lighted

This configuration isolates the Kootenai Building and recirculates first floor air through HEPA filters.

MODE 2 - EOF Isolation

If return air activity causes the return air radiation monitor on AHU-1 to trip at 50 mR/hr, the HVAC panel in Room 121 will indicate as follows:

AHU-1:	lighted	AHU-2:	lighted	Misc.:	lighted
EOF ISOL.:	lighted	AD4B:	lighted	SF3:	off

In this configuration, the EOF is sealed off from the rest of the Kootenai Building. Fan SF-3 recirculates EOF air through HEPA filters.

MODE 3 - EOF Stagnation

If the SF-3 return air radiation monitor trips at 50 mR/hr, SF-3 will stop and the EOF will remain isolated as in Mode 2. The SF-3 light on the Room 121 panel will be ON.

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 13 of 14
Title: Radiological Emergency Manager Duties		

MANUAL OPERATION

CAUTION

Due to the potential for airborne contamination and area radiation, HP surveys of the following areas should be performed prior to entry.

Modes 1 & 2:

Obtain EOF HVAC key (1 F 8) from EOF key locker. Enter stairwell on 2nd floor east side by Auditorium entrance.

At top of stairs, continue left 180°, facing east wall. Above handrail at your left are two radiation indicators. Above the indicators, the gray box contains the switches for Modes 1 and 2.

NOTE: In the event that the auto-trip function fails to de-energize SF-3 on high radiation in the recirculation fan plenum (Mode 3), the manual disconnect switch is available to interrupt power to this fan.

Mode 3:

Enter SF-3 fan room, room 123. Radiation indicator is inside large gray cabinet on north wall next to door facing Room 121. Disconnect switch for SF-3 is around other side of fan from radiation indicator, on north wall. Throw this switch to OFF to stop SF-3.

END

Number: 13.11.7	Use Category: REFERENCE	Major Rev: 037 Minor Rev: 003 Page: 14 of 14
Title: Radiological Emergency Manager Duties		

DOSE ASSESSMENT CENTER LEADERSHIP TRANSFER GUIDE

Transfer of MUDAC leadership from Energy Northwest to the State of Washington occurs following conclusion of the Plume phase. The transfer signals the beginning of the ingestion pathway or intermediate phase.

Prior to the transfer, the following conditions should be met:

1. Plant conditions are stable
2. The immediate emergency has been mitigated
3. No further threat of a radioactive release exists that could exceed Protective Action Guidelines (PAGs) to the public
4. The plume has dispersed and no longer threatens to exceed PAGs.

The following documentation should be provided to the Washington State Health Liaison during the transfer:

1. Classification Notification Forms (CNFs) identifying PARs and notifications on Potassium Iodide (KI)
2. Emergency dose projection results
 - Include both the data sheet and map projections
3. Airspace closure requests


Conduct a briefing with the Washington State Health Liaison addressing the following:

1. Status and duration of the release _____
2. Air sample results _____
3. Meteorological conditions, including wind speed _____
 Direction: _____ Stability: _____
4. Current field team deployment: _____
5. Offsite Protective Action Decisions (evacuations, etc.) _____

END

Verify Revision Information Prior To Use	Initials	
	Date	

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 1 of 21
Title: Emergency Event Termination and Recovery Operations		

PLANT PROCEDURES MANUAL	PCN#: N/A
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Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 2 of 21
Title: Emergency Event Termination and Recovery Operations		

DESCRIPTION OF CHANGES

Justification (required for major revision)
Align procedure with the E-Plan

Page(s)	Description (including summary, reason, initiating document, if applicable)
All	No CHANGE BARS used due to re-arrangement of sections to provide better flow of procedure.
Throughout	Added steps/verbiage as appropriate to align with E-Plan in multiple locations.
Throughout	Replaced "shall" with "will" in statements that are not regulatory requirements.
Page 8	Replaced section 4.2.1 with the criteria from the E-Plan to transition to the recovery phase
Attachments	Attachment 7.5 was renumbered 7.1 "Guidelines to Terminate an Emergency" Attachment 7.1 was renumbered 7.2 "Conduct of Preliminary Recovery Discussion" Attachment 7.2 was renumbered 7.3 "Recovery Phase Prioritization Methodology" Attachment 7.3 was renumbered 7.4 "Recovery Phase Operational Plan Development Guidelines" Attachment 7.4 was renumbered 7.5 "Suggested Recovery Task Force Organization Chart"
Page 9	Minor rev 001: Revised Step 4.2.5 to change referenced Attachment from "7.12" to "7.2". Editorial change only.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 3 of 21
Title: Emergency Event Termination and Recovery Operations		

TABLE OF CONTENTS

		<u>Page</u>
1.0	PURPOSE	4
2.0	DISCUSSION.....	4
2.1	Precautions.....	4
2.2	General Guidance.....	4
3.0	RESPONSIBILITIES	6
4.0	PROCEDURE	7
4.1	Termination of an Unusual Event or Alert.....	7
4.2	Termination of a Site Area Emergency or General Emergency and Transition to Recovery.....	8
5.0	REFERENCES	12
6.0	DOCUMENTATION	12
7.0	ATTACHMENTS	12
7.1	Guidelines to Terminate an Emergency	13
7.2	Conduct of Preliminary Recovery Discussion.....	14
7.3	Recovery Phase Prioritization Methodology	16
7.4	Recovery Phase Operational Plan Development Guidelines.....	17
7.5	Suggested Recovery Task Force Organization Chart.....	21

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 4 of 21
Title: Emergency Event Termination and Recovery Operations		

1.0 PURPOSE

The purpose of this procedure is to provide the decision making criteria and instructions for termination of the Emergency phase and transition to the Onsite Recovery Operations. The procedure also provides guidance for the Recovery Manager, the designated Recovery Organization, and the Recovery Phase Task Force, on onsite recovery planning. {R-5.1.1}

2.0 DISCUSSION

2.1 Precautions

2.1.1 The termination of an emergency classification or the transition to Recovery should be closely coordinated with the state and local authorities and federal agencies.

2.1.2 The Recovery Manager will ensure that onsite Emergency Response Organization (ERO) and appropriate offsite agencies are notified prior to initiating any recovery operations with a potential for radiological releases.

2.2 General Guidance

2.2.1 This procedure provides guidance and instructions for the termination of an Unusual Event or Alert emergency classification and the transition from a Site Area Emergency or General Emergency classification to the Recovery phase.

2.2.2 Emergency actions will shift to the recovery phase once the immediate corrective and protective actions have established effective control over the incident.

2.2.3 The individual responsible for emergency command and control and referred to as the Emergency Director, i.e., the Shift Manager (SM), Emergency Operations Facility (EOF) Manager, or Technical Support Center (TSC) Manager, is responsible for implementation of this procedure.

2.2.4 The extent of recovery activities will dictate the precise framework of the Recovery Organization:

- a. For an Unusual Event classification, the close-out of the event will normally involve termination of the emergency classification and notification of the ERO. Any necessary follow-up activities would be limited to in-plant or onsite areas and coordinated and managed by the site organization through normal work management and corrective action procedures. The normal onshift organization should be adequate to perform necessary close-out actions.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 5 of 21
Title: Emergency Event Termination and Recovery Operations		

- b. For an Alert classification, the close-out of the event will normally involve termination of the emergency classification and dismissal of the in-center ERO. Any necessary follow-up activities would be limited to in-plant or onsite areas and coordinated and managed by the site organization. In some cases, a Recovery Phase Operational Plan may be appropriate for the close-out of an Alert classification if substantial damage has occurred to plant structures or equipment. The Emergency Director should make this determination based on the extent of damage and other considerations.
- c. For the Site Area Emergency and General Emergency classifications, the proper close-out of the event involves the establishment of a Recovery Phase Task Force under the direction of a Recovery Manager, and the transition to the Recovery phase. During Recovery, overall management of recovery activities is the responsibility of the Recovery Manager with the Plant General Manager overseeing recovery activities within the respective Plant organizations.

The initial recovery efforts should encompass the following actions:

- Conduct comprehensive radiation surveys of the plant facilities and define all radiological problem areas,
- Isolate and post all radiation and contamination areas with appropriate warning signs as conditions and available time allow, and
- Identify potential hazards that may impact recovery operations.

2.2.5 During the reentry activities 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 the development of recovery operations.

2.2.6 Recovery operations will be performed in accordance with written procedures developed by the Recovery Manager and staff prior to implementation of any recovery action. These procedures shall be based upon information collected by the initial reentry team(s) and any subsequent updates. Special precautions will be identified for any potentially hazardous conditions. If radiological hazards exceed the boundaries of the radiation access controlled areas, radiological controls will be implemented to prevent unauthorized or unintentional entry into hazardous areas.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 6 of 21
Title: Emergency Event Termination and Recovery Operations		

3.0 RESPONSIBILITIES

- 3.1 The Emergency Director has the responsibility for determining when an emergency situation is stable and the plant is ready to enter the recovery phase and that the appropriate actions outlined in this procedure are taken.
- 3.2 The Recovery Manager is responsible for directing the activities of the Recovery Organization and should:
- Ensure that sufficient personnel from Columbia Generating Station and other organizations are available to support recovery.
 - Direct the development of a recovery plan and implementing procedures, as required.
 - Coordinate with the Corporate Nuclear Safety Review Board (CNSRB) to ensure adequate review of engineering activities and proper review and approval of the recovery plan and implementing procedures.
 - Coordinate the deactivations of emergency response facilities and personnel as appropriate.
 - Coordinate the integration of available state and Federal assistance into recovery activities.
 - Coordinate with offsite authorities, and provide support as required for offsite recovery activities.
 - Approve all technically oriented recovery information released by the Public Information Organization.
 - Periodically estimate total population exposure.
- 3.3 The Emergency Preparedness Manager is responsible for assistance with performing recovery phase activities and providing written summary of events to offsite agencies.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 7 of 21
Title: Emergency Event Termination and Recovery Operations		

4.0 PROCEDURE

4.1 Termination of an Unusual Event or Alert

NOTE: Attachment 7.1 contains guidelines to be followed should changing plant conditions warrant termination of an emergency classification.

- 4.1.1 IF substantial damage has occurred to plant systems or equipment, or if significant radiological releases or contamination have occurred onsite, THEN Recovery may be the more appropriate action, **REFER** to section 4.2
- 4.1.2 WHEN conditions have improved, stabilized and the following criteria are met, THEN CONSIDER termination of the emergency classification.
- Emergency Action Level (EAL) criteria are no longer met or exceeded, and
 - Prognosis for plant conditions is stable or improving.
- 4.1.3 WHEN the above criteria for termination are met, THEN TERMINATE the emergency classification.
- 4.1.4 **FILL** out a Classification Notification Form (CNF), Form 24075, **ENSURE** a summary of event close-out is provided in the "Description of Incident" section of the CNF.
- 4.1.5 **NOTIFY** offsite agencies, using the guidance found in PPM 13.4.1.
- 4.1.6 **NOTIFY** the Senior NRC Resident Inspector and NRC Headquarters upon termination of the event, using the guidance found in PPM 13.4.1.
- 4.1.7 Upon termination of an Unusual Event, **ANNOUNCE** the termination to the Control Room staff **AND NOTIFY** the on-call TSC Manager, EOF Manager and Joint Information Center (JIC) Manager.
- 4.1.8 Upon termination of an Alert, **DIRECT** the TSC to make the following PA announcement:
- "Attention all personnel, The Alert classification is terminated. Secure the Emergency Response Organization and Emergency Facilities and resume normal duties."
- 4.1.9 Upon termination of an Alert, **DIRECT** the JIC Manager to have a similar announcement made in the JIC. Additional comments may be added as necessary to update personnel.
- 4.1.10 **DIRECT** the Emergency Preparedness Manager to provide a written summary of the event to offsite authorities within 8 hours of termination for an Alert or within 24 hours of termination for an Unusual Event.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 8 of 21
Title: Emergency Event Termination and Recovery Operations		

4.2 Termination of a Site Area Emergency or General Emergency and Transition to Recovery

NOTE: Attachment 7.1 contains guidelines to be followed should changing plant conditions warrant termination of an emergency classification.

4.2.1 Prior to terminating an emergency and entering the recovery phase, The EOF Manager **COORDINATES** with the TSC Manager to ensure all of the entry conditions for Site Area Emergency or General Emergency are cleared and that the following criteria have been considered:

- The conditions which caused the emergency have stabilized, are under control and are unlikely to deteriorate further.
- 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.
- In-plant radiation levels are stable or decreasing.
- Radioactive releases are under control.
- The potential for an uncontrolled radioactive release is acceptably low.
- Containment pressure is within technical specifications.
- The reactor is in a stable safe shutdown condition and long-term core cooling is available as required.
- Any fire, flood, earthquake or similar emergency conditions no longer exist.
- Offsite conditions will not limit access of personnel and support resources to the site.
- Discussions have been held with DOE-RL, Washington, Oregon, affected counties and select regulatory agencies, and agreement has been reached to begin the recovery phase.
- NRC Headquarters (or the Director of Site Operations of the onsite response team) concurs with the transition to Recovery.

4.2.2 WHEN criteria to enter the recovery phase are met, THEN the Recovery Manager **INFORMS** emergency centers and offsite agencies using the guidance found in PPM 13.4.1, of the transition to recovery.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 9 of 21
Title: Emergency Event Termination and Recovery Operations		

- 4.2.3 The Recovery Manager **ENSURES** onsite ERO and appropriate offsite agencies are notified of the following;
- Prior to initiating any recovery operation with a potential for a radiological release
 - Changes in the key positions of the recovery organizational structure
- 4.2.4 **DIRECT** the Emergency Preparedness Manager to provide a written summary of the event to offsite authorities within 8 hours of termination of a Site Area Emergency or General Emergency.
- 4.2.5 The Recovery Manager **INITIATES** a discussion of recovery items with the Recovery Task Force members to develop a shutdown safety plan focusing on procedurally defined priorities discussion in accordance with Attachment 7.2.
- 4.2.6 **DIRECT** the EOF staff, the TSC Manager and staff, and the Operations Support Center (OSC) Manager and staff, to assess conditions in their respective areas and identify actions necessary to return the plant to a normal operational or cold shutdown status.
- These assessments should include, but not be limited to:
- The current operational status and condition of plant systems, structures and equipment involved in the emergency.
 - Identification of all systems, components or equipment damaged or made inoperable during the event.
 - An estimate of necessary repairs, parts and tools to restore all affected systems and equipment back to an operational condition.
 - Special tools, equipment or offsite support that may be required during the restoration period.
 - Identification of applicable plant surveillance tests and procedures required for post maintenance testing.
 - Identification of applicable system operability tests and procedures to restore plant systems to normal operation (or shutdown) configuration.
 - An estimate of liquid and solid radioactive waste generated during the event and recommendations on management and disposal.
 - Identification of special radiological requirements for personnel entry into affected areas with elevated dose rates or contamination levels.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 10 of 21
Title: Emergency Event Termination and Recovery Operations		

- An estimate of the decontamination and monitoring activities necessary to restore affected areas onsite, and offsite areas within the plant exclusion area boundary to pre-accident levels.
 - Establishment of a recovery phase environmental monitoring program. (EOF action)
 - Identification of special recovery actions that may need to be coordinated with the U.S. Department of Energy - Richland Operations. (EOF action)
 - Identification of special recovery actions or prior approval recommendations that require coordination with NRC, FEMA, or the State of Washington. (EOF action)
- 4.2.7 **DIRECT** the Site Support Manager to compile the action lists developed by the TSC and OSC which identify short and long term recovery items.
- 4.2.8 When the transition to Recovery occurs, **CONDUCT** control of work at the station using the normal administrative control procedures as specified in the Site Wide Procedures unless special conditions require preparation of specific Recovery Procedures.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 11 of 21
Title: Emergency Event Termination and Recovery Operations		

NOTE: The Recovery Phase Task Force should initially be made up of the key center Managers, i.e., the OSC, TSC, and JIC Managers, the Shift Manager or TSC Operations Manager, and the Energy Northwest Public Information Officer (PIO).

4.2.9 **DIRECT** the Recovery Phase Task Force to develop the Recovery Phase Operational Plan using the prioritization methodology in Attachment 7.3 and the development guidelines in Attachment 7.4.

The Recovery Phase Task Force (organization similar to Attachment 7.5) should:

- **PRODUCE** initial plans to cope with near and long term activities.
- **INCLUDE** a Shutdown Safety Plan established in accordance with PPM 1.20.3.
- **PROVIDE** input to the maintenance organization for an integrated outage plan.
- **PROVIDE** assistance to the Recovery Manager to coordinate transition of recovery activities from the recovery phase into a plant outage as deemed appropriate.
- **REVIEW, VALIDATE AND COMPLETE** the action list provided.

4.2.10 **SECURE** emergency response facilities as conditions permit and responsibilities for recovery are turned over to the Recovery Phase Task Force.

4.2.11 Following a Site Area Emergency or General Emergency, the CNSRB **REVIEWS AND COMMENTS** on the recovery planning effort to assure that all nuclear safety aspects of the recovery effort are satisfied and addressed per SWP-IRB-02.

4.2.12 The CNSRB **REPORTS** their findings to the Recovery Manager, who shall take the actions, deemed appropriate for safe recovery operations. {R-5.1.1}

4.2.13 All recovery operations are considered to be terminated when the plant has returned to pre-accident levels of radiation and contamination or to conditions which are acceptable and controllable for an extended period of time.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 12 of 21
Title: Emergency Event Termination and Recovery Operations		

5.0 REFERENCES

5.1 Regulatory / Licensing Documents

- 5.1.1 CGS Emergency Plan, Section 7
- 5.1.2 CGS Technical Specifications
- 5.1.3 10 CFR 50.47(b), Emergency Plans
- 5.1.4 10 CFR 50.54(x), Conditions of Licenses
- 5.1.5 10 CFR 50 Appendix E, IV.H, Recovery

5.2 Procedures

- 5.2.1 SWP-CAP-01, Corrective Action Program
- 5.2.2 SWP-IRP-02, Corporate Nuclear Safety Review Board
- 5.2.3 SWP-OPS-05, Restart Evaluation Process
- 5.2.4 PPM 1.20.3, Outage Risk Management
- 5.2.5 PPM 13.4.1, Emergency Notifications

5.3 Forms

- 5.3.1 Classification Notification Form, 24075

6.0 DOCUMENTATION

All logs, forms and records completed as the result of implementing this procedure during an actual declared event shall be retained as permanent plant records. Transmit documents to the Permanent Plant File under DIC 2304.2.

A sub-set of documents generated during drills shall be maintained in the Emergency Preparedness Department files, as necessary, to support completion of drill/exercise commitments.

7.0 ATTACHMENTS

- 7.1 Guidelines to Terminate an Emergency
- 7.2 Conduct of Preliminary Recovery Discussion
- 7.3 Recovery Phase Prioritization Methodology
- 7.4 Recovery Phase Operational Plan Development Guidelines
- 7.5 Suggested Recovery Task Force Organization Chart

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 13 of 21
Title: Emergency Event Termination and Recovery Operations		

GUIDELINES TO TERMINATE AN EMERGENCY

The purpose of this attachment is to provide specific examples of changing plant conditions that would warrant consideration of terminating the emergency.

CATEGORY	TERMINATION GUIDELINES
Fires	Fires extinguished and potentially impacted safety systems operable or Technical Specification actions complied with.
Spill	Tanks, pipes, valves, any other problem sources are empty and/or isolated.
Airborne	Source isolated and/or contained. Release is terminated and its cause is under control.
Unexpected increase in plant radiation	Cause determined and radiation levels are controlled. Actions are in progress to reduce radiation levels.
Release of toxic or flammable gases	Release terminated and hazardous atmosphere eliminated.
Explosion	Existing and potential hazards removed, destroyed and/or isolated.
Abnormal effluent	Liquid discharge is terminated, sampling is complete, and statistics verified. Public exposure to offsite radioactive material is reduced or eliminated.
Control Room evacuation	Plant is in cold shutdown and this condition is maintainable from the remote shutdown locations. Cause of evacuation is identified and under control.
Plant shutdown functions (not available or failed)	Unit is in cold shutdown and there is no potential for uncontrolled criticality.
Fuel handling accident - new or spent fuel damage channeled or unchanneled	Fuel elements, segments, or pellets not in a critical configuration and not capable of an uncontrolled change in configuration. Airborne activity has been evaluated and accountability of components is complete.
Water loss - LOCA Abnormal primary coolant leak	Source of leak identified. Ability to restore or maintain water level adequate for proper cooling.
Earthquake or other natural disaster	The plant is in a safe condition. Threat of aftershock has passed and any damage has been evaluated as to risk, if any.
Security threat	Threat to site is terminated and probability of recurrence has been removed.

END

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 14 of 21
Title: Emergency Event Termination and Recovery Operations		

CONDUCT OF PRELIMINARY RECOVERY DISCUSSION

The EOF Manager should lead the preliminary recovery discussions as follows:

1. Establish a conference call at the start of the discussions with those individuals that cannot attend the designated meeting location.
2. An individual should be assigned to take detailed notes in order to permit the ideas and suggestions made during the discussions to be incorporated in the Recovery Phase Operational Plan.
3. The discussions should begin with a review of the event chronology by the TSC Operations Manager, including:
 - The initial Plant conditions,
 - How and when the event was initiated,
 - Important transient situations, and
 - Current Plant conditions
4. Review the radiological consequences of the event by the Radiological Emergency Manager, including:
 - The radionuclide source (i.e., spent fuel, core, condensate storage tank, etc.),
 - The offsite release path (or potential release path),
 - Current offsite radiological conditions (e.g., plume dispersed, any contaminated areas, etc.), and
 - Current Plant radiological conditions (e.g., rad levels decreasing, release secured, high rad areas exist, etc.).
5. Review the offsite impact of the event by the Assistant EOF Manager, including:
 - The protective action recommendations made to the state and counties,
 - The success of emergency warning siren and EAS actuation,
 - The areas evacuated or sheltered by the counties,
 - Current actions being taken by the state.
6. Review the media attention that has been placed on the event including:
 - The timeliness of news releases and joint briefings (i.e., between Columbia Generating Station, NRC, FEMA, the states, and counties),
 - Major network or news agency actions, and
 - Current activities at the Joint Information Center.
7. Ensure that the Energy Northwest MUDAC personnel are assigned to support reentry and decontamination activities.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 15 of 21
Title: Emergency Event Termination and Recovery Operations		

8. Finally, the EOF Manager should open the discussion to the group to provide input on the following items:

	Discussion Item / Concern	Needed In Plan (Circle One)
a.	Are entries needed to high radiation areas in order to assess damage?	Yes / No
b.	Are there any Site/Plant areas that should have restricted access due to hazardous conditions?	Yes / No
c.	Are there any dose limitations on available personnel that could prevent satisfactory completion of recovery operations?	Yes / No
d.	Are there any immediate support equipment needs? And Is accessibility or availability a problem?	Yes / No
e.	Are there any sabotage or security concerns that require incident investigations?	Yes / No
f.	Is long-term cooling and protection of the core a concern?	Yes / No
g.	Can future radiation releases be controlled or prevented?	Yes / No
h.	Are communication systems and methods adequate to implement the recovery effort?	Yes / No
i.	Are state recovery organizations being established which will require our participation?	Yes / No
j.	Are periodic news releases and briefings going to be required to maintain a public dialogue?	Yes / No
k.	Are nuclear insurers going to be needed to assist with recovery costs and public compensation?	Yes / No
l.	Are offsite radiological conditions going to require Columbia Generating Station support of ingestion exposure concerns?	Yes / No
m.	Are recovery operations capable of being performed using current Plant procedures, including the ability to maintain exposure levels to 10 CFR 20 limits?	Yes / No

END

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 16 of 21
Title: Emergency Event Termination and Recovery Operations		

RECOVERY PHASE PRIORITIZATION METHODOLOGY

PRIORITY 1 - Protect the health and safety of the general public

- Personnel Safety
- Ensure no new release
- Maintain shutdown protection
- Maintain defense in depth

PRIORITY 2 - Protect the health and safety of plant staff and contractors

- Personnel safety
- Radiation protection/ALARA
- Enhance shutdown protection

PRIORITY 3 - Maintain and enhance the stability of plant systems and components

- Return components to operability
- Enhance system operability

PRIORITY 4 - Corrective or preventive modifications to systems or facilities for effective plant recovery

- Take preventive actions to enhance safety during recovery
- Determine and implement modifications for recovery

PRIORITY 5 - Logistics and/or facilities necessary to provide for reintroduction of full Energy Northwest work force

- Staff recovery activities
- Provide organization/facilities for recovery
- Determine and obtain supplies and logistical support

END

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 17 of 21
Title: Emergency Event Termination and Recovery Operations		

RECOVERY PHASE OPERATIONAL PLAN DEVELOPMENT GUIDELINES

A Recovery Phase Operational Plan should be developed as follows:

1. The Recovery Manager is responsible for coordinating the development of the Recovery Phase Operational Plan.

NOTE: If a section listed below is deemed inapplicable to the event which had occurred, it should still remain in the Plan with a description of why it is not applicable. Additional sections can be added or titles changed if recommended or approved by the Recovery Phase Task Force.

2. The Recovery Phase Operational Plan should, as a minimum, include the following:
 - a. Title Page
 - b. Table Of Contents
 - c. Sections:
 - Introduction/Event Description
 - Goals Of Recovery Efforts
 - Objectives And Objective Criteria
 - Description Of The Recovery Organization
 - Recovery Facilities
 - Major Tasks Onsite
 - Major Tasks Offsite
 - Recovery Schedule, including:
 - Statement on Prioritization Methodology similar to Attachment 7.3 used to Assess/Prioritize/Sequence Recovery Operations
 - Short Term Prioritized Recovery Plan (7 Days) Detailed, Resource Loaded Gantt Chart
 - Long Term Prioritized Recovery Plan (30-90 Day) Detailed, Resource Loaded Gantt Chart
 - d. Attachments

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 18 of 21
Title: Emergency Event Termination and Recovery Operations		

3. Members of the Recovery Phase Task Force should be assigned to:
 - a. Perform a preliminary assessment of the event in order to draft the Introduction/Event Description section of the Recovery Phase Operational Plan.
 - b. Perform a detailed analysis of the event including as a minimum:
 - Establishing pertinent initial conditions prior to the start of the event,
 - Preparing a detailed chronology of the event, and
 - Performing a root cause analysis (guidance can be found in SWP-CAP-01, Corrective Action Program).

4. The initial goals of the Recovery Phase Operational Plan should include:

NOTE: The Recovery Phase Operational Plan goals should support the primary goal of the State and Local Recovery Plan to take those actions which are necessary to compensate, relocate, or permit the return of members of the public who had been evacuated or otherwise affected by the event.

- a. To restore the Plant to an operational pre-emergency condition.
 - OR
 - b. To place the Plant in a safe, long-term shutdown condition.
5. The initial objectives of the Recovery Phase Operational Plan should include the following:
 - a. The determination of the extent of the damage to equipment and plans to restore and maintain equipment necessary for plant safety.
 - b. The necessity for installation of additional radiation shielding.
 - c. The necessity for placement of additional rope barriers and signs, including the need to redefine or extend the boundaries of the Radiological Controlled Area (RCA).
 - d. The identification of areas and methods for performing decontamination.
 - e. The identification of the necessary cleanup that will be required to place the Plant in an acceptable long-term condition.
 - f. The ability to keep the news media and the public informed of actions and progress being made during the recovery.
 6. Criteria should be developed to indicate how each objective will be accomplished and at what time it will be considered complete.

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 19 of 21
Title: Emergency Event Termination and Recovery Operations		

7. A Recovery Organization chart should be included along with a description of the responsibilities of the key individuals involved (refer to Attachment 7.5).
8. A description of the recovery facilities should be included, along with the identification of the major activities being performed at each facility.

NOTE: If the description of a major onsite task requires extensive discussion or detailed drawings (e.g., installation of an independent or backup support system), a summary of the task should be provided in the body of the Plan with the details provided in an attachment following the last section of the Plan.

9. A description of the major tasks to be accomplished onsite should list all surveillance, equipment repair, procedure development, report writing, etc., that must occur along with the individual or group assigned to accomplish it.

NOTE: If a reentry activity requires extensive discussion or detailed drawings (e.g., entry into a contaminated Containment Building), a summary of the reentry should be provided in the body of the Plan with the details provided in an attachment following the last section of the Plan. The quarantine of equipment should be coordinated with the NRC's Augmented Inspection Team.

10. A list of those areas that have been restricted or quarantined as a result of the emergency should be provided, along with descriptions of how reentry will be accomplished for each situation.

NOTE: If the description of a major onsite task requires extensive discussion or detailed drawings (e.g., installation of an independent or backup support system), a summary of the task should be provided in the body of the Plan with the details provided in an attachment following the last section of the Plan.

11. A description of the major tasks to be accomplished onsite should list all field surveys, disposition of contaminated properties and/or foodstuffs, procedure development, report writing, etc., that must occur along with the individual or group assigned to accomplish it.
12. A list of those offsite areas that have been evacuated and/or contaminated as a result of the emergency should be provided, along with a discussion of how this may or may not impact the onsite recovery efforts, including access requirements to the site for each situation.

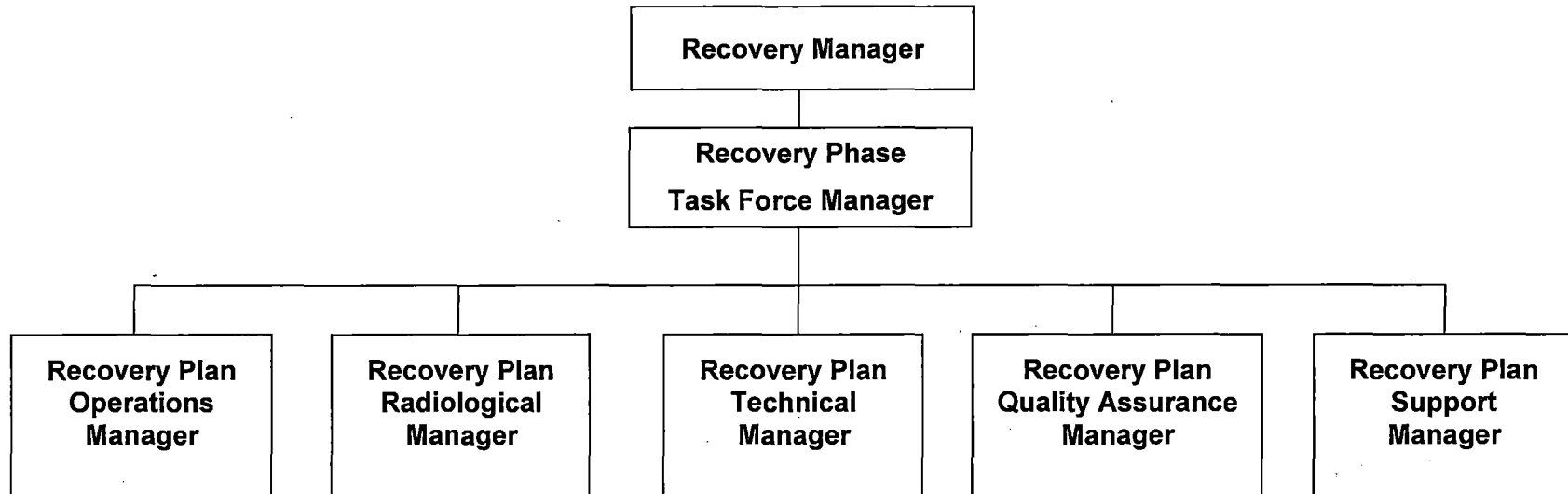
Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017 Minor Rev: 001 Page: 20 of 21
Title: Emergency Event Termination and Recovery Operations		

13. An overview should be provided of the methods to be used to interface the recovery efforts with the standard site procedures that normally are used to handle significant Plant events (such as SWP-CAP-01, Corrective Action Program; SWP-OPS-05, Restart Evaluation Process).
14. A description of the overall schedule of events should be provided in the Recovery Phase Operational Plan, including:
 - a. Expected start and completion dates of major tasks (supported by resource loaded Gantt Charts if possible).
 - b. Identification of when periodic updates or meetings will be conducted for state, county, federal officials, and the news media.

END

Number: 13.13.2	Use Category: REFERENCE	Major Rev: 017
Title: Emergency Event Termination and Recovery Operations		Minor Rev: 001
		Page: 21 of 21

SUGGESTED RECOVERY TASK FORCE ORGANIZATION CHART



Areas of Oversight Responsibilities:

- | | | | | |
|---|---|--|---|---|
| <ul style="list-style-type: none"> • Production Scheduling • Safety • Maintenance • Security (Plant) • Operations • Shutdown Safety | <ul style="list-style-type: none"> • Decon • Restoration (HP) • Radwaste • Surveys • Environmental | <ul style="list-style-type: none"> • Fuels • Licensing • Vendors • Analysis • Plant Support | <ul style="list-style-type: none"> • Commitments • Reviews • Oversight • Qualifications | <ul style="list-style-type: none"> • Procedures • Scheduling • Finance • Public Relations • Legal • Site Support • Procurement • Add'l Staffing |
|---|---|--|---|---|

NOTE: The NRC will be invited to participate in this task force as deemed appropriate

END