

DETROIT EDISON - FERMI 2
AUTOMATED RECORD MANAGEMENT
DISTRIBUTION CONTROL LIST
01/30/03

To: 00935

US NRC
DOCUMENT CNTRL DESK

PAGE 1

WASHINGTON, DC 20555

Media: 8 1/2 X 11

DTC	Doc. Serial Number	Page	Rev	Number	Cnt	Issue	Sec	Status
				Copies	Lvl	Date		
TPEPT	EP-402		20	1	ST	01/30/03		AFC

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Ref: cb3461

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RESPONSIBILITIES OF THE RECOVERY ORGANIZATION

Revision Summary

- 1) Added EP-302-01 as a Use Reference in Section 2.0.
- 2) Changed the title of the person acting as the NSRG Coordinator in step 4.5.9.
- 3) Added reference to the Recovery Manager/delegate in Section 5.1.
- 4) Deleted former step 5.1.1 due to redundant information.
- 5) Clarified step 6.2.7 to identify primary areas of interest for sampling.
- 6) Deleted step 6.16.3 due to redundant information.
- 7) Added new Section 6.18 to reference EP-302-01, Attachment 1.
- 8) Added step 6.21 to address need for post accident sampling.
- 9) Added examples of suggested post accident samples to Attachment 1, Recovery Operations Checklist.
- 10) Made minor editorial changes throughout text. No revision bars used to mark these changes.

Implementation Plan

- 1) This procedure goes into effect upon issuance.

Attachments

1 120302 Recovery Operations Checklist

Enclosures - None

<i>Information and Procedures</i>				
DSN EP-402	Revision 20	DCR # 02-1775	DTC TPEPT	File # 1703.10
IP Code I	Date Approved 1-28-03	Released By M Struck /s/	Date Issued 1-30-03	Recipient 935

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1.0 PURPOSE

To prescribe the methods for providing guidelines for recovery actions necessary to restore the plant to its pre-emergency status.

2.0 USE REFERENCES

2.1 EP-302-01, Operational Support Center

3.0 ENTRY CONDITIONS

3.1 The RERP Plan is activated.

3.2 The emergency situation has stabilized.

3.2.1 Radiation levels in all in-plant areas are stable and decreasing with time.

3.2.2 Reactor is in a shutdown condition with adequate core cooling.

3.2.3 Release of radioactive materials to the environment is within ODCM limits and the potential for additional uncontrolled releases is minimal.

3.2.4 Fire, flooding, or similar emergency conditions which do not affect reactor operations are under control.

3.3 The Emergency Officer or Emergency Director orders assembly and activation of the Recovery Organization.

3.4 The Recovery Organization shall also assemble to ensure safe and correct measures are taken to complete activities performed when the one or more of the following criteria are met:

3.4.1 Normally occupied areas of the plant are inaccessible due to increased radioactivity following an accident.

3.4.2 One or more of the three fission product barriers have failed.

3.4.3 Corrective measures have the potential for affecting plant access or the health and safety of the general public.

4.0 GENERAL INFORMATION

- 4.1 In any emergency, the immediate action is to limit the consequences of the incident to maximize protection for plant personnel and the general public.
 - 4.1.1 Once the immediate corrective and protective actions have established an effective control over the emergency, subsequent actions are part of the recovery program.
 - 4.1.2 All actions in the recovery program shall be deliberately planned to minimize hazards to recovery personnel.
- 4.2 The Emergency Officer (or Emergency Director if the Emergency Operations Facility is not activated) may assemble the Recovery Organization following any event declaration.
- 4.3 The recovery plan must be flexible enough to meet the needs of the existing conditions. Edison shall coordinate with federal, state, and local officials if onsite operations have the potential for offsite impact.
- 4.4 The Manager – Nuclear Outage Management/alternate shall serve as the **Recovery Manager**.

NOTE: Other personnel may be called upon to assist the Recovery Organization.

- 4.5 The following personnel (or their alternates) shall also serve in the Recovery Organization and shall report to the Recovery Manager:
 - 4.5.1 The Director – Nuclear Production shall act as the **Nuclear Production Coordinator**.
 - 4.5.2 The Regional Manager, Regional Relations shall act as the **Offsite Activities Coordinator**.
 - 4.5.3 The Director – Nuclear Engineering shall act as the **Technical and Engineering Support Coordinator**.
 - 4.5.4 The Manager – Nuclear Strategic Planning shall act as the **Administration and Planning Support Coordinator**.
 - 4.5.5 The Manager – Nuclear Security shall act as the **Nuclear Security Coordinator**.
 - 4.5.6 The Manager – Nuclear Quality Assurance shall act as the **Quality Assurance Coordinator**.

- 4.5.7 The Supervisor, Nuclear Information shall act as the **Public Information Coordinator**.
- 4.5.8 The Outage Coordinator shall act as the **Outage Management Coordinator**.
- 4.5.9 The Manager – Nuclear Licensing shall act as the **Nuclear Safety Review Group Coordinator**.

5.0 IMMEDIATE ACTIONS

- 5.1 Upon activation, the Recovery Manager/delegate shall complete Attachment 1, Recovery Operations Checklist.
 - 5.1.1 Recovery Manager/delegate sign and date completed form.

6.0 PROCEDURE

- 6.1 The Recovery Manager shall:
 - 6.1.1 Declare when plant conditions will permit recovery operations to begin.
 - 6.1.2 Authorize funds, personnel, and equipment to implement recovery operation.
 - 6.1.3 Coordinate with Emergency Officer (or Emergency Director if EOF is not functional) to promptly notify offsite authorities that a recovery operation will be initiated and define any expected or potential offsite impact.
 - 6.1.4 Ensure coordination of offsite recovery activities with appropriate federal, state, and county authorities.
- 6.2 The Nuclear Production Coordinator shall:
 - 6.2.1 Authorize start of plant reentry activities.
 - 6.2.2 Prepare:
 1. An analysis of circumstances leading up to and resulting from the emergency
 2. Recommendations to prevent a recurrence

- 6.2.3 Ensure radiation protection requirements have been met and that ALARA concerns are incorporated in recovery-related operations activities.
 - 6.2.4 Oversee plant during recovery operation.
 - 6.2.5 Develop procedures to support recovery efforts.
 - 6.2.6 Ensure plant personnel are trained in recovery-related operating and maintenance procedures.
 - 6.2.7 Develop post-accident plans and procedures for obtaining post accident samples of the Reactor Coolant System, Drywell, and/or Torus, or other systems and components as needed.
 - 6.2.8 Implement recovery plans and schedules.
 - 6.2.9 Implement offsite and onsite radiation monitoring programs.
 - 6.2.10 Authorize return to normal operations when approved by the Nuclear Regulatory Commission.
- 6.3 **The Offsite Activities Coordinator shall:**
- 6.3.1 Provide recovery operations information to offsite officials.
 - 6.3.2 Coordinate offsite activities with onsite activities.
- 6.4 **The Technical and Engineering Support Coordinator shall:**
- 6.4.1 Develop post-accident engineering procedures.
 - 6.4.2 Coordinate activities with Nuclear Operations.
 - 6.4.3 Analyze and develop solutions for instrumentation difficulties and the functions controlled by those instruments.
 - 6.4.4 Ensure ALARA concerns are incorporated in recovery-related engineering activities.
 - 6.4.5 Analyze situations and develop solutions necessary to achieve and maintain reactor core stability.
 - 6.4.6 Coordinate Architect/Engineer or consultant activities if required.

- 6.4.7 Analyze and develop input pertinent to plant licensing issues.
- 6.4.8 Coordinate design activities that support recovery activities.
- 6.5 **The Administration and Planning Support Coordinator shall:**
 - 6.5.1 Provide administrative and clerical support for recovery operation.
 - 6.5.2 Establish schedules and priorities that ensure an orderly and progressive work flow.
 - 6.5.3 Control and expedite Corporate, vendor-contract, and governmental commitments.
- 6.6 **The Nuclear Security Coordinator shall coordinate all security activities, such as personnel accountability and site access control.**
- 6.7 **The Quality Assurance Coordinator shall ensure that quality assurance requirements are met in all aspects of recovery operations.**
- 6.8 **The Public Information Coordinator shall disseminate information about recovery operations to the media.**
- 6.9 **The Outage Management Coordinator shall:**
 - 6.9.1 Coordinate outage activities with the Technical and Plant organizations, and also with any construction activities.
 - 6.9.2 Provide input to determine outage activity priorities.
- 6.10 **The Nuclear Safety Review Group Coordinator shall:**
 - 6.10.1 Ensure all nuclear safety aspects of reentry and recovery operations are satisfied by coordinating the Nuclear Safety Review Group to review various recovery organization activities.
 - 6.10.2 Analyze and develop input pertinent to plant licensing issues.
 - 6.10.3 Provide expertise to support offsite radiation monitoring programs and activities.
- 6.11 **The Recovery Organization shall review all information and data obtained during the emergency. Recovery Organization meetings shall be documented with formal meeting minutes.**

- 6.12 The Recovery Manager shall ensure the following actions are accomplished in Recovery Meetings:
- 6.12.1 Plant areas affected by radiation and/or contamination shall be defined by reviewing radiation survey data, and access to those areas shall be controlled as appropriate.
 - 6.12.2 Damage to plant equipment and systems shall be determined.
 - 6.12.3 Program to return systems and equipment to pre-emergency conditions shall be planned.
 - 6.12.4 All significant repair events and milestones shall be scheduled.
 - 6.12.5 Recovery Plan Implementing Procedures shall be reviewed.
 - 6.12.6 Radiation exposure records of personnel required to participate in recovery operations in the plant shall be reviewed.
- 6.13 Recovery Plan Implementing Procedures shall be developed, reviewed, and approved as follows:
- 6.13.1 Appropriate Nuclear Operations groups shall develop necessary Recovery Plan Implementing Procedures.
 - 6.13.2 The Recovery Organization shall review Recovery Plan Implementing Procedures and make recommendations where appropriate.
 - 6.13.3 OSRO shall approve the Recovery Plan Implementing Procedures.
- 6.14 The Recovery Organization shall develop a staffing plan to ensure that the recovery schedule can be maintained.
- 6.15 The Recovery Organization shall review the status of the recovery effort to ensure the Recovery Plan has been implemented.
- 6.16 Emergency teams may be required to enter the plant to gather information required for the Recovery Organization. Selection of personnel for the teams should be based on their knowledge of the plant, expertise, and radiation exposure history.
- 6.16.1 If the Emergency Response Organization is still activated, the Emergency Director shall approve team composition and entry.

- 6.16.2 If the Emergency Response Organization is no longer activated, the Manager - Nuclear Operations shall approve team composition.
- 6.17 Emergency teams shall be briefed by either the Emergency Director or Manager - Nuclear Operations (or representative) on the following activities and conditions prior to entry:
 - 6.17.1 Special or hazardous conditions that may be encountered
 - 6.17.2 Areas to be surveyed
 - 6.17.3 Radiation and contamination levels anticipated
 - 6.17.4 Radiation survey equipment required
 - 6.17.5 Special shielding requirements
 - 6.17.6 Protective clothing and equipment required
 - 6.17.7 Access control procedures (issuance of new Radiation Work Permits)
 - 6.17.8 Exposure limits and personal dosimetry required
 - 6.17.9 Decontamination requirements
 - 6.17.10 Communications equipment required
 - 6.17.11 Special tasks (for example: isolating leaks; initial damage repair) to be conducted
- 6.18 Emergency team briefs shall be documented using the OSC Team Briefing/Debriefing Sheet, Attachment 1 of EP-302-01.
- 6.19 Results of emergency team activities shall be reported to either Emergency Director or Manager - Nuclear Operations, as appropriate. Such information may include:
 - 6.19.1 Status of plant equipment
 - 6.19.2 Accessibility and condition of survey area
 - 6.19.3 Radiological survey results
 - 6.19.4 Other visible or potential personnel or equipment hazards

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- 6.20 Under accident conditions which cause cracking or other Radwaste Building subgrade damage, monitoring wells will be drilled between the affected structures and the Lake Erie shoreline to monitor subsurface travel and dispersion of radioactive material.
- 6.21 In order to address public concerns and to help establish recovery, post accident sampling should be considered.

7.0 FOLLOW-UP ACTIONS

- 7.1 Recovery operations may be terminated when any of the following conditions are met:
 - 7.1.1 The plant is returned to pre-accident radiation and contamination levels.
 - 7.1.2 Conditions exist which are acceptable and controllable for an extended period of time.
 - 7.1.3 Return to a normal operating condition has been achieved.
- 7.2 Upon completion of recovery activities, the Recovery Organization shall ensure the following items have been completed:
 - 7.2.1 All onsite and offsite personnel involved with the emergency and the recovery have been notified of the current conditions and of termination of activities under the RERP Plan.
 - 7.2.2 Emergency Response Facilities have been secured and actions commenced to restore them to the pre-emergency condition.
 - 7.2.3 News media facilities have received the final status briefing on the emergency and recovery operations, and those facilities are being restored to pre-emergency conditions.
 - 7.2.4 Short- and long-range action plans have been developed to identify and evaluate the causes and effects of the problems encountered during the emergency and their impact on future plant operations.
 - 7.2.5 Recommendations for revising the RERP Plan and/or procedures have been made.

- 7.2.6 Applicable Operations personnel have been trained or briefed on changes that occurred to the plant during the emergency.
- 7.2.7 Emergency equipment and supplies have been replenished.
- 7.3 The Recovery Manager shall ensure that all documentation related to the emergency and to the recovery program is assembled and forwarded to the Supervisor, RERP.

8.0 RECORDS

- 8.1 One original (or clear photocopy) of meeting minutes from each Recovery Organization meeting is a required record and shall be retained or dispositioned in accordance with established requirements.
- 8.2 Required records may be generated from procedures used concurrently with this procedure. Such records shall include, but are not limited to, Recovery Plan Implementing Procedures.

END OF TEXT

RECOVERY OPERATIONS CHECKLIST

OK N/A

- Receive Briefing from Emergency Officer (or Emergency Director if EOF is not functional).
 - current classification
 - on-site protective action recommendations
 - off-site protective action recommendations
 - status of the reactor core
 - status/operability of plant equipment
 - status/operability of plant instrumentation
 - status of repair activities
 - current radiological conditions in the plant
 - current radiological conditions off-site
 - status of environmental sampling
 - status of Federal Response Team(s) (i.e. FRMAC personnel)
 - status of NRC Response
 - status of off-site support requests
 - status of off-site notifications
 - status of HAZWOPER response
 - all safety hazards

ACCIDENT ASSESSMENT:

- Identify the sequence of events for the incident.
- Determine extent of equipment damage.
- Identify industrial safety hazards present in the plant and on-site.
- Determine engineering concerns.
- Determine amount of core damage.
- Determine location of monitoring wells.

RECOVERY OPERATIONS CHECKLIST

COMMUNICATIONS:

OK N/A

- Determine notification requirements.

- Establish a communications process for contacting the federal, state, and county authorities.

- Notify the State authorities that recovery operations have begun.

- Notify designated corporate personnel of recovery plan and activities.

- Contact Architect/Engineer or consultant for structural concerns.

- Contact Corporate Legal Department.

- Update nuclear insurers on plant status and activities.

- Review previous press releases.

- Establish method for dissemination of information to the public (i.e. JPIC, On-Site News Center, etc.).

WORK CONTROLS:

- Develop plans/procedures to assure reactor core stability.

- Establish a method for reviewing all proposed procedures and activities for ALARA concerns.

- Contact On-Site Review Organization to review and approve Recovery Plan Implementing Procedures.

- Develop procedures to maintain physical security of the site.

- Develop plant equipment and instrumentation repair schedules.

- Contact Nuclear Safety Review Group to review recovery plan and activities.

- Establish methodology for quality assurance review of recovery activities.

- Establish a work schedule for recovery personnel.

- Determine plant licensing issues and/or impact.

RECOVERY OPERATIONS CHECKLIST

RADIOLOGICAL CONTROLS AND ASSESSMENT:

OK N/A

- Determine radiological conditions in the plant and on-site.
- Establish post accident radiological survey requirements.
- Establish post accident chemistry sampling requirements. Examples may include:
 - Isotopic samples of reactor coolant
 - Primary containment hydrogen concentrations
 - Suppression pool (Torus) pH
 - Other samples, as needed
- Establish off-site and on-site environmental sampling schedules.
- Review radiation exposures to initial emergency response personnel.
- Document any variances from routine radiological controls and practices used by recovery personnel.
- Review radiation exposures to recovery personnel.

SAFETY:

- Develop appropriate safety measures for all on-site personnel.
- Review on-site protective actions, currently in place, for applicability.
- Establish training requirements for recovery personnel.
- Provide stand-down areas for recovery personnel.
- Establish trauma counseling for emergency response personnel.
- Establish a medical surveillance program for emergency responders and recovery personnel.

RECOVERY OPERATIONS CHECKLIST

RESOURCE MANAGEMENT:

- Review INPO Resource Manual for lists of possible resources.
- Establish financial funding for recovery operations.
- Contact the Purchasing Department for assistance.
- Obtain clerical support for assistance.
- Establish a liaison for foreign labor/vendor interface.

TERMINATION OF RECOVERY OPERATIONS:

OK N/A

- Determine termination criteria from current classification.
- Emergency equipment and supplies have been replenished.
- Emergency Response Facilities have been restored to their original condition.
- Outage schedule in place.
- Mitigation strategy has been identified.
- NRC concurs with termination from Recovery Operations.
- Dose to recovery workers has been determined.
- Notify all off-site agencies and support organizations of the termination of recovery operations.
- All recovery related paperwork (i.e. logs, notes, press releases, forms, etc.) have been collected and sent to the Supervisor, RERP.

Completed by: _____

Date: _____