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PROCEDURE NUMBER: EI-5.1  
TITLE: RECOVERY

TRANSMITTAL: LISTED BELOW ARE NEW/REVISED PROCEDURES WHICH MUST BE IMMEDIATELY INSERTED INTO OR DISCARDED FROM YOUR PROCEDURE MANUAL.

Action Required	Section or Description
REMOVE AND DESTROY	EI-5.1, R/0, ENTIRE PROCEDURE
REPLACE WITH	EI-5.1, R/1, ENTIRE PROCEDURE

SIGN, DATE, AND RETURN THE ACKNOWLEDGEMENT FORM WITHIN 10 DAYS TO THE PALISADES PLANT DOCUMENT CONTROL.

SIGNATURE OR INITIALS

DATE

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**ATTACHMENTS**

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- Attachment 2, "Recovery Organization Worksheet"
- Attachment 3, "Recovery Plan Format"
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**USER ALERT**  
REFERENCE USE PROCEDURE

Refer to the procedure periodically to confirm that all procedure segments of an activity will be or are being performed. Where required, sign appropriate sign-off blanks to certify that all segments are complete.

**1.0 PERSONNEL RESPONSIBILITIES**

**1.1 EMERGENCY OPERATIONS FACILITY (EOF) DIRECTOR**

The EOF Director, in conjunction with the Site Emergency Director (SED), the Site Vice President and the Shift Supervisor, is responsible for initiating actions to enter the recovery phase of emergency response.

**1.2 SITE VICE PRESIDENT**

The Site Vice President is responsible for designating the Recovery Manager and approving the recovery organization.

**1.3 RECOVERY MANAGER**

The Recovery Manager is responsible for directing the recovery process.

**1.4 SITE EMERGENCY DIRECTOR**

The SED is responsible for directing the reentry phase of recovery per Emergency Implementing Procedure EI-5.0.

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**2.0 PURPOSE**

The purpose of this procedure is to describe the recovery phase of emergency response at Palisades, and to provide guidelines for restoring the plant to its preemergency condition.

2.1 The following priorities should be considered and communicated to Palisades personnel throughout the recovery process:

- a. Maintain fuel integrity.
- b. Maintain personnel exposure within a defined plan.
- c. Keep regulators, agencies and the public informed.
- d. Clean up the site to reduce exposure.
- e. Restore the plant to operation.

**3.0 REFERENCES**

**3.1 SOURCE DOCUMENTS**

- 3.1.1 NUREG 0654, Section M, "Recovery And Reentry Planning And Post-Accident Operations"
- 3.1.2 Site Emergency Plan, Section 9, "Recovery"

**3.2 REFERENCE DOCUMENTS**

- 3.2.1 Emergency Implementing Procedure EI-5.0, "Reentry"
- 3.2.2 Nuclear Regulatory Commission (NRC) Response Coordination Manual, 1996 (RCM-96)

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**4.0 INITIAL CONDITIONS AND/OR REQUIREMENTS**

- 4.1 The following conditions should be considered before entering recovery:
- a. The reactor and associated systems are in a stable, safe condition.
  - b. The release of radioactive materials to the environment is under control or has ceased.
  - c. In-plant radiation levels are stable or decreasing.
  - d. Fire, flood, etc is under control or has ceased.
  - e. At least one level of redundancy in plant systems should be available to prevent reinitiation of the event.
  - f. Impact on state, local and federal governments has been evaluated.
- 4.2 The EOF Director, with input from the SED, shall determine with State officials if a change in emergency classification is warranted.

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**5.0 PROCEDURE**

<p style="text-align: center;"><b><u>USER ALERT</u></b> REFERENCE USE PROCEDURE</p> <p>Refer to the procedure periodically to confirm that all procedure segments of an activity will be or are being performed. Where required, sign appropriate sign-off blanks to certify that all segments are complete.</p>
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5.1 The Site Vice President shall designate the Recovery Manager.

**5.2 RECOVERY MANAGER**

5.2.1 The Recovery Manager should ensure that reentry has been initiated per Emergency Implementing Procedure EI-5.0, "Reentry."

5.2.2 If one or more of the following criteria are met, the Recovery Manager should consider formulating a Recovery Organization:

- a. Normally occupied areas of the plant are not accessible due to increased radioactivity.
- b. One or more of the three fission barriers have failed.
- c. Corrective measures have the potential of affecting plant access or the health and safety of the public.

**5.3 RECOVERY ORGANIZATION**

Attachment 1, "Recovery Organization Chart," should be used as a guideline for forming the Recovery Organization. Attachment 2, "Recovery Organization Worksheet," may be used in assigning personnel to the Recovery Organization.

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**5.4 RECOVERY PLANS**

- 5.4.1 Data obtained from the reentry process should be used to establish formal recovery plans. The format provided in Attachment 3 may be used to develop these plans.
- 5.4.2 Development of recovery plans should be closely coordinated with the NRC.
- 5.4.3 Assure that adequate information on plant status is released to the news media and local, state and federal authorities.
- 5.4.4 Coordinate applicable recovery activities with county, State and federal officials. Information regarding the federal response to an emergency at Palisades can be found in Attachment 4.
- 5.4.5 Recovery plans should include the following:

**NOTE:** With the exception of equipment needed for safe shutdown or to protect the health and safety of the public, failed equipment is to be quarantined until failure analysis is performed.

- a. Extent of damage to plant equipment and systems, and a schedule for returning the equipment/systems to preemergency status
- b. List of equipment under quarantine
- c. Definition of areas affected by radiation and/or contamination
- d. List of new procedures needed to implement recovery
- e. Resource needs, both personnel and equipment
- f. Criteria for termination of recovery operations.

**5.5 NRC INVESTIGATION**

All records and documents generated during the emergency and the resultant response shall be maintained and made available to the NRC. In addition, licensee personnel shall be made available for NRC interviews.



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**6.0 ATTACHMENTS AND RECORDS**

**6.1 ATTACHMENTS**

6.1.1 Attachment 1, "Recovery Organization Chart"

6.1.2 Attachment 2, "Recovery Organization Worksheet"

6.1.3 Attachment 3, "Recovery Plan Format"

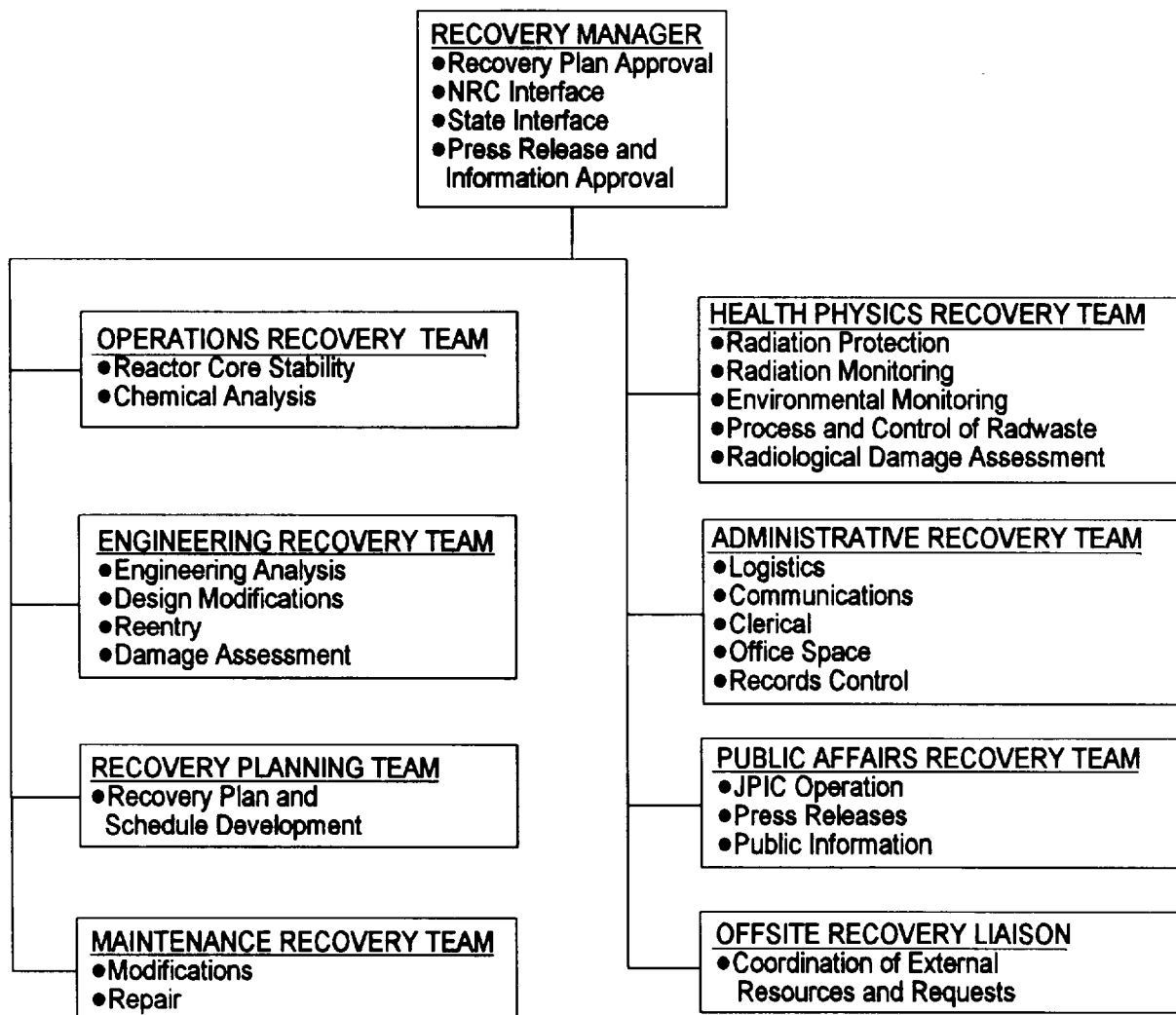
6.1.4 Attachment 4, "Federal Emergency Response"

**6.2 RECORDS**

Records generated by this procedure shall be filed in accordance with Palisades Administrative Procedure 10.46, "Plant Records." Refer to the record matrix attached to AP 10.46 for information needed to complete Record Indexing Form (Form 104).

## RECOVERY ORGANIZATION CHART

### RECOVERY ORGANIZATION RESPONSIBILITIES



**RECOVERY ORGANIZATION WORKSHEET**

RECOVERY ORGANIZATION ASSIGNMENTS

RECOVERY MANAGER

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OPERATIONS RECOVERY  
TEAM LEADER

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---

HEALTH PHYSICS RECOVERY  
TEAM LEADER

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---

ENGINEERING RECOVERY  
TEAM LEADER

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---

ADMINISTRATIVE RECOVERY  
TEAM LEADER

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---

RECOVERY PLANNING  
TEAM LEADER

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PUBLIC AFFAIRS RECOVERY  
TEAM LEADER

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MAINTENANCE RECOVERY  
TEAM LEADER

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OFFSITE RECOVERY LIAISON

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## **RECOVERY PLAN FORMAT**

### **OPERATIONS RECOVERY PLAN**

**I. PLANT STATUS**

Provide a general statement of the plant condition and key issues.

**II. RECOVERY OBJECTIVES**

Outline the steps required to return the plant to a long-term, stable condition.

**III. RECOVERY ORGANIZATION**

Provide a copy of the Operations Recovery Team organization with personnel assigned.

**IV. SCHEDULE**

Develop a schedule based on information available and input from other Recovery Organization Teams.

**V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support recovery efforts.

**VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of key issues identified in Section I and requirements to address these issues including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.

**RECOVERY PLAN FORMAT**

HEALTH PHYSICS RECOVERY PLAN

I. PLANT AND OFFSITE STATUS

Provide a general statement of onsite and offsite radiological conditions and key issues.

II. RECOVERY OBJECTIVES

Outline the steps required to return the plant to a long-term, stable condition.

III. RECOVERY ORGANIZATION

Provide a copy of the Health Physics Recovery Team organization with personnel assigned.

IV. SCHEDULE

Develop a schedule based on information available and input from other Recovery Organization Teams.

V. RESOURCES

List staff, equipment, facilities, contractors, and funding required to support recovery efforts.

VI. SPECIFIC ISSUES

Describe the immediate, short-term, and long-term aspects of key issues identified in Section I and requirements to address these issues including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.

## **RECOVERY PLAN FORMAT**

### **ENGINEERING RECOVERY PLAN**

#### **I. PLANT STATUS**

Provide a general statement of plant equipment condition and key issues.

#### **II. RECOVERY OBJECTIVES**

Outline the steps required to return the plant and specific components to a long-term, stable condition.

#### **III. RECOVERY ORGANIZATION**

Provide a copy of the Engineering Recovery Team organization with personnel assigned.

#### **IV. SCHEDULE**

Develop a schedule based on information available and input from other Recovery Organization Teams.

#### **V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support recovery efforts.

#### **VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of key issues identified in Section I and requirements to address these issues including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.

**RECOVERY PLAN FORMAT**

**ADMINISTRATIVE RECOVERY PLAN**

**I. PLANT STATUS**

Provide a general statement of requirements to support recovery including office space, communications equipment, and records management.

**II. RECOVERY OBJECTIVES**

Outline the steps required to administratively support recovery.

**III. RECOVERY ORGANIZATION**

Provide a copy of the Administrative Recovery Team organization with personnel assigned.

**IV. SCHEDULE**

Develop a schedule based on information available and input from other Recovery Organization Teams.

**V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support recovery efforts.

**VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of key issues identified in Section I and requirements to address these issues including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.

## **RECOVERY PLAN FORMAT**

### **RECOVERY PLANNING - COMPOSITE RECOVERY PLAN**

#### **I. PLANT STATUS**

Compile Recovery Plans from the individual Recovery Teams into a Composite Recovery Plan and submit the plan to the Recovery Manager for approval.

#### **II. RECOVERY OBJECTIVES**

Outline the steps required of the Recovery Planning Team to maintain an effective and current Composite Recovery Plan.

#### **III. RECOVERY ORGANIZATION**

Provide a copy of the Recovery Planning Team organization with personnel assigned.

#### **IV. SCHEDULE**

Develop a composite schedule based on information available and input from other Recovery Organization Teams.

#### **V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support overall recovery efforts.

#### **VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of key issues faced by the Recovery Planning Team including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.



**RECOVERY PLAN FORMAT**

**PUBLIC AFFAIRS RECOVERY PLAN**

**I. CURRENT STATUS**

Provide a brief summary of requirements to maintain an adequate flow of public information. If the JPIC is still operational, include requirements to continue its operation and criteria for shutdown.

**II. RECOVERY OBJECTIVES**

Outline the steps required of the Public Affairs Recovery Team to maintain an effective and current flow of key information to the media.

**III. RECOVERY ORGANIZATION**

Provide a copy of the Public Affairs Recovery Team organization with personnel assigned. Include the JPIC organization if still functional.

**IV. SCHEDULE**

Develop a schedule of routine public information releases including input requirement from other Recovery Organization Teams.

**V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support continuing public information efforts.

**VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of any key issues faced by the Public Affairs Recovery Team including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.

**RECOVERY PLAN FORMAT**

**MAINTENANCE RECOVERY PLAN**

**I. CURRENT STATUS**

Provide a general statement of plant equipment condition and key issues.

**II. RECOVERY OBJECTIVES**

Outline the steps required of the Maintenance Recovery Team to implement actions to repair the plant.

**III. RECOVERY ORGANIZATION**

Provide a copy of the Maintenance Recovery Team organization with personnel assigned.

**IV. SCHEDULE**

Develop a schedule based on information available and input from other Recovery Organization Teams.

**V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support Maintenance Recovery Team efforts.

**VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of any key issues faced by the Maintenance Recovery Team including support from offsite resource groups, required interface with external groups, and requirements of other Recovery Organization Teams.

## **RECOVERY PLAN FORMAT**

### **OFFSITE LIAISON RECOVERY PLAN**

#### **I. CURRENT STATUS**

Provide a general statement of external interface requirements and any key issues related to each of these groups. Attachment 4 provides a description of the Federal Emergency Response.

#### **II. RECOVERY OBJECTIVES**

Outline the steps required to maintain effective communications with each group identified.

#### **III. RECOVERY ORGANIZATION**

Provide a copy of the Offsite Liaison Recovery Team organization with personnel assigned. This includes the Governmental and Federal Radiological Monitoring and Assessment Center liaisons described in Emergency Implementing Procedure EI-4.3, "Emergency Operations Facility Activation," Attachment 5.

#### **IV. SCHEDULE**

Develop a schedule of contacts and external requirements based on information received from external entities.

#### **V. RESOURCES**

List staff, equipment, facilities, contractors, and funding required to support Maintenance Recovery Team efforts.

#### **VI. SPECIFIC ISSUES**

Describe the immediate, short-term, and long-term aspects of any key issues being addressed by the Offsite Liaison Recovery Team including requests from offsite groups, required interface with external groups, and routine interface needs.

## **FEDERAL EMERGENCY RESPONSE**

1.0 The Nuclear Regulatory Commission Response Coordination Manual, 1996 (RCM-96), Section Q, provides a detailed description of the NRC concept, purposes, and organization for performing essential functions during a Federal response to a severe radiological accident, with an emphasis on State and Federal coordination.

### 2.0 **DEFINITIONS**

#### 2.1 **Federal Radiological Response Plan**

Describes the coordination of Federal response activities, with the NRC serving as **Lead Federal Agency (LFA)** for nuclear facilities licensed by the NRC. LFA will coordinate Federal response from the Joint Operations Center (JOC), established locally in coordination with the Federal Emergency Management Agency (FEMA) and the State of Michigan.

#### 2.2 **Federal Radiological Monitoring and Assessment Center (FRMAC)**

Provides operational framework for coordinating all offsite Federal radiological monitoring efforts to provide the following radiological information to the State of Michigan and the LFA: (1) plume and deposition predictions; (2) air and ground concentrations, and (3) isotopic concentrations in environmental media. The US Department of Energy (USDOE) is responsible for establishing and the initial management of the FRMAC.

#### 2.3 **Lead Federal Agency**

The Nuclear Regulatory Commission (NRC) will serve as the Lead Federal Agency (LFA) for an emergency at Palisades in accordance with the Federal Radiological Emergency Response Plan (FRERP). NRC responsibilities as the LFA include the following:

- \* Coordinating all Federal on scene actions:
- \* Overseeing the onsite response, monitoring and supporting the owner or operator's activities, and providing Federal information about onsite conditions:

## **FEDERAL EMERGENCY RESPONSE**

- \* Assisting the State and local governments in determining measures to protect life, property, and the environment by providing technical information and protective action recommendations, if possible, in conjunction with the Federal Emergency Management Agency (FEMA), Environmental Protection Agency (EPA), the US Department of Health and Human Services (HHS), the US Department of Agriculture (USDA), and other Federal agencies, as necessary.
- \* Coordinating Federal information to the public, the media, the White House, and Congress; and
- \* Coordinating the overall activity of Federal agencies involved in the recovery process.

As the LFA, additional assistance can be requested by Palisades through the NRC for US Department of Energy (DOE) or other Federal support. A detailed listing of Federal agency response missions, capabilities, and authorities is contained in the FRERP.

### 3.0 **NRC RESPONSE MODES**

#### 3.1 **Monitoring Phase of Normal Mode:**

The situation may be complex but well understood with no likely safety consequences projected given existing conditions. The Region remains in charge, staffing a small team in its Incident Response Center (IRC). Headquarters would provide some assistance and support. State and local officials would be notified.

#### 3.2 **Standby:**

The situation is sufficiently complex or uncertain to require additional monitoring and preparations to increase the NRC response quickly should it prove to be necessary. The NRC Operations Center at headquarters (Rockville, Md) will fully staff and direct the NRC response activities. The regional office will initiate the necessary preparations to send a team to the site. Other Federal organizations are notified but are not directly involved. State and local authorities are notified by NRC. They will have been notified by the licensee and may call the NRC for an interpretation of the event and response.

## **FEDERAL EMERGENCY RESPONSE**

The following NRC modes, which indicate that an event with clear safety concerns is under way, usually involve direct participation by other Federal organizations.

### **3.3 Initial Activation:**

The event calls for the NRC to dispatch a team to the site. During this mode, the response to an event is directed by the NRC Executive Team from the NRC Headquarters Operations Center, while an NRC team is on the way to the site.

### **3.4 Expanded Activation:**

The NRC Site Team, is operational at the site. During this mode, the entire NRC response is directed from the site by the Director of Site Operations with operational authority delegated by the Director of the Executive Team. Other NRC teams act in support of the Director of Site Operations.

### **3.5 Deactivation:**

A plan for follow-up activities, including reentry and recovery, is in effect and the NRC is reducing its role consistent with that plan with the concurrence of the Federal Coordinating Officer and the State Coordinating Officer.