

Permanently Defueled Emergency PLAN-1

Revision 2 Issued



03/30/2016

To all PDEP – 1 manual holders:

Please remove all contents of Revision 1 and replace it with the enclosed Revision 2. If you have any questions or concerns please feel free to contact either Bobbie Anderson at (949) 368-**6972** or Lucia Sisco at (949) 368-**9894**. PAX numbers are bolded for your convenience.

Thank you,

Roberta E P Anderson

San Onofre Nuclear Generating Station (SONGS)
CDM – Controlled Manuals

AX45
NR R

5000 Pacific Coast Highway
San Clemente, CA 92674-0128

USNRC DIVISION OF TECH
INFO & DOCUMENT CONTROL
ONE WHITE FLINT NORTH
11555 ROCKVILLE PIKE
ROCKVILLE, MD 20852

BOOK 10

PDEP-1



SOUTHERN CALIFORNIA
EDISON[®]

An **EDISON INTERNATIONAL** Company

This book of **PERMANENTLY DEFUELED EMERGENCY PLAN-1**
Is the property of the Southern California Edison Company and is loaned
to the individual whose name appears below:

Book No. **BOOK 10** **PDEP-1**
Issued To: **USNRC DIVISION OF TECH. / INFO & DOC. CONTROL**
Location **ONE WHITE FLINT NORTH**
11555 ROCKVILLE PIKE
ROCKVILLE, MD 20852

**San Onofre Nuclear
Generating Station (SONGS)
Permanently Defueled
Emergency Plan**
(Volume 1, PDEP-1)

RECEIVED CDM

MAR 29 2016

SITE FILE COPY

Table of Contents

SECTION	PAGE
Part I: INTRODUCTION	
Section A: Purpose	Page 1
Section B: Background	Page 1
Section C: Scope	Page 1
Section D: Planning Basis.....	Page 2
Section E: Emergency Response Organization (ERO).....	Page 2
Section F: Form and Content of Plan	Page 2
Part II: PLANNING STANDARDS AND CRITERIA	
A Assignment of Responsibility.....	A-1
1 Concept of Operations	A-1
2 State and County Functions and Responsibilities.....	A-3
3 Agreements in Planning Effort	A-3
4 Continuous Coverage	A-3
B SONGS Emergency Response Organization.....	B-1
1 On-Shift Emergency Response Organization Assignments.....	B-1
2 Initial Assignment of Event Response Authority and Responsibility	B-1
3 Line of Succession.....	B-2
4 Functional Responsibilities of the Emergency Director.....	B-2
5 Emergency Response Organization Positional Responsibilities.....	B-2
6 Emergency Response Organization Block Diagram	B-4
7 Corporate Emergency Response Organization	B-4
8 Support Organizations and Personnel	B-4
9 Emergency Assistance to the ERO.....	B-4
C Emergency Response Support and Resources	C-1
1 Federal Response Support and Resources.....	C-1
2 Liaisons.....	C-1
3 Radiological Laboratories.....	C-1
4 Other Assistance.....	C-1
D Emergency Classification System.....	D-1
1 Emergency Classification System.....	D-1
2 Emergency Action Level Technical Bases	D-3
3 Review Offsite Classification Systems.....	D-3

Table of Contents

SECTION	PAGE
4 Offsite Emergency Planning.....	D-3
E Notification Methods and Procedures	E-1
1 Bases for Notification of Offsite Agencies	E-1
2 Notification and Mobilization of Emergency Response Personnel.....	E-1
3 Initial Notification Message	E-2
4 Follow-up Messages	E-3
5 State and County Information Dissemination.....	E-3
6 Notification of the Public.....	E-3
7 Messages to the Public.....	E-3
F Emergency Communications.....	F-1
1 Communications/Notifications.....	F-1
2 Medical Communications	F-2
3 Communications Testing.....	F-2
G Emergency Public Information	G-1
H Emergency Facilities and Equipment	H-1
1 Command Center.....	H-1
2 Emergency Operations Facility	H-1
3 Emergency Operations Centers.....	H-1
4 Activation.....	H-1
5 Onsite Monitoring Equipment.....	H-2
6 Offsite Monitoring Equipment.....	H-2
7 Offsite Monitoring Equipment Storage	H-2
8 Meteorological Monitoring	H-2
9 Facility and Equipment Readiness.....	H-2
10 General Use Emergency Equipment.....	H-3
I Accident Assessment.....	I-1
1 Plant Parameters and Corresponding Emergency Classification	I-1
2 Onsite Accident Assessment Capabilities.....	I-1
3 Source Term Determination.....	I-1
4 Effluent Monitor Data and Dose Projection	I-1
5 Meteorological Information.....	I-1
6 Off-scale or Inoperable Effluent Monitors (Unmonitored Releases).....	I-2
7 Field Monitoring.....	I-2

Table of Contents

SECTION	PAGE
8 Field Monitoring Team	I-2
9 Air Monitoring	I-2
10 Dose Estimates	I-2
11 Offsite Agencies Monitoring Capabilities	I-2
J Protective Response.....	J-1
1 Protective Actions for Site Personnel	J-1
2 Mitigation Strategies and Equipment	J-1
3 Provisions for Onsite Personnel	J-2
K Radiological Exposure Control.....	K-1
1 Emergency Exposure Guidelines	K-1
2 Emergency Radiation Protection Program	K-1
3 Emergency Personnel Exposure and Records	K-2
4 Contamination Control and Decontamination	K-2
5 Contamination Control Measures	K-3
L Medical and Public Health Support	L-1
1 Offsite Hospital and Medical Services	L-1
2 Onsite First Aid Capability	L-1
3 Medical Service Facilities	L-1
4 Medical Transportation	L-1
M Reentry and Recovery Planning	M-1
1 Reentry and Recovery	M-1
2 Recovery Organization	M-1
3 Recovery Phase Notifications	M-1
4 Emergency Response Records	M-1
N Drill and Exercise Program	N-1
1 Biennial Exercise	N-1
2 Other Drills	N-2
3 Critique and Evaluation	N-2
4 Resolution of Findings	N-3
5 Records	N-3
O Emergency Response Training	O-1
1 Assurance of Training of the Offsite Response Organizations	O-1
2 Functional Training of the ERO	O-1

SONGS Permanently Defueled Emergency Plan

Table of Contents

SECTION	PAGE
3 First Aid Response.....	O-1
4 Emergency Response Organization and Support Personnel.....	O-1
5 General, Initial, and Annual Training Program Maintenance	O-3
6 Records.....	O-3
P Responsibility for the Maintenance of the Planning Effort.....	P-1
1 Emergency Preparedness Staff Training	P-1
2 Authority for the Emergency Preparedness Effort.....	P-1
3 Responsibility for Development and Maintenance of the Plan.....	P-1
4 Emergency Plan and Agreement Revisions.....	P-2
5 Emergency Plan Distribution.....	P-2
6 Supporting Emergency Response Plans	P-2
7 Implementing and Supporting Procedures.....	P-2
8 Cross Reference to Planning Criteria.....	P-2
9 Audit/Assessment of the Emergency Preparedness Program	P-2
10 Maintenance of Emergency Telephone Directory	P-3

Part III: APPENDICES

Appendix 1: References.....	1-1
Appendix 2: Procedure Cross-Reference to Plan Sections	2-1
Appendix 3: List of Letters of Agreements	3-1
Appendix 4: Glossary of Terms and Acronyms.....	4-1

Volume 2 - PDEP-2, EAL Technical Bases Manual

Section A: Purpose

The purpose of this Permanently Defueled Emergency Plan (PDEP) is to assure an adequate level of preparedness by which to cope with a spectrum of emergencies that could be postulated to occur, including means to minimize radiation exposure to plant personnel. This PDEP integrates the necessary elements to provide effective emergency response considering cooperation and coordination of organizations expected to respond to potential emergencies.

Section B: Background

SONGS is owned by Southern California Edison (SCE), San Diego Gas and Electric (SDG&E) and the cities of Anaheim and Riverside, California. SCE is authorized to act as agent for the co-owners and has exclusive responsibility for the operation of the facility.

The PDEP describes the station's plan for responding to emergencies that may arise at the station while in a permanently shutdown and defueled configuration. All irradiated fuel is stored in the Independent Spent Fuel Storage Installation (ISFSI) and in the Spent Fuel Pool. In this condition, no reactor operations can take place and the station is prohibited from moving the fuel from the Spent Fuel Pool to the reactor vessel. An analysis of the possible design basis events and consequences is presented in the evaluation of the Safety Analysis Report accident assessment. This PDEP addresses the risks associated with SONGS current conditions.

The analysis of the potential radiological impact of design basis accidents in a permanently defueled condition indicates that any releases beyond the Exclusion Area Boundary (EAB) are limited to small fractions of the Environmental Protection Agency (EPA) Protective Action Guide (PAG) exposure levels, as detailed in the EPA's "Protective Action Guide and Planning Guidance for Radiological Incidents," Draft for Interim Use and Public Comment dated March 2013 (PAG Manual). Exposure levels, which warrant pre-planned response measures, are limited to onsite areas. For this reason, radiological emergency planning is focused onsite.

Section C: Scope

SONGS has developed this PDEP to respond to potential radiological emergencies at the station considering its permanently shutdown and defueled status. Because there are no postulated design basis accidents that would result in offsite dose consequences that are large enough to require offsite emergency planning, the overall scope of this plan delineates the actions necessary to safeguard onsite personnel and minimize damage to property.

In addition to the description of activities and steps that can be implemented during a potential emergency, this PDEP also provides a general description of the steps taken to recover from an emergency situation.

Furthermore the PDEP provides for:

- Identification and evaluation of emergency situations
- Protective measures
- Communications
- Coordination and notification of governmental authorities
- Document review and control
- Emergency Preparedness assessment
- Training of all emergency personnel
- An exercise and drill program
- An emergency recovery phase

Section D: Planning Basis

The concepts presented in this PDEP address the applicable regulations stipulated in 10 CFR 50.47, "Emergency Plans" and 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities" and are consistent with the applicable guidelines established in NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."

Exemptions to 10 CFR 50.47 and 10 CFR 50 Appendix E for SONGS were granted by the Nuclear Regulatory Commission (NRC) per ADAMS Accession Nos: Letter ML15082A204; Exemption: ML15082A143 on June 4, 2015.

The PDEP revision 0 was approved for use by the NRC per Safety Evaluation Report (SER) per ADAMS Accession No. ML15125A461 on June 5, 2015.

Section E: Emergency Response Organization (ERO)

SONGS has primary responsibility for planning and implementing emergency measures within the EAB including overall accident assessment. These emergency measures include mitigation, corrective actions, protective measures, and aid for personnel onsite. To assist in accomplishing these responsibilities, advance arrangements have been made with offsite organizations for special emergency assistance such as ambulance, medical, hospital, fire, and police services.

Section F: Form and Content of Plan

The PDEP has been formatted similar to NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." The use of this format lends itself to uncomplicated comparison with the criteria set forth in NUREG-0654/FEMA-REP-1 and addresses the guidance provided in NSIR/DPR-ISG-02, Emergency Planning Exemption Requests for Decommissioning Nuclear Power Plants.

Each Part II section begins by listing the planning standard implemented by section as modified by the exemptions granted to SONGS by the NRC for a permanently defueled station.

A. Assignment of Responsibility

Planning Standard 50.47(b)(1) (as exempted in Reference 11) – Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

1. Concept of Operations

The relationships and the concept of operations for the organizations and agencies that are a part of the overall ERO are as follows:

a. Primary Governmental Response Organizations

Identified below are Federal, State, and local agencies that are involved in a response to an emergency at SONGS.

1) Federal Agencies

The National Response Framework (NRF) is a guide to how the Nation responds to all types of disasters and emergencies. It is built on scalable, flexible, and adaptable concepts identified in the National Incident Management System (NIMS) to align key roles and responsibilities across the Nation. The NRF describes specific authorities and best practices for managing incidents that range from the serious but purely local to large-scale terrorist attacks or catastrophic natural disasters. The NRF describes the principles, roles and responsibilities, and coordinating structures for delivering the core capabilities required to respond to an incident and further describes how response efforts integrate with those of the other mission areas. The federal family response for an emergency at a SONGS station is made up of the following:

a) Nuclear Regulatory Commission (NRC)

With regard to emergency preparedness, the NRC will perform the following:

- Assess licensee emergency plans for adequacy;
- Make decisions with regard to the overall state of emergency preparedness and issuance of operating licenses.
- Coordinate with other federal response agencies.

The NRC will respond to incidents at licensed facilities or vehicular accidents involving licensed materials, including radionuclides, in transit. The NRC will act as the lead Federal agency with regard to technical response during a nuclear incident including radiological assistance.

b) Department of Homeland Security (DHS)

Per the NRF, DHS is responsible for the overall coordination of a multi-agency Federal response to a radiological incident. The primary role of DHS is to support local agencies by coordinating the delivery of Federal non-technical assistance. DHS coordinates local agencies requests for Federal assistance, identifying which Federal agency can best address specific needs.

c) Marine Corps Base, Camp Pendleton

Marine Corps Base, Camp Pendleton is the responsible agency for all emergency responses affecting all personnel located at the Base. The Commanding General, Marine Corps Base is the decision maker. Through a Letter of Agreement the Marine Corps Base Fire Department provides fire, medical, and rescue responses to SONGS.

d) Federal Bureau of Investigation (FBI)

The FBI acts as the lead agency for the coordination of law enforcement agencies responding to Security related events at the San Onofre Nuclear Generating Station. Response actions to Security events are addressed in the SONGS Safeguards Contingency Plan.

2) State of California

The California Office of Emergency Services (OES) is designated the State authority for coordination of all State level response. Cal OES is the primary State response agency that coordinates the State's response to requests for assistance from local jurisdictions. The primary method of initial notification of Cal OES is by a commercial telephone line from the SONGS Command Center to the Warning Center in Sacramento.

3) Local Agenciesa) Orange County

The Orange County Sheriff's Department is responsible for offsite coordination and response in unincorporated Orange County.

b) San Diego County

The San Diego County Office of Emergency Services is the lead governmental agency for offsite coordination and response in San Diego County.

b. SONGS Concept of Operations

During an emergency, the ERO replaces the normal station organization. The ERO provides the following functions:

- Control and operation of station activities.
- Mitigation of the emergency condition.
- Protection of station personnel.
- Emergency event classification.
- Radiological monitoring and dose assessment
- Emergency notifications to Federal, State and local agencies.
- Coordination of emergency support for fire fighting, security, and rescue/first aid.

c. Block Diagram of Organization Interrelationships

Interrelationships between major SONGS organizations and sub-organizations in the total response effort are illustrated in a block diagram in Figure A-1.

d. Individual in Charge of the Emergency Response

The individual in charge of the SONGS emergency response is given the title of Emergency Director.

e. 24 Hour Emergency Response

Individuals assigned to the shifts are available 24 hours per day. These individuals can perform all required response actions until individuals arrive to augment shift personnel.

2. State and County Functions and Responsibilities

The State and counties have plans that specify the responsibilities and functions for the major agencies, departments, and key individuals of their organizations. This information is located in their respective plans and standard operating procedures. These plans address multiple types of accidents that may occur at facilities within their jurisdictions.

3. Agreements in Planning Effort

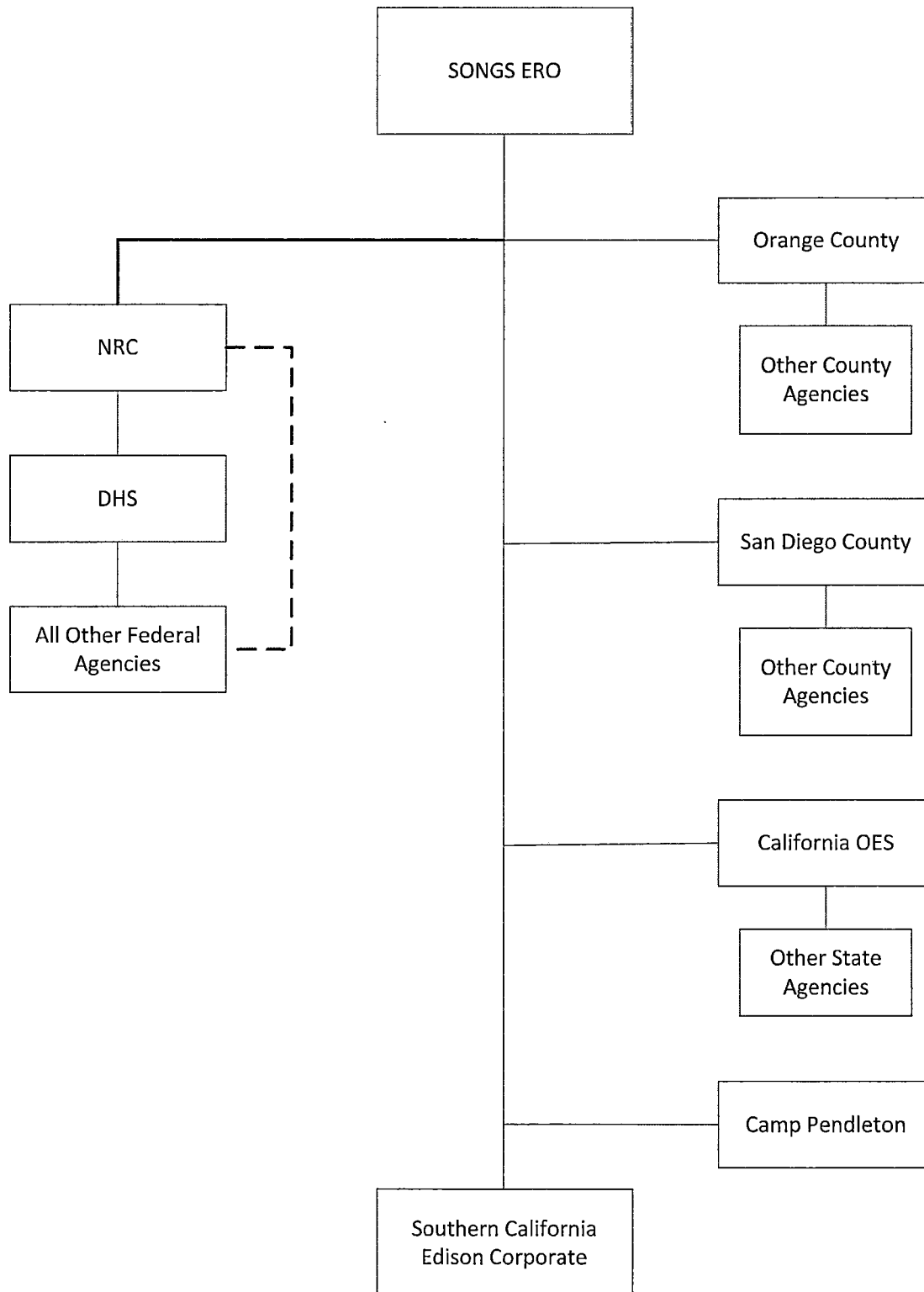
Written agreements describing the concept of operations between SONGS and other support organizations having an emergency response have been established. These agreements identify the emergency measures to be provided, the mutually accepted criteria for implementation, and the arrangements for exchange of information. A formal contract/purchase order is considered acceptable in lieu of a letter of agreement for the specified duration of the contract.

Appendix 3 of this PDEP contains the list of active and in force letters of agreement. The actual letters of agreement are maintained in Emergency Preparedness files.

4. Continuous Coverage

The ERO maintains the depth and capability for continuous 24-hour coverage of the emergency response for a protracted period.

Figure A-1: SONGS Emergency Response Organization Interrelationships



B. SONGS Emergency Response Organization

Planning Standard 50.47(b)(2) – On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

1. On-Shift Emergency Response Organization Assignments

SONGS has personnel on-shift at all times that provide the initial response to an event. Members of the on-shift organization are trained on their responsibilities and duties in the event of an emergency and are capable of performing all necessary response actions until the augmenting ERO arrives or the event is terminated. The normal shift staffing assignments include the roles and responsibilities for their emergency response functions. The relationship between normal and emergency response positions for the shift personnel is unchanged when an event occurs.

An on-shift analysis was performed for ERO functions to ensure sufficient personnel will be able to respond to the limiting event, a catastrophic loss of spent fuel pool (SFP) water inventory.

Shift ERO Positions:

- a. Shift Manager (Emergency Director): see section B.4 for Emergency Director (ED) responsibilities.
- b. Certified Operator: performs system and component manipulations and basic radiation surveys as needed.
- c. Station Security: will report to the ED when implementing the PDEP. Security personnel will assist ED as directed.
- d. Radiation Protection Technician (RPT): performs radiological assessment and radiation protection duties.

Refer to Table B-1, ERO Minimum Staffing Requirements, for summary of ERO shift and augmented positions.

2. Initial Assignment of Event Response Authority and Responsibility

The Shift Manager is the on-shift individual who declares the initial emergency classification and assumes the role of Emergency Director upon event declaration and has the authority and responsibility to immediately and unilaterally initiate any emergency actions. If the Shift Manager is unavailable or incapacitated for any reason the Certified Operator will assume duties until another Shift Manager arrives.

The Emergency Director has the authority to suspend any security measure described in the Physical Security Plan as necessary to facilitate response to emergency conditions.

3. Line of Succession

The Shift Manager assumes the title and responsibilities of the Emergency Director when an event is initially recognized and declared, and remains the Emergency Director throughout the event.

4. Functional Responsibilities of the Emergency Director

Non-delegable responsibilities of the Emergency Director include the following:

- Event classification and declaration
- Authorize notification of offsite authorities (State/local and NRC notifications)
- Authorization for the use of EPA-400 emergency exposure controls (emergency worker dose limits that exceed 10 CFR 20 occupational exposure limits)

Key delegable responsibilities of the Emergency Director include the following:

- Management of available station resources
- Initiation of assessment and mitigative/corrective actions
- Initiation of onsite protective actions
- Decision to call for offsite police, fire or ambulance assistance
- Augment the emergency staff as deemed necessary
- Notify SCE corporate officers and the company's duty spokesperson

5. Emergency Response Organization Positional Responsibilities

The Emergency Response Organization (ERO) is responsible for implementing the actions described in this Emergency Plan. The ERO is made up of shift personnel (described in section B.1), augmented by the ERO Coordinator, Radiation Protection Coordinator and supplemental positions described below.

1. The ERO Coordinator and Radiation Protection Coordinator shall report to the Command Center within 2 hours of declaration of an Alert classification or at the discretion of the Shift Manager for other events. The supplemental ERO is activated at the discretion of the Emergency Director and/or the ERO Coordinator.

a. ERO Coordinator

The ERO Coordinator reports to the Emergency Director. The responsibilities of the ERO Coordinator when implementing the PDEP include:

- Report to the Command Center and assist Emergency Director with assessment, mitigation, and communications tasks.
- Assist the Emergency Director to supplement the emergency staff as deemed necessary.
- Coordinate supplemental personnel and resource to support for emergency response.

b. Radiation Protection Coordinator

The Radiation Protection Coordinator reports to the ERO Coordinator. The responsibilities of the Radiation Protection Coordinator when implementing the PDEP include:

- Monitor personnel accumulated dose
- Advise the Emergency Director concerning Radiological EALs
- Augment the emergency staff as deemed necessary
- Establish Radiological Controls
- Perform Dose Assessment
- Establish and maintain communications as desired by the Emergency Director
- Maintain a record of event activities

2. The following positions are supplemental ERO and may be filled by personnel possessing requisite knowledge to support the response:

a. Technical Coordinator

The Technical Coordinator is a pre-designated supplemental position that reports to the ERO Coordinator. The responsibilities of the Technical Coordinator when implementing the PDEP include:

- Assist with and arrange for other resources to evaluate technical data pertinent to plant conditions
- Augment the emergency staff as deemed necessary
- Assist with incident assessment and recommend mitigative and corrective actions
- Assist with search and rescue actions
- Coordinate maintenance and equipment restoration
- Establish and maintain communications as desired by the Emergency Director
- Maintain a record of event activities

b. Radiation Protection Technicians (RPTs)

Additional RPTs are called as needed to support emergency response. They may be provided through a services contract.

Supplemental RPTs report to the Radiation Protection Coordinator when the Radiation Protection Coordinator position is activated.

RPTs perform radiological monitoring and surveys of plant areas and radionuclide analysis of air and water samples. When an event is classified and the PDEP is implemented, the RPTs report to the Radiation Protection Coordinator. Their responsibilities when implementing the PDEP include:

- Perform radiological monitoring and surveys as directed
- Ensure the habitability of the occupied areas of the plant
- Monitor personnel exposures
- Perform radioisotopic analysis as directed

- Establish and monitor Radiological Control Areas (RCAs)
- Provide radiological and first aid support to search and rescue and medical emergencies.
- Maintain a record of event activities and surveys performed
- Perform decontamination functions as necessary

c. Other Supplemental Positions

Various supplemental positions may be assembled as emergency needs dictate. Such positions include: first aid, radiological monitoring and damage assessment, control and repair. Personnel with badges for unescorted access to SONGS who do not have a specific emergency response role are considered supplemental.

6. Emergency Response Organization Block Diagram

Figure B-1 illustrates the overall emergency response organization.

7. Corporate Emergency Response Organization

No formal corporate response organization has been pre-identified. Southern California Edison will provide personnel and resource support as needed to mitigate any emergency conditions at the station. The company owns and operates an extensive fleet of ground transportation vehicles consisting of heavy-duty trucks, equipment, and four-wheel drive vehicles. These are available to SONGS as needed.

8. Support Organizations and Personnel

Personnel who do not have unescorted access may be requested to provide support to the ERO.

Individual, industry, and private support will be used based on needs of the event.

9. Emergency Assistance to the ERO

Agreements are maintained with outside support agencies who do not take part in the organizational control of the emergency that provide assistance when called on during an emergency or during the recovery phase. These agreements identify the emergency measures to be provided, the mutually accepted criteria for implementation, and the arrangements for exchange of information. These support agencies provide services of:

- a. Fire protection;
- b. Ambulance services;
- c. Medical and hospital support;
- d. Law Enforcement;

Support groups that provide fire protection are listed in Appendix 3, List of Letters of Agreement.

Support groups providing transportation and treatment of injured station personnel are described in Section L of this plan and Appendix 3.

Table B-1: ERO Minimum Staffing Requirements

Functional Area	Major Tasks	Emergency Positions	Shift Staffing	Augmented Staffing
1. Plant Operations, Assessment of Operational and Mitigation Aspects	Command Center Staff	Shift Manager ** Certified Operator **	1 1	
2. Emergency Direction and Control	Command and Control	Shift Manager (Emergency Director)	1(a)	
	ERO Coordination	ERO Coordinator		1
3. Notification & Communication	Notification of: Licensee	Shift Manager	1(a)	
	Local / State			
	Federal			
4. Radiological Assessment	Supervision	Radiation Protection Coordinator		1
	Dose Assessment	Shift Manager or Shift RP Technician	1(a)	
	Onsite Surveys within the EAB	Shift RP Technician ** RP Support	1	(c)
	Offsite Surveys beyond the EAB	RP Support		(c)(d)
	Chemistry	Chemistry Support		(c)
5. Plant System Engineering, Repair, and Corrective Actions	Repair and Corrective Actions	Technical Coordinator		(b)
		Certified Operator Support Personnel	1(a)	(c)
6. In-Plant Protective Actions	Radiation Protection	Shift RP Technician	1(a)	
7. Fire Fighting	--	Offsite fire fighting resources	(e)	
8. 1st Aid and Rescue	--	Shift Personnel and Offsite fire resources	(e)	
9. Site Access Control and Accountability	Security & Accountability	Security Personnel	(f)	
TOTAL:			3	2

** On-shift personnel required to direct or perform site-specific mitigation strategies required for a catastrophic loss in spent fuel pool inventory.

(a) Indicates concurrent or sequential functions performed by existing on shift minimum staff.

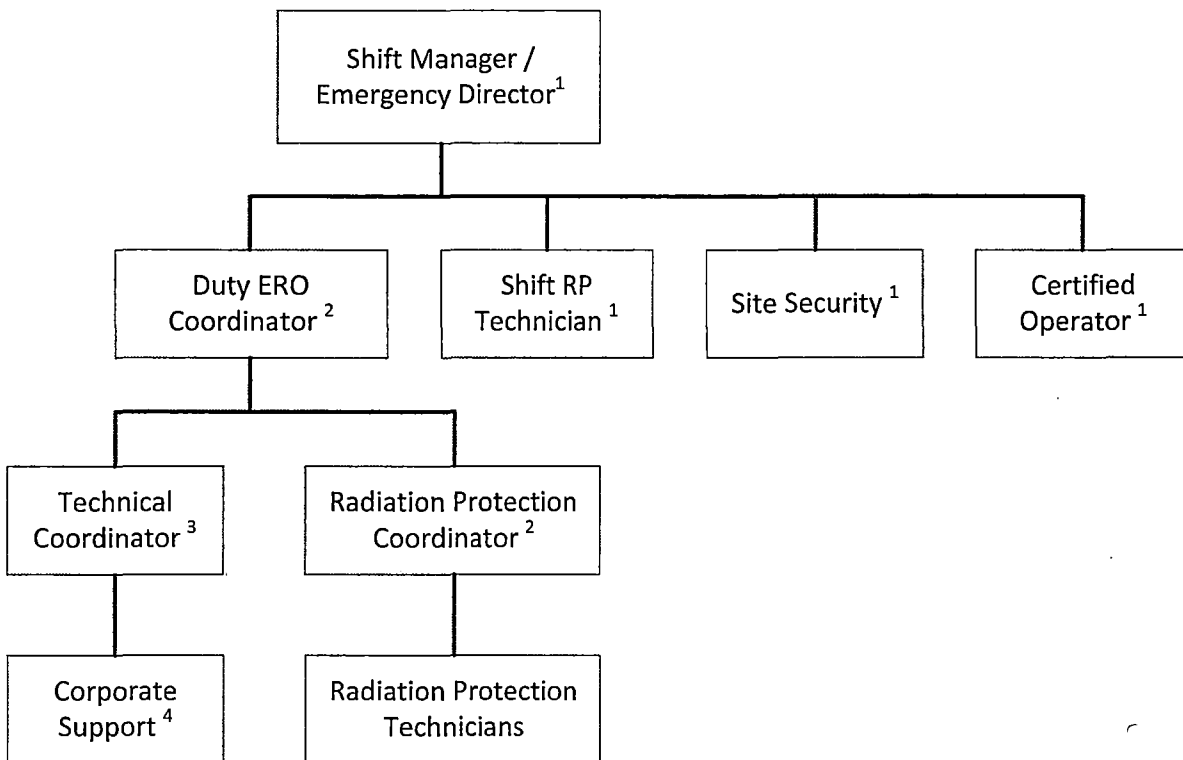
(b) Pre-Designated supplemental position called as needed based on event.

(c) Number of Corporate Support, Radiation Protection, Repair Personnel and Chemistry personnel called to support onsite response based on event.

(d) Pre planning for offsite surveys not required due to the radiological consequences of design basis accidents or other credible events not expected to exceed EPA Protective Action Guides. Survey can be performed with assistance from outside sources if deemed necessary.

(e) Fire Fighting and rescue operations are provided by agreement with offsite resources.

(f) Per the Station Security Plan.

Figure B-1: Emergency Response Organization**NOTES**

1. On-shift positions.
2. Augmented position that will report within 2 hours of declaration of an Alert classification or at the discretion of the Shift Manager for other events.
3. Pre-Designated supplemental position, called as needed based on event.
4. Southern California Edison will provide or arrange for additional technical, maintenance and other support as needed to restore station to pre-event condition.

C. Emergency Response Support and Resources

Planning Standard 50.47(b)(3) (as exempted in Reference 11) – Arrangements for requesting and effectively using assistance resources have been made and other organizations capable of augmenting the planned response have been identified.

1. Federal Response Support and Resources

a. Individuals Authorized to Request Federal Assistance

The Emergency Director is authorized to request assistance as needed.

b. Federal Resources

Federal agencies that may provide assistance in direct support of SONGS in the event of an accident are identified in Section A of this plan.

c. Resources Available to Support Federal Response

The Command Center has space available to accommodate limited NRC response team members.

2. Liaisons

- a. If a near site Incident Command Post (ICP) has been established for a large scale or hostile actions event, SONGS will send liaisons to the ICP to provide specific information relative to the event and assist as needed. Individuals assigned as ICP Liaisons will be part of the supplemental ERO.

3. Radiological Laboratories

Laboratory facilities are available and equipped to support normal plant and expected emergency operations. Services will be contracted as needed for declared events. Agreements may also be used to obtain laboratory services from other stations.

Support for chemical analysis is provided by Sierra Analytical Labs, located in Laguna Hills, California. Support for radiological analysis is provided by GEL Laboratories, located in Charleston, South Carolina. The laboratories have the capability for analyses of terrestrial, marine, and air samples.

4. Other Assistance

Refer to Appendix 3, List of Letters of Agreement for outside organizations that have pre-agreed arrangements to support onsite response actions.

No other specific assistance has been pre-identified.

D. Emergency Classification System

Planning Standard 50.47(b)(4) (as exempted in Reference 11) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee.

1. Emergency Classification System

A graded scale of response for distinct classifications of emergency conditions, actions appropriate for those classifications, and criteria for escalation to a more severe classification is provided.

The station maintains the capability to assess, classify, and declare an emergency condition within 30 minutes of the availability of indications that an Emergency Action Level (EAL) has been exceeded.

- The 30-minute criterion will commence when plant instrumentation, plant alarms, computer displays, or incoming verbal reports corresponding to an EAL first become available to the individual in command and control (SM/ED) or Certified Operator.
- Validation or confirmation of plant indications, alarms or reports is to be accomplished within the 30-minute criterion as part of the classification assessment.
- For EAL thresholds that specify a duration (time embedded EALs), the declaration process runs concurrently with that specified threshold duration. If it is determined that the condition will not clear within the time period, the event is declared regardless of whether the embedded time period has been met. Once the condition has existed for the specified duration, no further classification assessment is warranted and the EAL must be promptly declared.
- The 30-minute criterion is not used as a grace period to attempt to restore plant conditions to avoid declaring an emergency in which an EAL has been exceeded.
- The 30-minute criterion will not prevent implementation of response actions necessary to protect public health or deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.

SONGS utilizes a classification methodology endorsed by the NRC. Specifically SONGS classification system follows the methodology in NEI 99-01, Rev 6, Development of Emergency Action Levels for Non-Passive Reactors.

The emergency classification system utilizes two categories for classification of emergency events. The specific initiating conditions for each classification and their corresponding emergency action levels are provided in the EAL Technical Bases Manual controlled as Volume 2 of this PDEP.

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

The definitions and discussions of the two Emergency Classification Levels (ECLs), from lowest to highest severity, are as follows:

a. Notification of Unusual Event

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

This is the less severe of the two levels. The purpose of this classification is to bring response personnel and offsite agencies to a state of readiness in the event the situation degrades and to provide systematic handling of information and decision-making. The Shift Manager will classify a Notification of Unusual Event.

Required actions at this classification include:

- Notification to onsite personnel.
- Notification to station management
- Notification, within 60 minutes, of the required offsite agencies.
- At the discretion of the Emergency Director augment shift personnel if needed.
- Notification of the Nuclear Regulatory Commission (NRC) as soon as possible but within 60 minutes of classification.
- Assessment of the situation and response as necessary, which may include escalating to a higher classification if conditions warrant.
- Appropriate measures to mitigate the effects of the emergency and return conditions to normal operation status.
- When the event is terminated, closeout is performed over communication links to required offsite agencies and the NRC, followed by written summary within 24 hours.

b. Alert

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

The purpose of this classification is to ensure that emergency response personnel are readily available and to provide offsite authorities with current status information. An Alert will be classified as the initiating event or as escalation from a Notification of Unusual Event.

Required actions at this classification include:

- Notifications to onsite personnel.
- Notification to station management.
- Notification, within 60 minutes, of the required offsite agencies.

- Activation of the Emergency Response Organization.
- Notification of the NRC as soon as possible but within 60 minutes of classification.
- Keeping offsite authorities informed of plant status by providing periodic updates, including radiological data.
- Site evacuation and personnel accountability may be directed by the Emergency Director based on hazards associated with the event.
- Appropriate measures to mitigate the effects of the emergency and return conditions to normal operation status.
- When the event is terminated, closeout is performed over communication links to required offsite agencies and the NRC, followed by written summary within 8 hours.

2. Emergency Action Level Technical Bases

The initiating conditions, their corresponding emergency actions levels and the technical bases for each classifiable threshold are contained in the station's EAL Technical Bases Manual, which was based on NEI 99-01, Revision 6, Section 8 and Appendix C, and was approved for use by the NRC.

3. Review Offsite Classification Systems

SONGS emergency planning personnel periodically review the classification system with State and local agencies.

4. Offsite Emergency Planning

Offsite agencies maintain plans to respond to various natural or man-made emergencies. Although they may not be specific to an event at SONGS, the Emergency Preparedness Manager shall coordinate with offsite agencies for response planning to an emergency at the station.

E. Notification Methods and Procedures

Planning Standard 50.47(b)(5) (as exempted in Reference 11) – Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations has been established.

1. Bases for Notification of Offsite Agencies

SONGS, in cooperation with State and local authorities, has established mutually agreeable methods and procedures for notification of offsite response organizations consistent with the approved emergency classification level scheme. Notifications to offsite agencies include a means of verification.

2. Notification and Mobilization of Emergency Response Personnel

Emergency implementing procedures are established for notification and mobilization of emergency response personnel.

a. Notification of Onsite Personnel and Mobilization of the ERO

Each emergency classification results in onsite personnel being notified of the initial classification or any escalation of an emergency by recognizable alarms and/or verbal announcements over the plant Public Address (PA) System. Announcements include the emergency classification and response actions to be taken by personnel onsite (such as ERO, non-ERO, contractor personnel, and visitors). Provisions are made to alert personnel in high noise areas and outbuildings as applicable.

Provisions are established for notification of personnel within the Owner Controlled Area any time a Site Evacuation has been initiated, or as otherwise deemed appropriate.

When an emergency classification level is declared or upgraded, an announcement is made over the plant Public Address (PA) system (or by other means) that states the emergency classification level declared and response actions to be taken by site personnel.

At an Alert classification level all ERO augmentation personnel are notified to respond. Call Trees may be utilized.

Notifications of onsite personnel will be made as soon as possible after the triggering event (emergency declaration or decision to take protective actions) to ensure that actions can be completed within required time frames.

b. Notification and Mobilization of the Offsite Response Organizations (ORO)

When an emergency classification level is declared or upgraded, initial notifications are promptly made to staffed Warning Points for the OROs.

Notification and mobilization of federal, State and local agency response personnel is performed in accordance with their applicable emergency plans and procedures.

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

1) State and Local Response Agencies

State and local agency staffed Warning Points are notified within sixty (60) minutes of an event declaration (initial or an escalation) or change in radiological release status (occurring outside of an event classification).

2) Nuclear Regulatory Commission (NRC)

The NRC is notified immediately after notification of the appropriate State and local agencies and not later than one (1) hour after the time of initial classification, escalation, termination or entry into the recovery phase.

For hostile action events, the NRC is notified immediately following or concurrent with State and local notifications.

c. Support Organizations

- Medical, rescue, and fire fighting support services are notified for assistance, using normal 911 procedures, as the situation dictates.
- The American Nuclear Insurers (ANI) is notified at an Alert classification with requests for assistance as necessary.

3. Initial Notification Message

The initial emergency notification message contains the current emergency classification level and whether a release is taking place.

SONGS, in conjunction with authorities from local agencies has established the specific content and format of the initial notification message to be transmitted during an emergency, along with methods of transmission. The initial notification message form will provide the following information if it is known and appropriate:

- a. Location of incident, and name and telephone number of caller.
- b. Date/Time of incident.
- c. Class of emergency.
- d. Type of actual or projected abnormal release (airborne or liquid).
- e. Actual or projected dose rates and/or integrated dose at the EAB.
- f. Estimate of any abnormal surface radioactive contamination in plant or onsite.
- g. Plant emergency response actions underway.
- h. Request for offsite support from onsite personnel.
- i. Prognosis for event based on plant or response team information.

The following offsite agencies, at a minimum, will receive Initial Notification Messages:

- State of California
- Orange County

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

- San Diego County
- Marine Corps Base, Camp Pendleton

4. Follow-up Messages

Follow-up calls will also be made to each of the lead agencies notified initially. Follow-up messages will be made approximately every 2 hours (or at time intervals agreed upon during each event) utilizing a follow-up notification form with information similar to the initial notification form.

5. State and County Information Dissemination

Information dissemination is performed in accordance with State and local plans.

6. Notification of the Public

Notifications to the public are performed through the media in accordance with State and local plans.

7. Messages to the Public

Messages to the public are delivered through the media in accordance with State and local plans.

F. Emergency Communications

Planning Standard 50.47(b)(6) (as exempted in Reference 11) – Provisions exist for prompt communications among principal response organizations to emergency personnel.

1. Communications/Notifications

SONGS has reliable communication systems installed.

a. 24 Hour Notification Capabilities

SONGS maintains the capability to make initial notifications to the designated offsite agencies on a 24-hour per day basis.

b. Communications with State/Local Governments

Offsite notifications are provided to the California Office of Emergency Services (Cal OES), the Marine Corps Base (Camp Pendleton) and local agencies warning points (which are continually staffed) from the Command Center using commercial telephone (the primary means of communications) or satellite phone (the back-up means of communication).

Table F-1: Offsite Response Agency Notification (Staffed Warning Points)

Offsite Response Agency	Notified By	Individual Answering
Cal OES	SONGS Emergency Director or designee	Duty Personnel
Marine Corps Base, Camp Pendleton	SONGS Emergency Director or designee	Command Duty Officer or 911 Dispatch
Orange County	SONGS Emergency Director or designee	Orange County Communications Control 1
San Diego County	SONGS Emergency Director or designee	San Diego County Communications Shift

c. Communications with Federal Organizations

The Command Center uses NRC Emergency Notification System (ENS) phones through the Emergency Telephone System (ETS), commercial telephone lines, or other mobile communications devices such as cell or satellite phones to communicate with Federal Organizations.

d. Communications between Station Facilities

1) Private Automatic Exchange (PAX) Telephone System

The PAX telephone system provides communication capability between telephones located within the plant by dialing a five-digit station code.

The PAX telephone system also provides for outside communications through interconnections with the Corporate telephone communications system and commercial telephone lines.

2) Local Commercial Telephone System

This system provides standard commercial telephone service through the public infrastructure, consisting of central offices and the wire line and microwave carrier.

e. ERO Notification System

ERO notification is performed by the use of call trees initiated by commercial telephone as the primary method of communications or a satellite phone as the back-up method of communications. The station Public Address system may also be used to notify on site personnel.

f. NRC Emergency Notification System (ENS)

Communications with the NRC Operations Center will be performed primarily via the NRC ENS, commercial telephone lines, or other mobile communications devices such as cell or satellite phones.

2. Medical Communications

Communications are established with a primary or backup medical hospital and transportation services via commercial telephone that is accessed by station personnel.

3. Communications Testing

Communications equipment is checked in accordance with Section H.10.

Communications equipment utilized to notify and communicate with the NRC Headquarters and the appropriate NRC Regional Office Operations Center, as described in F.1.f, are tested monthly for operability.

In accordance with NRC Information Notice No. 85-44, communications between SONGS and the appropriate NRC Regional Office is performed through the Headquarters Operations Center. The communications link between the Headquarters Operation Center and the Regional Office is tested by the NRC.

Communications drills between SONGS and local agencies government facilities are conducted in accordance with Section N.2.a.

G. Emergency Public Information

Planning Standard 50.47(b)(7) (as exempted in Reference 11) –The principal points of contact with the news media for dissemination of information during an emergency are established in advance, and procedures for coordinated dissemination of information to the public are established.

The Company's Corporate Communications Department is the principle point of contact for the dissemination of information during an event at the station. The Company's Communications Department will disseminate information to the public through press releases and media conferences in accordance with current Corporate communication protocols.

Due to the lack of postulated events that would impact offsite areas or requiring Offsite Response Organizations to take pre-planned actions, no arrangements are made for a Joint Information Center.

SCE maintains a corporate media line that is available at all times (24/7). A Corporate Communications Spokesperson maintains a liaison with local media and would act as the initial Company spokesperson for a declared emergency at SONGS. SCE also has a Local Public Affairs Officer who acts as a liaison between SCE and State and local public affairs officers to coordinate the timely flow of information and address any misinformation related to the event.

H. Emergency Facilities and Equipment

Planning Standard 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

1. Command Center

The Command Center is the onsite facility used to respond to emergency events. Plant systems and equipment parameters necessary to initiate emergency measures and assess conditions can be monitored in this location. The Command Center also has Internet capabilities, which allows access to geophysical (i.e., meteorological, hydrologic, and seismic) information.

Command Center personnel evaluate and control the emergency and initiate activities necessary for coping with the emergency. The Command Center may be relocated as determined by the Emergency Director in the event that it is threatened by security events or hazardous conditions. The activities conducted by the Command Center staff include:

- Initial direction of all plant-related operations
- Accident recognition, classification, mitigation, and initial corrective actions
- Activation of emergency response facilities and ERO notification
- Notification of offsite agencies
- Continuous evaluation of the magnitude and potential consequences of an incident

In the event that augmented staff personnel respond, the Command Center provides space for those personnel to support the response. These activities include:

- Assessment of plant status
- Implementation of emergency actions and mitigation strategies.
- Provide voice communications with the NRC and local agencies as needed
- Radiological monitoring and assessment
- Brief and prepare personnel for work assignments in response to the event

2. Emergency Operations Facility

The SONGS PDEP does not include an Emergency Operations Facility.

3. Emergency Operations Centers

Offsite agencies maintain Emergency Operations Centers, for all types of emergencies, in accordance with their respective plans.

4. Activation

The Command Center is open on a continuing basis. There is no activation needed.

5. Onsite Monitoring Equipment

Radiation monitoring equipment provides radiological surveillance capabilities. The equipment provides for the following basic functions:

- Warns personnel of radiological health hazards, which have developed.
- Gives early warning of certain plant malfunctions, which might lead, to a radiological health hazard or plant damage.
- Prevents or minimizes the effects of inadvertent releases of radioactivity to the environment by consequence-limiting automatic responses.

Station instrumentation provides a display of plant parameters from which the safety status of systems can be assessed in the Command Center. Key parameters are:

- Gaseous Effluent Monitor readings
- Radiation Levels
- Fuel Handling Area Radiation Levels

Portable radiation and contamination monitoring instruments and sampling equipment normally utilized and maintained by the station is available for emergency use.

6. Offsite Monitoring Equipment

No radiation and contamination monitoring equipment is maintained specifically for offsite monitoring.

7. Offsite Monitoring Equipment Storage

Monitoring equipment is not stored offsite. Limited offsite monitoring near the EAB will be performed using onsite equipment or arrangements will be made for additional equipment as needed.

8. Meteorological Monitoring

The station maintains meteorological instrumentation for near instant time readings of wind speed and direction to provide guidance if onsite protective actions are implemented.

Backup meteorological information can also be obtained from the National Weather Service.

9. Facility and Equipment Readiness

The Command Center and emergency equipment are inspected and inventoried quarterly and after each use in accordance with site procedures. These procedures provide information on location and availability of emergency equipment and supplies. A system of sealed containers or facilities may be utilized versus actual performance of item-by-item inventories.

10. General Use Emergency Equipment

Station procedures identify the general category of equipment and supplies that make up equipment available to assist with emergency response and requirements for inventorying and testing equipment. General types of equipment available to support emergency response include:

- Radiation Monitoring Equipment
- Contamination Control Supplies
- Decontamination Equipment and Supplies
- Protective Clothing
- Damage Control and Mitigation Equipment
- Communications and Radio Equipment
- Supplemental Lighting

The onsite storeroom maintains a supply of parts and equipment for normal plant maintenance. These parts, supplies and equipment are available for damage control use as necessary.

I. Accident Assessment

Planning Standard 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential consequences of a radiological emergency condition are in use.

1. Plant Parameters and Corresponding Emergency Classification

Emergency Action Level thresholds have been established in accordance with the NRC endorsed methodology in Regulatory Guide 1.101. Refer to section D.

The EAL Technical Bases Manual identifies the system parameter and effluent parameter values that are used to determine the emergency condition.

Emergency Plan Implementing Procedures (EPIP) and EAL user aids have been developed to identify the system and effluent parameter values that are used to determine an existing emergency classification level.

2. Onsite Accident Assessment Capabilities

On-site capabilities and resources are available to provide initial and continuing information for accident assessment throughout the course of an event and include area and process radiation monitoring systems.

3. Source Term Determination

Station specific dose assessment procedures are used to calculate accumulated or projected dose at some time in the future if current or projected conditions continue. Radiological and meteorological readings are used to project dose rates at predetermined distances from the release point.

Due to the constantly declining source term, based on natural decay of fission products contained in the spent fuel, source terms used for dose projections can also be based on actual on or offsite radiological readings at the time of an event.

4. Effluent Monitor Data and Dose Projection

Station specific dose assessment procedures address calculating accumulated or projected dose at some time in the future if current or projected conditions continue. Radiological instrumentation readings and meteorological data are used to project dose rates at the EAB, and to determine the integrated dose received.

5. Meteorological Information

Local meteorological information is available to the Command Center staff. The meteorological parameters include wind speed and direction. Procedures have been developed to determine stability class as needed for atmospheric dispersion calculations. A description of the onsite meteorological capabilities is given in Section H.

6. Off-scale or Inoperable Effluent Monitors (Unmonitored Releases)

Dose projections can be made during a release through use of actual survey and air sample data in situations where effluent monitors are either off-scale or inoperative or the release occurs by an unmonitored flow path.

7. Field Monitoring

In the event of a radiological release, onsite field monitoring activities within the EAB are performed by qualified individuals to confirm dose projections or assist in event classification. Portable radiological survey instrumentation and equipment is provided as part of the SONGS Radiation Protection Program. This equipment is available to support emergency response.

8. Field Monitoring Team

No predefined field monitoring teams are assigned. Qualified individuals will be deployed as needed from the Command Center to perform surveys.

Prior to deployment, field monitoring teams are assembled at the Command Center to inventory and test survey and sampling equipment. Following the equipment and inventory checks, field monitoring teams are provided a briefing. Teams are then dispatched to perform surveys.

Communications are performed via radio or cell phones.

9. Air Monitoring

Instrumentation to measure radioactivity in counts per minute (cpm) and to determine dose rate in mRem/hr is used for detection and measurement of airborne isotopic concentrations. The air sample will be taken with a portable air sampler. Air sampling results will be obtained through the use of a multi-channel analyzer and appropriate gamma sensitive detector.

The presence of significant levels of radioiodines in the spent fuel is extremely limited, therefore no special equipment is provided to measure for radioiodines.

10. Dose Estimates

Design Basis Accidents at SONGS can no longer exceed the Alert level (i.e., offsite doses will only reach a fraction of the EPA Protective Action Guides). Dose estimates will be performed to determine projected onsite doses and potential offsite consequences of any release to the environment.

11. Offsite Agencies Monitoring Capabilities

The offsite agencies have the ability and resources to coordinate with federal monitoring teams as deemed necessary.

J. Protective Response

Planning Standard 50.47(b)(10) (as exempted in Reference 11) – A range of protective actions has been developed for emergency workers and the public.

It is no longer possible for the radiological consequences of design basis accidents or other credible events at SONGS to exceed the limits of the EPA PAGs beyond the EAB or require offsite protective actions. Therefore, pre-planned protective actions for the public are no longer necessary and the emergency planning zones will no longer exist. Therefore, SONGS will not have pre-defined Protective Action Recommendations. Offsite agencies maintain the ability, under their emergency management plans, to implement offsite protective measures, if needed, in the unlikely event of a release due to a beyond design-basis event.

1. Protective Actions for Site Personnel

Protective actions for onsite personnel will be delineated in the site procedures and will include:

- Criteria for ordering a site evacuation
- Means and timely notification of onsite persons impacted
- Ability to account for individuals within the Protected Area within 30 minutes from the time accountability is initiated
- Provisions for determining and maintaining accountability of assembled and evacuated personnel, and for identifying and determining the locations of personnel that were not evacuated
- Search and rescue
- Evacuation routes and means for transporting onsite personnel (e.g., privately owned vehicles, buses, company vehicles)
- Monitoring of evacuees for contamination and control measures if contamination is found
- Means for evacuating and treating onsite injured personnel, including potentially contaminated personnel

Notification and protective response actions for onsite emergency workers are also addressed in section E.2 and section K of this plan.

2. Mitigation Strategies and Equipment

SONGS has documented strategies for mitigation of designated emergencies involving the Spent Fuel Pool and has equipment available to be used in those strategies/mitigative actions.

The Shift Manager (Emergency Director) and ERO Coordinator are responsible for assessing the need for and directing mitigation activities. Additional assistance may be provided by the Technical Coordinator upon arrival or via available communication devices. The Implementing Procedures to this plan detail their responsibilities and offer a brief summary of the available strategies.

3. Provisions for Onsite Personnel

Protective equipment and supplies will be distributed (as needed) to personnel remaining or arriving on site during the emergency to minimize the effects of radiological exposures or contamination. Protective measures to be utilized are as follows:

- a. Individual Respiratory Protection: Emergency response personnel may be required to use respiratory protection in any environment involving exposure to airborne radionuclides, an oxygen deficient atmosphere, or where air quality is in doubt. In the presence of airborne particulates, qualified emergency response personnel may be directed by radiation protection personnel to use full-face filter type respirators. Self-Contained Breathing Apparatus (SCBA) is available for use by the ERO when needed due to hazardous conditions. The criteria for issuance of respiratory protection are described in station procedures.
- b. Use of Protective Clothing: Anti-contamination clothing, located in station dress out areas, is available for use by onsite personnel. The criteria for issuance of protective clothing are described in station procedures.

K. Radiological Exposure Control

Planning Standard 50.47(b)(11) – Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

1. Emergency Exposure Guidelines

SONGS maintains personnel exposure control programs in accordance with 10 CFR 20 under normal conditions. Personnel exposure levels are maintained under EPA-400 levels for emergency workers during declared emergencies.

In emergency situations, workers may receive exposure under a variety of circumstances in order to assure safety and protection of others and of valuable property. The Emergency Worker Dose Limits are as follows:

Dose Limit (Rem TEDE)	Activity	Condition
5	All	All Emergency Workers may be authorized up to 5 Rem Emergency Exposure for the emergency; however attempts should be made to keep exposures within 10 CFR 20 limits.
10	Protecting valuable property	Lower dose not practicable.
25	Lifesaving or protection of large populations	Lower dose not practicable.
> 25	Lifesaving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved.

Limit dose to the lens of the eye to 3 times the above values and doses to any other organ (including skin and body extremities) to 10 times the above values.

2. Emergency Radiation Protection Program

Radiation protection guidelines include the following:

- Volunteers over forty-five years of age are considered first for any emergency response action requiring exposure greater than normal limits. Routine dose limits are maintained as low as reasonably achievable and shall not be extended to emergency dose limits for declared pregnant individuals. As in the case of normal occupational exposure, doses received under emergency conditions should be maintained as low as reasonably achievable.
- Persons undertaking any emergency operation in which the dose will exceed 25 Rem TEDE should do so only on a voluntary basis and with full awareness of the risks involved including the numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects.

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

- In the context of the emergency limits, exposure of workers that is incurred for the protection of large populations may be considered justified for situations in which the collective dose avoided by the emergency operation is significantly larger than that incurred by the workers involved.
- Exposure accountability is maintained and proper personnel radiological monitoring equipment is provided for personnel during emergency conditions.
- Access to high radiation areas is only permitted with prior approval. Personnel are not allowed to enter known or potential high radiation areas unless their exposure has been properly evaluated.
- Periodic habitability surveys of the Command Center are performed during an emergency. If the facility is determined to be uninhabitable, the facility is evacuated in order to prevent or minimize exposure to radiation and radioactive materials.
- Assembly areas are established, as necessary, to relocate and monitor personnel evacuated from areas of the plant.

Station Emergency Plan Implementing Procedures are in place for expeditious decision making with reasonable consideration of the relative risks involved in a lifesaving mission involving radiation exposure.

3. Emergency Personnel Exposure and Records

a. Dosimetry

Emergency workers are issued permanent reading dosimeters as a means for recording exposure for permanent records prior to entering a radiologically controlled area. Additionally, personnel are issued digital dosimetry capable of measuring dose and dose rate on a real time basis.

b. Dose Records

Emergency worker dose records are maintained in accordance with the emergency and radiological protection procedures. Emergency workers are instructed to read their dosimeters frequently. Permanent reading dosimeters may be processed with increased periodicity during an event.

4. Contamination Control and Decontamination

a. Action Levels for Determining the Need for Decontamination

During emergency conditions, normal plant contamination control criteria will be adhered to as much as possible. However, these limits may be modified by the Emergency Director should conditions warrant.

b. Means for Radiological Decontamination

Contaminated personnel will normally be attended to at an onsite decontamination area in accordance with radiation protection procedures. Decontamination showers and supplies are provided at those onsite areas. If contamination above acceptable levels is found, personnel will be decontaminated in accordance with plant procedures. If normal decontamination procedures do not reduce personnel contamination to acceptable levels, the case will be referred to a competent medical authority (refer to Section L).

Processes for the control of solid contaminated waste are established. Shower and sink drains are routed to where the liquid is contained or is processed and monitored prior to discharge.

Temporary decontamination areas can also be set up inside at various locations.

Arrangements have been made to transfer contaminated injured personnel to hospitals capable of assisting with treatment and decontamination efforts.

5. Contamination Control Measures

Onsite contamination controls are established to contain the spread of loose surface radioactive contamination.

a. Area Access Control

Contaminated areas are isolated as restricted areas with appropriate radiological protection and access control. Personnel leaving contaminated areas are monitored to ensure both themselves and their clothing are not contaminated. Supplies, instruments, and equipment that are in contaminated areas or have been brought into contaminated areas will be monitored prior to removal. Items found to be contaminated, will be decontaminated using normal plant decontamination techniques and facilities or may be disposed of as radioactive waste.

b. Drinking Water and Food Supplies

Measures will be taken to control onsite access to potentially contaminated potable water and food supplies. Under emergency conditions when uncontrolled releases of activity have occurred, eating and drinking are prohibited in station emergency response facilities until habitability surveys indicate that such activities are permissible.

c. Return of Areas and Items to Normal Use

Restricted areas and contaminated items will be returned to normal use when contamination levels have been returned to acceptable levels. Contamination control criteria for returning areas and items to normal use are contained in the plant procedures.

L. Medical and Public Health Support

Planning Standard 50.47(b)(12) – Arrangements are made for medical services for contaminated injured individuals.

1. Offsite Hospital and Medical Services

Arrangements, by letter of agreement or contract, are maintained with primary and back-up hospitals or medical facilities located in the vicinity of the station. These facilities are equipped and qualified for receiving and treating contaminated or exposed persons with injuries requiring immediate hospital care.

Letters of agreement or contracts for medical services for SONGS are listed in Appendix 3.

2. Onsite First Aid Capability

The station maintains onsite first aid supplies and equipment necessary for the treatment of contaminated or injured persons. Medical treatment given to injured persons is of a "first aid" nature. The functions of station personnel in handling onsite injured people are:

- a. Administer first aid including such resuscitative measures as are deemed necessary;
- b. Begin decontamination procedures; and
- c. Arrange for suitable transportation to a hospital when required.

3. Medical Service Facilities

The following facilities are available to provide medical support for any contaminated injured individuals:

- Tri-City Medical Center
- Mission Hospital

4. Medical Transportation

Arrangements are made by the station for prompt ambulance transport of persons with injuries involving radioactivity to designated hospitals. Such service is available on a 24-hour per day basis and is confirmed by letter of agreement.

If contaminated, efforts will be made to decontaminate the victim before transportation as long as the decontamination does not obstruct the medical attention given the victim or cause an unnecessary delay in transporting. During transportation Radiation Protection department personnel will accompany the victim and prevent the further spread of contamination.

M. Reentry and Recovery Planning

Planning Standard 50.47(b)(13) – General plans for recovery and reentry are developed.

1. Reentry and Recovery

During a declared emergency, a point will be reached at which the plant will be placed in a stable condition. With the understanding that this condition could be attained even though specific Emergency Action Levels are still exceeded, the Emergency Director will determine that there is no longer a need to keep the emergency organization in effect and to begin plant recovery.

The extent and nature of the corrective and protective measures and the extent of plant recovery will depend on the emergency conditions at hand and the status of plant areas and equipment. The general goals for plant recovery are:

- An orderly evaluation of the cause and effect of the emergency and the implementing of solutions to prevent the immediate recurrence of the incident.
- A planned approach for returning the plant to a stable condition by obtaining the appropriate manpower, materials, and equipment needed to accomplish that end.
- An evaluation of the radiation exposure records for all on-site emergency response personnel involved in the incident.
- A planned approach to ensure that radiation exposures and contamination control are in keeping with the ALARA program.

2. Recovery Organization

The recovery organization will be based on normal SONGS organizations and functions with the SONGS executive management position being responsible for directing all site activities. The normal station organization is documented in the UFSAR, as required by Technical Specification 5.2.1.a.

If the event results in additional support being required to return the site to pre-event status along with increased interface with offsite agencies and/or media involvement, a recovery organization similar to that shown in Figure M-1 will be put in place.

Notification of onsite personnel and offsite response organizations that the plant recovery is to commence will be performed in accordance with Emergency Plan Implementing Procedures.

3. Recovery Phase Notifications

Offsite authorities will be notified when recovery phase begins and ends.

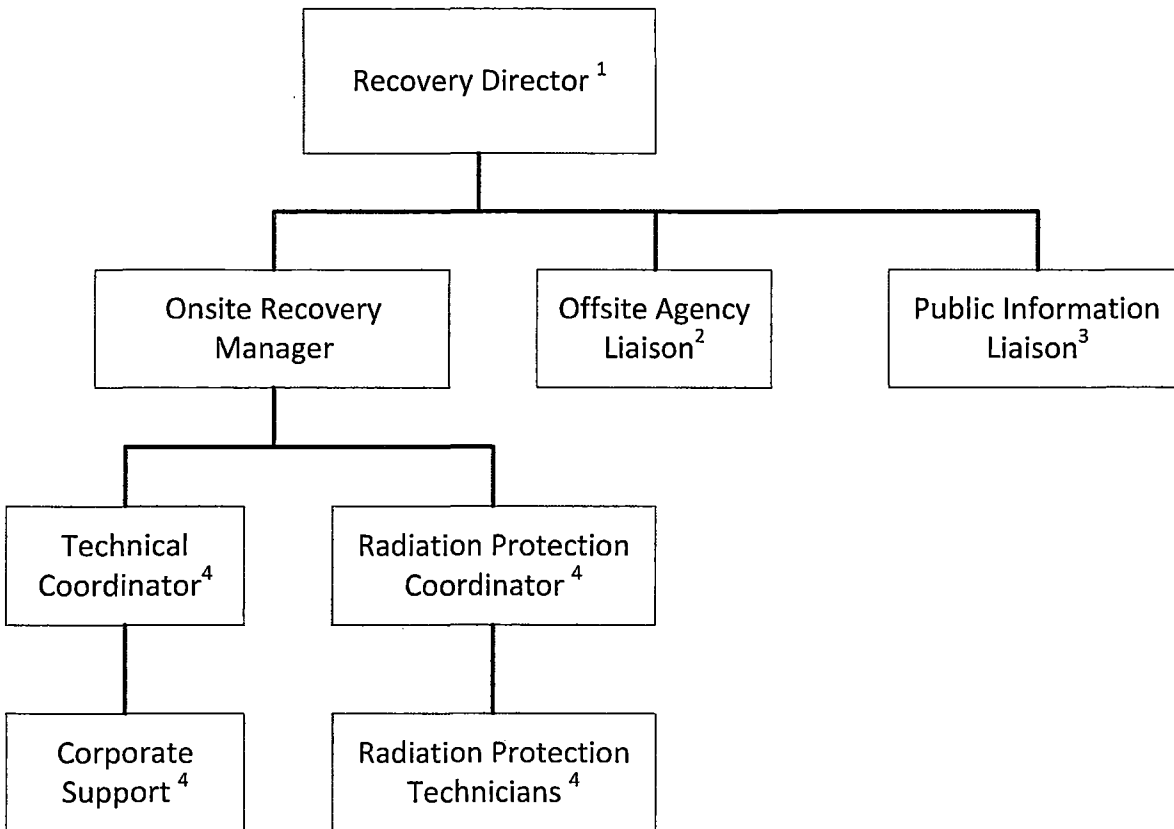
4. Emergency Response Records

- Records associated with the emergency that are to be maintained include:
 - cause of the incident,
 - personnel and equipment involved,
 - extent of injury and damage (onsite and offsite) as a result of the incident,
 - locations of contamination with the final decontamination survey results,

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

- corrective actions taken to terminate the emergency,
- actions taken or planned to prevent a recurrence of the incident,
- onsite and offsite assistance requested and received, and
- any program changes resulting from a critique of emergency response activities.

Figure M-1: Typical Recovery Organization



NOTES

1. Senior Management
2. Position normally filled by site Emergency Preparedness Manager
3. Position filled from SCE Communications Department
4. SCE will provide or arrange for additional technical, maintenance, radiation protection and other support as needed to restore station to pre-event condition

N. Drill and Exercise Program

Planning Standard 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

1. Biennial Exercise

SONGS conducts a biennial exercise in order to test the adequacy of timing and content of implementing procedures and methods; to test emergency equipment and communication networks; and to ensure that emergency personnel are familiar with their duties. Each exercise will be evaluated by station evaluators and possibly federal evaluators.

For alternating years, an integrated drill will be conducted for the purpose of testing, developing, and maintaining the proficiency of emergency responders.

Biennial Exercises and alternate year integrated drills will allow the ERO to demonstrate the following principal functional areas at least once every 6 years:

- Activities such as management and coordination of emergency response
- Accident assessment
- Event classification
- Notification of offsite authorities
- Assessment of onsite impact of radiological releases
- System repair and mitigation action implementation
- An opportunity to consider accident management strategies
- The Operating Staff would have opportunity to resolve problems (success paths)

The scenarios used for biennial exercise and drills will include, but not be limited to, the following:

- The basic objective(s) used in the exercise.
- The date(s), time period, place(s), and participating organizations.
- A time schedule of real and simulated initiating events.
- A narrative summary describing the conduct of the drill to include such items as simulated casualties, offsite fire assistance, rescue of personnel, use of protective clothing.

Critiques shall be scheduled at the conclusion of each exercise or drill to evaluate the performance of the organizations. The ability of personnel to self-evaluate weaknesses and identify areas for improvement is the key to successful ERO performance.

SONGS will allow observers from federal, State, and local governments, when requested, to observe scheduled exercises.

2. Other Drills

Drills are conducted to provide supervised instruction, training and practice opportunities for ERO members. Equipment and proficiency drills may be performed as part of the biennial exercise, integrated drill or as an independent drill.

a. Communication Drills

Communications with State and local governments shall be tested monthly. These communication drills will include the aspect of understanding the content of messages and the operation of communications equipment.

Communications drills with NRC Headquarters will be performed quarterly.

b. Radiation Protection Drills

Radiation Protection Drills involving a response to, and analysis of, simulated airborne and liquid samples and direct radiation measurements within the plant are conducted semi-annually.

Radiation Protection Drills involving collection and analysis of all sample media (water, vegetation, soil, and air) at or near the EAB will be conducted annually. These drills will include demonstration of communications and record keeping. At least once during the drill cycle State and local organizations will be invited to participate.

c. Medical Emergency Drills

A medical emergency drill, involving a simulated contaminated individual, and containing provisions for participation by local support services organizations (i.e., ambulance and support hospital) is conducted annually. The offsite portions of the medical drill may be performed as part of the required biennial exercise.

d. Augmentation Drills

Augmentation drills are performed to demonstrate the capability to activate the ERO in a timely manner.

e. Fire Drills

At least once each year a drill shall be conducted that involves participation of the Camp Pendleton Fire Department.

3. Critique and Evaluation

Exercise and drill performance objectives are evaluated against measurable demonstration criteria. As soon as possible following the conclusion of each exercise or drill, a critique, including participants and evaluators, is conducted to evaluate the ability of the ERO to implement the PDEP and its procedures.

A formal written critique report is prepared following an exercise or drill involving the evaluation of designated objectives. The report evaluates and documents the ability of the ERO to respond to a simulated emergency situation. The report will also contain reference to corrective action documents and recommendations.

4. Resolution of Findings

The critique process is used to identify areas of ERO performance and the Emergency Preparedness Program that require improvement. The Emergency Preparedness Manager is responsible for ensuring that items identified in the critique are correctly dispositioned and ensuring resolution of each item.

5. Records

Drill/exercise records and reports are to be formulated and maintained. The reports should include a summary of the drill/exercise scenario, objectives, and response actions demonstrated during the drill/exercise. Critique findings from participants, controllers and evaluators should be entered in the Corrective Action program for evaluation.

O. Emergency Response Training

Planning Standard 50.47(b)(15) – Radiological emergency response training is provided to those who may be called on to assist in an emergency.

1. Assurance of Training of the Offsite Response Organizations

Offsite training is provided to support organizations that may be called upon to provide assistance in the event of an emergency. The following outlines the training provided to these organizations:

- a. Non-SONGS organizations that may provide specialized services during an emergency (i.e., local law enforcement, fire-fighting, rescue, medical services, transport of injured) are provided or formally offered annual training.

The training made available is designed to acquaint the participants with the special problems potentially encountered during a nuclear plant emergency (including effects of radiation exposures and radiological contamination), notification procedures, and their expected roles. Organizations that must enter the site also receive site-specific emergency response training and are instructed as to the identity (by position and title) of those persons in the onsite organization who will control their support activities.

- b. Training of offsite emergency response organizations is described in their respective local agencies emergency plans, with support provided by SONGS as requested.

2. Functional Training of the ERO

All aspects of emergency preparedness training administration are specified in the station training program. This program identifies the level and the depth to which individuals are to be trained. Appropriate personnel will be trained in the areas such as radiation protection, respiratory protection, and first aid or its equivalent as part of the applicable training programs.

3. First Aid Response

Selected station personnel receive basic training in first aid.

4. Emergency Response Organization and Support Personnel

The training for ERO personnel is developed from the position specific responsibilities as defined in this plan. Members of the ERO receive initial and annual refresher training.

On-shift emergency response personnel perform emergency response activities as an extension of their normal duties and are given emergency preparedness training as part of their formal department specific training.

Personnel who are brought in to assist with mitigating or recovery actions who have not received Emergency Plan training will receive just-in-time training prior to performing response actions. This includes training in radiological and plant-specific hazards.

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

1. New ERO personnel receive an initial overview course that familiarizes them with the PDEP fundamentals by providing basic information in the following areas:
 - Planning Basis
 - Emergency Classification Levels
 - Emergency Response Organization and Responsibilities
 - Call-out of Emergency Organization
 - Emergency Response Facilities
2. Specific training requirements for personnel in the ERO and support categories are delineated in the sections below.

a. Emergency Directors

Receive specialized training in the areas of:

- Notifications
- Emergency Classification
- Emergency Action Levels
- Mitigation and Protective Actions
- Emergency Exposure Control

b. Personnel Responsible for Accident Assessment

The skills and knowledge required to perform plant stabilization and mitigation are a normal function of operation's specific positions. Subsequent stabilization and restoration is pursued utilizing station procedures. Operators receive routine training to ensure proficiency in this area.

Those positions that are called to assist operators with accident assessment, corrective actions, protective actions, and related activities receive appropriate training.

c. Radiological Assessment Personnel

The skills and knowledge required to perform radiological assessment are a normal function of Radiation Protection's specific positions.

The on-shift RPTs receive specific emergency response training on:

- Dose Assessment
- Basic Meteorology
- Transportation of Contaminated Injured Persons.

The Radiation Protection Coordinator receive specific emergency response training on:

- Dose Assessment
- Basic Meteorology

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

d. Repair and Damage Control Teams

Operations, Maintenance, and Radiation Protection personnel are trained as part of their normal job specific duties to respond to both normal and abnormal plant operations.

e. Communications Personnel

Personnel using specialized communications equipment that is not part of their normal daily function receive training on the equipment. Personnel involved in notifications to offsite agencies receive training in the notification process.

f. Site Security Force

The Security Force will receive specific emergency response training on:

- Site Accountability procedures
- Site Evacuation Procedure

g. Key SCE Communications Department Personnel

Individuals assigned to act as spokespersons or to coordinate public information will receive training on:

- Emergency Plan fundamentals
- Dissemination of information during declared events at the station

5. General, Initial, and Annual Training Program Maintenance

1. General Employee Training

Personnel assigned to work at the station with unescorted access receive initial and annual refresher training on general station procedures and policy. This training includes required actions to be taken if an emergency is declared at the station.

Personnel assigned to work at the station who do not require unescorted access, including visitors, receive information on the actions to be taken if an emergency is declared at the station.

2. ERO Training

ERO personnel receive initial training as stated in Section O.4. They also receive recurring Emergency Plan-related training annually through General Employee Training and position specific training as appropriate.

6. Records

- Records of training for SONGS ERO personnel are to be documented and maintained.
- Records for training offered and/or provided for the offsite responders is to be documented and maintained.

P. Responsibility for the Maintenance of the Planning Effort

Planning Standard 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

1. Emergency Preparedness Staff Training

The individual assigned the duties of the Emergency Preparedness Manager is to maintain an adequate knowledge of regulations, planning techniques and the latest applications of emergency equipment and supplies. This training may include:

- Training courses specific or related to emergency preparedness.
- Observation of or participation in drills and/or exercises at other stations.
- Participation in industry review and evaluation programs.
- Participation in regional or national emergency preparedness seminars, committees, workshops or forums.

2. Authority for the Emergency Preparedness Effort

Southern California Edison (SCE) is responsible for the safe and reliable maintenance of SONGS. The issuance and control of this plan and the activities associated with emergency preparedness at SONGS shall be the overall responsibility of station's Emergency Preparedness Manager.

3. Responsibility for Development and Maintenance of the Plan

The Emergency Preparedness Manager is responsible for the overall radiological emergency preparedness program associated with the station and to administer the program to ensure availability of resources in the event of an emergency.

Specific responsibilities include the following:

- Maintaining and updating this PDEP and associated procedures and documenting those reviews and required revisions
- Coordinating PDEP with other station programs and procedures
- Overseeing Emergency Preparedness Training Program and ensuring that proper records are maintained to document training and retraining of the ERO.
- Overseeing and documenting Emergency Preparedness Drill and Exercise Program
- Documenting and maintaining Emergency Preparedness Facilities and Equipment
- Documenting and maintaining Emergency Preparedness interfaces with offsite agencies.
- Performing and documenting appropriate evaluations of program and of classified emergency events
- Ensuring that onsite personnel and offsite response organizations are notified of updates to the PDEP or procedures.
- Ensuring all Letters of Agreement are reviewed annually and updated as needed.

4. Emergency Plan and Agreement Revisions

The PDEP is reviewed on an annual basis.

The annual Plan review/update includes required changes identified during audits, assessments, training, drills, and exercises.

Annually, each Letter of Agreement is reviewed and certified current in order to assure the availability of assistance from each supporting organization.

Changes to the PDEP are subject to evaluation under 10 CFR 50.54(q).

5. Emergency Plan Distribution

The PDEP volumes and implementing procedures are distributed on a controlled basis.

6. Supporting Emergency Response Plans

Other plans that support this PDEP are:

- NUREG-0728, US Nuclear Regulatory Commission, Concept of Operations: NRC Incident Response
- National Response Framework
- State of California Emergency Response Plan

7. Implementing and Supporting Procedures

Emergency Plan procedures provide specific instructions taken for each emergency classification including responsibilities, notification of offsite emergency organizations, and mobilization of the ERO. These procedures provide specific instructions to personnel for response to events and actions required to maintain the Emergency Planning program.

Appendix 2 of this plan contains a listing, by number and title, of those response and administrative/maintenance procedures that implement this PDEP. Changes to these procedures are subject to evaluation under 10 CFR 50.54(q).

8. Cross Reference to Planning Criteria

The PDEP is formatted in the same manner as NUREG-0654. The use of this format lends itself to uncomplicated comparison of the criteria set forth in NUREG-0654.

9. Audit/Assessment of the Emergency Preparedness Program

To meet the requirements of 10 CFR 50.54(t), SONGS coordinates an independent review the Emergency Preparedness Program to examine conformance with 10 CFR 50.47, 10 CFR 50.54, and 10 CFR 50 Appendix E. Included in the audit/assessment are the following:

- The PDEP and associated implementing procedures.
- The emergency preparedness training including drills and exercises as well as any activation of the PDEP since the last program audit.
- The readiness of the station Emergency Response Organization to perform its function.
- The readiness of facilities and equipment to perform as outlined in the PDEP and procedures.
- The interfaces between SONGS and local agencies pertaining to the overall Emergency Preparedness Program.

Part II: Planning Standards and Criteria SONGS Permanently Defueled Emergency Plan

Results of this review are submitted to Corporate Management and the Chief Nuclear Officer. The Emergency Preparedness Manager ensures that any findings that deal with offsite interfaces are reviewed with the appropriate agencies. Written notification will be provided to local agencies of the performance of the audit and the availability of the audit records for review at SONGS facilities. Records of the review are maintained for at least five years.

10. Maintenance of Emergency Telephone Directory

Names and phone numbers of the ERO, support personnel and applicable offsite organizations shall be reviewed and updated at least quarterly.

Appendix 1: References

References consulted in the writing of this Permanently Defueled Emergency Plan are listed in this section. With exception of regulatory requirements, inclusion of material on this list does not imply adherence to all criteria or guidance stated in each individual reference.

1. 10 CFR 50.47, Emergency Plans
2. 10 CFR 50 Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities
3. 10 CFR 20, Standards for Protection Against Radiation
4. NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, Revision 1, November, 1980
5. NUREG-0728, Report to Congress: NRC Incident Response Plan
6. US NRC Regulatory Guide 1.101, Emergency Planning and Preparedness for Nuclear Power Reactors, revision 4, July, 2003
7. EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, October 1991
8. FEMA-Guidance Memorandum, MS-1, Medical Services
9. American Nuclear Insurers Bulletin #5B (1981), Accident Notification Procedures for Liability Insured
10. US NRC NSIR/DPR-ISG-02, Interim Staff Guidance, Emergency Planning Exemption Requests for Decommissioning Nuclear Power Plants
11. NRC letter date June 4, 2015, "SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION - EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING REQUIREMENTS AND RELATED SAFETY EVALUATION (TAC NOS. MF3835, MF3836, AND MF3837)". (ADAMS Accession Nos: Letter ML15082A204; Exemption: ML15082A143 on June 4, 2015.)

Appendix 2: Procedure Cross-Reference to Plan Sections

Procedure	Plan Sections Implemented
SO123-VIII-ERO-1, PDEP Standards and Expectations	Sections A, B, & P
SO123-VIII-ERO-2, Shift Manager / Emergency Director Checklist	Sections B, D, E, I, J & M
SO123-VIII-ERO-3, ERO Coordinator Checklist	Sections B, E, I, J & M
SO123-VIII-ERO-4, Technical Coordinator Checklist	Section B & I
SO123-VIII-ERO-5, Radiation Protection Coordinator Checklist	Section B, I, J & K
SO123-VIII-ERO-6, Dose Assessment	Section J
SO123-VIII-ADMIN-1, Emergency Preparedness Program Maintenance	Sections A, C, F, G, H, L, P
SO123-VIII-ADMIN-2, Emergency Preparedness Program Training	Section O
SO123-VIII-ADMIN-3, Emergency Preparedness Program Drill Development and Evaluation	Section N
SO123-VIII-ADMIN-4, 10 CFR 50.54(q) Screening and Evaluations	Section P

Appendix 3: List of Letters of Agreements

<u>Organization/Agreement Type</u>	<u>Applicable To</u>
Tri-City Medical Center	Medical Treatment
Mission Hospital	Medical Treatment
Air Methods Corporation	Transport of Injured Persons
Commanding Officer, Marine Corps Base, Camp Pendleton	Firefighting / Transport of Injured Person
Orange County Fire Authority	Transport of Injured Person



February 10, 2004

Richard Garcia
Offsite Emergency Plan Coordinator
Nuclear Affairs & Emergency Planning
Southern California Edison Company
P. O. Box 4198
San Clemente, CA 92674-4198

Re: Medical Treatment at Tri-City Medical Center

Dear Mr. Garcia:

Tri-City Medical Center has always been, and agrees to continue to be, willing to work with Southern California Edison Company ("SCE") concerning provision of medical treatment of SCE personnel from the San Onofre Nuclear Generating Station ("Songs"), as well as emergency medical treatment for other individuals who, as a consequence of activity of SONGS, may have injuries complicated by radiation contamination, or who may have been exposed to excessive levels of radiation. Tri-City's Emergency Department has physician and nursing staff coverage 24 hours per day to provide evaluation and treatment of any such contaminated injured individuals. Tri-City is accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

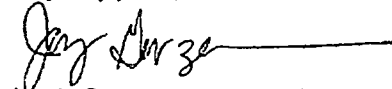
Tri-City acknowledges the staff training and emergency room supplies and equipment, which have been provided by Southern California Edison to support the handling of radiation contaminated patients. Tri-City further acknowledges Southern California Edison's commitment to continue to provide staff training, equipment and supplies, as evidenced by SCE's execution of the Acknowledgement of this letter, to support the provisions of medical treatment, as described. Tri-City also accepts SCE's commitment to provide health physics expertise to assist the Tri-City staff with radiological control and decontamination functions, as needed.



Richard Garcia
February 10, 2004
Page 2

Southern California Edison will be responsible for the payment of reasonable fees and charges for any services rendered by Tri-City at SCE's request. If either Tri-City or SCE becomes unable, or is no longer willing, to abide by the understanding expressed in this letter, it shall promptly communicate that fact to the other party in writing.

Very truly yours,



Joy A. Gorzeman, RN, MSN
COO/CNE

Acknowledgement:

SOUTHERN CALIFORNIA EDISON COMPANY

By: 

Date: 2/19/2004

Contract 24: SONGS Ltr. Agreement (21004)



January 17, 2002

Peter Bastone
Chief Executive Officer
Mission Hospital Regional Medical Center
27700 Medical Center Road
Mission Viejo, CA. 92691

Dear Mr. Bastone:

Subject: 2002 Renewal of Agreement for Medical Treatment Facilities

This letter confirms the Agreement between Mission Hospital Regional Medical Center (the "Hospital") and Southern California Edison Company ("SCE") concerning provision of medical treatment facilities for the general medical treatment of SCE personnel from San Onofre Nuclear Generating Station (the "Station") and emergency medical treatment for other individuals suffering from injuries, injuries complicated by radiation contamination, or excessive radiation exposure as a consequence of activity at the Station. Staff training and certain equipment to support the handling of radiation contaminated patients will be provided by SCE.

Confirmation of this Agreement is based on our current understanding that:

1. The Hospital has the physical capacity, personnel, medical equipment and resources to handle a radiation contaminated patient as a result of an accident at the Station and is accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).
2. The Hospital has or will grant temporary house privileges through the appropriate procedures as defined by the Medical Staff bylaws to those designated physicians who have their up-to-date credentials and license on file with the Hospital and have contracted with SCE to provide treatment or consultation to SCE personnel and other individuals who have been injured at the Station or individuals from communities in vicinity of the Station who have been exposed to excessive radiation; or who have injuries complicated by radioactive contamination as a consequence of a radiological accident at the Station.

P. O. Box 4198
San Clemente, CA 92674-4198

Mission Hospital Regional Medical Center

-2-

January 17, 2002


By executing acceptance of this letter, you confirm these understandings and agree to provide the following medical treatment services to SCE in support of the operation of the Station:

1. Hospital care and treatment for SCE personnel or other individuals in support of Station operations who have been injured at the Station; or who have been exposed to excessive radiation; or who have injuries complicated by radioactive contamination as a consequence of a radiological accident at the Station.
2. Hospital care and treatment for individuals from communities in the vicinity of the Station injured as a result of activities at the Station, whose injuries may be complicated by radioactive contamination as a consequence of a radiological accident at the Station.

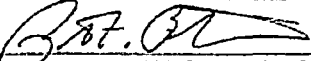
SCE will be responsible for the payment of your reasonable fees and charges for any such services rendered at SCE's request. This Agreement will remain in effect unless terminated by either party giving thirty (30) days advance written notice of termination to the other party.

Please signify your continued agreement to the provisions of this letter by executing the acceptance below and returning this letter to me in the enclosed self-addressed stamped envelope. A copy of this letter agreement is also enclosed for your records.

Very truly yours


Howard Newton
Manager, Site Support Services

Accepted and agreed to this 22nd day of JAN., 2002

By: 
Peter Bastone, Chief Executive Officer



The Exclusive Airborne Healthcare Company...Since 1980

Air Methods Corporation
Denver/Centennial Airport
NASDAQ/NMS: AIRM

February 9, 2009

Re: Agreement for Transportation of Injured or Contaminated Individuals

This letter acknowledges Mercy Air Service Inc. is agreeable and willing to be identified by San Onofre Nuclear Generating Station (hereafter "SONGS") as an emergency air ambulance resource.

SONGS may request Mercy Air Ambulance Service under this Letter agreement (weather and maintenance permitting) for any injured individual, who may also have exposure to radiological contamination, to the most appropriate treatment facilities available at the time of incident.

Mercy Air response is conditioned upon Southern California Edison Company (SCE) providing staff training and assistance necessary to support the handling of radiologically contaminated patients, as well as the availability of aircraft and qualified personnel at the time of the request. Mercy Air accepts SCE's commitment to provide health physics and medical expertise to assist contamination involved, degree of decontamination achieved, and risks involved to the staff and craft for the transport of the injured individual. Mercy Air shall have the discretion whether to accept the injured for transport based on risk to the flight crew.

Mercy Air understands SCE will be responsible for the payment of usual and customary fees and charges for any such services rendered at SCE's request, as evidenced by SCE's execution of this letter. Mercy Air will provide emergency care and transportation from SONGS to either of the following facilities capable of handling contaminated-injured patients: Tri City Medical Center in Oceanside, and Mission Hospital and Regional Medical Center in Mission Viejo.

The term of this agreement shall be three (3) years from the above date and subject to extension thereafter on a year to year basis by mutual agreement. Notwithstanding other provisions contained herein, this agreement may be terminated by either party with or without cause following written notice to the other party at least ninety (90) days prior to effective termination date.

Sincerely,

A handwritten signature in dark ink, appearing to read "G. A. Harris".

Western Regional Vice President
Mercy Air Service, Inc.
Air Methods Corp

A handwritten signature in dark ink, appearing to read "Barbara Culverhouse".

Offsite Emergency Planning and External Affairs Manager
San Onofre Nuclear Generating Station

7301 South Peoria - Englewood, Colorado, USA 80112 - 303-792-7400 - FAX 303-792-0499



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS WEST-MARINE CORPS BASE
BOX 555010
CAMP PENDLETON, CA 92055-5010
SOUTHERN CALIFORNIA EDISON COMPANY
5000 PACIFIC COAST HIGHWAY
P.O. BOX 128 OLE
SAN CLEMENTE, CA 92674-0128

MEMORANDUM OF AGREEMENT
BETWEEN
THE SOUTHERN CALIFORNIA EDISON COMPANY SAN ONOFRE
NUCLEAR GENERATING STATION
AND
THE UNITED STATES MARINE CORPS CAMP PENDLETON
FIRE DEPARTMENT

M02214-20140810-0075-1

This is a Memorandum of Agreement (MOA) between the Southern California Edison Company San Onofre Nuclear Generating Station (SCE SONGS) and the United States Marine Corps Camp Pendleton Fire Department (USMC CPFD). When referred to collectively, SCE SONGS and USMC CPFD are referred to as the "Parties."

1. BACKGROUND:

1.1. The SONGS facility, which is the subject of this MOA, resides on Marine Corps Base, Camp Pendleton, California.

1.2. On June 9, 2008, the Parties entered into a Mutual Aid Assistance Agreement (MAAA), reflecting the Parties' agreement to provide aid to each other in the area of emergency services, which includes fire, Emergency Medical Services (EMS), hazardous materials emergency response, and rescue.

1.3. In June 2013, SCE submitted a Certification of Permanent Cessation of Power Operations to the United States (U.S.) Nuclear Regulatory Commission, certifying the permanent cessation of power operations of SONGS.

1.4. As a result of ceasing power operations at SONGS, SCE has begun decommissioning of SONGS, the SONGS organizational and operational structure has changed, and SONGS personnel will not be able to perform several tasks presently stated in the June 2008 MAAA.

1.5. This MOA takes account of the current changes to SONGS organizational and operational structure, and supersedes and replaces the June 2008 MAAA, as described herein.

~~FOR OFFICIAL USE ONLY~~

2. PURPOSE: Pursuant to this MOA, the USMC CPFD (including EMS) hereby agrees, for good and sufficient consideration separately provided to USMC, to provide assistance to support the SCE SONGS nuclear plant's Emergency Plan, including the assistance expected to be provided in the event of an emergency. For purposes of this MOA, an emergency includes, but is not limited to, a radioactive release, hostile action, large scale fire or natural disaster (e.g., hurricane, tornado, earthquake or flooding), as may be more specifically described in the State and local emergency plans. Assistance requests will be communicated from the SCE SONGS operations group/command center and/or on-site incident commander/fire brigade leader, to the Camp Pendleton Emergency Communications Dispatch Center

3. RESPONSIBILITIES OF THE PARTIES:

3.1. SCE SONGS will-

3.1.1. Ensure that there is a minimum of two incipient fire brigade members on shift at all times 24 hours a day/7 days a week. At least one fire brigade member will be trained in understanding plant lay out, Pre-Fire Plan usage, mitigation strategies, ventilation systems and the locations of on-site radioactive material to provide initial direction to USMC CPFD response.

3.1.2. Provide a live fire roll over box to USMC CPFD. This live fire roll over box will be made available to SCE SONGS for additional/continued fire brigade drills as deemed necessary by SCE SONGS, for training evolutions.

3.1.3. Maintain and provide the foam totes and trailers (2), to be utilized at SCE SONGS for a large accelerant fire application, until the removal of transformer oil and diesel generator fuel.

3.1.4. Maintain and/or provide a fire suppression system including but not limited to a water source and connection point(s) to assist in normal fire suppression activities.

3.1.5. Maintain the Pre-Fire Plans at SCE SONGS and provide updated versions to the Pre-Fire Plans on a regular basis.

3.1.6. Offer and assist/engage with the offsite agency to participate/perform in a fire drill and/or Pre-Fire Plan walk downs; at least annually.

3.1.7. Provide training in site familiarization, radiation, mitigation strategies, and Pre-Fire Plans.

3.2. USMC CPFD will:

3.2.1. Provide assistance to support the SCE SONGS nuclear plant's Emergency Plan, including the assistance expected to be

2
~~FOR OFFICIAL USE ONLY~~

provided in the event of an emergency. For purposes of this MOA, an emergency includes, but is not limited to, a radioactive release, hostile action, large scale fire or natural disaster (e.g., hurricane, tornado, earthquake or flooding), as may be more specifically described in the State and local emergency plans.

3.2.2. In the event of an emergency, the USMC CPFD agrees that the assistance expected to be provided by the Camp Pendleton Fire Department includes, but is not limited to:

3.2.2.1. Providing fire suppression.

3.2.2.2. Providing search and rescue services.

3.2.2.3. Responding and rendering assistance to affected parties, including responding to emergency calls for specialized services (e.g., hazardous materials handling and extrication and technical rescues that include confined spaces, high angle, below grade, swift water, trench and collapse).

3.2.2.4. Performing salvage operations.

3.2.2.5. Providing back up route alerting.

3.2.2.6. Providing decontamination services (including radiological and hazardous material).

3.2.2.7. Providing emergency lifesaving care to people who are seriously ill or injured, including contaminated injuries.

3.2.2.8. Transporting patients to designated care facilities.

3.2.2.9. Operating ambulances and quick response vehicles to support the foregoing activities.

3.2.2.10. Other mitigation strategies/activities; such as providing fire pump/apparatus operation to maintain spent fuel pool inventory or fog patterns to prevent radioactive plumes.

3.2.2.11. Respond with a goal of less than 30 minutes after notification from SCE SONGS.

3.2.3. The USMC CPFD agrees that any resources or equipment expected to provide assistance will be maintained in a state of readiness suitable to support an emergency at the nuclear plant. If any such resources or equipment are damaged or destroyed in the course of the USMC CPFD providing assistance during an emergency at the nuclear plant, SCE SONGS agrees to reimburse USMC CPFD for repair or replacement costs.

3.2.4. In addition, the USMC CPFD agrees to acquire and retain knowledge of, and make its personnel aware of, any unusual hazards, characteristics, or features of the nuclear plant that are relevant in providing assistance to the nuclear plant. Subject to availability, the USMC CPFD agrees to participate in training, drills and exercises when requested by SCE SONGS.

3.3. Both Parties will agree to acquire and retain knowledge of, and make its personnel aware of, any unusual hazards, characteristics, or features of the nuclear plant that are relevant in providing assistance to the nuclear plant. The USMC CPFD agrees to participate in fire drills and/or pre fire plan walk downs; at least annually.

4. PERSONNEL: Each Party is responsible for all costs of its personnel, including pay and benefits, support, and travel. Each Party is responsible for supervision and management of its personnel. Exception shall be in accordance with paragraph 6.2.2.

5. GENERAL PROVISIONS:

5.1. POINTS OF CONTACT: The following Points of Contact (POC) will be used by the Parties to communicate in the implementation of this MOA. Each Party may change its POC upon reasonable notice to the other Party.

5.1.1. For SCE SONGS-

5.1.1.1. SCE SONGS Plant Manager; (949) 368-9275

5.1.1.2. SCE SONGS Fire Marshal; (949) 368-7311

5.1.2. For USMC CPFD-

5.1.2.1. Fire Chief CPFD; (760) 390-2701

5.1.2.2. Deputy Fire Chief CPFD; (760) 390-2702

5.2. CORRESPONDENCE: All correspondence to be sent and notices to be given pursuant to this MOA will be addressed, if to SCE SONGS, to-

5.2.1. Southern California Edison Company, San Onofre
Attn: Plant Manager
5000 Pacific Coast Highway
P.O. Box 120 D4E
San Clemente, CA 92674

and, if to USMC CPFD, to-

5.2.2. USMC Camp Pendleton Fire Department Headquarters
Attn: Fire Chief
22131 Vandegrift Blvd.
P.O. Box 555211
Camp Pendleton, CA 92055-5211

or as may from time to time otherwise be directed by the Parties.

5.3. REVIEW OF AGREEMENT: This MOA will be reviewed by the Parties whenever a request is made by either Party based on a change in circumstances related to such Party's ability to meet its obligations hereunder.

5.4. MODIFICATION OF AGREEMENT: This MOA may only be modified by the written agreement of the Parties, duly signed by their authorized representatives.

5.5. DISPUTES: Any disputes relating to this MOA will, subject to any applicable law, Executive Order, Directive, or Instruction, be resolved by consultation between the Parties.

5.6. TERMINATION OF AGREEMENT: This MOA may be terminated by either Party by giving at least 180 days written notice to the other Party provided that termination by USMC requires that SCE and USMC agree to a replacement response plan. The MOA may also be terminated at any time upon the mutual written consent of the Parties.

5.7. TRANSFERABILITY: This Agreement is not transferable except with the written consent of the Parties. Notwithstanding the prior sentence, SCE may assign this Agreement, without prior consent, to any entity that may be created or designated by SCE to oversee the Decommissioning of SONGS, provided such entity agrees to perform the obligations assumed by SCE herein.

5.8. ENTIRE AGREEMENT: It is expressly understood and agreed that this MOA embodies the entire agreement between the Parties regarding the MOA's subject matter and that this MOA is intended to be legally binding and that each Party acknowledges the consideration provided to each is sufficient for this MOA to be regarded as legally binding on both Parties hereto.

5.9. EFFECTIVE DATE: This MOA takes effect beginning on the day after the last Party signs.

5.10. EXPIRATION DATE: This Agreement will be reviewed every three (3) years per MCO P11000.11 and will continue in effect, with any modifications that may be agreed to by the Parties, until the agreement is terminated pursuant to paragraph 5.6.

5
~~FOR OFFICIAL USE ONLY~~

5.11. CANCELLATION OF PREVIOUS AGREEMENT: This MOA cancels and supersedes the previously signed agreement between the same parties with the subject, Mutual Aid Assistance Agreement, effective date of June 9, 2008.

6. FINANCIAL DETAILS:

6.1. AVAILABILITY OF FUNDS: This MOA does not document the obligation of funds between the two Parties. Accordingly, SCE is responsible for all of the costs associated with MCIWEST-MCB CAMPEN provision of goods and services under this MOA. Additionally SCE attests that funding is available to pay for the requested support.

6.2. BILLING:

6.2.1. MCIWEST-MCB CAMPEN (Fire & Emergency Services will bill SCE for goods and/or services rendered 30 calendar days after performance occurrence.

6.2.2. To the extent that costs to MCIWEST-MCB CAMPEN are increased as a result of support provided to the SCE, such costs will be borne by SCE, i.e. when overtime work is required to meet the schedule of the required services being provided.

6.2.3. Invoices shall be sent to:

Southern California Edison Company
Accounts Payable Division
P.O. Box 700
Rosemead, CA 91770

6.3. PAYMENT OF BILLS: The payment due date is 30 calendar days from the date of the invoice. SCE will forward payment, to MCIWEST-MCB CAMPEN.

6.4. Checks will be made payable to the U.S. Treasury and remit to the following address.

Commanding General
Attn: AC/S G-8/Budget Office
Box 555011 Bldg 1160 Room 273
Camp Pendleton, CA 92055-5011

6.5. FINANCIAL POINT OF CONTACTS. The following are the financial POC to be used by the Parties to communicate in the implementation of the financial details of this MOA. Each Party may change its POC upon reasonable notice to the other Party.

6.5.1. For the CG, MCIWEST-MCB CAMPEN


Arlene C. Casimiro
GS/Budget Officer
MCIWEST-MCB CAMPEN
(760) 725-5709
arlene.casimiro@usmc.mil

6.5.2. For Southern California Edison

Robert B. Sholler
SONGS Plant Manager
Southern California Edison Company
5000 Old Pacific Coast
San Clemente, CA 92672
(949) 368-9275
Bob.Sholler@sce.com


AGREED:

For SCH SONGS-


Robert B. Sholler
SONGS Plant Manager
Southern California Edison Company

10-8-14
(Date)

For USMC CFPD-


J. K. ARRUDA
Chief of Staff
MCIWEST-MCB CAMPEN

20 NOV 14
(Date)



ORANGE COUNTY FIRE AUTHORITY

P. O. Box 57115, Irvine, CA 92619-7115 • 1 Fire Authority Road, Irvine, CA 92692

Chip Prather, Fire Chief

(714) 373-6000

www.ocfa.org

July 7, 2004

Mr. Howard W. Newton
Manager, Site Support Services
Southern California Edison

Subject: Renewal of Agreement for the Transportation of Individuals

Dear Mr. Newton:

This letter confirms an agreement ("Agreement") between the Orange County Fire Authority ("OCFA") and Southern California Edison ("SCE") concerning emergency care and ambulance transportation for individuals that are injured at the San Onofre Nuclear Generating Station, where the injury may involve radiological contamination.

Pursuant to this Agreement, San Onofre Nuclear Generating Station may request OCFA provide emergency care and transportation under this Agreement for any injured individual who may have been exposed to radiological contamination at the San Onofre Nuclear Generating Station. Transportation will be to one of the following medical treatment facilities capable of handling contaminated-injured patients: San Clemente Hospital, South Coast Medical Center in Laguna Beach, Tri-City Medical Center in Oceanside, and Mission Hospital and Regional Medical Center in Mission Viejo.

As part of this Agreement, SCE agrees to provide staff training and assistance to OCFA so it is adequately prepared to handle contaminated individuals as described herein. In exchange, OCFA agrees to provide available vehicles and qualified personnel in response to requests from SCE for assistance in the handling of radiologically contaminated patients.

In addition, when SCE requests assistance from OCFA then SCE will provide OCFA staff with available health physics and medical information about the related contamination injuries so this information can be used by the OCFA in responding to these injuries. This information will assist OCFA's staff in understanding the nature of the injury, the extent and characteristics of any contamination that may be involved, the degree of decontamination achieved, and the risks involved to the staff and to the vehicles and equipment used for the transport of the injured individual.

SCE agrees that it will be responsible for the payment of usual and customary fees and charges for any emergency care or transportation services rendered at SCE's request, as evidenced by SCE's execution of this letter, and OCFA agrees to send any bills to me at the above address (unless subsequent billing instructions are provided in writing by SCE to OCFA).

Serving the Cities of Aliso Viejo • Brea Park • Cypress • Dana Point • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods • Lake Forest • La Habra
Los Alamitos • Milpitas Viejo • Placentia • Rancho Santa Margarita • San Clemente • San Juan Capistrano • San Juan de los Rios • San Juan de los Rios
Westminster • Yorba Linda • and Unincorporated Areas of Orange County

RESIDENTIAL SPRINKLERS AND SMOKE DETECTORS SAVE LIVES

Southern California Edison
July 7, 2004
Page 2

It is also understood and agreed that the sole remedy of either party for breach of this Agreement (except for non-payment for services rendered by SCE which shall not be subject to this limitation on remedies) shall be the termination of this Agreement. Except for non-payment claims, under no circumstances shall either party be liable to the other for any damages arising out of the breach of this Agreement.

Norwithstanding any other provisions contained herein, either party with or without cause may terminate this Agreement following 30 days written notice to the other party.

The SCE signatory below represents that he has authority to sign this Agreement on behalf of SCE.

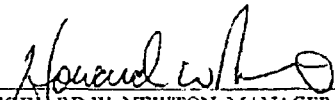
Very truly yours,

ORANGE COUNTY FIRE AUTHORITY

By: 
CHIP PRATHER, FIRE CHIEF

ACCEPTED AND AGREED TO:

SOUTHERN CALIFORNIA EDISON

By: 
HOWARD W. NEWTON, MANAGER,
SITE SUPPORT SERVICES

APPROVED AS TO FORM:

By: 
GENERAL COUNSEL

Appendix 4: Glossary of Terms and Acronyms

Accident Assessment	Accident assessment consists of a variety of actions taken to determine the nature, effects and severity of an accident.
Activation	"ERO Activation" is the process of initiating actions to notify and mobilize Emergency Response Organization (ERO) personnel following an event classification under the PDEP.
ALARA	Acronym for "As Low as Reasonably Achievable," a basic concept of radiation protection that specifies that radioactive discharges from nuclear plants and radiation exposure to personnel be kept as far below regulation limits as feasible.
Annual	At least once per calendar year, January 1 to December 31.
Assembly/Accountability	A procedural or discretionary protective action taken for all persons within the Protected Area, which involves the gathering of personnel into pre-designated areas, and the subsequent verification that the location of these personnel is known.
Assembly Area	An area designated for the assembly of site personnel upon evacuation of the Protected Area.
Assessment Actions	Those actions taken during or after an emergency to obtain and process information that is necessary to make decisions to implement specific emergency measures.
Biennial	Occurring every two years
Classification	The classification of emergencies is divided into two categories or conditions, covering the postulated spectrum of emergency situations.
Command and Control	When in Command and Control of the event, the designated individual has overall responsibility for the SONGS emergency response efforts.
Command Center	The operations center of the station from which the plant can be monitored.
Company, the	A term used to describe the holder of SONGS license.
Confinement Boundary	The outside surfaces of a storage cask containing spent fuel that act as a barrier between the radioactive substances contained within and the environment.
Corrective Action	Those emergency measures taken to lessen or terminate an emergency situation at or near the source of the problem, to prevent an uncontrolled release of radioactive material, or to reduce the magnitude of a release. Corrective actions include, equipment repair or shutdown, installation of emergency structures, fire fighting, repair, and damage control.

Appendix 4: Glossary of Terms and Acronyms

Damage Assessment	Estimates and descriptions of the nature and extent of damages resulting from an emergency or disaster; of actions that can be taken to prevent or mitigate further damage, and of assistance required in response and recovery efforts based on actual observations by qualified engineers and inspectors.
Decontamination	The reduction or removal of contaminated radioactive material from a structure, area, material, object, or person. Decontamination may be accomplished by (1) treating the surface so as to remove or decrease the contamination, (2) letting the material stand so that the radioactivity is decreased as a result of natural decay, and (3) covering the contamination.
Dose	A generic term that means absorbed dose, dose equivalent, effective dose equivalent, deep dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent.
Dose Projection	The calculated estimate of a radiation dose to individuals at a given location (normally offsite), determined from the source term/quantity of radioactive material (Q) released, and the appropriate meteorological dispersion parameters (X/Q).
Dose Rate	The amount of ionizing (or nuclear) radiation to which an individual would be exposed per unit of time. As it would apply to dose rate to a person, it is usually expressed as rems per hour or in submultiples of this unit, such as millirems per hour. The dose rate is commonly used to indicate the level of radioactivity in a contaminated area.
Drill	A supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation.
Emergency Action Level (EAL)	A pre-determined, site-specific, observable threshold for a plant Initiating Condition that places the plant in a given emergency class. An EAL can be an instrument reading, an equipment status indicator, a measurable parameter (onsite or offsite), a discrete observable event; or another phenomenon, which if it occurs, indicates entry into a particular emergency class.
Emergency Director	The Director of the facility in Command and Control of the event. The Shift Manager fills the role of Emergency Director throughout an event.
Emergency Operations Center (EOC)	A facility designed and equipped for effective coordination and control of emergency operations carried out within an organization's jurisdiction. The site from which civil government officials (municipal, county, State, and Federal) exercise direction and control in a civil defense emergency.
Emergency Response Personnel	SCE personnel who may be called upon during an emergency to perform duties to mitigate accident conditions at SONGS.

Appendix 4: Glossary of Terms and Acronyms

Emergency Preparedness	A state of readiness that provides reasonable assurance that adequate protective measures can and will be taken upon implementation of the Emergency Plan in the event of a radiological emergency.
Environmental Monitoring	The use of radiological instruments or sample collecting devices to measure and assess background radiation levels and/or the extent and magnitude of radiological contamination in the environment around the plant. This may be done in various stages such as normal operations, emergency, and recovery.
Evacuation	The urgent removal of people from an area to avoid or reduce high level, short-term exposure usually from activity release of radioactivity or other environmental hazard.
Exclusion Area	The area surrounding the reactor where the reactor licensee has the authority to determine all activities, including exclusion or removal of personnel and property (10 CFR 100.3). The Exclusion Area is determined as an area of such size that an individual located at any point on its boundary for two hours immediately following onset of the postulated fission product release would not receive a total radiation dose to the whole body in excess of 25 rem or a total radiation dose in excess of 300 rem to the thyroid from iodine exposure [10 CFR 100.11(a)(1)]. In accordance to the letter dated March 31, 2014 (ADAMS Accession No. ML 14092A332), SONGS analyses demonstrate that the radiological consequences of design-basis accidents at SONGS will not exceed the 1 rem limit of the EPA PAGs at the Exclusion Area Boundary.
Exclusion Area Boundary (EAB)	For SONGS, the Exclusion Area Boundary (EAB) is roughly formed by two semicircles with radii of 1967.5 ft. each, centered on the Unit 2 Containment dome and a point 134 ft. southeast of the Unit 3 Containment dome, with a tangent connecting the landward arcs and seaward arcs of the two semicircles. The EAB is depicted in UFSAR Figure 2.1-5.
Exercise	A test of the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. An exercise may involve participation of offsite organizations.
Hostile Action	An act toward the station or its personnel that includes the use of violent force to destroy equipment, takes hostages, and/or intimidate the licensees to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. This should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the station.
Initiating Condition	A predetermined condition where either the potential exists for an emergency or such an emergency has occurred.

Appendix 4: Glossary of Terms and Acronyms

Integrated Drill	A training activity that incorporates multiple demonstration requirements to be conducted in connection with one another. An example could be including a contaminated injured person with a loss of spent fuel coolant accident.
Local Agencies	Orange County and San Diego County
Meteorological Instrumentation	A device mounted in a location that will provide the Command Center with local wind speed and direction to assist in the assessment and decision-making to implement onsite protective actions.
Monthly	At least once per calendar month.
Offsite	The area around the station that lies beyond the EAB.
Onsite	The area around the station that lies within the EAB.
Owner Controlled Area	SCE SONGS controlled property, to include facilities and parking lots located on the west side of the Interstate 5 freeway, extending westward from Old Highway 101 to the median high-tide line, bordered on the north and south by the State Beach Park.
Personnel Monitoring	The determination of the degree of radioactive contamination on individuals, using standard survey meters, and/or the determination of dosage received by means of dosimetry devices.
Radiation Monitoring System	An instrumentation system designed to detect and alarm abnormal radiation levels in spent fuel pool area and effluent streams.
Projected Dose	That calculated dose that some individuals in the population group may receive if no protective actions are implemented. Projected doses are calculated to establish an upper limit boundary.
Protected Area	That onsite area within the security boundary as defined in the station's Security Plan.
Protective Action	Those emergency measures taken for the purpose of preventing or minimizing radiological exposures to affected population groups.
Quarterly	At least once in each of the following four periods: January 1 through March 31; April 1 through June 30; July 1 through September 30; October 1 through December 31.
Radiological Release	A ' <i>Release in Progress</i> ' is defined as ANY radioactive release that is a result of, or associated with, the emergency event. Normal off-gas or plant vent releases that occur during operations or shutdown are not considered to be a release unless the value exceeds an alarm setpoint.
Safety System	A system required for cooling the spent fuel pool in the permanently defueled mode of operation.

Appendix 4: Glossary of Terms and Acronyms

Semi-Annual	At least once in each of the following periods: January 1 through June 30; July 1 through December 31.
Site Evacuation	The evacuation of non-essential personnel from the plant site.
Source Term	Radioisotope inventory of spent fuel, or amount of radioisotope released to the environment, often as a function of time.
Staffed Warning Points	Offsite agency locations that are staffed 24 hours a day. Such as 911 centers or other staffed watch locations.
Threshold Value	Measurable, observable detailed conditions that must be satisfied to determine an EAL applicability.
Total Effective Dose Equivalent (TEDE)	The sum of the deep dose equivalent (for external exposure) and the committed effective dose equivalent (for internal exposure) and 4 days of deposition exposure.
Unrestricted Area	Any area to which access is not controlled for protecting individuals from exposure to radiation and radioactive materials, or other industrial hazards.
Weekly	At least once per calendar week: Sunday through Saturday.

Any abbreviation followed by a lower case 's' denotes the plural form of the term.

Appendix 4: Glossary of Terms and Acronyms**ACRONYMS**

ARM	Area Radiation Monitor
CFR.....	Code of Federal Regulations
CC.....	Command Center
DHS	Department of Homeland Security
EAB.....	Exclusion Area Boundary
EAL	Emergency Action Level
EAS.....	Emergency Alerting System
ED	Emergency Director
ENS.....	Emergency Notification System (NRC)
EOC	Emergency Operations (or Operating) Center
EPA.....	Environmental Protection Agency
EPZ.....	Emergency Planning Zone
ISFSI	Independent Spent Fuel Storage Installation
NRC	Nuclear Regulatory Commission
OES	California Office of Emergency Services
PAG	Protective Action Guide
PDEP	Permanently Defueled Emergency Plan
RPT.....	Radiation Protection Technician
SCBA	Self Contained Breathing Apparatus
TEDE	Total Effective Dose Equivalent
UFSAR.....	Updated Final Safety Analysis Report