



FEMA

FEB 11 2010

Mr. Elmo E. Collins, Jr.
Regional Administrator
U.S. Nuclear Regulatory Commission Region IV
611 Ryan Plaza, Suite 400
Arlington, Texas 76011-8064

Dear Mr. Collins:

I am forwarding a copy of the Final After Action Report for the Radiological Emergency Preparedness (REP) Plume Exposure Pathway Phase Exercise held on September 23, 2009 for the San Onofre Nuclear Generating Station (SONGS). The purpose of this exercise was to assess the level of state and local preparedness in responding to a radiological emergency. The final exercise report was prepared by the Interjurisdictional Planning Committee (IPC) for the SONGS Offsite Response Organizations (OROs).

Based on the evaluation of the September 23, 2009 exercise, the offsite radiological emergency response plans for the state of California and the affected local jurisdictions site-specific to SONGS can be implemented, and are adequate to provide reasonable assurance that appropriate measures can be taken off-site to protect the health and safety of the public in the event of a radiological emergency at SONGS.

Therefore, the Title 44 of the Code of Federal Regulations (CFR) Part 350 interim approval of the offsite radiological emergency response plans and preparedness for the state of California, site-specific to SONGS, will remain in effect.

I would also like to take this opportunity to acknowledge the many individuals that participated in this successful exercise. Their dedication to this program was clearly evident.

Mr. Elmo E. Collins, Jr.
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If you have any questions or need additional information, please contact me at (510) 627-7100. Your staff may also contact Mr. Harry Sherwood, Regional Assistance Committee Chair, at (510) 627-7240.

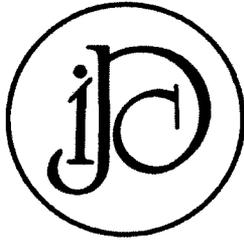
Sincerely,


Nancy Ward
Regional Administrator
FEMA Region IX

Enclosure

cc: NRC Headquarters Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555-0001

✓ Vanessa Quinn, Chief
Radiological Emergency Preparedness Branch
FEMA Headquarters



Interjurisdictional Planning Committee

County of Orange•County of San Diego•City of San Clemente•City of San Juan Capistrano
City of Dana Point•California State Parks•U. S. Marine Corps•Southern California Edison

After Action Report

San Onofre Nuclear Generating Station (SONGS)



San Onofre Nuclear Generating Station

After Action Report

Exercise Date – September 23, 2009

SONGS Interjurisdictional Planning Committee

After Action Report

2009 Plume Phase Exercise



FEMA

Published December 2009

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ADMINISTRATIVE HANDLING INSTRUCTIONS

1. The title of this document is *SONGS Radiological Emergency Planning (REP) Exercise After Action Report (AAR)*.
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EXECUTIVE SUMMARY

The 2009 San Onofre Nuclear Generating Station (SONGS) biennial Radiological Emergency Preparedness (REP) plume phase exercise was conducted on September 23, 2009. Out-of-sequence interviews and demonstrations of selected off-site response organizations (OROs) were conducted on September 21, 22, and 24, and November 30, 2009. The previous biennial plume phase exercise at this site was conducted on April 18, 2007.

The purpose of the exercise was to assess the level of preparedness of local responders to react to a simulated radiological emergency at SONGS. This exercise was held in accordance with the Federal Emergency Management Agency's (FEMA) policies and guidance concerning the exercise of State and local Radiological Emergency Response Plans (RERPs) and procedures. An additional purpose of the exercise was to test concepts for integrating the REP program and Homeland Security Exercise and Evaluation Program (HSEEP). The Exercise Evaluation Guides (EEGs) used during the exercise represented a combination of FEMA REP criteria and HSEEP capability-based guides.

Personnel from the State of California, County of Orange, County of San Diego, City of Dana Point, City of San Juan Capistrano, City of San Clemente, City of Oceanside, Capistrano Unified School District (CUSD), Southern California Edison, other county-level agencies, non-governmental organizations and private sector organizations participated in the exercise. Cooperation and teamwork of all the participants was evident during this exercise, and the IPC wishes to thank FEMA for their support with this effort.

This report shall represent the HSEEP AAR for the 2009 SONGS plume phase exercise and out-of-sequence activities.

The exercise participants demonstrated knowledge of their emergency response plans and procedures and adequately demonstrated the ability to execute those plans. There were no Deficiencies identified during the course of the exercise. Two previously identified items which required performance improvement were demonstrated and are now closed. One previously recorded item remains unresolved pending clarification of the federal regulations affecting the area. The corrective action plan for issue areas are documented in the 2009 SONGS IPC Plume Phase Exercise Improvement Plan.

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SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

San Onofre Nuclear Generating Station (SONGS) Radiological Emergency Preparedness (REP) Exercise

Type of Exercise

Full-Scale Exercise

Exercise Date

September 23, 2009

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Capabilities

- Communications
- Emergency Operations Center Management
- WMD and Hazardous Materials Response and Decontamination
- Critical Resource Logistics and Distribution
- Responder Safety and Health
- Citizen Evacuation and Shelter-in-Place
- Mass Prophylaxis
- Emergency Public Safety and Security Response
- On-Site Incident Management
- Emergency Public Information and Warning

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

The Exercise Planning Team was lead by the SONGS IPC and included representatives from FEMA and Southern California Edison.

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1.3 Participating Organizations

Federal
Federal Emergency Management Agency (FEMA)
Nuclear Regulatory Commission (NRC)
United States Marine Corps Base Camp Pendleton
State
California Emergency Management Agency (Cal EMA)
California Department of Parks and Recreation, Orange Coast District (State Parks)
California Department of Public Health (CDPH)
California Department of Food & Agriculture
California Department of Social Services
California Department of Transportation (Caltrans)
California Emergency Medical Services Authority
California Highway Patrol (CHP)
California National Guard
County
County of Orange
County of San Diego
Local
City of Dana Point
City of San Clemente
City of San Juan Capistrano
Capistrano Unified School District (CUSD)
Other Public Agencies
Orange County Fire Authority (OCFA)
Water Emergency Response Organization of Orange County
Orange County Transportation Authority (OCTA)
Oceanside Fire Department (OFD)
Non-Governmental Organizations
2-1-1 San Diego
American Red Cross (ARC)

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Orange County Radio Amateur Civil Emergency Service (RACES)
Private Sector Organizations
California Utilities Emergency Association
KOGO-AM, San Diego County Emergency Alert System
KWVE-FM, Orange County Emergency Alert System
Southern California Edison

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SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

FEMA Region IX evaluated the exercise on September 23, 2009 to assess the capabilities of local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving SONGS. The purpose of the After Action Report (AAR) is to present the results and findings on the performance of the OROs during a simulated radiological emergency in the HSEEP format. The draft AAR was reviewed during the After Action Conference (AAC) held on October 26, 2009.

2.2 Exercise Objectives, Capabilities, and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL) and REP criteria.

Criterion 1.a.1	<ul style="list-style-type: none"> • Communications • Emergency Operations Center Management • WMD and Hazardous Materials Response and Decontamination
Criterion 1.b.1	<ul style="list-style-type: none"> • Emergency Operations Center Management
Criterion 1.c.1	<ul style="list-style-type: none"> • Emergency Operations Center Management • WMD and Hazardous Materials Response and Decontamination
Criterion 1.d.1	<ul style="list-style-type: none"> • Communications • Emergency Operations Center Management
Criterion 1.e.1	<ul style="list-style-type: none"> • Critical Resource Logistics and Distribution • Emergency Operations Center Management • Responder Safety and Health
Criterion 2.a.1	<ul style="list-style-type: none"> • Responder Safety and Health
Criterion 2.b.1	<ul style="list-style-type: none"> • Emergency Operations Center Management • WMD and Hazardous Materials Response and Decontamination
Criterion 2.b.2	<ul style="list-style-type: none"> • Citizen Evacuation and Shelter-in-Place • Emergency Operations Center Management
Criterion 2.c.1	<ul style="list-style-type: none"> • Citizen Evacuation and Shelter-in-Place
Criterion 3.a.1	<ul style="list-style-type: none"> • Responder Safety and Health
Criterion 3.b.1	<ul style="list-style-type: none"> • Mass Prophylaxis
Criterion 3.c.1	<ul style="list-style-type: none"> • Citizen Evacuation and Shelter-in-Place
Criterion 3.c.2	<ul style="list-style-type: none"> • Citizen Evacuation and Shelter-in-Place
Criterion 3.d.1	<ul style="list-style-type: none"> • Emergency Public Safety and Security Response
Criterion 3.d.2	<ul style="list-style-type: none"> • Citizen Evacuation and Shelter-in-Place
Criterion 4.a.1	<ul style="list-style-type: none"> • WMD and Hazardous Materials Response and Decontamination

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Criterion 4.a.2	<ul style="list-style-type: none">• On-Site Incident Management
Criterion 4.a.3	<ul style="list-style-type: none">• WMD and Hazardous Materials Response and Decontamination
Criterion 5.a.1	<ul style="list-style-type: none">• Emergency Public Information and Warning
Criterion 5.a.3	<ul style="list-style-type: none">• Communications• Emergency Public Information and Warning
Criterion 5.b.1	<ul style="list-style-type: none">• Emergency Public Information and Warning

2.3 Scenario Summary

EMERGENCY PLAN EXERCISE 0906, SEPTEMBER 23, 2009
SAN ONOFRE NUCLEAR GENERATING STATION

SCENARIO SUMMARY (See Appendix A for detailed Exercise Timeline Matrix)

INITIAL CONDITIONS

The exercise began with Unit 2 at 100% power. Unit 3 was operating normally at full power, preparing for a refueling outage.

LOSS OF CONTROL OF RADIOACTIVE MATERIAL

At 0752, the Control Room received an alarm on Area Radiation Monitor. A Health Physics Supervisor reported a highly radioactive material transfer container was tipped over onto the floor, opened, and exposed its contents. Within 15 minutes of this event, SONGS declared an Alert. This Alert declaration required activation of both onsite and offsite jurisdiction emergency operation centers.

RCP SEIZED SHAFT - REACTOR TRIP - STEAM LINE BREAK IN CONTAINMENT

At 0918, Reactor Coolant Pump shaft seized, causing a reactor trip and a ruptured steam line in containment.

BRUSH FIRE - LOSS OF OFFSITE POWER - STATION BLACKOUT

Upon transfer of power from one transformer to another, an arc occurred resulting in a brushfire across the freeway from the plant. This event resulted in a loss of power to Units 2 and 3. When power had been lost for greater than 15 minutes, SONGS classified the event as a Site Area Emergency.

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STEAM GENERATOR TUBE RUPTURE - UNCONTROLLED RELEASE OF RADIOACTIVITY

At 1104, a Steam Generator Tube Rupture occurred necessitating the declaration of a General Emergency. A Protective Action Recommendation (PAR) was made by the Utility. Offsite jurisdictions initiated a Decision Makers Conference Call to determine appropriate protective actions for the general population. An Emergency Alert System Message was agreed upon and released and the community alert sirens were activated.

EXERCISE TERMINATION

The Exercise was terminated when all objectives were demonstrated.

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SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the September 23, 2009 plume exercise and out-of-sequence interviews and demonstrations which were conducted to test the offsite emergency response capabilities of State and local government agencies for the SONGS Emergency Planning Zone (EPZ).

Each jurisdiction and functional entity was evaluated on its demonstration of criteria contained in the exercise evaluation areas as outlined in the Federal Register, Vol. 67, No. 80 "FEMA–Radiological Emergency Preparedness: Exercise Evaluation Methodology" (April 25, 2002). In addition, the jurisdictions and functional entities were evaluated on the degree to which they met the target capabilities applicable to each criterion.

FEMA has developed a standardized system for numbering exercise issues. This system has been used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. It is also used to expedite tracking of exercise issues on a nationwide basis. The identifying number for Deficiencies and Areas Requiring Corrective Action (ARCAs) includes the following elements, with each element separated by a hyphen (-).

- Plant Site Identifier – A two-digit number corresponding to the Utility Billable Plant Site Codes.
- Exercise Year – The last two digits of the year the exercise was conducted.
- Evaluation Area Criterion – A letter and number corresponding to the criteria in the FEMA REP Exercise Evaluation Methodology.
- Issue Classification Identifier – (D = Deficiency, A = ARCA, P = Planning Issue). Only Deficiencies and ARCAs are included in exercise reports. Planning Issues are identified with a P in a separate notification.
- Exercise Issue Identification Number – A separate two digit indexing number assigned to each issue identified in the exercise.

3.2 Summary Results of Exercise Evaluation

The matrix presented in the table on the following page presents the status of all exercise evaluation area criteria. Exercise criterion are listed on the matrix by number; the status of those criterion scheduled for demonstration during the exercise is indicated by the use of the following letters:

M – Met
 A – ARCA
 D – Deficiency assessed
 N – Not demonstrated
 U – Unresolved

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Table 3.1 Summary of Exercise Evaluation

ELEMENT/Sub-Element	SOC	SREOC	CHP	DPH DOC	EOF	ODAC	Orange Co RMT	Oceanside RMT	Orange Co EOC	Orange Co Sheriff's Dept	Orange Co Public Works	Orange Co Transportation Authority	San Diego Co EOC	Dana Point EOC	San Clemente EOC	San Juan Cap EOC	State Parks EOC	IPC	JIC	Capistrano Unified School District	Orange Co EAS	San Diego Co EAS	
	EMERGENCY OPERATIONS MANAGEMENT																						
1.a.1 Mobilization	M	M		M	M	M	M	M	M				M	M	M	M	M	M					
1.b.1 Facilities	M			M															M				
1.c.1 Direction and Control	M	M		M	M	M	M	M	M				M	M	M	M	M	M	M				
1.d.1 Communications Equipment	M	M		M	M	M	M	M	M				M	M	M	M	M	M	M			M	M
1.e.1 Equipment & Supplies to Support Operations	M	M		M	M	M	M	M	M	M			M	M	M	M	M	M	M			M	
PROTECTIVE ACTION DECISION MAKING																							
2.a.1 Emergency Worker Exposure Control						M							M										
2.b.1 Rad Assessment & PARs Based on Available Information						M																	
2.b.2 Rad Assessment and PADs for the General Public													M	M	M	M							
2.c.1 Protective Action Decisions for Special Populations																					M		
2.d.1 Rad Assessment & Decision Making for Ingestion Exposure																							
2.e.1 Rad Assessment & Decision Making for Relocation, Re-entry & Return																							
PROTECTIVE ACTION IMPLEMENTATION																							
3.a.1 Implementation of Emergency Worker Control			M		M	M	M	M	M	M	M	M											M

Section 3: Analysis of Capabilities

SONGS REP Exercise

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ELEMENT/Sub-Element	SOC	SREOC	CHP	DPH DOC	EOF	ODAC	Orange Co RMT	Oceanside RMT	Orange Co EOC	Orange Co Sheriff's Dept	Orange Co Public Works	Orange Co Transportation Authority	San Diego Co EOC	Dana Point EOC	San Clemente EOC	San Juan Cap EOC	State Parks EOC	IPC	JIC	Capistrano Unified School District	Orange Co EAS	San Diego Co EAS
3.b.1 Implementation of KI Decisions		M	M		M	M	M	M	M	M	M	M		M		M	M			M		
3.c.1 Implementation of PADs for Special Populations									M			M										
3.c.2 Implementation of PADs for Schools									M											M		
3.d.1 Implementation of Traffic and Access Control	M		M						M	M	M		M		M	M	M					
3.d.2 Impediments to Evacuation and Traffic and Access Control	M		M						M	M	M				M	M	M					
3.e.1 Implementation of Ingestion Decisions Using Adequate Info																						
3.e.2 Implementation of IP Decisions Showing Strategies and Instr. Materials																						
3.f.1 Implementation of Relocation, Re-entry and Return Decisions																						
FIELD MEASUREMENT AND ANALYSIS																						
4.a.1 Plume Phase Field Measurement & Analysis Equipment							M															
4.a.2 Plume Phase Field Measurement & Analysis Management						M	M															
4.a.3 Plume Phase Field Measurements & Analysis Procedures							M															
4.b.1 Post Plume Field Measurement & Analysis																						
4.c.1 Laboratory Operations																						

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ELEMENT/Sub-Element	EMERGENCY NOTIFICATION AND PUBLIC INFORMATION																							
	SOC	SREOC	CHP	DPH DOC	EOF	ODAC	Orange Co RMT	Oceanside RMT	Orange Co EOC	Orange Co Sheriff's Dept	Orange Co Public Works	Orange Co Transportation Authority	San Diego Co EOC	Dana Point EOC	San Clemente EOC	San Juan Cap EOC	State Parks EOC	IPC	JIC	Capistrano Unified School District	Orange Co EAS	San Diego Co EAS		
5.a.1 Activation of Prompt Alert and Notification									M				M	M	M	M	M	U				M		M
5.a.2 Activation of Prompt Alert and Notification 15 Minute (Fast Breaker)																								
5.a.3 Activation of Prompt Alert & Notification Backup Alert & Notification			M						M					M	M	M	M							
5.b.1 Emergency Info and Instructions for the Public and the Media	M								M				M	M	M	M	M		M			M		M
SUPPORT OPERATIONS/FACILITIES																								
6.a.1 Monitoring & Decon of Evacuees & EWs and Registration of Evacuees																								
6.b.1 Monitoring and Decon of Emergency Worker Equipment																								
6.c.1 Temporary Care of Evacuees																								
6.d.1 Transport and Treatment of Contaminated Injured Individuals																								

3.3 Evaluation Summaries

3.3.1 State Jurisdictions

3.3.1.1 California State Operations Center (SOC)

Communications Capability Summary: The SOC received notification of the emergency via the dedicated Yellow Phone System (YPS). Follow on notifications came from the same direct telephone landline and were followed by a confirmation fax from the SONGS, including the Site Area Emergency (SAE) at 0947 and the General Emergency (GE) at 1121.

EOC Management Capability Summary: In accordance with the Exercise Plan (EXPLAN), the SOC staff was not pre-positioned but responded with a sense of urgency. Also activated were supporting agencies to include representatives from the California National Guard, CHP, Caltrans, California Emergency Medical Services Association, California Department of Social Services, California Department of Public Health (CDPH), California Department of Food and Agriculture, the ARC, and the California Utilities Emergency Association. The SOC was fully operational at 0845.

The existing SOC serves as the hub of emergency management for the State of California. California Emergency Management Agency (Cal EMA) also has regional emergency operations centers (REOCs) that serve as the first line on support for cities and counties. Those regional centers, when activated, support the local needs but when they are unable to satisfy all missions, the SOC is requested to satisfy mission assignment requests for various resources needed at the city, county, or regional level.

Emergency Public Safety and Security Capability Summary: The CHP representatives in the SOC demonstrated the ability to coordinate traffic and access control resources, provide information to the SOC, and maintain current status of actions in response to protective actions. Contact with local representatives was maintained through telephone and email contact throughout the exercise.

Citizen Evacuation and Shelter-in-Place Capability Summary: The CHP representatives in the SOC demonstrated the ability to coordinate traffic impediment activities, provide information to the SOC, and maintain current status of actions. Contact with local representatives was maintained through telephone and email contact throughout the exercise.

Emergency Public Information and Warning Capability Summary: The two members of the Public Information staff in the SOC monitored event activities, and provided information to the press and media with regard to activities at the SOC through the preparation and release of four news releases. Communications was effective and comprehensive.

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1.a.1 Observation: Strength

The COMMUNICATOR! NXT system was a very effective tool for mobilizing staff to the SOC.

References:

1. NUREG-0654, A.4, D.3, 4, E.1, 2, H.4
2. Criteria 1.a.1

Discussion: The use of the COMMUNICATOR! NXT system was above and beyond a requirement for a State agency. This use of this system at a Federal level can be a complicated process, and even more difficult at a State level. However, the Warning Center utilized it properly and in doing so was able to contact and confirm receipt of thirty nine people in thirty nine minutes.

1.b.1 Observation: Strength

The California SOC is an effective and efficient emergency operations facility.

References:

1. Cal EMA Manual, Management of the State Operations Center, September 27, 2006
2. State of CA Emergency Operations Plan
3. CA NPP ERP

Discussion: The Cal SOC has a reputation as one of the best in the nation. Based on the evaluator's assessment, the SOC meets and exceeds all requirements for supporting response to a radiological emergency. The SOC is a model EOC.

1.c.1 Observation: Strength

The overall management of the SOC activation, from mobilization to termination of the exercise, was outstanding.

References:

1. CA Emergency Operations Plan
2. CA NPP ERP
3. Cal EMA Manual, Management of the State Operations Center, September 27, 2006

Discussion: As outlined in the narrative, the leadership was very professional and all evaluation criteria were met in a totally satisfactory manner. The Cal EMA has a reputation throughout the emergency management community for progressive and innovative initiatives concerning all phases of the program. Significantly, the incident command system (ICS) originated in California. That initiative, coupled with the internal practices employed during this exercise and under normal operations of an EOC, highlights the need for recognition. It is understood that many states have visited their EOC to gain insight to the excellent facility. It should also be held up as a model for the great internal operating procedures they employ.

3.3.1.2 Southern Region Emergency Operations Center (SREOC)

EOC Management Capability Summary: Due to the ongoing real world wildfires, the SREOC demonstrated their operations through a simulation cell (SIMCELL) operated by Cal EMA staff. Consequently, the normal SREOC Director responsibilities for this SONGS exercise were assigned to a Cal EMA Liaison and two public information officer (PIO) assistants. Throughout the SONGS exercise, the SIMCELL Director demonstrated strong leadership capabilities in the direction and coordination of the SREOC emergency response efforts. This resulted in Cal EMA staff remaining focused on the mission to respond to wildfires while providing State support to Orange and San Diego Counties for the purpose of the exercise.

3.3.1.3 California Highway Patrol (CHP) (interview)

Critical Resource Logistics and Distribution Capability Summary: The CHP were well equipped to perform functions assigned to them based on SONGS standard operating procedures (SOPs). The CHP officers had good resources for equipment and had endless avenues they could approach to access specialized equipment if required.

Responder Safety and Health Capability Summary: The CHP maintains an ongoing radiological program for their officers, which includes briefing them four times a year on the program. This effort makes the officers some of the better trained radiological responders in the nationwide REP community. Other agencies may receive their training once a year prior to an exercise, a frequency that can stretch a responder's memory capabilities.

Mass Prophyiaxis Capability Summary: The CHP is a close knit group with excellent forms of communication. Their ability to distribute potassium iodide (KI) to traffic control points (TCPs) and access control points (ACPs), and to provide orders to ingest KI is unquestioned. Their knowledge displayed during the interview process provides assurance that KI distribution and ingestion would be done in a orderly manner.

Emergency Public Safety and Security Capability Summary: The CHP is an excellent agency to assist with traffic control. The CHP deploys personnel several times a year to support emergency operations with wildfires, at times using the same TCPs identified in REP Plans. This agency is a strong addition to the existing agencies that pull together to support incidents at SONGS.

Citizen Evacuation and Shelter-in-Place Capability Summary: CHP demonstrated their large resources to maintain traffic flow, and expedite removal of impediments using their extensive database of State and private agencies to handle all traffic impediments imaginable.

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Emergency Public Information and Warning Capability Summary: The CHP provides a liaison to the EOF and provides PIO staff to the JIC. CHP displayed (via interview) a large capability to support route alerting tasks and provides backup assistance to State Parks as needed.

3.3.2 Risk Jurisdictions

3.3.2.1 SONGS Emergency Operations Facility (EOF)

Communications Capability Summary: The off-site response organization (ORO) liaisons worked well together. The more experienced Liaisons assisted the lesser experienced in getting set up and understanding Emergency Operations Facility (EOF) operations. Liaisons from the OROs utilized their primary communication system to contact their EOCs, and displayed uses of their alternate communications devices during the exercise without failure.

EOC Management Capability Summary: The EOF completed their assigned roles. The jurisdictional Offsite Liaisons communicated with EOF staff, the Offsite Dose Assessment Center (ODAC), and each other in a manner that produced effective results. Offsite EOCs received information about operations from their respective EOF Liaisons. The Offsite EOCs reported updates and information to their liaisons in the EOF.

Responder Safety and Health Capability Summary: Liaisons were adequately equipped with equipment, proper dosimetry and KI, and supplies to perform their functions. Liaisons at the EOF were knowledgeable of their dosimetry and wore it in the correct location. They took readings every thirty minutes and recorded the values on their R-1 form. The interviewed Liaisons were knowledgeable of turn back values, administrative limits, and when to report these readings to their EOC management. They also properly recorded the time they ingested (simulated) KI.

Mass Prophylaxis Capability Summary: The EOF had the capability to provide mass prophylaxis to emergency workers (EWs). Liaisons maintain awareness for any direction to ingest KI; all Liaisons arrived at the EOF with their own supply of KI. At 1203 a decision to ingest KI was announced, and at 1206 EOF Administrative staff met with the Liaisons to direct them to ingest KI. The EOF Liaisons ingested (simulated) and recorded the time and dose ingested.

3.3.2.2 Off-site Dose Assessment Center (ODAC)

EOC Management Capability Summary: The ODAC was effectively managed to complete the facility's functions and to manage field team activities. Key personnel with leadership roles provide direction and control to that part of the overall response effort for which they were responsible. The ODAC had effective procedures to alert, notify, and

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mobilize emergency personnel and activate facilities in a timely manner. The ODAC also had good primary and backup communication systems to coordinate with field teams and other OROs.

The ODAC worked affectively with the EOF to develop accurate protective action recommendations (PARs) to protect the public. The PARs were appropriately based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions.

Responder Safety and Health Capability Summary: The ODAC effectively managed the safety and health of the ODAC staff and field teams. The personnel all came prepared with their radiation kits. The ODAC established effective measures to ensure that everyone monitored their exposure and recorded the results, every 30 minutes. The ODAC thoroughly briefed the monitoring teams on their exposure limits and continually reminded the teams to check their dosimeters and record the results.

The ODAC used a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, was in place for EWs including provisions to authorize radiation exposure in excess of administrative limits or protective action guides (PAGs).

Mass Prophylaxis Capability Summary: All ODAC personnel arrived with their KI blister packs and were knowledgeable about its use. When they were notified to simulate the ingestion of KI, everyone complied with the order.

On-Site Incident Management Capability Summary: The ODAC Radiation Monitoring Supervisor (RMS) effectively managed the teams. He briefed the ODAC Communicators on where he wanted the teams to perform their surveys and what information to collect. In turn, the ODAC Communicator relayed these directions to each team. The ODAC Communicator collected the data from the teams and provided it to the RMS.

3.a.1 Observation: Strength

The ODAC EW exposure control process was very effective.

References:

1. Offsite Dose Assessment Center Procedure, May 9, 2009

Discussion: EWs at the ODAC all arrived with their radiation kits and were prepared to follow procedures. The ODAC Administrator immediately got out a timer and set it for 30 minutes. At the sound of the ding, everyone knew that they should record their dose for that 30 minute time frame. To ensure that this was done, The ODAC Illustrator checked with each group to ensure that the readings were recorded on the proper forms. The process was repeated throughout the exercise, resulting in good records of worker exposure.

4.a.2 Observation: Strength

The ODAC effectively managed radiological monitoring teams (RMTs) to obtain sufficient information to help characterize the release and to control radiation exposure.

References:

1. Offsite Dose Assessment Center Procedure, May 9, 2009

Discussion: The ODAC did a very effective job in managing the activities of the FMTs and were able to use the information gathered by the teams. The ODAC provided initial briefings for two FMTs. The FMTs were instructed on their notification and mission limits and how they were to monitor and record their exposures, every 30 minutes, using the R-1 forms. After the teams deployed to the field and began their monitoring activities, the ODAC Communicator contacted them whenever there was a change in the wind direction; a change in plant conditions; or change in the location that they were to monitor for any changes in radiological conditions.

3.3.2.3 Orange County Fire Authority (OCFA) Radiological Monitoring Team (RMT)

WMD and Hazardous Materials Response and Decontamination Capability

Summary: The OCFA RMT successfully conducted their mission to monitor radiological conditions in response to an emergency at SONGS. The team was mobilized in a timely manner at the Alert emergency classification level as per procedures. The Radmon Team Supervisor (RMS) in the ODAC established primary communication with the team via 800 Mhz radio. The FTC provided direction and control of the RMT. An OCFA Captain served as Team Lead of the OCFA RMT.

The OCFA RMT adequately demonstrated taking ambient radiological measurements and air samples using proper procedures. The RMT members successfully recognized when their readings indicated they were in the plume and at an appropriate location to take an air sample. The team Lead also successfully relayed survey information to the RMS at the ODAC.

Communications Capability Summary: The OCFA RMT successfully used 800 MHz Motorola hand-held radios as their primary communication system and team members' cellular telephones as backup communications.

Responder Safety and Health Capability Summary: The OCFA RMT was provided with sufficient pre-assembled Plume Survey Kits, dosimetry, and KI. The team members successfully used the ODAC Radiation Monitoring Team procedure to aid in managing radiological exposure. The Team Lead ensured appropriate exposure control by having team members read and record dosimeter readings every 30 minutes.

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Mass Prophylaxis Capability Summary: The ODAC RMT members deployed with tablets of KI. The ODAC RMS instructed the RMT members to take KI at 1205 in accordance with the protective action decision. Each team member simulated taking KI, and the Team Lead recorded the ingestion on each team member's Form R-1, Emergency Worker Radiation Exposure Form. The Team Lead provided the R-1 Forms to the RMS at ODAC at the end of the mission at 1326.

On-Site Incident Management Capability Summary: The ODAC RMS managed the field team operations. He provided a pre-deployment briefing for the OCFA RMT at the EOF, including instructions on: proper EW exposure control; communications procedures; air sampling procedures; expected wind conditions; and where to report while waiting further instructions. The ODAC RMS effectively directed the deployment and task assignments for the RMTs to obtain readings to confirm the presence of the plume.

3.3.2.4 Oceanside Fire Department (OFD) Radiological Monitoring Team (RMT)

WMD and Hazardous Materials Response and Decontamination Capability Summary: The Oceanside Fire Department (OFD) RMT 7 effectively demonstrated team mobilization. The team was pre-positioned in accordance with the EXPLAN. The North Communication Dispatcher maintains a duty roster listing contact information for the on duty OFD, Fire Inspector. There are five qualified Fire Inspectors with three on rotation at any time, providing adequate mobilization capability. The Fire Inspector informs the Dispatcher what other members to contact. The North Communications Dispatcher then calls the team members specified and instructs them to report to their designated assignment.

RMT 7 was under the direction and control of the ODAC RMS. The RMS briefed the team prior to dispatching them onto the field and kept them updated with current meteorological and plant conditions on a regular basis. RMT 7 relayed exposure rate information to the RMS through the Radio Communicator in the ODAC. Decisions were timely made by the team to maintain exposure as low as reasonably achievable. All information was coordinated and exchanged with the RMS.

RMT 7 obtained an emergency equipment kit containing: a Ludlum model 2241-2 with a model 44-9 pancake GM probe and a model 44-38 side window GM detector (referred to as the "silver probe" in procedures) and a SAIC model H-810 air sampler. All were with the calibration expiration date of March 23, 2010. The team performed a battery check and an operability check on all instruments prior to placing the instrument in service. A "drill use only" air sampling head containing a charcoal cartridge was used. If the instruments did not pass the operability check, replacement instruments were available from one of the other kits stored at the Fire Station.

RMT 7 was initially positioned in a downwind location prior to the beginning of the release. They were instructed to monitor instrumentation to determine when the

leading edge of the release approached that particular location. They traversed the plume suspected path and measured ambient radiation levels as they traversed the designated routes. The team successfully located the entrance edge, center line and the exit edge of the plume. They also conducted air sampling at four separate locations. Ambient radiation measurements were only taken upon arrival to the location.

Communications Capability Summary: RMT 7 had 800 MHz radios available as the primary communication system with and backup communications by cellular telephones. The fire truck used by the team had a permanently installed 800 MHz Radio and each of the team members had a Motorola hand held radio on the same frequency. In addition each team member was issued a cellular telephone. Telephone numbers were exchanged prior to being dispatched. Communications checks were performed prior to dispatch. Communications were maintained with the RMS throughout the exercise using these systems. Both systems functioned without problems during the exercise.

Responder Safety and Health Capability Summary: The EWs were provided with appropriate safety and health equipment. RMT 7 was issued a DRC thermoluminescent dosimeter (TLD) with an exchange date of January 4, 2010 printed on the face of the TLD and an Aloka MyDose Mini electronic dosimeter (DRD) Model PDM 203. The MyDose electronic dosimeter per the manufacture's specifications has a micro processor that does not need calibration after being put in service. RMT 7 also had iOSTAT blister packet with 14 tablets of 130 mg KI with an expiration date October 2014. The KI packet had an insert with instructions for use as well as precautions and possible side effects.

The MyDose electronic dosimeter that the RMT 7 monitored their exposure has a range of 0-9999 mR that enables team members to easily read their administrative reporting limit of 500 mR and their mission limit of 1000 mR. Dosimetry readings were read and recorded on the Form R-1 every thirty minutes as directed and to ensure they did not exceed any administrative limit. Exposures were reported to the RMS so exposure could be tracked in the ODAC. The team practiced as low as reasonably achievable principles to maintain exposure as low as possible.

Critical Resource Logistics and Distribution Capability Summary: RMT 7 was provided with the necessary monitoring equipment and supplies to support operations. They had a radiation kit that contained a Ludlum model 2241-2 with a model 44-9 pancake GM probe and a model 44-38 side window GM detector (referred to as the "silver probe" in procedures), and a SAIC model H-810 air sampler, and three pre-assembled air sample heads. The Kit obtained also had a flashlight, one gallon plastic Ziploc bags, masking tape, disposable gloves, pens, a gardening trowel, procedures with Emergency Worker Exposure Forms (R-1), Plume survey forms, and RMT briefing forms, a 0 to 5 mile radius map surrounding SONGS and a Thomas Brothers Map Book.

Mass Prophylaxis Capability Summary: RMT 7 had the capability to provide mass prophylaxis for EWs. RMT 7 obtained an emergency equipment kit that contained one

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iOSTAT blister packet with 14 tablets of 130 mg KI with an expiration date October 2014. The KI packet had an insert with instructions for use as well as precautions and possible side effects. Each of the team members also completed their individual Form R-1 Emergency Worker Radiation Exposure Form. This form contained information on the dosage to ingest, instructions on when to ingest KI, and a location to record the ingestion of KI and the dosage ingested. When instructed to do so, team member ingested (simulated) the KI and recorded the information of Form R-1.

On-Site Incident Management Capability Summary: The RMT 7 was adequately managed by the ODAC RMS to obtain sufficient information to help locate, track and characterize the release and to control radiation exposure. The team was instructed to traverse the suspected plume path at several routes to identify the plume's location and was instructed to take ambient radiation readings and to take air sample to characterize the plume.

3.3.2.5 Orange County Emergency Operations Center (OCEOC)

Communications Capability Summary: The Control One Supervisor was well versed and practiced in message receipt, document preparation, EOC staff notification, and resource management. Notification processes and systems were operational and delivered successful notices. Pre-staging of personnel was in accordance with the EXPLAN and allowed personnel to assume their duties in a timely manner.

The Orange County Sheriff's Department (OCSD) Control One utilizes IPC pre-scripted plans and procedures. Siren activation is conducted in coordination with the YPS and other risk jurisdictions responsible for siren activation. There are three siren activation systems available to Control One: a computer based system (primary). Control One is also the designated LP-2 emergency alert system (EAS) station with the ability to capture the KWVE broadcast frequency and broadcast the EAS messages from pre-recorded messages or verbally read into a microphone

EOC Management Capability Summary: The OCEOC was fully staffed and operational without undue delay. Mobilization was initiated when notification of the "Alert" ECL was received by Control One. Subsequent notifications were well managed by the Policy Group as the Director of Emergency Services (DES) successfully demonstrated direction and control, dissemination of critical information and successfully accomplish PADs.

EOC management of communications links was successfully observed. The Yellow Phone System (YPS), the dedicated SONGS interagency phone system worked excellently in all aspects of receiving and transmitting communication at the OCEOC. The procedures for the use of the Yellow Phone System and the Decision Makers Conference Call worked extremely well. The Radio Amateur Civil Emergency Service (RACES) operator briefed Evaluators on his communication capabilities and was ready

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to augment the primary system as required. The resulting factor was successful information flow internally and externally of the OCEOC.

The OCEOC Policy Group demonstrated good discussion within the Command Center and implemented good decision making processes for PADs involving consideration of appropriate factors and coordination with all jurisdictions. The policy group had good leadership and established EOC objectives within a timely manner. The DES in the OC EOC successfully demonstrated direction and control, dissemination of critical information and the ability to successfully carry out PADs.

Responder Safety and Health Capability Summary: The OCEOC demonstrated an ability to effectively manage radiological exposure to EWs by ensuring the availability of dosimetry and KI and performing a liaison function with Dosimetry Coordinators in the field. Actual field implementation of EW exposure control relies heavily on the County's certified Dosimetry Coordinators. The OCEOC provides effective resource and information support for EW exposure control, but the Dosimetry Coordinators did not display a strong knowledge of the relevant plans and procedures. The County should review its Dosimetry Coordinator Training Program; an enhanced training program would be beneficial.

The Radiological Protection Officer (RPO) and County Health Officer (CHO) in the OCEOC demonstrated a decision making process to ensure an exposure control system, including the use of KI for EWs.

Mass Prophylaxis Capability Summary: The OCEOC successfully demonstrated distribution of KI to EWs and the general public. The County's cache of KI was transferred to the reception and decontamination center at the Orange County Fairgrounds before the public was instructed to evacuate. The cache far exceeded any potential demand from evacuated residents. In addition, many residents already had KI as it was distributed by the State in mailings to those that requested it approximately five years ago. Upon the CHO's order to ingest KI, the order was passed to EWs through Dosimetry Coordinators and dispatch centers. Notification of the general public was provided through the Joint Information Center (JIC) and EAS messages.

Citizen Evacuation and Shelter-in-Place Capability Summary: The OCEOC demonstrated an effective ability to coordinate and verify the implementation of protective action decisions and precautionary actions for special populations. It maintains a pre-developed list of 450 individuals within the EPZ that would need various types of support in an emergency situation. The Public Information Hotline was responsible for contacting and supporting special populations. Meanwhile, the Medical and Health Branch communicated with all institutional facilities and coordinated their evacuation.

The OCEOC demonstrated an effective ability to decide upon and support the implementation of protective action decisions for schools in the EPZ. Through its liaison at the OCEOC, the CUSD policy group coordinated its precautionary and protective

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action decisions with the OCEOC command/policy group before implementing actions. Each private school and day-care has the authority to make its own decision regarding relocation or other protective action; however, they maintain a strong relationship with CUSD and tend to follow its lead. The Schools Group Supervisor maintained close contact with them. Precautionary transfer and ultimately the evacuation of students were implemented in a strategic and effective way. Citizens living within the EPZ were appropriately protected from the accident at SONGS.

Emergency Public Information and Warning Capability Summary: The OCEOC successfully demonstrated activities associated with alert and notification of the general public in a timely manner following the initial decision of YPS participants to notify the public.

The OCSO Control One has the ability to control the three sirens located in the unincorporated area of Orange County OC as well as in Dana Point, San Clemente, San Juan Capistrano and San Onofre State Beach. A siren 'Check-back' feature indicates a failed siren geographically in red on a computer monitor as well as a text message. This feature allows a rapid identification and second attempt to sound the failed siren and swift route alerting notification.

The Public Information Hotline staff provided accurate and timely information to special needs populations by communications with the affected responsible jurisdictions. The OCEOC provided news releases in English to the JIC and media outlets including Spanish speaking media operations that translate the messages and broadcast in the appropriate language.

All OCEOC news releases were verbally read to the Command Center group for content, clarity and approval before being signed by the DES prior to distribution. Approved news releases were immediately sent by facsimile and email to the pre-identified and group listed media outlets and jurisdictions.

WMD and Hazardous Materials Response and Decontamination Capability Summary: The Orange County RPO provided input to SONGS and the ODAC for the development of PARs. SONGS made the appropriate PARs based on available plant conditions, field monitoring data, and licensee and ODAC dose projections. The RPO reviewed the PAR and agreed with the PAR during a YPS decision-makers conference call.

3.3.2.5.1**Resolved Prior Issue¹**: No. 51-07-5b1-A-2

Issue: During the 2007 SONGS Plume Phase Exercise, it was identified that the first paragraph of Special News Broadcast Number Three omitted the unincorporated area south of Ortega Highway as an affected area.

Corrective Action Demonstrated: Special News Broadcast #3 is a newly revised version dated July 15, 2009 and now states in the first paragraph of the message: This emergency affects only the 51 Area, Camp Mateo, Camp Talega at Marine Corps Base Camp Pendleton, State Beaches by the power plant, the City of San Clemente and the unincorporated area of Orange County south of the Ortega Highway.

3.3.2.6 Orange County Sheriff Department (OCSD) (interview)

Critical Resource Logistics and Distribution Capability Summary: The OCSD had all necessary equipment to record exposures in the field and protect them from radiation overexposure. The incident post, from which they deployed, equipped them appropriately for their field mission.

Responder Safety and Health Capability Summary: The OCSD supervisor and deputy had adequate dosimetry issued to them to detect radiation exposure. The electronic direct-reading dosimeter (DRD) seems to be more user-friendly than traditional DRDs. Because responder safety is a priority to OCEOC, being able to quickly read the dosimeter with an exact number is important.

Mass Prophylaxis Capability Summary: The OCSD representatives had a working knowledge of KI. They know the orders for when to take it, and had proper forms to record dose information.

Emergency Public Safety and Security Capability Summary: The OCSD was able to establish TCPs in order to direct the general public out of the affected protective action zones (PAZs). The OCSD had proper equipment to setup the TCPs and control traffic.

Citizen Evacuation and Shelter-in-Place Capability Summary: The OCSD supervisor and deputy could contact many resources to help remove impediments that effect citizen evacuation. The availability of resources would supplement the OCSD effort to eliminate the problem as quickly as possible.

¹ A corrective action can be accomplished at any time, however, it is only demonstrated to have occurred during an evaluated exercise. For example, the Special News Broadcast may have been updated in 2007, however it was not considered “demonstrated” until verified by FEMA during the 2009 evaluated exercise.

3.3.2.7 Orange County Public Works (OCPW) (interview)

Critical Resource Logistics and Distribution Capability Summary: The OCPW Supervisor demonstrated the ability to utilize all necessary equipment to record radiation limits in the field and to protect workers from overexposure.

Responder Safety and Health Capability Summary: The OCPW Supervisor surpassed the required knowledge needed for the effective use of all dosimetry equipment.

Mass Prophylaxis Capability Summary: The OCPW Supervisor had a working knowledge of KI. He understands the orders for when to take it, and had proper forms to record dose information.

Emergency Public Safety Summary: The OCPW Supervisor was very knowledgeable about the TCPs to support law enforcement evacuation of the general public out of the PAZs. The OCPW demonstrated the ability to effectively mobilize resources and equipment in assisting with the setup of TCP's and traffic control.

Citizen Evacuation and Shelter-in-Place Capability Summary: The OCPW Supervisor demonstrated the ability to mobilize many resources to help remove impediments that effect citizen evacuation. The availability of resources would supplement responding law enforcement efforts to eliminate the problem as quickly as possible.

3.3.2.8 Orange County Transportation Authority (OCTA) (interview)

Responder Safety and Health Capability Summary: The OCTA has sufficient capabilities to ensure the safety and health of the responders. They have 30 EW exposure control kits on-site, and access to more than 500 through the OCEOC, appropriately outfitted with dosimetry, KI, instructions and tracking sheets to help prevent illnesses and injury to EWs as a result of preventable exposure to a radiological release. A Dosimetry Coordinator provides briefings to EWs to ensure they understand and how and when to use the equipment.

The Transportation Supervisor/Dosimetry Coordinator was aware of the critical elements associated with EW exposure control. The participants were able to reference appropriate sections of the plan and information related to EW exposure control. Due to the collaborative nature of the interview and the likelihood that the Dosimetry Coordinator would not be acting alone it is reasonable to believe that the OCTA could avoid illnesses or injury to emergency workers as a result of preventable exposure to a radiological release.

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Critical Resource Logistics and Distribution Capability Summary: Through the OCEOC, the OCTA has ensured that resources needed to support evacuation or other movement objectives and protect EWs are available upon request for proper distribution and to aid affected and at-risk populations in a cost-effective and timely manner. In addition, OCTA maintains a fleet of hundreds of buses that can be used to help evacuate transportation dependent populations.

Mass Prophylaxis Capability Summary: There is reasonable assurance that appropriate KI distribution and administration strategies will be implemented for EWs in a timely manner upon order of the CHO. Appropriate resources are in hand and Dosimetry Coordinators are tasked with conducting briefings to ensure EWs know when and if they should ingest KI. OCTA's participation in the OCEOC as well as extensive role in planning has guaranteed that KI will be appropriately administered to eligible EWs in appropriate dosages. Internal and public information strategies include specific actions for relaying the administration orders.

Citizen Evacuation and Shelter-in-Place Capability Summary: OCTA maintains a fleet of hundreds of buses that could support evacuation efforts. These resources are coordinated in support of evacuation efforts from the OCEOC. They are first staged at a central location where the Staging Area Supervisor provides dosimetry, KI and specific mission assignments. Although OCTA is well suited to support the evacuation of transportation dependent special populations, the Field Supervisor acknowledged that OCTA does not have a large number resources for those in wheelchairs or with other special medical needs. Each of OCTA's 40-foot coaches only has space for two wheelchairs.

3.3.2.9 San Diego County Emergency Operations Center (EOC)

Communications Capability Summary: The San Diego County EOC receives notification of emergencies at SONGS via the YPS, a dedicated secure system that provides contact and conference call capability between SONGS, the San Diego County EOC, the OCEOC, the ODAC, the JIC, and other OROs. The EOC then uses an automated call and email system to alert and activate the staff. Both systems were effectively used.

EOC Management Capability Summary: The San Diego County EOC was under the Direction and Control of the Office of Emergency Services Director. Promptly after being notified of the Alert, the Director promptly activated the EOC at Level 3 and directed mobilization of staff to the EOC. The Director served as EOC Director with the EOC staff organized by Incident Command Structure. The San Diego County EOC was quickly declared operational and was fully staffed in less than 25 minutes. Personnel wore color-coded vests with position titles, which served to clearly identify roles. The EOC Director and the Section Chiefs worked closely together to maintain situational awareness, provide directions, and resolve issues. The EOC Director, and a designated

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staff member, monitored communications and coordinated with other jurisdictions over the YPS. The staff used WebEOC extensively to post status changes and share information. There were also good person-to-person interactions to share information and to resolve issues. Staff at all levels knew their roles and responsibilities and carried them out efficiently. The effective direction and control by the EOC management enabled the EOC to monitor two real-world wildfires without adversely affecting their ability to demonstrate their ability to satisfy the REP criteria.

The San Diego County EOC management demonstrated that they have a decision-making process to authorize the general public to ingest KI if the potential doses would exceed Environmental Protection Agency (EPA) PAGs. The CHO considered dose projections made by the utility's ODAC and authorized the ingestion of KI at the appropriate time.

Emergency Public Safety and Security Capability Summary: San Diego County EOC received the SAE at 1000. The Sheriff's Department Liaison in the Law Enforcement Branch contacted the United States Coast Guard (USCG) and Federal Aviation Administration (FAA) at 1008, requesting waterway and airspace restrictions. The USCG was requested to close waterways within a 10 mile radius of SONGS. FAA was requested to restrict air space at or below 2500 feet above sea level, for a radius of 15 nautical miles around SONGS. Upon receipt of the Emergency Classification Level (ECL) change to GE at 1134, the Law Enforcement Branch contacted Metrolink at 1141 to request restriction of rail service through the EPZ.

Emergency Public Information and Warning Capability Summary: The San Diego County EOC JIC provided accurate emergency information and instructions to the public in a timely manner. The JIC had six monitors used to display current information and used three to monitor broadcast television allowing them to identify and correct any inaccurate information.

The San Diego County EOC demonstrated the capability to provide emergency public information and warning through activation of the EAS. The EOC Director coordinated with other OROs, via the YPS, to decide on protective actions following the announcement of a GE. During the discussions, the OROs made a joint decision that persons in PAZs 1 and 4 should evacuate and ingest KI. They also decided that pre-scripted EAS Message C should be broadcast from radio station KOGO, the Local Primary 1 EAS station. The EOC Logistics Section contacted KOGO and put them on standby to receive the message for simulated broadcast. The Logistics Section recorded the EAS message, transmitted it to KOGO, and verified that it was received and broadcast.

Responder Safety and Health Capability Summary: The San Diego County EOC demonstrated that they have the capability to protect the safety and health of EWs. The EOC role in responder safety and health is limited to evaluating potential doses to workers and authorizing the workers (and the public) to ingest KI if the doses would exceed EPA PAGs. Dosimetry for EWs is distributed at other locations. The CHO

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considered dose projections made by the utility's ODAC and authorized the ingestion of KI at the appropriate time.

Citizen Evacuation and Shelter-in-Place Capability Summary: The San Diego County EOC coordinated with other OROs to consider protective action recommendations from the utility and reach a joint decision on evacuation of the public from the EPZ.

The San Diego County EOC also demonstrated that they have the ability to coordinate with FAA, the USCG, and MetroLink to close air, water, and rail movement in the vicinity of the plant. Air and waterway closures were completed when the emergency reached the SAE level. The MetroLink railway was closed when the emergency reached the GE level.

1.c.1 Observation: Strength

The San Diego County EOC had good direction and control at all levels of the EOC organizational structure.

Discussion: The San Diego County EOC is organized according to the ICS structure under direction and control of the EOC Director. The Operations, Planning, Info/Intelligence, Logistics, and Finance sections were under the direction and control of a Section Chief. The Policy Group, JIC, Public Inquiry, and other units and subunits all had a designated leader. Each component of the organizational structure operated efficiently under its leader. Information and issues were communicated up and down the organizational structure and dealt with in an appropriate manner. The leadership at all levels enabled staff to monitor two real world emerging wildfire situations without adversely affecting exercise demonstrations.

1.c.1 Observation: Strength

The San Diego County EOC staff maintained situational awareness by effectively sharing information via WebEOC and person-to-person discussion.

Discussion: The San Diego County EOC used WebEOC to share information between groups. The EOC staff appeared to be well versed in the system and used it effectively to post significant events, share data, and request information or services from other groups. The staff also checked with other staff members and groups to verify that the information was received, thereby avoiding the problem of requests being made electronically but not opened by the intended recipient.

1.d.1 Observation: Strength

The San Diego County EOC has multiple communication systems in place allowing for efficient coordination and planning.

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References:

1. The San Diego County Nuclear Power Plant Emergency Response Plan, April 2009
2. San Diego County SOP, June 2009

Discussion: The San Diego County Office of Emergency Services has several communications systems available, they operated properly, and communication links were established and effectively maintained throughout the exercise. Multiple communications consisting of the YPS, the Operational Area Satellite Information System (OASIS), and a commercial telephone system that is the primary communication link for all other calls coming into the SDEOC. Computers are located at each work station in the EOC. Each computer has WebEOC and email capabilities that were used effectively during the exercise. EOC activation is accomplished by an automatic call out system used to notify the SDEOC staff by pager and phone. This system may be activated from any computer with Internet access.

There is an 800Mhz multi-channel radio system used by fire, law enforcement, marine safety nets, local government nets and has common channels for communications with non-county resources. The San Diego County EOC also has access to additional radio communications assistance from the RACES and the Amateur Radio for Emergency Services (ARES) through the Sheriff's Department. A dedicated telephone line is used to connect encoder/decoder equipment at the San Diego County EOC with KOGO (AM 600) radio station in San Diego, which is the primary EAS station for the county.

None of the communication systems failed during the exercise; however the EOC would have been able to operate unhindered by using any of the available back-up systems.

5.b.1 Observation: Strength

The use of San Diego 2-1-1 was an effective way to handle public inquiry and rumor control.

References:

1. The San Diego County Nuclear Power Plant Emergency Response Plan, April 2009
2. San Diego County SOP, June 2009

Discussion: Two Public Inquiry Hotline (Rumor Control) operators from San Diego 2-1-1 reported to the San Diego County EOC and received a total of 36 simulated calls from the public. They responded to the calls with accurate answers based on news releases, the emergency plans and procedures, briefings by the Media Team Leader, the CHO, and other EOC staff, as needed. They identified several trends. Questions were answered correctly and respectfully. Per procedure, the trend was reported to the Public Inquiry Liaison who in turn relayed the trend to the PIO. In the event of an actual emergency, the normal 2-1-1 notification center is located approximately 1.5 miles from the EOC. The 2-1-1 center can handle 24,000 calls in a 24 hour period and can also connect to other 2-1-1 centers if needed. Although no other languages were required during the exercise, a language line covering over 150 languages is available to them. This is an invaluable service provided to the public during an emergency.

3.3.2.10 Dana Point Emergency Operations Center (EOC)

Communications Capability Summary: The City of Dana Point receives notification of an emergency at SONGS in two manners: first, during normal working hours, Dana point is contacted by SONGS over the dedicated YPS; secondly, Orange County Communications receives calls on behalf of Dana Point after working hours and contacts the City’s leadership. Subsequently, in either case, the City’s Emergency Organization is notified using the Dana Point notification tree.

SONGS provides jurisdictions within the EPZ with sirens and communications equipment to facilitate the timely notification of the public in the event of an emergency situation at SONGS. The equipment present in the City of Dana Point EOC was fully functional during the demonstration.

EOC Management Capability Summary: The Dana Point EOC is activated upon SONGS declaration of an ECL of Alert or higher. Simultaneously, liaisons are dispatched to the JIC and the ODAC. Within nine minutes of being notified of the declaration of ECL Alert at SONGS, the City of Dana Point issued an EOC staff recall and the EOC was declared operational.

Overall management and direction and control of the City’s operations in an emergency situation are vested in the City Manager, acting as the DES.

The DES drew upon the experience of the staff in preparing the City’s position on PADs. Through his forward-looking and proactive mindset the DES directed early preparatory actions that facilitated a timely transition to an emergency footing as the incident escalated. All decisions were timely and considered a wide array of factors.

The robust communications capability in the Dana Point EOC demonstrated significant redundancy, interoperability and survivability. In addition to the dedicated YPS, EOC personnel used commercial and cell phones, facsimiles, Internet, WebEOC, and real-time visual displays to support ongoing operations. All the communications technology worked without fail. Additionally the EOC maintains a cache of cell phones, handheld radios, and satellite communications for emergency purposes. These diverse communications and a standalone 28 KV generator to maintain power provides the decision maker and staff with more than ample communications support.

All EOC staff members are considered EWs and as a part of the EOC activation they receive individual pouches with relevant dosimetry and KI to provide personal radiological exposure control measures. The activation process also includes a detailed briefing on the dosimetry and KI.

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Citizen Evacuation and Shelter-in-Place Capability Summary: Upon an assessment of the impact of given PARs on the population of the citizens of Dana Point, the DES participates in the Interjurisdictional decision process and subsequently initiates protective measures utilizing City, contract, and non-governmental agencies (i.e., ARC) to safeguard the citizens and the City's interests. During this exercise the City of Dana Point's citizens were not endangered.

Responder Safety and Health Capability Summary: The Emergency Services Coordinator is responsible for the issuance of dosimetry and KI to the City's EWs, as well as ensuring they are current in the proper use of dosimetry, the taking of readings and reporting, and the ingestion of KI. This was accomplished in a timely manner due to the advanced preparation of individual pouches with personal dosimetry exposure items available for the EW to include TLD (issue date 1/5/2009, expiration 1/4/2010) and four IOSAT 130 mg tablets of KI (Exp 3/20/2014). Those in the EOC are provided readings every 30 minutes from a common electronic Occupational Services, Inc. RAD-60R Personal Dosimeter (calibrated 5/8/2009), while pouches prepared for field EW contain individual electronic dosimeters. Personnel were familiar with exposure limits.

Mass Prophylaxis Capability Summary: The CHO is responsible for issuing instructions to the public regarding KI. At 1203 there was acknowledgement of the Health Officer's decision for EW and the general public in PAZs 1 and 4 to ingest KI when it was included in the PAD. Although Dana Point participated in the decision process it had no effect on its population since Dana Point is in PAZ 5.

Emergency Public Information and Warning Capability Summary: The City of Dana Point uses fixed sirens to alert the public followed by the dispatch of emergency action and emergency information messages broadcast over designated media outlets. The City of Dana Point has eight fixed sirens within its boundary and the ability to activate the sirens from its EOC in conjunction with other jurisdictions. At 1141 the YPS facilitator initiated a call to address PADs. Concurrence was received at 1203 and the sirens were sounded simultaneously by jurisdictions at 1213 and the counties dispatched the relevant EAS message at 1218. The Dana Point EOC participated fully in this process with no noted shortcomings.

The processes followed by Dana Point and other SONGS jurisdictions are described fully in IPC IP#5. This provides for a tightly regulated system that enables a near simultaneous alert and notification to the public throughout the SONGS EPZ. Dana Point participated in the demonstration of this capability with no siren failures. Personnel described the procedures that were in-place to notify the public in the event of a siren failure. These include the use of a reverse 9-1-1 type mass telephonic notification system augmented by emergency personnel traversing roadways and making announcements over PA systems. The area of coverage in Dana Point is relatively small and available resources should be able to conduct backup route alerting within established timelines.

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The release of emergency information to the public is guided by IPC IP#6 – Public Information. This ensures that following the activation of the SONGS EOF that a joint utility government jurisdiction body is collocated to provide current and relevant information to the media. Notwithstanding, in the City of Dana Point all news releases are developed in the EOC, reviewed by the EOC Manager and approved by the DES. Subsequently they are provided to the Dana Point JIC representative/spokesperson and local media outlets. Dana Point also has the ability to use the City’s website and the local cable network community channel to disseminate information, but these methods were not demonstrated. Dana Point issued four news releases which were designed to ensure its citizens were aware that the incident occurring at SONGS was not endangering them or the Dana Point area.

1.a.1 Observation: Strength

The background and experience of the key EOC staff supports a pro-active mindset and nurtures identification of operational improvements to sustain the activation and operation of the EOC.

References:

1. SONGS 2009 EXPLAN
2. IPC Procedures
3. City of Dana Point Emergency Plan, Part Three

Discussion: The exercise provided an opportunity for senior staff to discuss several areas in which they might better prepare city employees to assume an emergency role if an incident occurs at SONGS. Plans identify a second shift to relieve those who initially staff the EOC as well as strike teams that may be more appropriate to other disasters but could be used in support of a SONGS emergency.

1.d.1 Observation: Strength

The City of Dana Point has outlaid significant funds to provide a telecommunications capability that significantly enhances the presentation of real time data.

References:

1. SONGS 2009 EXPLAN
2. IPC Procedures
3. City of Dana Point Emergency Plan, Part Three

3.3.2.11 San Clemente Emergency Operations Center (SCEOC)

Communications Capability Summary: The City of San Clemente used effective procedures to alert, notify, and mobilize the EOC staff in a timely manner using telephones, pagers, cellular phones, and text messaging.

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The SCEOC successfully demonstrated back up route alerting by interview as per the EXPLAN. Current plans and procedures were provided that included maps and directions for emergency responders that would have to perform back up route alerting in the event of a siren failure.

EOC Management Capability Summary: The City of San Clemente used effective procedures to activate the EOC in a timely manner. The EOC is set up from scratch in multi-use conference room. Although the time taken to set up the EOC before it was declared operational was adequate, the city may consider adding wiring and permanent displays to the EOC to reduce setup time.

Key personnel in the SCEOC successfully provided direction and control to those parts of the response effort for which they were responsible. The EOC Director maintained an effective span of control over his Section Chiefs, who in turn managed their assigned staff.

The SCEOC successfully demonstrated communications systems available to support emergency operations. Using the YPS, commercial telephones, cellular telephones, a computer system, and emergency services radios SCEOC was able to fully support communications within and outside their jurisdiction.

The SCEOC successfully demonstrated equipment, maps, displays, dosimetry, KI, and other supplies sufficient to support their emergency operations. While the SCEOC equipment is stored when not in use, the jurisdiction maintains an adequate inventory of essential items on site with the capability of supplementing it from other City departments.

The City of San Clemente effectively demonstrated a decision-making process involving consideration of appropriate factors and necessary coordination to make a PAD for the general public during this exercise. Using information provided by OCEOC, the EOC Director made accurate and timely decisions, coordinated them with other affected areas, and implemented them in an effective manner.

Citizen Evacuation and Shelter-in-Place Capability Summary: The City of San Clemente does not have primary responsibility for maintaining a special needs list or for notifying special needs, this resides with Orange County. However, the City is provided the latest list and stood ready to assist in notifications or protective measures as needed.

The SCEOC successfully demonstrated the ability to resolve impediments to evacuation. Per the EXPLAN this function was demonstrated by interview with a Public Works Maintenance Worker at the SCEOC. By discussion it was determined that local equipment and knowledge of the traffic patterns would be adequate for most impediments. Should local intervention not resolve it, the knowledge was apparent for where to obtain assistance.

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Responder Safety and Health Capability Summary: The SCEOC successfully demonstrated the ability to issue appropriate dosimetry and procedures, and manage radiological exposure to EWs in accordance with its plans and procedures. The Safety Officer/Dosimetry Coordinator had responsibility for dosimetry and KI at the SCEOC. All SCEOC staff were provided appropriate equipment and training to self protect from a radiological incident.

Mass Prophylaxis Capability Summary: The SCEOC had sufficient KI and appropriate instructions available to support the any decision to recommend its use. KI was issued to SCEOC staff on their arrival at the SCEOC and up-to-date and accurate information was supplied at that time. In addition the Safety Officer/Dosimetry Coordinator was available to assist with any questions.

Emergency Public Safety and Security Capability Summary: The SCEOC successfully demonstrated the ability to establish appropriate traffic and access control and to provide accurate instructions to traffic and access control personnel. Both SCEOC staff and field personnel were aware of the need for effective traffic control and the Orange County Sheriff representative and the Public Works representative in the SCEOC made appropriate arrangements (by simulation) for personnel and equipment to be in place at TCPs/ACPs.

Emergency Public Information and Warning Capability Summary: The SCEOC successfully demonstrated activities associated with primary alerting and notification of the public in a timely manner. The City of San Clemente demonstrated their ability (by simulation) to activate the 19 sirens in the jurisdiction. They also demonstrated the ability to prepare and release news statements to the media through the JIC.

The SCEOC successfully demonstrated back up route alerting by interview as per the EXPLAN. Equipment and personnel that would be required for this function were demonstrated by interview only.

The SCEOC successfully demonstrated the ability to provide accurate emergency information and instructions to the public and the news media in a timely manner. This was done from the EOC by a City PIO who developed news release information that was reviewed and signed off on by the EOC Director prior to faxing it to the JIC. Five news releases were issued by San Clemente dealing with the local impact of the larger incident.

3.3.2.12 San Juan Capistrano Emergency Operations Center (SJCEOC)

Communications Capability Summary: Response time for activation was quickly completed and in accordance with existing plans and protocols.

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EOC Management Capability Summary: Round table management meetings were scheduled on a regular basis to discuss changes and anticipated problems. When needed, policy decisions were quickly made and implemented.

SJCEOC responsibility in PADs is to concur/non-concur, in coordination with other IPC jurisdictions, with PARs made by ODAC. This was done successfully.

Responder Safety and Health Capability Summary: The Safety officer was active in the exercise and provided advice and recommendations to the EOC Director. SJCEOC was not affected by the plume.

Monitoring of the radiological situation was done constantly by the Dosimeter Coordinator and instruments were read and readings recorded at 30 minute intervals.

Citizen Evacuation and Shelter-in-Place Capability Summary: SJCEOC staff carried out their responsibilities as outlined in the EXPLAN without problems.

3.3.2.13 State Parks and Recreation Emergency Operations Center (CSPEOC)

Communication Capability Summary: CSPEOC has primary communications via the dedicated YPS connecting them to SONGS and other IPC members. The CSPEOC successfully used commercial telephones, cellular telephones, and facsimile as backup systems while the YPS was shutdown.

EOC Management Capability Summary: The CSPEOC has the capability to be activated in a timely manner. The call down system is operated out of its SURCOM office; it was very efficient and the EOC was activated in fifteen minutes. Staff were kept apprised of the situation through one-on-one briefings and broadcasting of the YPS discussion throughout the EOC.

Though the CSPEOC is small (a photo copy room), there is sufficient equipment and supplies to run an efficient operations. The EOC is crowded at times but is functional. The CSPEOC dispenses KI and dosimetry equipment for 50 staff from the location, and this adds to the congestion.

Responder Safety and Health Capability Summary: The capability to dispatch EW was very efficiently demonstrated, beaches were evacuate (simulated) in a timely manner. Information of the pre-cautionary evacuations was communicated to the IPC members in a timely manner. The overall operation went well.

Mass Prophylaxis Capability Summary: CSPEOC has the capacity to dispense KI to all field and office staff in a timely manner. Personnel receive a briefing before being dispatched. Employees are aware of the side effects of KI and when to ingest KI.

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Emergency Public Safety and Security Capability Summary: Personnel are dispatched to evacuate the State Beaches and once cleared to establish TCPs/ACPs where necessary until relieved by CHP. Once relieved, they assisted with TCP/ACP or assist SONGS in evacuation of its personnel.

Citizen Evacuation and Shelter-in-Place Capability Summary: State Parks has the capacity and resources to remove impediments if the occasion arises. The Maintenance Department has a front-end loader, back hoe, a tractor, a fork lift, two trucks, and three transport trailers that can be deployed to remove traffic impediments.

Emergency Public Information and Warning Capability Summary: The CSPEOC had an EOF Liaison in the EOF and a JIC Liaison in the JIC, which facilitated information sharing between the locations. The CSPEOC addressed previous Issue No. 51-07-5-a-1-A3 by correcting pre-scripted EAS message “C” to state that “State Park Officials are closing State beaches and campgrounds within the vicinity of the Nuclear Power Plant” rather than saying “State Beach Officials closed their facilities within 2 miles of the plant.” However, the information in the press release did not match the EAS message.

3.3.2.13.1

Resolved Prior Issue: No. 51-07-5a1-A-3

Issue: During the 2007 SONGS Plume Phase Exercise, the initial EAS message stated that “State Beach officials closed their facilities within 2 miles of the plant.” Although this statement is true, it was not complete as all beaches in the EPZ were closed, including Doheny State Beach and San Clemente State Beach.

Corrective Action Demonstrated: EAS Message C is a newly revised version dated July 15, 2009 and now states in the second paragraph of the message: State Park Officials are closing State beaches and campgrounds within the vicinity of the Nuclear Power Plant. Beach and campground officials are to follow all directions of State Parks Officials and Law Enforcement personnel. The follow-up Special News Broadcast 3 uses the same language.

3.3.2.14 Joint Information Center (JIC)/ Emergency News Center (ENC)

Emergency Public Information and Warning Capability Summary: The capability of Emergency Public Information and Warning was effectively performed at the JIC. Emergency information in the form of News Releases, Media Briefings, Media Kits, and EAS messages was provided to the media in a timely manner, to advise and warn the public to implement precautionary and protective actions.

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The utility provides initial notifications and subsequent changes in the ECL to OROs via the YPS. Follow-up information to the YPS notification is conducted using pre-designated telephone and facsimile. YPS notification, followed by fax messages are very effective in keeping all OROs updated on current and changing conditions and was very effective in keeping all OROs informed during the exercise. Once notified by SONGS, the OROs conducted telephone notifications to designated JIC liaison staff who respond to the facility.

The JIC liaison personnel from the responding offsite organizations were very effective in keeping their respective EOCs informed of plant activities and status. They also provided the public, via press briefings to the media at the JIC, coordinated, updated and factual information.

The JIC successfully demonstrated the ability to manage emergency public information and warnings in a timely and clear manner. Through direction and control by the JIC Director, combined with collegial decision making and the use of SOPs and checklists, the PIOs and JIC staff provided the media with concise information to support actions and information to assist in protecting the public.

EOC Management Capability Summary: The JIC maintains and utilized a variety of maps, displays, TV monitors, and pre-press briefings to keep JIC liaison personnel informed of current and changing information during this exercise. News releases were distributed and posted to further ensure staff was kept informed and able to provide consistent and accurate information to the public. Personnel in the JIC, members of the media at the JIC, and ORO EOCs were able to observe press briefings as they occurred, via the televised and web streaming system located in the JIC media briefing area, ensuring that a coordinated and consistent message was being provided to the public.

The JIC successfully demonstrated that it could maintain and use all communications systems necessary to support its mission during an emergency.

5.b.1 Observation: Strength

The JIC effectively conducted three Media Briefings, and distributed 48 news releases and an EAS message to the assembled media, to provide emergency information and instructions for the protection of the health and safety of the general public.

References:

1. NUREG-0654, E.5,7; G.3.a; G.4.c.
2. HSEEP EXPLAN SONGS 2009, 7/27/09.
3. County of Orange Power Plant Emergency Plan, August, 2009.
4. California State Parks, Orange Coast District, SOP for SONGS, June, 2009.
5. San Diego County Emergency Plan, SOP#6, Public Information, June, 2009.
6. California Emergency Management Agency Nuclear Power Plant Emergency Response Plan, Section 2, June, 2009.
7. City of Dana Point Emergency Plan, Annex A-6, March, 2002.

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8. City of San Clemente Command Section Checklist III-18, July, 2009.
9. City of San Juan Capistrano Emergency Operations Plan, M-81, 2009.

Discussion: The JIC successfully demonstrated the ability to distribute emergency information and instructions to the public in a timely manner. The JIC was staffed and managed by an effective public information cadre. News releases were distributed to the media efficiently. Media briefings were conducted in a commendable manner. Media monitoring was conducted via television and radio. The JIC function was activated, organized, managed, and accomplished by a professional and dedicated staff.

3.3.2.15 Capistrano Unified School District (CUSD) (interview)

Responder Safety and Health Capability Summary: The CUSD has 150 EW exposure control kits appropriately outfitted with dosimetry, KI, instructions and tracking sheets to help prevent illnesses and injury to EWs as a result of preventable exposure to a radiological release. The equipment will be provided to EWs at a centralized staging area before they are allowed to enter the EPZ. EWs also receive instructions from Dosimetry Coordinators so they have an understanding of how and when to use the equipment.

Although the participants were ultimately able to reference appropriate sections of the plan and information related to EW exposure control, there was a particular lack of familiarity on the part of the certified Dosimetry Coordinator. Due to the collaborative nature of the interview and the likelihood that the Dosimetry Coordinator would not be acting alone it is reasonable to believe that the school district could avoid illnesses or injury to EWs as a result of preventable exposure to a radiological release. However, additional training and review of the Dosimetry Coordinator program is necessary.

Critical Resource Logistics and Distribution Capability Summary: Through planning and mutual aid coordination, the CUSD has ensured that resources needed to implement protective or precautionary actions and protect EWs are available upon request for proper distribution and to aid affected and at-risk populations in a cost-effective and timely manner. CUSD has pre-identified, and obtained most resources needed to support evacuations, shelter-in-place, and KI decisions. Mutual aid and communications systems are in place to provide additional resources as needed.

Citizen Evacuation and Shelter-in-Place Capability Summary: Due to its extensive planning and attention to detail, the CUSD demonstrated reasonable assurance that it could quickly and effectively make decisions regarding shelter-in-place, evacuation, early dismissal, precautionary transfer, or cancellation to protect affected and at-risk populations (students and staff). The CUSD has a policy group that works hand-in-hand with the County's policy group with a focus on proactive, timely, efficient decision-making. The policy group takes into consideration appropriate factors to select precautionary actions and awaits the County's decision for protective actions.

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Mass Prophylaxis Capability Summary: There is reasonable assurance that appropriate KI distribution and administration strategies will be implemented for students, staff, and EWs in a timely manner upon order of the CHO. Appropriate resources are in hand and Dosimetry Coordinators are tasked with conducting briefings to ensure EWs know when and if they should ingest KI. Extensive planning and parental pre-approval has guaranteed that KI will be appropriately administered to students in appropriate dosages. Internal and public information strategies include specific actions for relaying the administration orders.

Citizen Evacuation and Shelter-in-Place Capability Summary: Due to its extensive planning and attention to detail, the CUSD demonstrated reasonable assurance that it could safely shelter-in-place or evacuate affected and at-risk populations (students and staff). The CUSD's plans address student accountability, transportation, administration of KI, parental notifications, reception center management and student release, among other critical elements. The plans have addressed numerous contingencies and minute details making them adaptable and actionable.

1.e.1 Observation: Strength

The CUSD has an impressive NIMS/Standardized Emergency Management System (SEMS) compliant EOC and mobile EOC. The CUSD information management system was on par with or better than most County governments.

Discussion: Through donations and grants (no general funds used), the CUSD has built a very sophisticated EOC that would impress many counties. It is NIMS-compliant, includes numerous redundant communications capabilities, signage and vests, includes electronic overhead projection capabilities for situational awareness, has a database with hundreds of data elements, virtual mapping and photographs of each school in the district, and has individual job descriptions and plans/procedures for each position. The CUSD even has a mobile command vehicle pre-staged with resources to support school relocation or any other hazard that may occur in its jurisdiction. The mobile unit is outfitted with all the equipment, communications, and resources of its primary EOC so that the capabilities of the primary EOC can be duplicated if the primary EOC is rendered inaccessible. The equipment and resource capabilities of the CUSD were very impressive for a school district and were certainly sufficient to support its emergency functions should an incident occur at the SONGS.

3.c.2 Observation: Strength

CUSD has the most impressive emergency preparedness program for a school district this evaluator has seen; including comprehensive plans and procedures, equipment, information management, and a history of progressive exercises.

Discussion: The CUSD has addressed the most minute details in its planning (from how to distribute KI in the most efficient way while the students are in transit, to blacking out windows where elementary students are kept at the reception center so they don't see

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the potential chaos outside), making it all the more prepared to handle an emergency at SONGS or any other incident.

In addition, it has developed individual checklists for each emergency management position and uses them, as well as all other response capabilities of the district, in frequent trainings and exercises.

3.3.2.16 Interjurisdictional Planning Committee (IPC)

Emergency Public Information and Warning Capability Summary: The IPC members have developed a set of pre-scripted EAS and Special News Broadcast messages to facilitate the issuance of emergency public information to the public. During the exercise, the IPC decision-makers selected EAS Message C for broadcast. The use of the pre-scripted message minimized the time needed to prepare the message and get it to the EAS stations. However, the message did not cite the authority for activating the alert signal and instructional message, as required by FEMA guidance. This is a continuation of a previous planning issue applicable to OROs in the SONGS EPZ.

3.3.2.16.1

Unresolved Prior Issue: No. 51-07-5a1-P-1

Observation: Area for Improvement – the EAS message did not contain one of the elements required by FEMA guidance.

References:

1. Federal Register / Vol. 66, No. 177 /Wednesday, September 12, 2001/Notices on Page 47547
2. IPC Interjurisdictional Policy #5, July, 2009

Discussion: The initial EAS message sent to local radio stations at 1218 did not contain one of the four required elements following FEMA revised guidance as indicated in Federal Register/Vol. 66, No. 177/Wednesday, September 12, 2001/Notices on Page 47547. Required information missing from pre-scripted EAS Message 'C' is the identification (name or title) of the authority/authorities authorized to provide the alert signal and instructional message. None of the pre-scripted messages includes this required information.

EAS messages must be 120 seconds or less in length. Because of the limited amount of time allowed and the complexity of jurisdictional governance in the EPZ, the IPC has made a choice to not include this information.

Recommendations:

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1. FEMA and the IPC should meet to review NPP and EAS Federal Guidance, EAS time permissions and message content. The pre-scripted message should be revised to include the above item, while including all other required items and additional information the IPC deems necessary to protect public health and safety.

3.3.3 Private Jurisdictions

3.3.3.1 Orange County Emergency Alert System (EAS) Radio Station

EOC Management Capability Summary: EAS station KWVE uses a dedicated facsimile communications link and machine to receive EAS and supplemental messages sent from OCSO Control One. Additional communications capabilities included cellular telephone and OCSO 2-way radio. KWVE has multiple transmitter sites. The original site in San Clemente is currently used as a backup and is complete with broadcast equipment. Backup diesel generated power is available for the broadcast station and transmitter sites.

Emergency Public Information and Warning Capability Summary: The KWVE broadcast signal covers a wide area from the Mexican border to Northern Los Angeles County. Training for station broadcast engineers is thorough and recurrent. Updated pre-scripted EAS messages are stored on electronic media and pre-printed for ease of selection and redundancy. Verification of EAS and Special News Broadcast messages is required by both KWVE and Control One.

The interviewed KWVE broadcast engineer accurately described the EAS LP-1 station notification, and activation process beginning with a call from the OCSO Control One initial heads up notification telephone call. Selected EAS and supplemental messaging coordination was accurately described as was the broadcast repeat intervals. Radio station KWVE broadcasts EAS messages in English and does have two Spanish-speaking translators on staff during regular business hours and a Spanish language channel on HD-2, which is a digital secondary broadcast channel. Several Spanish and other non-English radio stations within the Orange County broadcast region who will receive the KWVE EAS broadcasts will rebroadcast the message in the appropriate language.

5.a.1 Observation: Strength

The KWVE broadcast engineer demonstrated a thorough working knowledge of EAS procedures, operations, communications systems and pre-scripted broadcast messages. The engineer described primary and backup communications equipment, use and procedures during the interview in detail.

Discussion: All KWVE broadcasters receive recurrent training and testing in EAS procedures, and operations, conducted weekly to ensure KWVE EAS system proficiency.

3.3.3.2 San Diego Emergency Alert System (EAS) Radio Station

EOC Management Capability Summary: The LP-1 radio station, KOGO (AM600), has operational and redundant communication capability between the station and the San Diego County EOC. The station has an EAS encoder/decoder that provides dedicated communication of EAS messages from the EOC. Other communication systems include commercial telephone, dedicated facsimile, and cellular telephones.

Emergency Public Information and Warning Capability Summary: The designated LP-1 EAS station, KOGO (AM 600), has adequate capability to provide emergency public information and warning in a timely manner. The station broadcasts the EAS messages at the request of the San Diego County EOC. The station can receive electronic recordings of the message directly from the EOC's EAS encoder/decoder, dedicated fax, or telephone. The station maintains copies of the pre-scripted EAS messages so they can broadcast the message even if the encoder/decoder or fax transmission of the message were to malfunction. The station is continuously staffed and has adequate backup power systems in the studios and at the broadcast towers to maintain operations.

The designated LP-1 EAS station, KOGO (AM 600), has adequate capability to provide accurate emergency public information and warning to the public and media in a timely manner. The station broadcasts pre-scripted EAS messages at the request of the San Diego County EOC. The EOC is responsible for the content and accuracy of the message.

To ensure timeliness, the EOC contacts KOGO during emergencies and puts the station on standby to receive a message. The KOGO broadcaster or Station Engineer verifies the message content and coordinates the timing of the EAS broadcast with the EOC.

SECTION 4: CONCLUSION

The U.S. DHS FEMA Region IX evaluated the Offsite Biennial Exercise on September 23, 2009 for the Plume Exposure Pathway EPZ around SONGS. The purpose of the exercise was to assess the level of State and local preparedness in response to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local RERP and procedures.

An additional purpose of the exercise was to test concepts for integrating the REP Program and the HSEEP as they apply to REP exercises. The Exercise Evaluation Guides used during the exercise represented a combination of FEMA REP criteria and HSEEP capability-based guides. This report presents the results of the exercise evaluation in a HSEEP format.

This report finalized by the IPC in partnership with Cal EMA and FEMA, represents the HSEEP AAR for the 2009 SONGS plume phase exercise and out-of-sequence activities. A separate report was prepared by FEMA to officially comply with current reporting requirements.

The exercise participants demonstrated knowledge of their emergency response plans and procedures and adequately demonstrated the ability to follow those plans to protect the health and safety of the public. There were no Deficiencies and no ARCAs identified during the course of the exercise, however two previously recorded ARCAs were resolved. One prior planning issue remains open (regarding the listing of authority in EAS messaging).

The FEMA Region IX evaluation also considered the following capabilities of the OROs:

- Communications
- Emergency Operations Center Management
- WMD and Hazardous Materials Response and Decontamination
- Critical Resource Logistics and Distribution
- Responder Safety and Health
- Citizen Evacuation and Shelter in Place
- Mass Prophylaxis
- Emergency Public Safety and Security Response
- On-Site Incident Management
- Emergency Public Information and Warning

This evaluation of capabilities identified many strengths, including the following:

- The COMMUNICATOR! NXT system was a very effective tool for mobilizing staff to the SOC.
- The California SOC is an effective and efficient emergency operations facility.
- The overall management of the SOC activation, from mobilization to termination of the exercise, was outstanding.
- The ODAC emergency worker exposure control process was very effective.
- The ODAC effectively managed the RMTs to obtain sufficient information to help characterize the release and to control radiation exposure.

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- The San Diego County EOC had good direction and control at all levels of the EOC organizational structure.
- The San Diego County EOC staff maintained situational awareness by effectively sharing information via WebEOC and person-to-person discussion.
- The San Diego County EOC has multiple communication systems in place allowing for efficient coordination and planning.
- The use of San Diego 2-1-1 was an effective way to handle public inquiry and rumor control.
- The Orange County EOC Public Information Team did an excellent job of managing the timely sharing of information from the EOC to the JIC.
- The flow of information from the Orange County EOC was successful both internally and externally.
- The Director of Emergency Services in the Orange County EOC successfully demonstrated direction and control, dissemination of critical information and the ability to successfully carry out PADs.
- The procedures for the use of the Yellow Phone System and the Decision Makers Conference Call worked extremely well.
- The City of Dana Point has outlaid significant funds to provide a telecommunications capability that significantly enhances the presentation of real time data.
- The City of San Clemente's key personnel provided effective direction and control to their portions of the response effort.
- The JIC effectively conducted three Media Briefings, and distributed 48 news releases and an EAS message to the assembled media, to provide emergency information and instructions for the protection of the health and safety of the general public.
- Thanks to the leadership of the CUSD's Executive Director of Safety and Student Services, the CUSD has the most impressive emergency preparedness program for a school district this evaluator has seen; including comprehensive plans and procedures, equipment, information management, and a history of progressive exercises.
- The KWVE broadcast engineer demonstrated a thorough working knowledge of EAS procedures, operations, communications systems and pre-scripted broadcast messages. The engineer described primary and backup communications equipment, use and procedures during the interview in detail

FEMA will review the status of plan corrections during the next bi-annual review. The IPC jurisdictions will review the suggested items for improvement and make corrections as warranted.

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APPENDIX A: EXERCISE TIMELINE

DATE AND SITE: San Onofre Nuclear Generating Station, September 23, 2009

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken												
		SOC	SREOC	OCEOC	SDEOC	SCEOC	SICEO	C DPEO	C	CSPEOC	ODAC	RMTs OCF/ OFD	EOF JIC	
Unusual Event	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Alert	0804	0810	0823	0810	0811	0810	0810	0811	0811	0825	0820	0855	0810	0820
Site Area Emergency	0947	1010	0955	1002	1000	1000	1013	1001	1001	0950	0949	0955	0947	0958
General Emergency	1121	1140	1134	1134	1134	1134	1135	1135	1135	1135	1126	1142	1125	1123
Simulated Rad. Release Started	1113	1140	1134	1134	1134	1134	1135	1135	1135	1116	1113	1106	1121	1123
Simulated Rad. Release Terminated	1331	ongoing	ongoing	ongoing	ongoing	ongoing	ongoing	ongoing	1331	ongoing	1344	ongoing	ongoing	ongoing
Facility Declared Operational		0845	0829	0850	0828	0854	0848	0820	0820	0825	0839	0848	0836	0840
Facility Evacuated		n/a	n/a	n/a	n/a	1217	n/a	n/a	n/a	1135	n/a	n/a	n/a	n/a
Local Declaration of State of Emergency		1053	1026	1021	n/a	n/a	n/a	1045	1045	n/a	n/a	n/a	n/a	1045
Orange County		n/a	n/a	n/a	n/a	1049	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1100
San Clemente		n/a	1022	n/a	1012	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1022
San Diego		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1025
Dana Point		n/a	n/a	n/a	n/a	n/a	1120	n/a	n/a	n/a	n/a	n/a	n/a	1140
San Juan Capistrano		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Governor's Declaration of State of Emergency		1103	n/a	1125	1148	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1138
Exercise Terminated		1345	1346	1346	1345	1217	1345	1346	1346	1345	1350	1309	1331	1340
Early Precautionary Actions:														
Evacuate CUSD		n/a	1044	1008	n/a	1102	n/a	1036	1036	n/a	n/a	n/a	n/a	1020

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Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken													
		SOC	SREOC	OCEOC	SDEOC	SCEOC	SJCEOC	C DPEO	C	CSPEOC	ODAC	RMT's OCFA/ OFD	EOF JIC		
Evacuate private schools		n/a	n/a	1008	n/a	n/a	n/a	1036	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Evacuate San Onofre State Beach		1015	0919	1001	1005	0938	1010	0936	1010	0915	n/a	n/a	1025	0940	
Evacuate San Clemente State Beach and Campground		1015	1030	1001	1005	0950	1010	1011	1010	n/a	n/a	n/a	1025	1001	
Evacuate Doherty State Beach and Campground		1015	1030	1001	1005	1018	1010	1011	1010	n/a	n/a	n/a	1025	1001	
Evacuate City beaches of San Clemente		1015	n/a	n/a	n/a	1028	n/a	n/a	n/a	n/a	n/a	n/a	1025	1055	
Evacuate Surf Beach		1015	0919	1001	1005	0938	1010	0936	1010	n/a	n/a	n/a	1025	0940	
Evacuate Trestles Beach		n/a	n/a	1001	n/a	n/a	n/a	1011	n/a	n/a	n/a	n/a	n/a	n/a	
Evacuate San Mateo State Park		1015	0919	1001	1005	0938	1010	0936	1010	n/a	n/a	n/a	1025	0940	
Evacuate Camp Mesa		n/a	1011	1001	n/a	n/a	n/a	1011	n/a	n/a	n/a	n/a	n/a	n/a	
Restrict Airspace and Flights		n/a	1130	n/a	1008	n/a	n/a	1130	n/a	n/a	n/a	n/a	n/a	1028	
Clear Railways		n/a	1237	n/a	1141	n/a	n/a	1237	n/a	n/a	n/a	n/a	n/a	1205	
Re-route Vessels inbound to Dana Point Harbor		n/a	1015	n/a	n/a	n/a	n/a	1015	n/a	n/a	n/a	n/a	n/a	0955	
Evacuate Special Populations in Zone 4		n/a	n/a	1047	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1st Alert and Notification Sequence: Evacuate PAZ 1 and 4		1223	1203	1203	1203	1203	1203	1203	1203	n/a	n/a	n/a	n/a	1207	
1st Siren Activation		1223	1213	1213	1213	1213	1213	1213	1213	n/a	n/a	n/a	n/a	1207	
1st EAS or EBS Message Release		1223	1218	1218	1218	1218	1218	1218	1218	n/a	n/a	n/a	n/a	1207	
1st Supplemental Press Release		n/a	n/a	1220	1220	1220	1220	1220	1220	n/a	n/a	n/a	n/a	1230	
Protective Action Decision: Livestock on Stored Feed; Store Harvest; No Fruits or Vegetables in House		n/a	n/a	1200	n/a	n/a	n/a	1245	n/a	n/a	n/a	n/a	n/a	1234	
KI Administration: Emergency workers and General Public in PAZ 1 and 4 should ingest KI		1223	1208	1203	1203	1203	1203	1203	1203	n/a	n/a	n/a	1206	1207	

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APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

SONGS REP Exercise September 23, 2009	
Location	Evaluator
Southern Region EOC (SREOC)	*Roy Smith (ICF) Alonzo McSwain (FEMA HQ)
California Highway Patrol (CHP) Interview	Roy Smith (ICF)
California State Operations Center (SOC)	*David White (ICF) Patricia Gardner (FEMA HQ) Gary Goldeburt (ICF)
State of California Department of Public Health (DPH) Department Operations Center (DOC)	Gary Goldberg (ICF)
SONGS Emergency Operations Facility (EOF)	Glenn Kinnear (ICF)
SONGS Offsite Dose Assessment Center (ODAC)	*Daryl Thome (ICF) Michael Cornell (DOE R7)
Orange County Fire Authority (OCFA) Radiological Monitoring Team (RMT)	Brad McRee (ICF)
Oceanside Fire Department (OFD) Radiological Monitoring Team (RMT)	Richard Grundstrom (ICF)
Orange County Emergency Operations Center (OCEOC)	*Wendy Swygert (ICF) Paul Anderson (FEMA RIX) Rebecca Fontenot (FEMA HQ) Nick Lowe (ICF) James McClanahan (ICF) Gerald McLemore (FEMA RIV)
Orange County Sheriff's Department (OCSD) Interview	Rebecca Fontenot (FEMA HQ)
Orange County Public Works (OCPW) Interview	Richard Echavarria (FEMA RIX)
Orange County Transportation Authority (OCTA) Interview	Nick Lowe (ICF)
San Diego County Emergency Operations Center (SDEOC)	*William Vocke (ICF) Janet Hlavaty-LaPosa (FEMA RX)
Dana Point Emergency Operations Center (DPEOC)	Willis Larrabee (ICF)
San Clemente Emergency Operations Center (SCEOC)	Gary Bolender (ICF)
San Juan Capistrano Emergency Operations Center (SJCEOC)	Robert Gantt (ICF)

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SONGS REP Exercise September 23, 2009	
Location	Evaluator
California State Parks Emergency Operations Center (CSPEOC)	Quirino Iannazzo (ICF)
Joint Information Center (JIC)/Emergency News Center (ENC)	*Henry Christiansen (ICF) Dan Feighert (FEMA RVIII) Ed Snyder (EPA R9)
Capistrano Unified School District (CUSD) Interview	Nick Lowe (ICF)
Orange County Emergency Alert System (EAS) Radio Station	Wendy Swygert (ICF)
San Diego Emergency Alert System (EAS) Station	William Vocke (ICF)

* Team Leader

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APPENDIX C: ACRONYMS

Table F.1: Acronyms

Acronym	Meaning
AAC	After Action Conference
AAR	After Action Report
ACP	Access Control Point
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARES	Amateur Radio for Emergency Services
Cal EMA	California Emergency Management Agency
Caltrans	California Department of Transportation
CDPH	California Department of Public Health
CHO	County Health Officer
CHP	California Highway Patrol
CSPEOC	State Parks Emergency Operations Center
CUSD	Capistrano Unified School District
DES	Director of Emergency Services
DHS	Department of Homeland Security
DPEOC	Dana Point Emergency Operations Center
DRD	Direct-Reading Dosimeter
EAS	Emergency Alert System
ECL	Emergency Classification Level
EEG	Exercise Evaluation Guide
ENC	Emergency News Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ERP	Emergency Response Plan
EW	Emergency Worker
EXPLAN	Exercise Plan
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOUO	For Official Use Only
GE	General Emergency
HazMat	Hazardous Materials
HQ	Headquarters
HSEEP	Homeland Security Exercise and Evaluation Program
ICS	Incident Command System
IP	Improvement Plan

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Acronym	Meaning
IPC	Interjurisdictional Planning Committee
JIC	Joint Information Center
KI	Potassium Iodide
NIMS	National Incident Management System
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
NUREG	Nuclear Regulation
OASIS	Operational Area Satellite Information System
OCEOC	Orange County Emergency Operations Center
OCFA	Orange County Fire Authority
OCSD	Orange County Sheriff's Department
OCTA	Orange County Transportation Authority
ODAC	Offsite Dose Assessment Center
OFD	Oceanside Fire Department
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PAZ	Protective Action Zone
PIO	Public Information Officer
PPE	Personal Protective Equipment
PSK	Plume Survey Kit
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
REOC	Regional Emergency Operations Center
REP	Radiological Emergency Preparedness
REPP	Radiological Emergency Preparedness Program
RERP	Radiological Emergency Response Plan
RMS	Radiological Monitoring Supervisor
RMT	Radiological Monitoring Team
RPO	Radiological Protection Officer
SAE	Site Area Emergency
SCEOC	San Clemente Emergency Operations Center
SDEOC	San Diego County Emergency Operations Center
SEMS	Standard Emergency Management System
SERF	Standard Exercise Report Format
SIMCELL	Simulation Cell
SJCEOC	San Jan Capistrano Emergency Operations Center
SOC	California State Operations Center
SONGS	San Onofre Nuclear Generating Station
SOP	Standard Operating Procedure

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Acronym	Meaning
SREOC	Southern Region Emergency Operations Center
TCL	Target Capabilities List
TCP	Traffic Control Point
THD	Technological Hazard Division
TLD	Thermoluminescent dosimeter
USCG	United States Coast Guard
WMD	Weapons of Mass Destruction

