



Diablo Canyon Power Plant Biennial Medical Services Drill After-Action Report

Drill Date: May 24, 2023

Radiological Emergency Preparedness Program



FEMA

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Table of Contents

Executive Summary	1
Section 1: Exercise Overview	2
Section 2: Analysis of Capability Targets	3
2.1 Summary Results of Exercise Evaluation	3
2.2 Detailed Results of Drill Evaluation	5
2.2.1 French Hospital Medical Center	5
Objective 1: Emergency Operations Management	5
Objective 2: Exposure Control.....	5
Objective 3: Alert and Notification.....	5
Objective 5: Operate	6
2.2.2 San Luis Ambulance Services	6
Objective 1: Emergency Operations Management	6
Objective 2: Exposure Control.....	6
Objective 3: Alert and Notification.....	7
Objective 5: Operate	7
Conclusion	8
Appendix A: Participating Organizations	9
Appendix B: Acronyms and Abbreviations	10

EXECUTIVE SUMMARY

The United States (U.S.) Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA), Region 9, National Preparedness Division, Technological Hazards Branch, evaluated a biennial Medical Services Drill (MSD) for the 10-mile Emergency Planning Zone (EPZ) surrounding the Diablo Canyon Power Plant (DCPP) on May 24, 2023.

During the biennial MSD, FEMA assessed the ability of state and local Offsite Response Organizations (ORO) to implement plans and procedures to protect the public, in the event of a radiological incident at DCPP.

The biennial MSD is part of the FEMA Radiological Emergency Preparedness Program (REPP) to ensure that adequate capabilities exist to prevent, protect against, mitigate the effects of, respond to, and recover from incidents involving commercial nuclear power plants. This biennial MSD was held in accordance with FEMA's policies and guidance and implemented NUREG 0654/FEMA REP 1, Rev 2 and the REPP Manual (December 2019).

The Extent of Play Agreement (EOPA) was reviewed and approved by the FEMA Region 9 Regional Assistance Committee (RAC) Chair on March 17, 2023. The EOPA was based on the objectives and capability targets outlined in the REPP Manual (December 2019).

The evaluation was held in accordance with FEMA's policies and guidance for the implementation of state and local ORO radiological emergency response plans and procedures. There were no Level 1 or Level 2 Findings, and no Planning Issues.

In summary, the OROs adequately demonstrated their capability to implement plans and procedures during the biennial MSD and follow up demonstration. The RAC Chair has made the determination that there is a continued reasonable assurance that measures can be taken to protect the health and safety of the public in the event of a radiological incident occurring at DCPP.

SECTION 1: EXERCISE OVERVIEW

Drill Name	2023 Diablo Canyon Power Plant (DCPP) Medical Services Drill (MSD)
Drill Date	May 24, 2023
Scope	Medical Service Drill involves an injured, simulated, contaminated DCPP employee and a member of the general public. The MSD contains provisions for participation by support services agencies (i.e., ambulance and offsite medical treatment facility).
Mission Area(s)	Prevention Protection Mitigation Response Recovery
Core Capabilities	Planning Operational Coordination Critical Transportation Environmental Health/Response and Safety Mass Care Services Operational Communication Public Health, Healthcare, and Emergency Medical Services Situational Assessment
Objectives	Emergency Operations Management Emergency Worker Exposure Control Management Alert and Notification Operate
Threat or Hazard	Radiological
Scenario	This MSD required Offsite Response Organizations (OROs) to coordinate their decisions on how to address a radiological hazard occurring at or near DCPP. OROs demonstrated the implementation of protective actions to preserve health and safety of the public due to a potential or actual offsite release of radioactive materials from DCPP.
Sponsor	County of San Luis Obispo Office of Emergency Services Diablo Canyon Power Plant
Participating Organizations	A complete list of participating agencies can be found in Appendix A.

SECTION 2: ANALYSIS OF CAPABILITY TARGETS

2.1 Summary Results of Exercise Evaluation

Table 1, below, includes the assessment activity objectives, capability targets, selected core capabilities, and status of each capability target evaluated during the 2023 Diablo Canyon Power Plant biennial Medical Services Drill.

Each jurisdiction and functional entity were evaluated based on the demonstration of selected core capabilities and associated capability targets. Capability targets are listed and the demonstration status of those capability targets are indicated by the use of the following terms:

- **Met (M):** The jurisdiction or functional entity performed all activities under the objective/capability target to the level required per the work plan and/or the extent-of-play agreement, with no Level 1 or Level 2 Findings evaluated under that objective/capability target during the current activity and no unresolved prior Level 2 Finding(s).
- **Level 1 Finding (L1):** An observed or identified inadequacy of organizational performance during an assessment activity that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of an NPP.
- **Level 2 Finding (L2):** An observed or identified inadequacy of organizational performance during an assessment activity that is not considered, by itself, to adversely impact public health and safety.
- **Plan Issue (P):** An observed or identified inadequacy in the ORO's emergency plan/implementing procedures, rather than in that of the ORO's performance.
- **Not Demonstrated (N):** For a justifiable reason, the jurisdiction or functional entity did not perform assessment activities under the objective/capability target as specified in the extent-of-play agreement.
- **Not Applicable (N/A):** The objective/capability target does not apply to the jurisdiction.

Table 1. Summary Results of Capability Targets

Objective	Target	Core Capabilities	Status
Objective 1: Emergency Management Operations			
French Hospital Medical Center	1.1	Planning, Operational Coordination	M
	1.2	Planning, Operational Coordination, Environmental Response/Health and Safety, Mass Care Services; Public Health, Healthcare, and Emergency Medical Services, Situational Assessment, and Critical Transportation	M
San Luis Ambulance Services	1.1	Planning, Operational Coordination	M
	1.2	Planning, Operational Coordination, Environmental Response/Health and Safety, Mass Care Services; Public Health, Healthcare, and Emergency Medical Services, Situational Assessment, and Critical Transportation	M
Objective 2: Exposure Control			
French Hospital Medical Center	2.2	Operational Coordination; Environmental Response/Health and Safety; and Planning	M
San Luis Ambulance Service	2.2	Operational Coordination; Environmental Response/Health and Safety; and Planning	M
Objective 3: Alert and Notification			
French Hospital Medical Center	3.1	Operational Communications; Operational Coordination; Situational Awareness; and Planning	M
San Luis Ambulance Services	3.1	Operational Communications; Operational Coordination; Situational Awareness; and Planning	M
Objective 5: Operate			
French Hospital Medical Center	5.3	Environmental Response/Health and Safety; Public Health, Healthcare; Emergency Medical Services; and Planning;	M
San Luis Ambulance Service	5.3	Environmental Response/Health and Safety; Public Health, Healthcare; Emergency Medical Services; and Planning;	M

2.2 DETAILED RESULTS OF DRILL EVALUATION

2.2.1 French Hospital Medical Center

Objective 1: Emergency Operations Management

Capability Target 1.1 – Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations (OROs) to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

All relevant critical tasks were adequately demonstrated.

Capability Target 1.2 – Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

All relevant critical tasks were adequately demonstrated.

Objective 2: Exposure Control

Capability Target 2.2 – Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the Protective Action Guides.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

All relevant critical tasks were adequately demonstrated.

Objective 3: Alert and Notification

Capability Target 3.1 – Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

All relevant critical tasks were adequately demonstrated.

Objective 5: Operate

Capability Target 5.3 – Transportation and Treatment of Contaminated, Injured Individuals

Intent: The capability to provide medical transport and treatment services to contaminated, injured individuals.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (C.2.d, F.2, H.11, H.12, J.2, K.3, K.4, L.1, L.3, L.4, and O.1)

All relevant critical tasks were adequately demonstrated.

2.2.2 San Luis Ambulance Services

Objective 1: Emergency Operations Management

Capability Target 1.1 – Mobilization

Intent: The capability to alert, notify, and mobilize OROs to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

All relevant critical tasks were adequately demonstrated.

Capability Target 1.2 – Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

All relevant critical tasks were adequately demonstrated.

Objective 2: Exposure Control

Capability Target 2.2 – Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the PAGs.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

All relevant critical tasks were adequately demonstrated.

Objective 3: Alert and Notification

Capability Target 3.1 – Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

All relevant critical tasks were adequately demonstrated.

Objective 5: Operate

Capability Target 5.3 – Transportation and Treatment of Contaminated, Injured Individuals

Intent: The capability to provide medical transport and treatment services to contaminated, injured individuals.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 1 (C.2.d, F.2, H.11, H.12, J.2, K.3, K.4, L.1, L.3, L.4, and O.1)

All relevant critical tasks were adequately demonstrated.

CONCLUSION

The Federal Emergency Management Agency (FEMA), Region 9, National Preparedness Division (NPD), Technological Hazards Branch (THB), evaluated a biennial Medical Services Drill (MSD) for the 10-mile Emergency Planning Zone surrounding the Diablo Canyon Power Plant (DCPP) on May 24, 2023.

The purpose of the biennial MSD was to assess the readiness of Offsite Response Organizations (OROs) to perform specific functions in response to a simulated radiological incident occurring at or within the vicinity of the DCPP. The biennial MSD drill and related capability targets were conducted in accordance with FEMA policies and guidance concerning emergency response plans and procedures.

Copies of the approved Extent of Play Agreement are maintained by FEMA Region 9 NPD/THB.

Based on the evaluation of the biennial MSD, the offsite plans, and procedures for jurisdictions site specific to DCPP can be implemented and are adequate to provide continued reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological incident occurring at or within the vicinity of the DCPP.

Therefore, Title 44 Code of Federal Regulations § 350 (October 2022), approval of the offsite plans and procedures and preparedness for the State of California site-specific to DCPP will remain in effect.

Appendix A: PARTICIPATING ORGANIZATIONS

Federal
Federal Emergency Management Agency
County
San Luis Obispo County Office of Emergency Services
Local
French Hospital Medical Center
San Luis Ambulance Services
Private
Diablo Canyon Power Plant – Pacific Gas & Electric

Appendix B: ACRONYMS AND ABBREVIATIONS

ACRONYM	DESCRIPTION
AAR	After Action Report
DCPP	Diablo Canyon Power Plant
DHS	Department of Homeland Security
EOPA	Extent of Play Agreement
EPZ	Emergency Planning Zone
FEMA	Federal Emergency Management Agency
ORO	Offsite Response Organization
L1	Level 1
L2	Level 2
MSD	Medical Service Drill
M	Met
N	Not Demonstrated
N/A	Not Applicable
NPD	National Preparedness Division
NPP	Nuclear Power Plant
NUREG	U.S. Nuclear Regulatory Commission Regulation
P	Plan Issue
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness
REPP	Radiological Emergency Preparedness Program
THB	Technological Hazards Branch
U.S.	United States