



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 16, 2015

LICENSEE: Pacific Gas and Electric Company

FACILITY: Diablo Canyon Power Plant, Units 1 and 2

SUBJECT: SUMMARY OF DIABLO CANYON POWER PLANT, UNITS 1 AND 2,
JULY 14-17, 2014, AUDIT ASSOCIATED WITH LICENSE AMENDMENT
REQUEST TO TRANSITION TO THE NATIONAL FIRE PROTECTION
ASSOCIATION 805 STANDARD (TAC NOS. MF2333 AND MF2334)

By letter dated June 26, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13196A139), as supplemented by letter dated October 3, 2013 (ADAMS Accession No. ML13277A457), Pacific Gas and Electric Company (the licensee) submitted a license amendment request (LAR) to transition the Diablo Canyon Power Plant, Units 1 and 2 (DCPP) fire protection licensing basis to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.48(c). Section 50.48(c) of 10 CFR endorses, with exceptions, the National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition (NFPA 805). The purpose of this summary is to document the results of an audit performed at DCPP associated with this LAR.

A review team consisting of U.S. Nuclear Regulatory Commission (NRC) staff and NRC contractors from the Pacific Northwest National Laboratory (PNNL) and Southwest Research Institute (SwRI)/Center for Nuclear Waste Regulatory Analyses (CNWRA) participated in a regulatory audit of DCPP in accordance with NRC Office of Nuclear Reactor Regulation (NRR), Office Instruction LIC-111, "Regulatory Audits" (ADAMS Accession No. ML082900195), during July 14–17, 2014, in Avila Beach, California. The purpose of the audit was to understand what information the NRC staff needed to support its review of the LAR and to develop requests for additional information (RAIs) as needed. The information submitted in support of the LAR is under final review, and the staff will request any additional information needed to support its review in accordance with NRR Office Instruction LIC-101, Revision 4, "License Amendment Review Procedures" (ADAMS Accession No. ML113200053).

The audit team consisted of 12 NRC staff, two PNNL staff, and one CNWRA staff. Enclosure 1 provides the schedule of activities during the audit. Enclosure 2 lists NRC staff, PNNL staff, CNWRA staff, and the licensee's staff and contractors that participated in the audit. Enclosure 3 provides a list of attendees at the entrance meeting. Enclosure 4 contains a list of documents reviewed by the team. Enclosure 5 provides a list of attendees at the exit meeting.

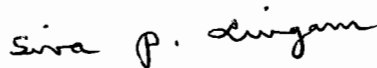
On July 14, 2014, the audit team held an entrance meeting with the DCPP management, staff, contractors, and a few industry representatives. Technical discussions at the audit were focused on five major topical areas: Fire Protection Engineering (FPE), Safe Shutdown/Circuit Analyses (SSD/CA), Fire Probabilistic Risk Assessment (FPRA), Fire Modeling (FM), and fire protection program programmatic review. The audit team participated in site tours, plant

walkdowns; technical presentations and briefing, and discussions focusing on the major topical areas. During the audit, team members met in smaller groups according to their area of expertise to focus on the RAIs needed in accordance with the areas of the DCPD LAR review. The licensee's staff provided plant walkdowns and presentations on FPE, post-fire safe shutdown circuit analysis, FPRA, and FM. NRC and licensee discussions focused on these subjects and on fire protection programmatic review.

At the conclusion of the audit, the NRC's audit team participated in a summary exit meeting with the DCPD staff and management on July 17, 2014.

Please direct any inquiries to me at (301) 415-1564 or at Siva.Lingam@nrc.gov.

Sincerely,



Siva P. Lingam, Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

1. Audit Schedule
2. Audit Participants
3. Audit Participants at Entrance Meeting
4. Audit Documents
5. Audit Participants at Exit Meeting

cc w/enclosures: Distribution via Listserv

Schedule of Activities

Monday, July 14, 2014

- 07:30 a.m. Audit Commencement: NRC Audit Team members met at the Diablo Canyon Learning Services Simulator Building, established computer connections, and began DCPD site document reviews.
- 08:15 a.m. Introductions to site personnel
- 9:00 a.m. Audit Entrance meeting: Plant Overview Discussions
- 9:45 a.m. Virtual Tour
- 10:45 a.m. Main Control Room (MCR) and Hot-Shutdown Panel (HSDP) Simulator tour
Breakout Sessions for: Fire PRA (FPRA), Fire Modeling (FM), Safe Shutdown (SSD), and FPE
- 12:30 p.m. Presentation: Attachment S Modifications
- Continued Sessions: FPRA, FM, SSD, and FPE
- New Breakout Sessions: MCR Abandonment, Nuclear Safety Capability Assessment (NSCA), Multiple Spurious Operations (MSO), Recovery Actions (RAs), Radioactive Release (RR), Non-Power Operations (NPO)
- 4:45 p.m. Licensee Wrap Up

Tuesday, July 15, 2014

- 8:00 a.m. Plant Tour – [safety briefing, break into three tour groups]
- 12:30 a.m. Combined FPRA/FM Breakout
- 1:30 p.m. FM (CFAST) Presentation
- 3:15 p.m. FPRA Breakout
- 4:45 p.m. Licensee Wrap Up

Wednesday, July 16, 2014

- 8:30 a.m. Joint FM/PRA Breakout – MCR Abandonment
- 10:00 a.m. Programmatic Breakout Session
- 12:30 p.m. Fire PRA and Fire Modeling Breakout Sessions
- 5:00 p.m. Licensee Wrap Up

Thursday, July 17, 2014

8:00 a.m. Discussions and Continued Breakouts

10:30 a.m. Combined Group Breakout

11:00 a.m. FPRA Breakout

2:30 p.m. Audit Exit Meeting

List of Participants

NRC Audit Team

• Alex Klein	NRC	Branch Chief
• Hossein Hamzehee	NRC	Branch Chief
• Leslie Fields	NRC	Audit Team Leader
• Jay Robinson	NRC	Programmatic Lead
• Paul Lain	NRC	Team Technical Lead
• Harold Barrett	NRC	Team QA Advisor
• J. S. Hyslop	NRC	FPRA
• Todd Hilsmeier	NRC	FPRA
• Garill Coles	PNNL	FPRA
• Bernard Litkett	NRC	SSD/CA
• Karl Bohlander	PNNL	SSD/CA/FPE
• Brian Metzger	NRC	FPE/FM
• Kaushik Das	CNWRA	FM
• John Reynoso	NRC	RIV Observer
• Sarah Obadina	NRC	NRR Observer

DCCP Team

• Richardson, Michael	Reg. Svcs	Lead/Licensing
• Baker, Steve	Engr	Audit Lead/Design Engr
• Hampshire, Dave	Engr	Lead FPE
• Hromyak, Dan	Engr	Sys Engr/FPE
• Arsene, Alex	Engr	FPE
• Baradaran, Rasool	PRA	Lead/PRA
• Pyo, John	PRA	Analyst/PRA
• Barber, Nathan	PRA	Analyst/PRA (Seismic)
• Shepard, Matt	PRA	Analyst/PRA
• Imbaratto, David	PRA	Analyst/PRA
• Montoya, Ariel	Engr	Lead EE
• Lodolo, Larry	Engr	SSD/CA
• Leatham, Russ	Engr	EE/EE
• Chitwood, Tony	Operations	Support/OPS (NPO)
• Williams, Dave	Operations	Support/OPS (NPO)
• Wernet, Todd	Fire Chief	Support/OPS (Fire Dept.)
• Horstman, Bill	Engr	Lead CE/Engr (Seismic)

NRC NFPA-805 Entrance Attendance Form

Name	
Jay Robinson	
Bernard Litkett	
Karl Bohlander	
Sarah Obadina	
Garill Coles	
Brian Metzger	
Todd Hilsmeier	
Paul Lain	
Leslie Fields	
Alex Klein	
Hossein Hamzehee	
Bryan Sallee	
Carl Terry	
Dan Stermer	
Jan Nimick	
Jim Wesch	
Paula Gerffen	
Mike Dominguez	
Todd Wernei	
Lynn Walter	
Bob Velasquez	
Mike Quitter	
Michael Ginn	
Tom Baldwin	
Rasool Boradarn	
Stephen Baker	
Mikel Betts	
Laura Radle	
Andy Ratchford	
Lawrence Pulley	
Michael Richardson	
Nozar Jahanson	
Brewt Weggener	
Stan Harris	
Ted Stanton	
John Pyo	

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Todd Hilsmeier	Rasool Boradarn
Paul Lain	Stephen Baker
Leslie Fields	Mikel Betts
Alex Klein	Laura Radle
Hossein Hamzehee	Andy Ratchford
Bryan Sallee	Lawrence Pulley
Carl Terry	Michael Richardson
Dan Stermer	Nozar Jahanson
Jan Nimick	Brewt Weggener
Jim Wesch	Stan Harris
Paula Gerffen	Ted Stanton
Mike Dominguez	John Pyo

List of Documents Reviewed During the Audit

- F.3.11a Revision 0, Fire PRA Single Compartment Analysis for Units 1 and 2

The following appendix and attachments were reviewed:

- Appendix R.33
 - Attachment 12
 - Attachment 32
- F.3.11b Revision 2—Main Control Room Fire Modeling
 - F.3.6 Revision 1—Extent of Thermoplastic Cables Employed at DCPD
 - DCPD white paper related to compensatory measures
 - F.3.11c Revision 1—Fire PRA Multi Compartment Analysis for Units 1 and 2
 - EPM-DP-FP-01 Revision 3—Detailed Fire Modeling
 - F.3.11d Revision 0—Fire-Induced Failure for Structural Steel in Units 1 and 2
 - F.3.15 Revision 1—Uncertainty and Sensitivity Analysis
 - R2044-311-001 Revision 3—Verification and Validation of Fire Modeling Tools and Approaches for Use in NFPA 805 and Fire PRA Applications

NRC NFPA-805 Exit Attendance Form

Name	Name
Jennifer Molina	Alex Klein
Steve Baker	Hossein Hamzehee
Rasool Baradaran	J. S. Hyslop
Matthew Shepard	Paul Lain
David Imbaratto	Brian Metzger
Mikel Betts	Jay Robinson
Nathan Barber	Harry Barrett
John Pyo	Leslie Fields
Bill Keulen	Bernard Litkett
Robert Oldenkamy	Todd Hilsmeier
Wayne Ginter	Kaushik Das
Barry Allen	Karl Bohlander
Jeff Summy	Sarah Obadina
Lou Fusco	Garill Coles
Todd Wernet	Tom Baldwin
Alex Arsene	Glenn Goelzer
David Hampshire	Paul Bemis
Fred Mowrer	Andy Ratchford
Ray Dyer	John Lote
Mark Crompton	Phillippe Soenen
Ted Stanton	Ken Schrader
Stan Harris	J. D. Wilcox
Dean Overland	Robert Waltos
Larry Parker	
David Nelson Madsen	
Paul Ouellette	
David Williams	
A. J. Chitwood	
Michael Richardson	
Travis Weber	
Daniel Funk	

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/RA/

Siva P. Lingam, Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
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RidsNrrDssStsb Resource	DFrumkin, NRR
RidsNrrLAJBurkhardt Resource	RGallucci, NRR

ADAMS Accession No.: ML15092A079 *by memorandum

OFFICE	NRR/DORL/LPL4-1/PM	NRR/DORL/LPL4-1/LA	NRR/DRA/AFP/BC*
NAME	SLingam	JBurkhardt	AKlein
DATE	4/6/15	4/6/15	3/26/15
OFFICE	NRR/DRA/APLA/BC*	NRR/DORL/LPL4-1/BC	NRR/DORL/LPL4-1/PM
NAME	HHamzehee	MMarkley	SLingam
DATE	3/26/15	4/16/15	4/16/15

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