



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

September 18, 2012

LICENSEE: Pacific Gas and Electric Company

FACILITY: Diablo Canyon Power Plant, Unit Nos. 1 and 2

SUBJECT: SUMMARY OF AUGUST 7, 2012, MEETING WITH PACIFIC GAS AND ELECTRIC COMPANY ON DIESEL GENERATOR TECHNICAL SPECIFICATION CHANGES (TAC NOS. ME9042 AND ME9043)

On August 7, 2012, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Pacific Gas and Electric Company (PG&E, the licensee) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. PG&E requested this pre-application meeting to discuss its plans for a license amendment request (LAR) related to diesel generator (DG) technical specification (TS) changes at Diablo Canyon Power Plant, Unit Nos. 1 and 2. The licensee's meeting slide presentation is available in the Agencywide Documents Access and Management (ADAMS) at Accession No. ML12226A255. A list of attendees is provided in Enclosure 1.

PG&E described the issues to be resolved in the LAR, the DG loading analyses that would support the LAR, and the TS changes that would be included in the LAR. PG&E indicated that it would be providing the LAR in the September 2012 time frame. As a result of the meeting, PG&E took the following actions:

- PG&E should ensure that the LAR appropriately characterizes the guidance found in American National Standard Institute (ANSI) N195-1976, "Fuel Oil Systems for Standby Diesel-Generators." For example, Slide 5 of the licensee's presentation indicates that the standard provides a basis for lube oil volumes which it does not, and Slide 25 of the presentation includes a discussion of the basis for the day tank that should include a discussion that the capacity of the day tank is sufficient to maintain at least 60 minutes of operation at the level where fuel is automatically added to the day tank.
- PG&E should consider providing in the LAR a robust description of the minimum volumes for the DG day tank, fuel oil tank, and lube oil tank that PG&E is proposing to move from the TSs to the TS bases. The discussion should include: (1) a summary of the calculations that are done in accordance with the methodology found in Technical Specifications Task Force (TSTF) traveler TSTF-501, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control," (2) a discussion that the conservative alternative calculation method in ANSI N195-1976 is used, and (3) the bases for the consumption rate, including what fuel type was used to determine the consumption rate (e.g., ultra-low sulfur diesel fuel or some other fuel type) and how the consumption rate was determined (testing by the manufacturer, testing at the plant, etc.).

- For the DG loading analyses, PG&E should consider providing a summary of the calculations (e.g., Electrical Transient Analyzer Program (ETAP) analysis) in the LAR that includes a description of the limiting transients, modeling methods, and conservatisms in the calculations. PG&E should also consider providing a description of the low frequency and voltage analysis that includes an evaluation of motor-operated valves and pump torque capabilities. The discussion should include effects on the operating point on the pump torque curve at reduced frequencies.
- For the DG capability testing, PG&E agreed to consider adding a discussion in the LAR that frequency measurements take into account loop uncertainty to ensure that TS requirements are met.
- For the changes to the fuel oil day tank volume, PG&E agreed to verify that the 7-day fuel oil supply for the DG does not include the day tank volume.
- For presentation Slide 31, related to the 24-hour DG capability test, PG&E is to consider providing information in the LAR that demonstrates that the power factor can be met for some duration based on actual testing that has been performed at the site.

PG&E and NRC took the following joint action:

- For presentation Slide 29, related to the 24-hour DG capability testing, PG&E and NRC took an action to review the guidance associated with the 2-hour portion of the test. Specifically, this review is expected to confirm whether the 2-hour portion of the test should envelope maximum transient conditions and the appropriate assumptions for the 22-hour steady state portion of the test.
- Presentation Slide 34 describes a PG&E proposed change to the TS Bases that will include the addition of a statement that no instrument uncertainties for loads will be included in the surveillance procedures. One of the issues discussed was whether such a change would require NRC prior approval. The NRC staff indicated, and PG&E agreed, that it was PG&E's responsibility to use the process in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.59 to determine if the TS Bases changes required prior approval. Subsequent to the meeting, PG&E provided additional information regarding treatment of instrument uncertainties in TS surveillances, which is provided in Enclosure 2. PG&E believes that this information supports its position discussed at the meeting.

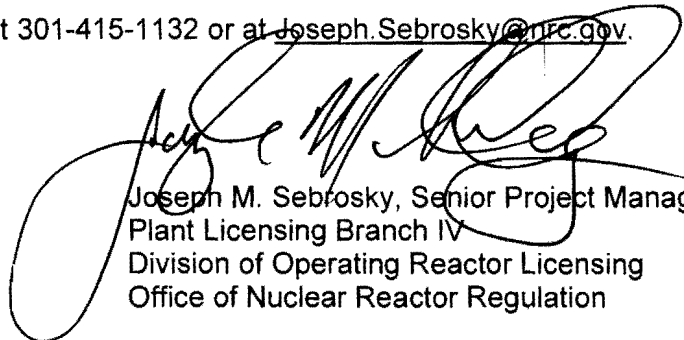
Subsequent to the meeting, the NRC staff discussed PG&E's position regarding instrument uncertainties presented during the meeting and the additional information found in Enclosure 2. The staff does not believe that the permissive and interlock examples from TSTF-493, "Clarify Application of Setpoint Methodology for LSSS [Limiting Safety System Setting] Functions," are germane to DG surveillances. In addition, the staff did not consider instrument uncertainty during its approval of the April 22, 2009, Indian Point license amendment (ADAMS Accession No. ML090840073), which was referenced by PG&E.

During its review of PG&E's LAR, the NRC staff will evaluate the issue of the treatment of instrument uncertainty. Regardless of whether PG&E determines the TS Bases change needs prior NRC approval, the staff will review the TS surveillance power bands for the DG. The staff believes that PG&E will need to justify in its LAR that without consideration of instrument uncertainty, the proposed TS surveillances, if satisfactorily completed, will demonstrate operability of the DGs.

The NRC took the following additional action from the meeting:

- PG&E provided proposed positions on presentation Slides 23, 26, 30, and 32, related to the 1-hour DG capability testing, DG full load rejection testing, 24-hour DG capability testing, and DG hot re-start testing, respectively. The NRC agreed to review these positions and provide feedback to PG&E prior to its submittal. Subsequent to the meeting, the staff reviewed these positions to determine if PG&E's proposed changes to the DG surveillance testing meet the guidance found in NRC Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Uses an Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, dated August 1977 (ADAMS Accession No. ML12216A011). Based on the limited information provided in the meeting, the staff has not reached a conclusion on whether or not the proposed changes are consistent with the guidance found in RG 1.108. The staff expects PG&E to provide a detailed discussion in the LAR on how the proposed changes to the surveillance requirements meet RG 1.108. The staff will review the information in the LAR against the guidance found in RG 1.108 and other NRC guidance and document its conclusions in the safety evaluation associated with the LAR.

Please direct any inquiries to me at 301-415-1132 or at Joseph.Sebrosky@nrc.gov.



Joseph M. Sebrosky, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

1. List of Attendees
2. Additional Information Provided By PG&E
Regarding Instrument Uncertainty

cc w/encl: Distribution via Listserv

LIST OF ATTENDEES

AUGUST 7, 2012. MEETING WITH PACIFIC GAS AND ELECTRIC COMPANY REGARDING

DIESEL GENERATOR TECHNICAL SPECIFICATION CHANGES FOR

DIABLO CANYON POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-275 AND 50-323

<u>NAME</u>	<u>ORGANIZATION</u>
Mark Sharp	Pacific Gas and Electric
Kenneth Schrader	Pacific Gas and Electric
Ghulam Rasul Kohistani	Shaw Group
Matthew McConnell	U.S. Nuclear Regulatory Commission
Kerby Scales	U.S. Nuclear Regulatory Commission
Gurcharan Matharu	U.S. Nuclear Regulatory Commission
Gerald Waig	U.S. Nuclear Regulatory Commission
Bob Wolfgang	U.S. Nuclear Regulatory Commission
Joe Sebrosky	U.S. Nuclear Regulatory Commission
Jennivine Rankin	U.S. Nuclear Regulatory Commission
Leonard Miller	U.S. Nuclear Regulatory Commission (Region IV)
Laura Micewski	U.S. Nuclear Regulatory Commission (Region IV)
Eduardo Rivera	Lockheed Martin

Additional Information Provided By Pacific Gas and Electric Regarding Instrument Uncertainty

From: Kenneth Schrader
Sent: Sunday, August 19, 2012 07:47 PM
To: Schrader, Kenneth
Subject: Information on application of instrument uncertainties during TS surveillances

Joe,

During the staff meeting on instrument uncertainties for the DG load surveillances to support the request PG&E made in the 8/7 public meeting, please consider the information below.

An example where the staff has previously approved the use of nominal values without regard to instrument accuracy for a TS limit, is as part of TSTF-493, Revision 4, for permissives and interlocks.

In TSTF-493, Revision 4, page 15 of 1338 pdf file of TSTF letter TSTF-10-07 dated April 23, 2010 [ML101160026] states:

Permissive and interlock setpoints allow the blocking of trips during plant startups, and restoration of trips when the permissive conditions are not satisfied, but they are not explicitly modeled in the Safety Analyses. These permissives and interlocks ensure that the starting conditions are consistent with the safety analysis, before preventive or mitigating actions occur. Because these permissives or interlocks are only one of multiple conservative starting assumptions for the accident analysis, they are generally considered as nominal values without regard to measurement accuracy, (i.e. the value indicated is sufficiently close to the necessary value to ensure proper operation of the safety systems to turn the AOO). Therefore permissives and interlocks are not considered to be SL-LSSS.

TSTF-493, Revision 4, pages 170 and 171 of 1338 pdf file of TSTF letter TSTF-10-07 dated April 23, 2010 [ML101160026], in the WOG STS Bases 3.3.1 markup (pages B 3.3.1-11 and B 3.3.1-12) states: Permissive and interlock setpoints allow the blocking of trips during plant startups, and restoration of trips when the permissive conditions are not satisfied, but they are not explicitly modeled in the Safety Analyses. These permissives and interlocks ensure that the starting conditions are consistent with the safety analysis, before preventive or mitigating actions occur. Because these permissives or interlocks are only one of multiple conservative starting assumptions for the accident analysis, they are generally considered as nominal values without regard to measurement accuracy.

Also,

Indian Point Unit 2 was approved to use a very small load range during their TS SR 3.8.1.10 8 hour test of For > 105 minutes and < 2 hours loaded > 2050 kW and < 2100 kW, followed by for > 10 minutes and < 15 minutes loaded > 2270 kW and < 2300 kW

This was approved in Amendment No. 259 to Facility Operating License No. DPR-26 for the - Indian Point Nuclear Generating Unit No. 2, "Indian Point Nuclear Generating Unit No. 2 - Issuance of Amendment RE: Emergency Diesel Generator Surveillance Test (TAC No. MD9214)," dated April 22, 2009 [ML090840073, attached], which did not address or require application of instrument uncertainties.

Thanks, Ken Schrader

During its review of PG&E's LAR, the NRC staff will evaluate the issue of the treatment of instrument uncertainty. Regardless of whether PG&E determines the TS Bases change needs prior NRC approval, the staff will review the TS surveillance power bands for the DG. The staff believes that PG&E will need to justify in its LAR that without consideration of instrument uncertainty, the proposed TS surveillances, if satisfactorily completed, will demonstrate operability of the DGs.

The NRC took the following additional action from the meeting:

- PG&E provided proposed positions on presentation Slides 23, 26, 30, and 32, related to the 1-hour DG capability testing, DG full load rejection testing, 24-hour DG capability testing, and DG hot re-start testing, respectively. The NRC agreed to review these positions and provide feedback to PG&E prior to its submittal. Subsequent to the meeting, the staff reviewed these positions to determine if PG&E's proposed changes to the DG surveillance testing meet the guidance found in NRC Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Uses an Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, dated August 1977 (ADAMS Accession No. ML12216A011). Based on the limited information provided in the meeting, the staff has not reached a conclusion on whether or not the proposed changes are consistent with the guidance found in RG 1.108. The staff expects PG&E to provide a detailed discussion in the LAR on how the proposed changes to the surveillance requirements meet RG 1.108. The staff will review the information in the LAR against the guidance found in RG 1.108 and other NRC guidance and document its conclusions in the safety evaluation associated with the LAR.

Please direct any inquiries to me at 301-415-1132 or at Joseph.Sebrosky@nrc.gov.

/RA/

Joseph M. Sebrosky, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosures:

- List of Attendees
- Additional Information Provided By PG&E Regarding Instrument Uncertainty

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC	RidsNrrPMDiabloCanyon Resource	GMatharu, NRR/DE/EEEE
LPLIV Reading	RidsOgcRp Resource	RWolfgang, NRR/DE/EPTB
RidsAcrsAcnw_MailCTR Resource	RidsOpaMail Resource	GWaig, NRR/DSS/STSB
RidsNrrDeEeeb Resource	RidsRgn4MailCenter Resource	MMcConnell, NRR/DE/EEEE
RidsNrrDeEptb Resource	SKennedy, EDO RIV	LMicewski, RI, RIV
RidsNrrDorl Resource	VDricks, OPA RIV	Neil O'Keefe, RIV/DPR/PRB-B
RidsNrrDorlLpl4 Resource	TWertz, NRR	LMiller, RIV
RidsNrrDssStsb Resource	WMaier, RIV	
RidsNrrLAJBurkhardt Resource	KScalles, NRR/DE/EEEE	

ADAMS Accession Nos. Meeting Notice ML12200A076; Meeting Summary ML12250A567, Slides ML12226A255 *per email

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/DE/EEEE/BC	NRR/DSS/STSB	NRR/DE/EPTB	NRR/LPL4/BC	NRR/LPL4/PM
NAME	JSebrosky	JBurkhardt	JAndersen	GWaig*	RWolfgang*	MMarkley	JSebrosky
DATE	9/18/12	9/17/12	9/18/12	8/28/12	8/10/12	9/18/12	9/18/12

OFFICIAL RECORD COPY