UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

December 4, 2002

Gregory M. Rueger, Senior Vice
President, Generation and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 3
Avila Beach, California 93424

SUBJECT: DIABLO CANYON - NRC RADIATION SAFETY TEAM INSPECTION REPORT
50-275/02-08; 50-323/02-08

Dear Mr. Rueger:

On November 7, 2002, the NRC completed a radiation safety team inspection at your Diablo Canyon Nuclear Power Plant, Units 1 and 2, facility. The enclosed report documents the inspection findings that were discussed with Mr. P. Roller, Director of Operations Services, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your operating license. The team reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the team evaluated the inspectable areas within the Radiation Protection Strategic Performance Area that are scheduled for review every two years. These areas are:

- Radiation Monitoring Instrumentation
- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems
- Radioactive Material Processing and Transportation
- Radiological Environmental Monitoring Program and Radioactive Material Control Program

This report documents a finding of very low significance (Green), which was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it is entered into your corrective action program, the NRC is treating the finding as a non-cited violation consistent with Section VI.A of the NRC Enforcement Policy. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Diablo Canyon Power Plant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public

Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

//RA//

Troy W. Pruett, Chief
Plant Support Branch
Division of Reactor Safety

Dockets: 50-275
50-323
Licenses: DPR-80
DPR-82

Enclosure:
NRC Inspection Report
50-275/02-08; 50-323/02-08

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DC Site Secretary **(AWC1)**

DOCUMENT NAME: R:_DC\2002\DC2002-08RP-TEAM-LTR.wpd

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LTRicketson	MPShannon	DRCarter	BDBaca	TWPruett
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-275 50-323
License:	DPR-80 DPR-82
Report No.:	50-275/02-08 50-323/02-08
Licensee:	Pacific Gas and Electric Company
Facility:	Diablo Canyon Nuclear Power Plant, Unit 1 and 2
Location:	7 ½ miles NW of Avila Beach Avila Beach, California
Date:	November 4 - 7, 2002
Inspectors:	Larry Ricketson, P.E., Senior Health Physicist - Team Leader Michael P. Shannon, Senior Health Physicist Bernadette D. Baca, Health Physicist Daniel R. Carter, Health Physicist
Approved By:	Troy Pruett, Chief, Plant Support Branch Division of Reactor Safety
ATTACHMENT:	Supplemental Information

SUMMARY OF FINDINGS

Diablo Canyon, Units 1 and 2
NRC Inspection Report 50-275/02-08; 50-323/02-08

IR 05000-275-02-08, IR 05000-323-02-08; Pacific Gas and Electric. Co.; 11/04/2002 - 11/07/2002; Diablo Canyon Nuclear Power Plant Units 1 and 2; Radioactive material control; Radiation Safety Team Inspection

The inspection was conducted by a team of four region-based inspectors. Based on the results of the inspection, the team identified one finding of very low safety significance (Green). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process," (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified Findings

Cornerstone: Public Radiation Safety

- Green. A non-cited violation of Technical Specification 5.4.1a was identified by the team because the licensee did not prevent the release of detectable licensed radioactive material from the radiologically controlled area. Specifically, Procedure RCP D-614, "Release of Solid Materials From Radiologically Controlled Areas," Revision 6, Section 7.1.1, states, in part, "All material released from the radiologically controlled area shall have no detectable licensed radioactivity." However, during the whole body counting of two workers, conducted outside the radiologically controlled area on May 22, 2001, and May 29, 2002, radioactive material was detected on items released from the radiologically controlled area. The team determined that these examples were self-revealing rather than licensee-identified because the examples were found during the whole body counting process, a process which was not specifically intended to prevent the release of solid radioactive material from the radiologically controlled area.

  The failure to properly control detectable licensed radioactive material is a performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Material Release Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy (Section 2PS3).

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety [OS]

2OS3 Radiation Monitoring Instrumentation (71121.03)

a. Inspection Scope

To determine the accuracy and operability of radiation monitoring instruments used for the protection of occupational workers and the adequacy of the program to provide self-contained breathing apparatus to personnel entering unknown atmospheres, the team interviewed cognizant licensee personnel and compared the following items with regulatory requirements:

- Calibration, operability, and alarm setpoint, when applicable, of selected portable radiation detection instrumentation, area radiation monitors (Unit 2 Control Room Ventilation and Unit 2 Containment High Range A), continuous air monitors, whole-body counting equipment, electronic alarming dosimeters, and personnel contamination monitors

- Calibration expiration and source response check currency on radiation detection instruments staged for use

- The status of self-contained breathing apparatuses staged and ready for use in the plant and associated surveillance records

- The licensee's capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions

- Self-contained breathing apparatus air quality checks

- Training and qualifications of control room operators and emergency response personnel for use of self-contained breathing apparatus and change-out of bottles

- 2001 Radiation Protection Program Audit (EDMS Number 011770001) sections related to radiation monitoring instrumentation and self-contained breathing apparatus programs

- Corrective action documents that involved radiation monitoring instrumentation or self-contained breathing apparatuses since the last inspection in this area

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety [PS]

2PS1 Radioactive Gaseous And Liquid Effluent Treatment And Monitoring Systems (71122.01)

a. Inspection Scope

The team interviewed cognizant personnel and walked down the major components of the gaseous and liquid effluent release systems to observe ongoing activities, equipment material condition, and system configuration, as compared to the description in the Updated Final Safety Analysis Report. The team reviewed and compared the following items with regulatory requirements to determine whether the licensee had ensured adequate protection of public health and safety from exposure to radioactive material released into the public domain:

- 2000 and 2001 Radiological Effluent Release Reports
- Changes to the Offsite Dose Calculation Manual and to the radioactive waste system design and operation
- Anomalous results reported in the 2000 Radiological Effluent Release Reports
- Compensatory sampling and radiological analyses conducted when effluent monitors were declared out-of-service
- Collection and analysis of particulate, iodine, and gaseous samples from the Unit 2 plant vent stack and a liquid sample from Unit 2 high conductivity tank HCT 2-1
- Selected radioactive liquid and gaseous waste release permits and associated projected doses to members of the public
- Monthly, quarterly, and annual dose calculations
- Engineered safety feature air cleaning system surveillance test results
- Surveillance test results for the stack and vent flow rates
- Records of instrument calibrations performed since the last inspection for the plant vent radioactive gas monitor (RM-14), plant vent iodine monitor (RM-24), containment purge monitor (RM-44B), and liquid radwaste discharge monitor (RM-18) and flow measurement devices
- Effluent radiation monitor alarm setpoint values
- Calibration and quality control records of counting room instrumentation associated with effluent monitoring and release activities

- 2000 and 2001 intracompany radiochemistry cross check results
- Audits and self-assessments related to the radioactive effluent treatment and monitoring program (2001 Radioactive Effluents Program and Offsite Dose Calculation Procedure Audit 3708957, 2001 Chemistry and Radiochemistry Program Audit 12210004, and 2002 Radioactive Effluent Control Program Audit 13130017)
- Selected corrective action reports related to the radioactive effluent treatment and monitoring program

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

The team interviewed radiation workers and radiation protection personnel involved in material processing and transportation activities. The team observed the receipt and processing of a shipment of new fuel. The team walked down the liquid and solid radioactive waste processing systems to verify that the current system configuration and operation agreed with the descriptions contained in the Updated Final Safety Analysis Report and in the Process Control Program. The team reviewed and compared the following items with regulatory requirements:

- Adequacy of any changes made to the radioactive waste processing systems since the last inspection
- Waste stream sampling procedures and radio-chemical sample analysis results for each radioactive waste stream
- Scaling factors and calculations used to account for difficult-to-measure radionuclides
- 10 CFR Part 20, Appendix G, Quality Assurance Program
- Documentation for seven non-excepted package shipments that demonstrated shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness
- Transferee licenses
- Training of personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities

- Licensee audits and self-assessments related to radioactive material and shipping programs (Quality Assurance Audit 020030077 and Radiation Protection Assessment 010940038)

- Selected corrective action reports related to the radioactive material and shipping programs

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program and Radioactive Material Control Program (71122.03)

a. Inspection Scope

The team reviewed the radiological environmental monitoring and meteorological monitoring programs to verify that the licensee implemented them consistent with the Technical Specifications and Offsite Dose Calculation Manual. The team interviewed members of the licensee's staff responsible for implementing the radiological environmental monitoring, meteorological monitoring, and radioactive material control programs. The team observed the following activities and equipment:

- Collection and preparation of broadleaf vegetation, airborne particulate, and charcoal samples

- Meteorological instrumentation and data displays in the control room

- The survey of materials for release from the radiologically controlled area

The following items were reviewed and compared with regulatory requirements to determine whether the licensee had an adequate program to verify the impact of radioactive effluent releases to the environment and to ensure that the licensee's surveys and controls were adequate to prevent the inadvertent release of licensed materials into the public domain:

- Implementing procedures for the radiological environmental monitoring program

- Environmental sample analytical results

- Seven environmental air sampling and thermoluminescent dosimetry (TLD) stations (MT1, 7D1, 5F1, 0S2, 1S1, 8S1, and 8S2), and two broadleaf vegetation stations (5F2, and 7G1)

- Calibration and maintenance records for selected environmental air sampling equipment

- 2000 and 2001 land use census results and changes to the radiological environmental monitoring program

- 2000 and 2001 Annual Environmental Operating Reports
- Implementing procedures for the meteorological monitoring program
- Meteorological instrument operability, reliability, and annual meteorological data recovery
- Procedures, methods, and instruments used to survey, control, and release materials from the radiologically controlled area
- Detection sensitivities of radiation survey instruments used for the release of potentially contaminated materials from the radiologically controlled area
- Criteria used for the unrestricted release of potentially contaminated material from the radiologically controlled area
- Quality audits, and department self-assessments related to radiological environmental monitoring, and release of radioactive material programs (Audit 022210002, Radiological and Environmental Monitoring Program and Offsite Dose Calculation Procedure Programs, 2001 Dosimetry Program Self-Assessment, and Material Controls Self-Assessment dated August 5, 2002)
- Selected corrective action reports related to the radiological environmental monitoring, meteorological monitoring, and release of radioactive material programs

b. Findings

The team identified two examples of a non-cited violation of very low safety significance because the licensee did not control licensed radioactive material in accordance with Technical Specifications.

During the review of corrective action documents pertaining to the control of radioactive material the team noted that, on May 22, 2001, one pair of safety glasses with contamination levels as high as 300 counts per minutes was found outside the radiologically controlled area during an exit whole body count. On May 29, 2002, a lanyard with contamination levels as high as 400 counts per minute was also found outside the radiologically controlled area during a routine annual whole body count. The team determined that these examples were self-revealing rather than licensee-identified because the examples were found during the whole body counting process, a process which was not specifically intended to prevent the release of solid radioactive material from the radiologically controlled area. (The licensee identified three additional examples in which detectable licensed radioactive material was not properly controlled. These examples are discussed in Section 4OA7.)

The team determined that the failure to control detectable licensed radioactive material was a performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Material Release Program) and affected the associated cornerstone objective. Using the Public

Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem.

Technical Specification 5.4.1.a requires written procedures be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A, Section 7 references procedures for control of radioactivity. Procedure RCP D-614, "Release of Solid Materials From Radiologically Controlled Areas," Revision 6, Section 7.1.1, states, in part, "All material released from the radiologically controlled area shall have no detectable licensed radioactivity." This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Action Requests A0533714 and A0558200 (NCV 50-275; 50-323/0208-01).

4. OTHER ACTIVITIES

4OA6 Meetings

Exit Meeting Summary

The team presented the inspection results to Mr. P. Roller, Director of Operations Services, and other members of licensee management during an exit meeting conducted on November 21, 2002. The licensee acknowledged the findings presented.

The team asked the licensee whether or not any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee Identified Violations

The following violation of very low safety significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a non-cited violation.

Technical Specification 5.4.1.a requires written procedures be established, implemented, and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A, Section 7 references procedures for control of radioactivity. Procedure RCP D-614, "Release of Solid Materials From Radiologically Controlled Areas," Revision 6, Section 7.1.1, states, in part, "All material released from the radiologically controlled area shall have no detectable licensed radioactivity." On March 20, 2001, May 2, 2001, and May 29, 2002, the licensee identified examples in which detectable licensee radioactivity was found outside the radiologically controlled area, as described in the licensee's corrective action program Action Requests A0527739, A0530710, and A0558721, respectively. Because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem, this violation is not more than of very low significance, and is being treated as a non-cited violation.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

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R. Gagne, Radwaste Foreman, Radiation Protection
C. Hansen, Team Lead, Radiation Protection
R. Jett, Nuclear Quality Analysis and Licensing
G. Lautt, Team Lead, Radiation Protection
L. Moretti, Supervisor, Radiation Protection
C. Miller, Principal Engineer, Radiation Protection
D. Nugent, Senior Engineering Technician, Radiation Protection
D. Oatley, Vice President, Diablo Canyon Operations
L. Sewell, Dosimetry Foreman, Radiation Protection
M. Wright, REMP Engineer, Radiation Protection

NRC

D. L. Proulx, Senior Resident Inspector
T. W. Jackson, Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Opened and Closed During this Inspection

50-275;323/0208-01	NCV	Failure to control detectable licensed radioactive material (Section 2PS3).

Previous Items Closed

None

LIST OF DOCUMENTS REVIEWED

IP 71121.03

Instrumentation
Action Requests: A0531009, A0530893, A0539682, A0539684, A0546027, A0546269, A0546612, A0547524, A0547630, A0554500, A0561139, and A0563642

SCBA
Action Requests: A055697, A0536024, A0536876, A0543226, A0543228, A0543912, A0565485, A0566419, and A0568046

IP 71122.01

Effluents
Action Requests: A0515745, A0523063, A0523064, A0525341, A0526976, A0528059, and A0530086

IP 71122.02

Solid Waste and Transportation
Action Requests: A0513993, A0529727, A0538150, A0542978, A0549923, A0551616, A0551618, and A0551988

IP 71122.03

Radiological Environmental Monitoring Program
Action Requests: A0541313, A0546760, A0564876, A0565954 and A0566027

Release of Radioactive Material A0523854, A0527739, A0530710, A0531619, A0533714, A0537661, A0542439, A0549814, A0555585, A0557136, A0558200, A0558721, A0559617, A0560365, and A0562719

Meteorological Monitor A0523870, A0523928, A0536890, and A0543654