UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

October 23, 2008

Mr. John T. Conway
Site Vice President and Chief Nuclear Officer
Pacific Gas and Electric Company
P.O. Box 3
Mail Code 104/6/601
Avila Beach, California 93424

SUBJECT: NRC INSPECTION REPORT 050-00133/08-003

Dear Mr. Conway:

A Nuclear Regulatory Commission (NRC) inspection was conducted on September 22-26, 2008, at your Humboldt Bay Power Plant, Unit 3 facility. This inspection was an examination of activities conducted under your license as they relate to safety and compliance of the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection included reviews of your organization, management, and cost controls; safety reviews, design changes, and modifications; spent fuel pool safety; maintenance and surveillances; decommissioning status; occupational radiation exposure; and radioactive waste treatment, effluent and environmental monitoring. On September 26, 2008, at the conclusion of the onsite inspection, an exit interview was conducted with Mr. Mark Smith, Engineering Manager, and other members of your staff. The enclosed report presents the scope and results of that inspection. The inspection determined that you were conducting decommissioning activities in compliance with regulatory and license requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC's Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Mr. Emilio Garcia, Health Physicist, at (530) 756-3910, or the undersigned at (817) 860-8197.

Sincerely,

/RA/

Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

Docket No.: 050-00133
License No.: DPR-7

Enclosure:
NRC Inspection Report 050-00133/08-003

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10/22/2008	10/23/2008

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	050-00133
License No.:	DPR-7
Report No.:	050-00133/08-003
Licensee:	Pacific Gas and Electric Company (PG&E)
Facility:	Humboldt Bay Power Plant (HBPP), Unit 3
Location:	1000 King Salmon Avenue Eureka, California 95503
Dates:	September 22 through 26, 2008
Inspector:	Emilio M. Garcia, Health Physicist Nuclear Materials Safety Branch B
Approved By:	Jack E. Whitten, Chief Nuclear Materials Safety Branch B
Attachment:	Supplemental Inspection Information

ENCLOSURE

EXECUTIVE SUMMARY

Humboldt Bay Power Plant, Unit 3
NRC Inspection Report 050-00133/08-003

The Humboldt Bay Power Plant (HBPP), Unit 3 was shutdown in 1976. The facility has been in a SAFSTOR status since shutdown with minimal decommissioning activity. This routine inspection was conducted to review the licensee's organization, management, and cost controls; safety reviews, design changes, and modifications; spent fuel pool (SFP) safety; maintenance and surveillances; decommissioning status; occupational radiation exposure; and radioactive waste treatment, effluent and environmental monitoring.

Organization, Management, and Cost Controls

- The licensee had sufficient staff to conduct the work in progress, including an ample number of certified fuel handlers. The onsite and offsite review committees were functioning in accordance with quality assurance program requirements (Section 1).

Safety Reviews, Design Changes, and Modifications

- The licensee's safety review program was conducted in compliance with 10 CFR 50.59 requirements (Section 2).

Spent Fuel Pool Safety

- The licensee was maintaining the SFP in accordance with Technical Specifications, Defueled Safety Analysis Report, and procedure requirements (Section 3).

Maintenance and Surveillances

- The licensee had implemented a maintenance and surveillance program that met the requirements of the Maintenance Rule as provided in 10 CFR 50.65 (Section 4).

Decommissioning Status

- The licensee was conducting decommissioning activities with an emphasis on radiological safety. Radiation protection controls had been implemented including postings, boundaries, and labels. The licensee had established a plan for radiologically surveying the new generation construction area, and the plan was formulated in accordance with NRC regulatory guidance (Section 5).

Occupational Radiation Exposure

- The licensee had conducted an annual a review of their radiation protection program content and implementation as required by 10 CFR 20.1101(c). The licensee's radiological occurrence report system had properly documented and evaluated radiation protection deficiencies. The inspector concluded that changes made to the number of personnel, equipment, and procedures since the last inspection had a positive effect on occupational radiation protection. The licensee was maintaining an effective program to control and monitor occupational radiation exposures (Section 6).

Radioactive Waste Treatment, Effluent and Environmental Monitoring

- The 2007 HBPP Radiological Effluent Program and Radiological Environmental Monitoring Program audit met applicable requirements. The offsite dose calculation manual was revised twice in 2007. The Annual Radiological Environmental Monitoring Report and the Annual Radioactive Effluent Release Report for calendar year 2007 were submitted on a timely basis and met applicable requirements. Radioactivity levels in the sampled media were generally consistent with previous years and were below the NRC required reportable levels. The releases of radioactivity in gaseous and liquid effluents in 2007 did not exceed applicable regulatory limits (Section 7).

Report Details

Summary of Plant Status

Humboldt Bay Power Plant (HBPP), Unit 3, is currently in decommissioning SAFSTOR status. Unit 3 received an operating license from the U.S. Atomic Energy Commission on August 28, 1962. On July 2, 1976, Unit 3 was shutdown for annual refueling and seismic modifications. This work was suspended in December 1980. In June 1983, PG&E announced its intention to decommission the unit. Unit 3 has been essentially in SAFSTOR since July 1985. On July 19, 1988, NRC approved the licensee's SAFSTOR plan and amended the license to a possess-but-not-operate status. The license will expire on November 9, 2015. The facility has undergone minimal decommissioning activity since shutdown.

1 Organization, Management, and Cost Controls (36801)

1.1 Inspection Scope

The inspector reviewed site staffing and the onsite and offsite safety review committees for compliance with regulatory requirements, site procedures, and licensee commitments.

1.2 Observations and Findings

a. Site Organization

Technical Specifications 5.2.1 provides the requirements for the onsite and offsite organizations necessary for the safe storage of irradiated fuel. There had been no changes in the individuals filling the positions listed in Technical Specifications 5.2.1 since this area was last inspected in January 2008.

The onsite nuclear organization chart was provided in Humboldt Bay Administrative Procedure (HBAP) A-1, "HBPP Organization and Staff Qualifications," Revision 29. This site procedure was last revised effective September 11, 2008. This revised procedure modified Appendix 6.2 to reflect changes in job titles. The inspector compared the actual organizational structure in place at the time of the inspection to the requirements in the procedure. All staff positions had been filled in accordance with the procedure. The Director and Nuclear Plant Manager stated in discussions with the inspector that changes to the organization would be taking place once all the fuel had been relocated to the Independent Spent Fuel Storage Installation (ISFSI) and the licensee started to prepare for active decommissioning.

Section 5.2.2.g of the Technical Specifications states that the Shift Foreman shall be a certified fuel handler (CFH). During the audit of the 2008 HBPP Technical Specifications and Training, report EDMS #080870008, the licensee identified that during the period of October 15 to November 30, 2007, an individual designated in the operations log as the shift foreman was not a CFH. This individual had previously been a CFH, but had failed to pass a recertification course. The individual successfully completed the retraining on January 17, 2008, and regained his CFH status. The audit concluded that this problem was weakness related to improper documentation in the shift logs, since there were other CFHs on shift that had been informed by the licensee that they were to perform CFH duties as necessary. Further reviewed by HBPP staff determined that the problem

was actually the failure to designate a CFH to act as the shift foreman for Unit 3. The licensee opened a problem report, SAPN 1246772. At the time of the inspection, the licensee was conducting an apparent cause analysis and was planning to develop and implement corrective actions to prevent recurrence.

The inspector determined, based on licensee training records, that the individual in question had lost his CFH classification on September 21, 2007 and regained it on January 17, 2008. The inspector reviewed selected shift logs and noted that on some of the shifts the number of CFH on shift had been recorded but not named. The inspector concluded that this licensee identified and corrected problem was a minor violation of Technical Specification 5.2.2.2.g. This failure constitutes a violation of minor significance and is not subject to formal enforcement action.

Section 5.2.2.a of Technical Specifications required that at least one CFH shall be onsite when fuel is in the spent fuel pool (SFP). As of September 23, 2008, there were 18 CFH employed by the licensee. The licensee stated that this staffing level permitted it to meet Technical Specifications requirements.

b. Onsite and Offsite Review Committees

The SAFSTOR Quality Assurance Plan, L-4, Revision 23, provided the requirements for the Plant Staff Review Committee (PSRC) and the Nuclear Safety Oversight Committee (NSOC). The inspector reviewed the implementation of the committees to ensure compliance with quality assurance program requirements.

The PSRC was the licensee's onsite group that reviewed proposed changes, tests and experiments, plant modifications, procedure revisions, and other issues having nuclear safety significance. The SAFSTOR Quality Assurance Plan specified that the PSRC membership and that the committee would meet at least once per quarter and at other times at the discretion of the Chair. As of September 25, 2008, the PSRC had met 92 times during 2008. The inspector reviewed the PSRC meeting minutes from January to September 2008. Minutes of the PSRC documented that the quorum requirements had been met and provided a list of all subjects reviewed. The committee reviewed and approved, as appropriate, proposed procedure changes, temporary procedures, plant modifications, and negative trends. Reasons for rejecting procedures were documented when the committee rejected proposed changes or procedures.

The NSOC provided high-level review and oversight of site activities including the PSRC. Humboldt Bay Administrative Procedure HBAP A-6, "Nuclear Safety Oversight Committee," Revision 6, described the organization and charter of the NSOC, including its authorities, responsibilities, and duties. The Manager of Quality Verification appointed the Chair of the NSOC. The Nuclear Plant Manager and the Engineering Manager were the two plant personnel who were members of the NSOC. The NSOC was required to meet at least twice per year. During calendar year (CY) 2008, the NSOC met on March 18 and was scheduled to meet on September 30.

1.3 Conclusions

The licensee had sufficient staff to conduct the work in progress, including an ample number of certified fuel handlers. The onsite and offsite review committees were functioning in accordance with quality assurance program requirements.

2 Safety Reviews, Design Changes, and Modifications (37801)

2.1 Inspection Scope

The inspector conducted reviews of the licensee's design change and nonconformance programs to ensure compliance with the requirements of 10 CFR 50.59 and Quality Assurance Plan requirements.

2.2 Observations and Findings

a. Design Change Process

Licensee procedure HBAP C-19, "Licensing Basis Impact Evaluation (LBIE)," Revision 25, establishes the requirements mandated by the licensee for evaluating potential effects on licensing basis documents from proposed changes to the facility, procedures, test or experiments. The licensee used this procedure to determine if 10 CFR 50.59 evaluations were required and whether prior NRC approval was required before implementing the changes. As of September 26, 2008, three 10 CFR 50.59 evaluation had been performed in 2008. There had been 21 design change packages (DCP) generated in 2008. The inspector reviewed the package supported by the full 10 CFR 50.59 evaluations and the other design change notices. A safety screen that included consideration of the requirements specified in 10 CFR 50.59 supported each package reviewed. Other attributes considered in the review packages included impacts on decommissioning and whether changes were required to be implemented in licensing basis documents, site procedures, and site drawings. All safety screens made by the licensee were complete.

Three full safety evaluations had been performed in 2008 as of September 26, 2008. These evaluation conducted by the licensee concluded that the proposed changes did not require a licensee amendment nor prior NRC approval. These 10 CFR 50.59 evaluations were reviewed by the PSRC during their January 16, May 29, and June 6, 2008 meetings. All the design change notices reviewed provided sufficient detail to explain what was being changed. The safety screens had been prepared and reviewed by individuals qualified to perform these functions.

b. Nonconformance Reports

As of September 25, 2008, there were no open nonconformance reports and none had been opened in 2008.

2.3 Conclusions

The licensee's safety review program was conducted in compliance with 10 CFR 50.59 requirements.

3 Spent Fuel Pool Safety (60801)

3.1 Inspection Scope

The inspector reviewed the licensee's control of the SFP to ensure compliance with

Technical Specifications requirements and Defueled Safety Analysis Report (DSAR) commitments.

3.2 Observations and Findings

Technical Specifications 3.1.1 states that the SFP water level shall be maintained at an elevation greater than 10.5 feet. The inspector observed that on September 25, 2008, the control room SFP water level indicator showed the water level as 10.78 feet. In addition, the licensee measured the SFP water level locally. The local level indicator displayed SFP in units of inches water column. The SFP level was found to be within limits specified in the Technical Specification during the inspection.

Technical Specifications 3.1.3 states that the SFP liner water level shall be maintained at an elevation less than +9 inches (+0.75 feet). The licensee has three indicators of liner level: a recorder, a remote indicator, and a local indicator. The inspector observed that on September 25, 2008, the control room SFP liner level indicator showed that the liner water level was at -0.63 feet. The inspector confirmed that the licensee was monitoring and recording the SFP pool water and liner water levels at the frequencies established in Technical Specifications surveillance requirements.

Section 2.3.1.1 of the DSAR states that two sources of makeup water will be maintained for the SFP. The DSAR also specifies that a minimum of 2,000 gallons shall be maintained in the demineralized water tank. The inspector interviewed operations staff personnel and determined that the two primary water sources of makeup water were the demineralized water storage tank and the fire water system. During the inspection, the demineralized water tank contained approximately 4590 gallons of water. Alternate sources of water, if needed by the licensee, included the domestic water system.

The licensee continued to use the SFP demineralizer to help maintain water quality. Table 5.2 of the DSAR provides the limits for SFP water chemistry and radioactivity levels. Detailed instructions for the implementation of this requirement were documented in site procedure STP 3.6.5, “Monthly Spent Fuel Pool Water Quality Check,” Revision 44. Procedure STP 3.6.5 requires that the pool water be sampled monthly for pH, conductivity, and cesium-137 activity. The inspector reviewed the SFP water quality records for March 2006 through September 2008. The licensee had collected the pool water samples on a monthly frequency and had analyzed the samples for the required chemical constituents. Since March 2006, all water quality parameters remained within the limits specified in DSAR Table 5.2.

3.3 Conclusions

The licensee was maintaining the SFP in accordance with Technical Specifications, DSAR, and procedure requirements.

4 Maintenance and Surveillance (IP 62801)

4.1 Inspection Scope

The inspector reviewed the licensee’s maintenance and surveillance program for compliance with the Maintenance Rule requirements specified in 10 CFR 50.65.

4.2 Observations and Findings

The licensee's maintenance program remained generally as described in Inspection Reports 050-00133/05-003 and 050-00133/07-003. Administrative procedures HBAP C-40, "Maintenance Program," Revision 19, and HBAP C-40 #1, "Maintenance Rule Compliance," Revision 5, described the licensee's program for complying with the Maintenance Rule. The licensee had identified 16 Structures, Systems or Components (SSC) that were subjected to the Maintenance Rule. The licensee had developed surveillance test procedures (STPs) to monitor the SSC subject to the Maintenance Rule as required by 10 CFR 50.65(a)(1).

The inspector reviewed the licensee method to assure the timely conduct of STPs. The licensee was using a computer based system, STP Tracking, to assist in maintaining the STP schedule. Administrative procedure HBAP C-3 #2, "Scheduling of Plant and Equipment Tests," Revision 24, remained the official system for maintaining the STP schedules updated and for issuing the weekly reminders to the test coordinators. The STP schedule and weekly reminders were maintained in paper records based on the information generated by the computerized STP Tracking. In summary, the STP schedule had been maintained.

4.3 Conclusions

The licensee had implemented a maintenance and surveillance program that met the requirements of the Maintenance Rule as provided in 10 CFR 50.65.

5 Decommissioning Performance and Status Review (IP 71801)

5.1 Inspection Scope

The inspector evaluated whether the licensee and its contracted workforce were conducting SAFSTOR decommissioning activities in accordance with license and regulatory requirements.

5.2 Observations and Findings

The inspector toured the fuel handling building, Unit 3 control room, and other areas of the facility. Radiological postings were visible, and the postings met the requirements of 10 CFR Part 20. Housekeeping and facility conditions were effectively controlled in the radiologically restricted area. Most areas in the facility were free of radiological contamination and were accessible without the need for protective clothing.

During site tours, the inspector observed the transfer of the third full spent fuel canister from the fuel handling building and observed it being lowered into the ISFSI. During a later tour, the inspector observed portions of the lowering of the fourth spent fuel canister into the spent fuel pool. Proper radiological controls were observed during these two activities including, when appropriate, air particulate, alpha, and ambient gamma and neutron exposure rate monitoring. The inspector concluded that the licensee had established good radiological protection controls for the work in progress.

The inspector observed plant-operating parameters including system pressures, flow rates, and tank levels. All observed parameters were within the limits specified in site

procedures and licensing documents. In summary, the inspector determined that the licensee was conducting plant operations in accordance with license and procedural requirements.

b. Review of Site Decommissioning Activities

The inspector conducted a review of the licensee's planned decommissioning activities to ensure compliance with NRC requirements. The licensee plans to commence with decommissioning of Unit 3 balance-of-plant equipment during 2009.

The license stated that they will use the NRC's generic screening criteria provided in Table B.2, "Screening Values of Common Radionuclides for Soil Surface Contamination Levels," from NUREG-1757, Volume 1, Revision 2, Consolidated Decommissioning Guidance for the surveys that will be conducted where the new power generation will be built. The licensee projected demolition of the structures where the new power generation facilities will be built to be completed in early December 2008. The implementation of the cross contamination prevention plan and the final status surveys were projected to occur shortly after the existing building demolition.

5.3 Conclusions

The licensee was conducting decommissioning activities with an emphasis on radiological safety. Radiation protection controls had been implemented including postings, boundaries, and labels. The licensee had established a plan for radiologically surveying the new generation construction area, and the plan was formulated in accordance with NRC regulatory guidance.

6 Occupational Radiation Exposure (IP 83750)

6.1 Inspection Scope

The inspector reviewed the licensee's recent radiation protection program annual review and its radiological occurrence reporting system. The inspector interviewed the Radiation Protection Manager and the Senior Radiation Protection Engineer to determine if any of the changes made to the organization, personnel, facilities, equipment, programs, or procedures since the last inspection would have resulted in a negative affect on occupational radiation protection. The licensee's personnel radiation monitoring program and associated reports submitted were inspected for compliance with applicable regulatory requirements and commitments.

6.2 Observations and Findings

a. Audits and Appraisals

10 CFR 20.1101 required each license to conduct, at least annually, a review of their radiation protection program content and implementation. The controlling procedure for conducting this review is HBAP HB-C200, "Requirements for the HBPP Radiation Protection Program," Revision 9. The last review was conducted in December 2007. The Senior Radiation Protection Engineer was projected to complete the 2008 review by October 31, 2008.

To document and evaluate identified radiation protection deficiencies, the licensee had established the Radiological Occurrence Report (ROR) system. Radiation Control Procedure RCP-2F, "Radiological Occurrence Reports", guided this program. The ROR system classified occurrences as Level 1 or Level 2. Level 1 is minor radiological occurrences that may be below the threshold for a plant problem report. Level 2 is radiological occurrences that violated procedures, policies and NRC directives or that requires a higher than Level 1 attention. Records maintained by the licensee indicated that 11 RORs were issued in 2007 of which three were Level 2. As of September 25, 2008, 14 RORs had been initiated in calendar year 2008 of which two were Level 2. The Level 2 RORs were identified as Level 2 because they required a higher attention than Level 1, such as assigning dose to an individual. None of the Level 2 RORs were the result of violated procedures, policies or NRC directives. Effective September 23, 2008, Procedure RCP-2F was revised. A major changed of this procedure was to eliminate the separate ROR form and instead utilize the company wide problem reporting system, SAPN. The licensee had effectively followed its process for reporting, documenting, and evaluating radiological occurrences.

b. Changes

There had been no changes in organization since this area was last reviewed during the July 2007 inspection. The licensee added two senior radiation protection technicians as temporary additions to support the Repowering Project. At the time of the inspection, there were a total seven senior radiation protection technicians and five decontamination technicians as temporary additions.

The licensee had five new portable scalers (Ludlum 2221 using a 44-10 sodium iodide probe) to support the Repowering Project. The licensee also added six Data Radiation Monitors that provide the ability to remotely monitor locations. The licensee added three Teletectors model 6112M digital readout instruments and an additional air sample pump calibrator. The licensee also leased two REM-500, neutron survey meters.

Five radiation control standards and 22 radiation control procedures had been revised, or had been initially issued since this area was last inspected in July 1, 2007. The inspector reviewed selected standards and procedures. The reviews indicated that procedure changes implemented by the licensee provided improvements or clarifications for the existing procedures. The inspector concluded that these procedure changes had a positive effect on the program.

c. External and Internal Exposure Control and Other Radiation Protection Inspection Areas

The inspector interviewed the Radiation Protection Engineer and Dosimetry Coordinator about the occupational radiation exposure control program, and examined occupational dosimetry records from January 1, 2007, through June 30, 2008. The records indicated that no individual had been classified as a declared pregnant worker and that no planned special exposures had been conducted.

The licensee used thermoluminescent dosimeters (TLD) provided by the Diablo Canyon Nuclear Power Plant. Diablo Canyon was accredited under the National Voluntary Laboratory Accreditation Program for the type of dosimeters used. This accreditation is valid through September 30, 2009.

During calendar year 2007, the licensee had monitored 182 individuals with TLDs for external radiation exposure and had assigned internal exposures to seven individuals based on breathing zone air samples. The cumulative total effective dose equivalent (TEDE) during 2007 for all individuals monitored was 3.271 rem of which 0.163 rem was due to internal exposure or committed effective dose equivalent (CEDE). CEDE was calculated based on the results from breathing zone air samples results. The individual with the highest exposure during calendar year 2007 received 0.346 rem TEDE, 0.311 rem DDE and 0.035 rem CEDE. The highest CEDE was 0.040 rem. During calendar year 2007, other dose measurements for shallow dose, lens of the eye dose, and extremity dose were all below applicable limits. The licensee submitted their annual report, required by 10 CFR 20.2206, to the NRC on April 28, 2008.

6.3 Conclusions

The licensee had conducted an annual a review of their radiation protection program content and implementation as required by 10 CFR 20.1101(c). The licensee's radiological occurrence report system had properly documented and evaluated radiation protection deficiencies. The inspector concluded that changes made to the number of personnel, equipment, and changes procedures since the last inspection had a positive effect on occupational radiation protection. The licensee was maintaining an effective program to control and monitor occupational radiation exposures.

7 Radioactive Waste Treatment and Effluent and Environmental Monitoring (84750)

7.1 Inspection Scope

The inspector interviewed licensee personnel and reviewed selected documents to determine if any significant changes had been made by the licensee that affected (1) the licensee's liquid and airborne radwaste, water chemistry, and radiological environmental monitoring organization, or (2) the offsite dose calculation manual (ODCM). The inspector reviewed the status of radioactive waste process and effluent monitors. The 2007 Annual Radiological Environmental Monitoring and the 2007 Annual Radioactive Effluent Release Reports were reviewed.

7.2 Observations and Findings

a. Audits and Appraisals

The inspector reviewed the 2007 HBPP Radiological Effluent Program and Radiological Environmental Monitoring Program audit report, EDMS #072050032. This audit was performed August 21 through September 17, 2007. The individuals that conducted the audit were independent of the HBPP organization and did not report to any managers at HBPP. This audit identified six quality problems and made eight recommendations. The licensee had opened problem reports (SAP Notifications) for all quality problems and recommendations identified in the audit. The licensee had addressed the quality problems and recommendations identified in the audit but had not completed all of the actions at the time of this inspection.

b. Changes

This area was last inspected July 10-13, 2007. There had been no significant changes

made to the site radiological monitoring organization. The licensee last updated the ODCM to Revision 14, on September 6, 2007. This change was reported to the NRC with issuance of the Annual Radioactive Effluent Release Report for 2007. The changes to the ODCM were described in the Annual Radioactive Effluent Release Report for 2007. No other changes had occurred.

b. Annual Radiological Environmental Monitoring Report for 2007

Technical Specification 5.7.2 required that an Annual Radiological Environmental Monitoring Report be submitted to the NRC prior to May 1 covering the previous calendar year. On April 29, 2008, the licensee submitted the 2007 report. This report indicated that direct radiation, surface water, and groundwater and were being monitored as required. Airborne, ingestion and terrestrial pathway monitoring was not required by the ODCM. The environmental report submitted as part of the SAFSTOR license request established baseline conditions for those pathways. The licensee monitors direct radiation at 16 onsite locations and 4 offsite locations. The Annual Radiological Environmental Monitoring Report noted that results, interpretations, and analysis of trends of the results, indicate that SAFSTOR activities have had no measurable radiological effect on the environment. Direct radiation measurements and onsite doses were slightly higher this year than in previous years. This occurrence was attributable to the movement and storage of radioactive resins onsite. The measured offsite annual doses continue to be within the ranges that have been observed over the last 10 years.

c. Annual Radioactive Effluent Release Report for 2007

Technical Specification 5.7.3 required that an Annual Radioactive Effluent Release Report be submitted prior to April 1 of each year. In accordance with 10 CFR 50.36(a), the report must cover the activities of the previous calendar year. On March 31, 2008, the licensee submitted the 2007 Annual Radioactive Effluent Release Report on a timely basis. The report included summaries of radioactive gaseous and liquid releases from the site. The report concluded that the releases of radioactivity in gaseous and liquid effluents were well below the 10 CFR Part 50 Appendix I numerical as low as reasonably achievable (ALARA) guidelines and that the maximum potential direct radiation dose for the highest potential individual (teen age group) was 0.01 millirem for the year. This value is well below the 50 millirem per year limit specified in 10 CFR 20.1302(b)(2)(ii).

There were no abnormal gaseous or liquid releases during 2007. There were six liquid batch releases during 2007 and no continuous liquid releases. There were no batch gaseous releases during 2007.

In 2007, the licensee made 25 solid radioactive waste shipments. All the shipments were made by truck to one of two low-level radioactive waste disposal facilities. The waste consisted of dry compressible waste, contaminated equipment, irradiated components, soils, and demolition debris. Total volume was approximately 455 cubic feet with a total activity of approximately 580 curies.

7.3 Conclusions

The 2007 HBPP Radiological Effluent Program and Radiological Environmental Monitoring Program audit met applicable requirements. The OCDM was revised twice in 2007. The Annual Radiological Environmental Monitoring Report and the Annual

Radioactive Effluent Release Report for calendar year 2007 were submitted on a timely basis and met applicable NRC requirements. Radioactivity levels in the sampled media were generally consistent with previous years and were below the NRC required reportable levels. The releases of radioactivity in gaseous and liquid effluents in 2007 did not exceed applicable regulatory limits.

8 Exit Meeting

On September 26, 2008, at the conclusion of the site visit, the inspector presented to the Engineering Manager who was acting Director and Nuclear Plant Manager and other licensee staff members the preliminary results of the inspection. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

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A. Berry, Project Manager - AM Solutions (Contractor)
C. Caldwell, Operations Supervisor
J. Chadwick, Senior Radiation Protection Engineer
J. Davis, Radiation Protection Engineer
V. Jensen, Quality Control, Training and Programs Coordinator
K. Rod, Decommissioning Manager
P. Roller, Operations Manager
L. Sharp, Director and Nuclear Plant Manager
M. Smith, Engineering Manager
D. Sokolsky, Licensing Supervisor

INSPECTION PROCEDURES USED

IP 36801	Organization, Management, and Cost Controls
IP 37801	Safety Reviews, Design Changes, and Modifications
IP 60801	Spent Fuel Pool Safety
IP 62801	Maintenance and Surveillances
IP 71801	Decommissioning Status
IP 83750	Occupational Radiation Exposure
IP 84750	Radioactive Waste Treatment, Effluent and Environmental Monitoring

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS

ALARA	As Low As Reasonably Achievable
CEDE	Committed Effective Dose Equivalent
CFH	Certified Fuel Handler
CFR	Code of Federal Regulations
CY	Calendar Year
DCP	Design Change Package
DSAR	Defueled Safety Analysis Report
HBAP	Humboldt Bay Administrative Procedure
HBPP	Humboldt Bay Power Plant
IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
LBIE	Licensing Basis Impact Evaluation
NSOC	Nuclear Safety Oversight Committee
ODCM	Offsite Dose Calculation Manual
PG&E	Pacific Gas and Electric Company
PSRC	Plant Staff Review Committee
ROR	Radiological Occurrence Report
SFP	Spent Fuel Pool
SSC	Structures, Systems or Components
STP	Surveillance Test Procedures
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeters