January 12, 2000

Mr. Gregory M. Rueger
Senior Vice President and General Manager
Pacific Gas and Electric Company
Diablo Canyon Nuclear Power Plant
P. O. Box 3
Avila Beach, CA 94177

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENTS RE: CONTAINMENT POLAR AND TURBINE BUILDING CRANES (TAC NOS. MA3664 AND MA3665)

Dear Mr. Rueger:

The Commission has issued the enclosed Amendment No. 137 to Facility Operating License No. DPR-80 and Amendment No. 137 to Facility Operating License No. DPR-82 for the Diablo Canyon Nuclear Power Plant (DCNPP), Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated September 11, 1998, as supplemented by letters dated January 14 and August 5, 1999.

The amendments revise TS 6.8.4f, "Containment Polar and Turbine Building Cranes," of the current TSs (CTS) to allow operation of the containment polar cranes in jet impingement zones during plant operating Modes 1, 2, 3, and 4. The August 5, 1999, letter excluded the proposed changes to improved technical specification (ITS) 5.5.18 from the request because in Amendment No. 135 dated May 28, 1999, the NRC indicated that the requirement for a containment polar and turbine building cranes program is not required in the ITS. Changes to the CTS are required until DCNPP implements the ITS which is scheduled for May 31, 2000.

A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

/RA

Steven D. Bloom, Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-275
and 50-323

Enclosures: 1. Amendment No. 137 to DPR-80
2. Amendment No. 137 to DPR-82
3. Safety Evaluation

cc w/encls: See next page

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PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-275

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 137
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas and Electric Company (the licensee) dated September 11, 1998, as supplemented by letters dated January 14 and August 5, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 137, are hereby incorporated in the license. Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA

Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: January 12, 2000

PACIFIC GAS AND ELECTRIC COMPANY

DOCKET NO. 50-323

DIABLO CANYON NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 137
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Pacific Gas and Electric Company (the licensee) dated September 11, 1998, as supplemented by letters dated January 14 and August 5, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 137, are hereby incorporated in the license. Pacific Gas and Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA

Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: January 12, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 137

TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. DPR-82

DOCKET NOS. 50-275 AND 50-323

Replace the following page of the Appendix A current Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

REMOVE	INSERT
6-15a	6-15a (CTS)

PROCEDURES AND PROGRAMS (Continued)

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

1) Identification of a sampling schedule for the critical variables and control points for these variables,

2) Identification of the procedures used to measure the values of the critical variables,

3) Identification of process sampling points, including monitoring the discharge of the condensate pumps for evidence of condenser in-leakage,

4) Procedures for the recording and management of data,

5) Procedures defining corrective actions for all off-control point chemistry conditions, and

6) A procedure identifying: (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

d. Backup Method for Determining Subcooling Margin

A program which will ensure the capability to accurately monitor the Reactor Coolant System subcooling margin. This program shall include the following:

1) Training of personnel, and

2) Procedures for monitoring.

e. Postaccident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

1) Training of personnel,

2) Procedures for sampling and analysis, and

3) Provisions for maintenance of sampling and analysis equipment.

PROCEDURES AND PROGRAMS (Continued)

f. Containment Polar and Turbine Building Cranes

A program which will ensure that: 1) the parking location of the containment polar cranes precludes jet impingement from a postulated pipe rupture; and 2) the operation of the turbine building cranes is consistent with the restrictions associated with the current Hosgri seismic analysis of the turbine building. This program shall include the following:

1) Training of personnel, and

2) Procedures for the containment polar and turbine building cranes operation.

The procedures will control the operation of the containment polar cranes in jet impingement zones.

g. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the RMCP, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance requirements and setpoint determination in accordance with the methodology in the ODCP,

2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2,

3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCP,

4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREA conforming to Appendix I to 10 CFR Part 50,

5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCP at least every 31 days,

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. DPR-80

AND AMENDMENT NO. 137 TO FACILITY OPERATING LICENSE NO. DPR-82

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-275 AND 50-323

1.0 INTRODUCTION

By application dated September 11, 1998, as supplemented by letters dated January 14 and August 5, 1999, Pacific Gas and Electric Company (or the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. DPR-80 and DPR-82) for the Diablo Canyon Power Plant, Units 1 and 2 (DCPP). The proposed changes revise both the DCPP's current Technical Specifications (CTS) 6.8.4f. and the Improved Technical Specifications (ITS) 5.5.18, "Containment Polar and Turbine Building Cranes," to allow operation of the containment polar cranes in jet impingement zones during plant operating modes 1, 2, 3, and 4. Specifically, the LAR proposes to change both the CTS 6.8.4f and ITS 5.5.18 to insert the term "parking location," for "position." This will enable DCPP to park the containment polar cranes where they would preclude jet impingement from postulated pipe ruptures that could initiate heavy load drop accidents. Additionally, the license amendment request (LAR) proposes to add a requirement to both the CTS and ITS stating that "procedures will control the operation of the containment polar cranes in jet impingement zones," during plant operating Modes 1, 2, 3, and 4.

PG&E's letter of August 5, 1999, excluded the proposed changes to ITS 5.5.18 from the LAR because in Amendment 135, dated May 28, 1999, NRC indicated that the requirement for a containment polar and turbine building cranes program is not required in the ITS. Changes to the CTS are required until DCPP implements the ITS which is scheduled for no later than May 31, 2000.

The August 5, 1999, supplemental letter provided additional clarifying information, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination published in the Federal Register on April 21, 1999 (64 FR 19561).

2.0 BACKGROUND

NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants," dated July 1980, provides regulatory guidelines for licensees to assure safe handling of heavy loads in areas where a load drop could impact on stored spent fuel, fuel in the reactor core, or equipment that may be required to achieve safe shutdown or permit continued decay heat removal. The objectives of the guidelines are to assure that either (1) the potential for a load drop is extremely small, or (2) the potential hazards of load drops do not exceed acceptable limits. The NUREG provides guidelines that are implemented in two phases. The Phase I guidelines address reducing the likelihood of dropping heavy loads in proximity to or over safe shutdown equipment or irradiated fuel in the spent fuel pool area. These guidelines provide criteria for establishing safe load paths, procedures for load handling operations, training of crane operators, and design, testing, inspection, and maintenance of cranes and lifting devices. The Phase II guidelines address alternatives for reducing and mitigating the consequences of heavy load drops, including using (1) a single-failure-proof crane for increased handling system reliability, or (2) electrical interlocks and mechanical stops for restricting crane travel, or (3) load drop and consequence analyses for assessing the impact of dropped loads on plant safety and operations.

Generic Letter 85-11, “Completion of Phase II of Control of Heavy Loads at Nuclear Power Plants, NUREG-0612,” dated June 28, 1985, dismissed the need for licensees to implement the requirements of NUREG-0612, Phase II. However, GL 85-11 encouraged licensees to implement actions they perceive to be appropriate to maintain safety.

NRC Supplemental Safety Evaluation Reports (SSERs) 27 and 31 dated July 30, 1984, and April 1985, respectively, approved DCPP’s provisions for overhead heavy load handling in accordance with NUREG-0612, Phase I. SSER 31 also dismissed the need for further licensee actions regarding NUREG-0612, Phase II in accordance with GL 85-11. However, based on a subsequent review of the DCPP Technical Specifications, the staff, by letter dated July 27, 1985, and as stated in SSER 32, Section 8.3, "Unit 2 Tech Spec Considerations," dated July 1985, requested, in part, that DCPP (1) provide technical specifications for restricting the parking location of the containment polar crane to preclude jet impingements from postulated pipe ruptures, or (2) demonstrate that the crane can withstand the jet impingement forces from postulated pipe ruptures.

In LAR 85-14, "Containment Polar Crane and Turbine Building Cranes Program Requirements," dated November 25, 1985, the licensee proposed TS 6.8.4f that required that the position of the containment polar cranes preclude jet impingement from a postulated pipe rupture. On September 18, 1987, the NRC issued License Amendments (LAs) 20 and 21 approving TS 6.8.4f.

In Licensee Event Report 1-1998-007-0, dated July 24, 1998, DCPP determined that TS 6.8.4f had not been met in the past because the polar cranes had transited through high energy line break (HELB) jet impingement zones in Modes 1 and 4.

3.0 EVALUATION

3.1 Containment Polar Crane Operation

As noted above, NRC SSERs 27 and 31 approved DCPP's provisions for handling heavy loads in accordance with guidelines 1,2,3,4,5,6, and 7 in NUREG-0612, Phase I. Therefore, the staff approved the polar cranes, hoists, monorails, and the associated lifting system design, inspection, testing, and maintenance requirements. The staff also approved the procedures for identifying safe load paths, specific heavy loads, and the required crane operator training.

The polar crane is a cantilever gantry type crane located in containment in each unit. The polar crane is used for (1) lifting and handling heavy loads such as the reactor vessel head, reactor vessel internal assemblies during refueling operations, and (2) assisting in routine maintenance of other systems and equipment in containment such as the containment fan cooler unit (CFCU) motors, the reactor coolant pump motors, control rod drive mechanisms (CRDM) fan motors, residual heat removal (RHR) pumps and motors, and heat exchangers, etc. The polar crane has a rated capacity of 200 tons in the main hoists and 35 tons in the auxiliary hoists for Units 1 and 2. The crane does not perform a safety-related function. However, its failure could damage safety-related equipment. In other words, the structural elements of the crane help to preclude any damage to the containment structure or safety-related equipment in containment. The licensee states that the structural elements of the crane are classified as Design Class I and are evaluated for their capability to withstand seismic loads. However, the polar crane itself is designed to withstand a jet impingement from a HELB such as that generated by a break in the main steam lines or the main feedwater lines. It is not designed to withstand the forces of a seismic event nor is it designed to withstand forces generated by a simultaneous HELB and seismic event.

Based on the previous approval of the polar crane under NUREG-0612, and the design evaluation of the crane, the staff accepts the licensee's proposal to (1) park the crane so that it is not subjected to potential impacts from jet impingements, and (2) operate the crane so that potential concurrent impacts from both seismic events and jet impingements do not occur.

3.2 Load Path

The current load paths for use of the containment polar crane include both the parking location and the positioning of the crane while operating it in the jet impingement zone. Operating the crane in the jet impingement zone is sometimes needed when removing and installing, for example, containment fan cooling unit (CFCU) motors, reactor coolant pump motors, residual heat removal pumps and motors, and heat exchangers, etc.

The jet impingement zones are defined as the vertical and horizontal areas above the floor at the 140 foot elevation immediately surrounding the steam generators and their associated main steam and auxiliary feedwater lines. The jet impingement zones surround these components that could be involved in a high energy line break. They rise up beyond the full height of the component up to the crane bridge. In Appendix 6.5, "Polar Crane Parking Locations to Prevent Jet Impingement Loading," to DCNPP Administrative Procedure-Polar Crane Operating Restrictions, the licensee designates the jet impingement zones (Attachment 1 to this SE). They also show that the parking location of the crane is in the restricted area

between 70° north and 110° south of the East/West axis of the containment building. The designated crane parking location avoids the area over the components and is outside the area of potential impact to the crane or jet impingement loads (e.g., internally generated missiles, etc.) if a pipe rupture was to occur.

The LER dated July 24, 1998, discovered that on a number of previous occasions, the polar cranes had been moved through HELB impingement zones during Modes 1 and 4. Therefore, TS 6.8.4f had not been met. Furthermore, the licensee determined that the jet impingement zones which were established in 1982 did not include the potential for a vertical jet from a HELB at the main steam line steam generator (SG) nozzle.

The NRC agrees that the revised load path supports the technical specification, as proposed, and that it will allow the licensee more flexibility to move heavy loads within containment while reducing the potential for a load drop accident due to jet impingements.

3.3 Load Drop Analysis

In the LAR, the licensee discussed three approaches to analyzing postulated load drop accidents along the load paths inside containment during Modes 1 through 4: (1) a structural analysis of the building floors to withstand the impact of dropped heavy loads; (2) analysis of a HELB that could result in missile generation; and (3) a risk-informed analysis of polar crane operation in the jet impingement zone (refer to Section 3.4 for evaluation of the risk informed assessment).

PG&E presented a structural analysis that involves the use of PG&E's "intervening floors" methodology that was approved by the staff based on an EG&E Idaho, Inc., Draft Technical Evaluation Report (TER), "Control of Heavy Loads at Nuclear Power Plants Diablo Canyon Unit 1 (Phase II), dated October 1983. In the TER, the staff approved the licensee's methodology of analyzing postulated load drop accidents in accordance with NUREG-0612, Section 5.1.2(2). Section 5.1.2(2) provides for an alternate heavy load drop methodology that credits intervening floors if the load drop does not penetrate the ceiling or cause spalling that could cause failure of safe shutdown equipment. The staff accepts the licensee's commitment to evaluate each heavy load prior to being moved, and to initiate discussions regarding an unreviewed safety question with the NRC if a specific heavy load does not meet the evaluation criteria.

The HELB analysis examined the potential for a pipe rupture or crack that could generate potential hazards (e.g., pipe whip, internally generated missiles, jet impingement, etc.) that could lead to dropped heavy loads during operation of the polar crane. The licensee determined that breaks in the SG nozzle welds at the feedwater and main steam lines are the only credible HELBs that may result in jet impingements on the polar crane. As a result, the licensee has implemented ultrasonic testing, visual inspections, and monitoring programs to confirm and maintain the integrity of the feedwater and main steam lines nozzle welds. This will help minimize the potential for pipe ruptures. In addition, the licensee will implement compensatory measures to minimize the risk of damage due to load drop or crane failure, including (1) always positioning the crane outside the jet impingement zone if it is not involved in a lift, (2) maintaining an operator on station while operating in the jet impingement zone, (3) verifying that offsite power is operable, (4) disallowing maintenance in the switchyard during polar crane operation in the jet impingement zone, and (5) prohibiting moving heavy loads over

designated exclusion areas.

The licensee's identification of the potential accidents during operation of the polar crane and measures to minimize the potential impact of internally generated missiles on the crane that could result in dropped loads on the containment floor and safety-related equipment are in accordance with NUREG-0612 and, therefore, are acceptable.

3.4 PRA of Crane Failure/Load Drop

The polar crane is designed to withstand a jet impingement from a HELB such as that generated by a break in the main steam lines or the main feedwater lines. However, the polar crane was not designed to withstand the forces generated by a simultaneous HELB and seismic event. The frequency of polar crane failure due to simultaneous HELB jet impingement and a seismic event, however, is low. A seismically induced steam generator failure and a resultant HELB which impacts the crane in the jet impingement zone is expected to be a rare occurrence. The Diablo Canyon Individual Plant Examination of External Events indicates that seismic failure of the steam generator (failure modes include the main steam lines and other lines) has a high confidence of low probability of failure of 2.6g, which corresponds to an exceedance frequency of approximately 3.7E-5/yr. The licensee has indicated that a heavy load operation may take approximately 10 hours, and the proposed technical specification prohibits parking the crane in the jet impingement zone. Thus, the low seismic frequency coupled with infrequent operation in the jet impingement zone for a short time indicates that the risk from a seismically induced HELB is small. Also, the frequency of a seismic event and a random HELB which results in jet impingement on the polar crane occurring simultaneously is small. Thus, the staff finds that the small increase in risk from these considerations during polar crane operation in the jet impingement zone meets the acceptance guidelines in Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis."

A random occurrence of a load drop is more likely to occur. For a 10 hour load lift there is a non-negligible probability of a drop. The licensee, however, has a heavy load program established which requires an evaluation of potential heavy load drops in containment during Modes 1 through 4. This program ensures that load drops do not result in secondary missile generation, consequential damage to safe shutdown components, and unreviewed safety questions.

Load paths to be followed preclude heavy loads from areas where a dropped load could result in a loss of coolant accident. Based on the load paths to be followed and the assumption that heavy load operation meets the Diablo Canyon heavy load program criteria, the licensee concluded that the only credible contributor to risk during polar crane operation in the jet impingement zone was associated with a steam line break inside containment. PG&E has identified administrative restrictions, listed below, to eliminate that potential risk associated with the postulated steam line break:

1. Exclusion areas will be established above the steam generators regarding the use of the polar crane while in Modes 1, 2, 3, or 4. The exclusion areas are shown in Figures 3 and 4 of the TS request submittal, and are included in this safety evaluation for reference as

Attachments 2 and 3.

2. Additionally, administrative controls will limit the potential for a load swing that could affect the vertical portions of the steam line piping above the 140 foot elevation.

The staff finds that the licensee has a number of assurances in place which show that the risk from a heavy load drop during Modes 1, 2, 3, or 4 is small. This is a result of adherence to the DCPP heavy load program criteria, which ensures, in part, no consequential damage to safe shutdown components due to a heavy load drop. Furthermore, heavy loads will be precluded from areas where a dropped load or load swing could result in a loss-of-coolant accident or a main steam line break. Exclusion areas for polar crane operation are clearly identified, and administrative controls are established which address the potential for load swing affecting steam line piping. Therefore, a dropped load is unlikely to cause a transient or to damage safety-related systems, structures, or components. Thus, the staff finds that the risk associated with a heavy load drop in Modes 1, 2, 3 or 4 is small and meets the acceptance guidelines in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant Specific Changes to the Licensing Basis."

The staff finds that the risk associated with the TS amendment is small, given the above assumptions, and meets the acceptance guidelines in Regulatory Guide 1.174.

3.5 TS 6.8.4f, Containment Polar and Turbine Building Cranes

Current TS 6.8.4f, "Containment Polar and Turbine Building Cranes" requires in part:

> "A program which will ensure that: (1) the "position" of the containment polar cranes precludes jet impingement from a postulated pipe rupture;.. This program shall include the following:
>
> (1) The training of personnel, and
>
> (2) Procedures for the containment polar and turbine building cranes operation."

The licensee states: "that the current TS are too restrictive and overly conservative; therefore, the proposed change will allow more flexibility to use the cranes during modes 1 through 4. The proposed change to TS 6.8.4f would replace the word "position" with the words "parking location," and add the following language: "procedures will control the operation of the containment polar cranes in jet impingement zones." As stated by the licensee, polar crane parking restrictions, which include prohibited parking of the crane in jet impingement zones, will remain in effect.

The rationale for the proposed TS change is based on SSER 32, Section 8.3, "Unit 2 Tech Spec Considerations." The current licensing basis was established based on the staff's concern that the "parking location" for the polar crane was restricted to preclude jet impingement and the operation of the crane was limited to staff accepted analyses for the cranes. Therefore, although the staff approved the current TS, the staff was really concerned about parking the polar crane such that it precludes jet impingement. Furthermore, the licensee states that the parking locations of the containment polar cranes are restricted by administrative

controls that are intended to avoid jet impingements. Therefore, the proposed change to TS 6.8.4f would not affect current restrictions that prohibit parking the polar cranes.

The proposal to add a requirement to the TS to procedurally control the crane operation in the jet impingement zone is in accordance with NUREG-0612. The procedures require the licensee not to traverse any safe shutdown equipment (i.e., the reactor vessel, the steam generators and associated piping, and other safety-related components) with heavy loads; minimize operation of the polar crane in the jet impingement zone; assure that a crane operator is on station during the entire crane operation; verify that offsite power sources are operable; and verify the integrity of potential pipe break locations, including reviewing inservice tests and pipe stress analyses. Also, the procedures specify when and under what loading conditions the crane should traverse the areas surrounding the safety related equipment to limit any potential impact on these components.

The NRC finds the proposed TS 6.8.4f pertaining to the parking location and operation of the containment polar crane in the jet impingement zone inside containment acceptable. Based on analysis of potential causes of crane failures and load drop accidents, the licensee proposes to (1) park the crane outside the jet impingement zone, (2) implement inspections and testing of piping welds to minimize the potential for pipe ruptures that could result in jet missile generation, and (3) procedurally control operation of the crane in the jet impingement zones.

The licensee found that the polar crane would not fail due to high energy line break events because the crane is designed to withstand the jet impingement loads from such events. Furthermore, the risk associated with the TS amendment is small, given the assumptions discussed in Section 3.4 above, and meets the acceptance guidelines in Regulatory Guide 1.174. Also, the licensee is committed to implement the heavy loads program that is in accordance with NUREG-0612. The licensee will apply a previously approved methodology for evaluating the impact capability of the containment floor.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the California State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (64 FR 19561). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachments: Figures 1 through 3

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