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

MAR 22 1984

Vic Benaroya

Please review the attached allegations 203-210 and provide DL with your evaluation of their impact on low power operation of Diablo Canyon.

Provide your conclusions on their impact by COB March 23, 1984 to Hans Schierling, x27100.

George W. Knighton

D15

202. On December 12, 1983, PG&E's Mr. C. Braf rebuked Pullman's QC representative in strong language, asserting that QC was "wasting time" in noting that shop-drilled holes did not match the design drawing, because the vendors "have their own QA/QC program and accepted the materials for shippment /sic/ to Diablo Canyon." This rebuke was instead of a reply on the merits to the legitimate question raised. (See December 9, 1983 Memoranda, and December 12, 1983 Reply, enclosed as Attachment 6.) The brush-off also is suspect, because Pullman inspectors have been reporting QC violations since 1979 on purchases from the same vendors, Bostrom-Bergen and American Bridge, including welds so "pathetic" that they rip the inspectors' clothes. (See February 2 Petition, pp. 24-6.) 4/

D. Absence of Quality Control Coverage

While there was only spotty or unreliable QC coverage for welding at Diablo Canyon, there was no quality control for paint and other protective coating according to a painter on-site.

203. Faulty quality-control for paint and other protective coverings can affect the safety of the plant. The use of improper paint or the correct paint under improper conditions can defeat the original purpose of the covering, such as rust protection of carbon steel components. (See February 6, 1984 Interview Report with an anonymous Diablo Canyon painter enclosed as Attachment 8, p. 2.)

204. QA violations for paint also have spillover effects on other safety-related work. For example, in a radioactive area, if the wrong paint is used, or if the proper paint is improperly applied, it may chip off. This can interfere with the proper working of other safety systems. Nuclear reactors require a clean environment to run. Further, paint chips from a radioactive area can help spread

4/ This allegation also suggests that the vendor QA breakdown persisted through December 12, 1983, at PG&E's insistence.

radioactivity to other equipment and to people. (Id., p. 2.)

205. Until December 1983, Pacific Gas and Electric (PG&E) had no quality control (QC) program of any kind for at least the previous five years to insure the quality of paint and other protective coating at Diablo Canyon. Diablo Canyon may, in fact, be the only plant in the nation with no QC for paint. An NRC inspector informed PG&E officials in December of 1983 that Diablo Canyon was the only such plant. This problem was discovered late in December of 1983 when NRC inspectors inspected the General Construction (GC) paint department which inspects the painting and insulation work of contractors, originally the H.P. Foley Company and now Bechtel, and which should have had a QC program. (Id., p. 1.)

206. The discovery was also made in December of 1983 that the plant specifications used by the paint foreman did not conform to the specifications maintained by the records department of GC. When an NRC inspector reviewed the specifications that the foreman said he had relied on, the inspector discovered that they conflicted with what the inspector had been told by the records department. (Id.)

207. Corrective action for the paint QC violations had been prospective only. In the wake of the NRC discovery, management has belatedly begun to use a Daily Paint Report to record various data that can affect the ability of protective coatings to perform their safety-related functions, including the temperature and wetness of the surface that was coated, the preparation of the surface, the type of protective coating applied, the manufacturer, the method of application, the thickness of the coating, etc. This program should be applied retroactively to all safety-related painting. (Id.)

208. Because of the failure to record critical information or to adequately control the variables described above, the quality of an unknown percentage of

the paint and other protective coatings at Diablo Canyon is indeterminate. (Id., p. 2.)

209. The witness saw no evidence of any efforts by PG&E or any of its contractors to assess the safety significance of the non-existence of any quality control for paint. (Id.)

210. Paint inspectors have not been instructed that they can write a Non-conformance Report (NCR) or any similar report. The only method to record problems is on the newly-instituted Daily Paint Record, or in the log book maintained by the paint foremen. Neither approach is designed to provide resolutions for quality-control problems. (Id.)

E. Generic Crisis of Harassment and Retaliation

Pullman QA management enforced its restrictions on organizational freedom by retaliating against those who did not know their place. Harassment, attempted intimidation, and personnel reprisals permeated the entire QA program, not just those activities concerning special processes. The pattern extended within other departments as well, such as PG&E construction. The harassment has been occurring at least since 1978, and has intensified during the last three months. The methods include such tactics as physical threats by construction employees, threatened job actions, reprimands, denial of raises, isolation, and dismissal. It is an understatement to conclude that there has been a "chilling effect" from the reprisal crisis at Diablo Canyon. A quality assurance Ice Age would be more accurate. Due to the pervasive repression, an unknown number of deficiencies have not been reported. (See February 2 petition, allegations 129-37.)

Events of the last month have confirmed the credibility of these allegations. On February 22, 1984 the U.S. Department of Labor (DOL) issued an order

to reinstate QC inspector Steve Lockert, after finding that he was illegally dismissed in reprisal for writing a Discrepant Condition Notice. (See February 2 petition, allegations 32-3, 131-32.) The Department of Labor order is enclosed as Attachment 9. The pace of legal challenges to the repression also is intensifying. On February 9, 1984, Mr. Harold Hudson filed a DOL complaint challenging his January 1984 temporary layoff as retaliatory. (February 2 petition, allegations 129-30, 133.) The same day Mr. Hudson's partner (Attachment 2, supra) filed a DOL complaint similarly challenging his continuing layoff. The complaints are enclosed as Attachments 10 and 11.

Under 10 CFR 50.7 of Commission regulations, patterns of retaliation can be decisive for licensing decisions when they reach the intensity of the Diablo Canyon abuses. Licensing revocation or suspension is a possible remedy. 47 Fed. Reg. 30452-58 (July 14, 1982). As the Commission reminded licensees on February 14 of this year, there can be no question that public health and safety require that employees be free to raise safety issues to licensee management and to the NRC. (NRC IE Information Notice No. 84-08 is enclosed as Attachment 12.)

211. In 1982, a QC inspector was told by his own leadman that he would no longer be allowed to occasionally act as a temporary leadman, because he was not sufficiently "production oriented." (Attachment 2, p. 7.) Such criterion is improper, since a QC inspector's mission is to be quality-oriented. Indeed, 10 CFR 50, Appendix B, Criterion I guarantees QA personnel will have freedom from cost and scheduling pressures that could compromise quality. At Diablo Canyon, the priorities were reversed.

212. In 1983, Mr. Karner tore up a DCN that a QC inspector had written to protest harassment by Superintendant Rich Babineau. Mr. Karner also threw away a supporting statement signed by another inspector. Further, a production foreman

ROUTING AND TRANSMITTAL SLIP Date 3/16/83

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. L. Rubenstein		
2. D. Parr		
3. J. Wermiel		
4. W. LaFave		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

Questions only of DSI memo of 2-24-83 were faxed to PG&E on 2-28-83. PG&E was advised of their committment made at 1-28 meeting and were requested to provide prompt response. Attached is their status & schedule on CCW.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post) H. Schierling

Room No.—Bldg.

Phone No. 27100

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆GPO : 1981 O - 341-529 (109)

D4

[illegible] Eisenhut — /83

CCWS Status

— DSI has given me a copy of the Safety Evaluation of Diablo Canyon CCWS [illegible] still waiting [illegible] from PG&E

— PG&E agreed in a letter to submit by

April 1, 1983

April 7, 1983

April 15, 1983

— Aux Systems Branch indicated completion target date of May 5, 1983 [illegible] meeting with Mr. Smith [illegible]

— Meeting with Mr. Smith [illegible] PG&E's [illegible]

C Rossi

J [illegible]

G. [illegible]

Mr Smith

Annette [illegible]

cc [illegible]

cc Schierling

~~D/1~~

D-1

ROUTING AND TRANSMITTAL SLIP Date 2/1/84

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. G. Knighton, Chief, LB-3/DL		
2.		
3.		
4.		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
X	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

Attached are copies of our response to Allegations 7 and 46 revised to reflect our completion of the review of P.G. & E.'s Information Report of October 13, 1983.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
A. Thadani, Chief, RRAB/DST	Phone No.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
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☆ U.S. GPO: 1977-0-241-530/3228

D-11

Task: Allegation # 7

ATS. No. NRR-83-02 BN No.: 83-03(1/7/83)

Characterization:

PG&E appeared not to have a clear understanding of the scope of the targets and commitments to the NRC in the Systems Interaction Program.

Implied Significance to Plant Design, Construction, or Operation:

If, as alleged, P.G.&E. did not have a clear understanding of the scope of the targets and commitments to the NRC in the Seismically-Induced Systems Inter-Action Program (SISIP), then the misunderstanding might be significant to operation of equipment important to safety. At Diablo Canyon "Targets" refers to selected set of structures, systems and components that are important to safety and serve to either bring the plant to safe shutdown or maintain it in safe shutdown condition. A misunderstanding of the scope of the targets might affect the capability to safely shutdown the plant following the occurrence of a Hosgri event.

Assessment of Safety Significance:

At the request of the Advisory Committee on Reactor Safeguards (ACRS) P.G.&E. agreed to initiate a program to determine if seismically initiated failure of non-seismically qualified equipment and piping would cause

interactions with safety-related systems which could prevent the plants from being safely shut down following the occurrence of a Hosgri event.

P.G.&E., by letters dated May 7, July 1, July 15, August 19, and September 16, 1980, submitted drafts of their proposed program to the NRC staff for review and comment. The degree of P.G.&E.'s understanding including many details, e.g., target selection criteria, application of the target selection criteria, source identification criteria, application of source identification criteria, source-target interaction criteria, application of the source-target interaction criteria, use of analysis for the resolution of postulated interactions and the resolution of postulated interactions by plant modifications were contained in their draft program. These drafts were reviewed and comments submitted to P.G.&E. as guidance for their use in improving their program. These reviews were described in Sections 2 through 5 of Supplement No. 11 to the Safety Evaluation Report (NUREG-0675, Supplement 11).

The staff performed an onsite audit of the program activities which was reported in Sections 6 and 7 respectively of Supp. 11. This audit was not a 100% review of P.G.&E.'s target list, but was a review of representative samples taken from the target list and provides confidence that the target list reflects the actual plant systems, components, structures and layout.

By a letter dated October 13, 1983, P.G.&E. submitted an information report on the status of their seismic systems interaction study within the

containment of Unit 1. Included in the Information Report was the preliminary status of their study of Unit 2. P.G.&E. has not yet completed its study of Unit 2 and the staff has not yet completed its review of the Unit 2 program activities. The staff has completed its review of the October 13, 1983 PG&E Information Report (reported in January 9, 1984 memo from F. Rowsome, DST to T. Novak DOL) as it applies to Unit 1 and the review of this information has not modified our earlier conclusion that we have not identified any misunderstanding of the original scope of the targets and commitments to the NRC in the PG&E program. In fact, even more detailed understandings have been attained and additional voluntary commitments made to the NRC. Therefore, the extent to which we have communicated with P.G.&E. continues to provide reasonable assurance that P.G.&E. understands the scope of the targets and the commitments made by P.G.&E. to the staff. The commitments are documented in Section 8.2, Supplement 11 to NUREG 0675 (SER):

(a) "P.G.&E. will complete their program and any necessary plant modifications for each unit prior to the issuance of any license authorizing full-power operation of that unit."

(b) Region V, OIE, will verify "the completion of P.G.&E.'s program and the acceptability of any plant modifications."

(c) "P.G.&E. will ...provide for our information copies of their final report of their program which will include an identification of all interactions postulated, all walkdown data, interaction resolutions, and technical reports."

Staff Position

Based upon (a) the degree of understanding between the staff and P.G.&E. which includes many details documented in Supplement 11, NUREG-0675 and reinforced by extensive informal communication, and (b) the review of preliminary results contained in P.G.&E.'s Information Report, the staff has no basis to conclude that PG&E misunderstands the scope of the targets and their commitments to the NRC.

Action Required:

No new action is required in response to this allegation. The staff review of the final report on Unit 1 will continue to take steps to assure that no misunderstandings occur which might be significant to the safe operation of Diablo Canyon.

Task: Allegation #48

ATS. No. RV 83A34

Characterization:

Status of Seismic Systems Interaction Study

Implied Significance to Plant Design Construction or Operation

The allegation that the safety of fuel loading and operations cannot be assured prior to completion of the modifications from the seismic systems interaction study is not significant to either fuel loading or operations, because: (a) the completion of the modifications prior to fuel loading is not required for safety, and (b) the completion of the modifications prior to operations is required, and all indications are that the modifications will be completed prior to operations.

Assessment of Safety Significance:

The staff has re-examined both the status of the seismic systems interaction study and the activities related to the allegation that: "The safety of operations is not assured if fuel load and operation of the plant occur before the seismic interaction study and associated modifications are complete."

During the re-examination the staff have assumed that "the study" is the P.G.&E. Seismically Initiated Systems Interaction Study with all its aspects including the criteria for postulating systems interactions. Also, it was assumed that "operation of the plant" means thermal power greater than five percent of design power.

Section 8.2, Supplement 11 to NUREG 0675 (SER) states the commitments pertinent to this allegation:

(a) "P.G.&E. will complete their program and any necessary plant modifications for each unit prior to the issuance of any license authorizing full-power operation of that unit."

(b) Region V, OIE, will verify "the completion of P.G.&E.'s program and the acceptability of any plant modifications."

(c) "P.G.&E. will ...provide for our information copies of their final report of their program which will include an identification of all interactions postulated, all walkdown data, interaction resolutions, and technical reports."

The important point to note is that no power operation of the plant will be authorized before the modifications are complete.

Although fuel loading is important to safety in other ways, it is not necessary to complete the modifications associated with the P.G.&E. study before loading fuel. Fuel loading, and its completion, means that only new fuel elements have been positioned in the reactor. Sustained fission has not occurred, therefore, fission products do not exist in the core in sufficient amount to require decay heat removal.

As additional safety precautions, P.G.&E. (in a letter dated September 10, 1983) states that (a) no modifications will be made inside containment during fuel

loading, (b) during the period when the modifications are being made the plant will be in modes 5 and 6 (cold shutdown and refueling), (c) no modifications will be made to those systems or portions of systems required by Technical Specifications to be functional during these modes of operation, (d) post fuel-loading modifications will not be undertaken until the reactor vessel head and missile shield are in place to provide protection of fuel from any modification activity, and (e) the modifications will be completed prior to the first reactor criticality. Note that all such post fuel-loading work will be reviewed for the introduction of new interactions under P.G.&E.'s study.

The P.G.&E. study, as we accepted it, provides for follow-on activities during power operations to remain alert for adverse systems interactions. These follow-on activities should not be confused with the completion of the modifications identified during the pre-operating period. The follow-on activities provide for responsiveness to those adverse systems interactions that might be identified subsequently.

The staff review of the P.G.&E. reports provides an independent check of the P.G.&E. study. The staff review will provide assurance against adverse systems interactions from Hosgri events at Diablo Canyon and will consider the potential for generic implications from the findings of the P.G.&E. study.

By a letter dated October 13, 1983, P.G.&E. submitted an information report on the status of their seismic systems interaction study within the containment of Unit 1. Included in this Information Report was the preliminary status of their study of Unit 2. P.G.&E. has not yet completed its study of Unit 2 and the staff has not yet completed its review of the Unit 2 program activities. The staff has completed its review of the P.G.&E. Information Report (reported in a January 9, 1984 memo from F. Rowsome, DST to T. Novak, DOL) as it applies to Unit 1 and neither P.G.&E. not the staff has yet identified any seismically induced systems interaction that consists of a violation of the regulatory criteria within the applicable sections of the Standard Review Plan (NUREG-0800). In summary, the staff concluded that power operations should be authorized only after all modifications are completed. It is not necessary to complete all modifications prior to fuel loading. Precautions are being taken to assure that the fuel loading is not vulnerable to modifications associated with the P.G.&E. systems interactions study. The safe operation of Diablo Canyon is not jeopardized by the seismic systems interaction study and its associated activities.

Staff Position

Based on our review of the P.G.&E. seismic systems interaction study description, a site visit to observe the conduct of the system interaction walkdowns, the precautions being taken and the minor nature of the post fuel-loading modifications as described in the September 10, 1983, P.G.&E. letter, the status of the modifications as presented in the October 13, 1983

Information Report, and the commitment to complete these modifications prior to taking the reactor critical for the first time, the staff concluded that it is not necessary to complete all modifications prior to loading fuel. We require that any necessary modifications for each unit be completed prior to issuing a license authorizing full-power operation of that unit.

Action Required

No new action was required in response to this allegation. Our review of the October 13, 1983 Information Report has not identified any new actions required to be taken in response to this allegation. The commitments identified in Supplement 11 to NUREG 0675 (SER), Section 8.2, continue to be required actions from our previous licensing review of the P.G.&E. seismic systems interaction study.

Task: Allegation 100

(previously addressed in SSER 21)

ATS No.: RV83A0069 BN No.: None

Characterization

No quality control program for painting inside containment.

Implied Significance to Design, Construction, or Operation

Excessive zinc coatings inside containment could result in potential clogging of drains under post-LOCA accident conditions. This is potentially significant to operations.

Assessment of Safety Significant

Previously addressed in SSER 21

Staff Position

As previously discussed in SSER 21 the staff concludes that the licensee has conformed with the original classification of painting as not being a quality class 1 activity. However, considering the importance of the containment coating, particularly with respect to zinc inventory and potential for flaking, it is the staff's opinion that these aspects be further examined.

The staff is reviewing the FSAR related to paint composition and inventory of zinc in the containment, specifically with respect to the FSAR post-LOCA assumptions related to blockage of core flow paths and/or containment spray nozzles by flaked paint.

Action Required

Based on the initial review the staff has concluded that this concern need not be resolved for operation below 5 percent power. A resolution is required before exceeding 5 percent power operation.

1. Additional discussion and engineering justification for the maximum assumed leak rate of 200 gpm from the nonseismically qualified components in the "C" loop of the CCWS following an SSE. (Reference: January 28, 1983 meeting transcript at 101).

2. Additional verification of the design heat removal capability of the CCWS in the various accident operating modes including operator actions required, and assuming the most limiting single failure with respect to CCWS performance. This reevaluation is also to include a comparison against the FSAR temperatures and assumptions for heat removal, and should provide verification of the capability of each CCW heat exchanger to handle full flow from all CCW pumps. (Reference: January 28, 1983 meeting transcript at 69 through 79).

Faxed to PDR
2/28

D2