

NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

FEB 1 8 1983

MEMORANDUM FOR: George E. Lear, Chief

Structural & Geotechnical Engineering Branch, DE

Coenge Workinghton, Chief Licensing Branch No. 3, DL

FROM:

Harold Polk, Structural Engineer

Structural & Geotechnical Engineering Branch, DE

Hans Schierling, Project Manager Licensing Branch No. 3, DL

SUBJECT:

MEETING NOTES OF PG&E/IDVP MEETING ON DIABLO CANYON

UNIT 1 STRUCTURAL ANALYSES, FEBRUARY 4, 1983,

SAN FRANCISCO

On February 4, 1983 the PG&E Diablo Canyon Project (DCP) briefed and described to the IDVP (Teledyne Engineering Services) and its consultants (M. J. Holly and J. M. Biggs) the status of the PG&E analyses for the containment annulus steel structure and the auxiliary building floor and wall loadings. H. Polk and H. Schierling of the NRC staff and A. J. Phillippacopoulos of &NL attended the meeting. The technical consultant to Joint Intervenors was represented. A list of attendees is attached.

Containment Annulus Structure

The Project reanalyzed the annulus steel structure for seismic loads using a "frame" concept for each radial beam. The mass of the tangential steel beams and supported equipment was incorporated into the adjacent radial beams in the frame. Floor response spectra were generated for various nodal points on the individual radial beam frames and compared with the original URS/Blume spectra. The new spectra generally exceed the IRS/Blume spectra at most frequencies of interest. The DCP proposed to modify the structure so that the new spectra would be comparable to the current Hosgri spectra. The new spectra are generally controlled by the columns at the containment wall. The modifications proposed are additional columns under the tangential beams at about 20 locations and some stiffening of the radial beams. The piping would be reanalysed incorporating the tangential beams which were not evaluated in the seismic analysis. The new response spectra will be used for the piping evaluation and equipment qualification. Two detailed piping problems were presented but results were not yet available. PG&E proposed to use a sensitivity study of supported piping mass to structure mass to justify the adequacy of the existing structure at certain locations.

Based on the status of the analysis it is doubtful that the structural modifications could be designed and installed in accordance with the currently projected fuel load date. The IDVP and the staff need to review the modifications prior to the fuel load decision. As of this date the Project has not provided formal documentation on the analysis or the modifications.

Auxiliary Building

The seismic analysis has been completed and is currently being used in evaluating the structure adequacy. PG&E has retained a consultant (Jack Benjamin) to evaluate the acceptance criteria and to assist in evaluating the structure. The measured material properties will be used in the structural evaluation in accordance with the provisions of the ACI code.

The implicit assumption of the floor slabs acting as rigid diaphrams in generating the seismic model was discussed. DCP proposed to use a three-stick model for determing the torsional loads and load distribution due to the floor diaphram flexibility.

Future Action

The IDVP requested that the information provided at the meeting be documented in sufficient detail for evaluation. PG&E will present the analyses for the annulus steel structure and the auxiliary building floor loading in the next supplement (February 15, 1983) to the PG&E Phase I Final Report. PG&E suggested a meeting with the IDVP for the week of February 21, 1983 in San Francisco to provide the IDVP with further information.

Harold Polk, Structural Engineer

Structural & Geotechnical Engineering Branch

Division of Engineering

Hans Schierling, Project Manager

Licensing Branch No. 3 Division of Licensing

Attachment: As stated

Attendance List D.C.P. HOWARD FRIEND TOVP-705 RON WRAY J.M. Biggs M. J. HOLLEY JR VINCE STEPHENS Ned Denison Peter 7. mason Las W. Moore

J.R. Melvin D. Soko SKY R.V. Bettuger S. L. Chin A.J. PHILIPPA COPOULOS

HAROLD PONK

JK MECall D.R. Cooley Han Schierling MC Anderson WH Waite

RICHARD F. LOCKE Ken Buchert RRFray VJ GHIO Birnal Sarkar

S.M. SKIDMORE PA CRANE MI Tresler

H. Hollingshaus John B. Hoch

IDUP-HHB IOUP - RUCA Robert L. Cloud Assoc. DCP BECHTEL

> PG and E - ENG. IUCA TES BNL

NRC

DCP DCF NRC DCP DCP PG+E Bechtel

DCP DCP-PG+E

DCP-PGSE PGEE - LAW DEP-176-SE

501(6/81)

File No. 9011

IDVP COMPLETION REPORT

the	above Fire in-
1.	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which recategorized this item as a Closed Item.
	Based on additional information provided by PGandE PGandE Completion Sheet IDVP File No. 9011, Rev. 0, signed 821208
	the Findings Review Committee has recommended with considered that the resolution is in compliance with established criteria. No physical modifications are required.
	32: T. Comme 830117
	2. Signature:Approval/Program Manager

	ERROR REPOR	T Fil	e Nc.	9012	
	Class: C	File Revisio	n Nc.	2	_
	A,B,0	or D PG&E Tas	k No.		-
	Dates: Reported to Program Review Cor	mmittee NA			-
•	Dates: Reported to Program Review Committee Action	on NA			
	Reported to PG&E and Originate	or 830117			-
2.	Scheduled for TES Semimonthly Report	No. rebruary ,			
3.	Structure(s), system(s), or component	(S) Involved.			

NSSS.

4. Description of Error:

Requirements of specification 8752, Installation of Nuclear Supply Systems (page 3-18 para. 6.67) were not met. Of 14 weld procedures reviewed, 8 were found to be deficient, because method and material used in monitoring interpass temperatures are not addressed in the procedure.

5. Significance of Error:

Violation of specification requirements.

Additional information shown as an attachment to PGandE Completion Sheet IDVP File NO. 9012 Revision O signed 821208 indicates that 4 procedures were not used in Unit 1, 2 procedures were not used for pressure boundary welds, and 2 procedures were used to perform single pass welds. It is concluded that there is no safety significance regarding this item.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

		For Program Review -67-	Committee	Approved	rogram Manager
3.	Signatures:	NA O	the state of the s	26 60	ogram Manager
	rocciic iui Li	10. 11000. 1 0.3	Type Name/	Organization	Date 830117
7	Potential Fr	ror Report signed by	C. D. Lundi	n (SWEC)	on 830112

	File	No.	9012
File	Revision	No.	3

IDVP COMPLETION REPORT

1.	The action which	completes the IDVP effort is:	
		on No is a Program Resolution Report which did this item as a Closed Item.	h
		ditional information provided by PGandE etion Sheet IDVP File No. 9012, Rev. 0, signed 8212	08
	considered	s Review Committee has recommended and the IDVP has that the resolution is in compliance with criteria. No physical modifications are required.	
2.	Signature:	2. E. Gog 830117 Approval/Program Manager	

PROGRAM	RESOLUT	ION	REPORT

9014 File No. 2

File Revision No.

1. Resolution of an:

Open Item: □ Class 2. Independent Design Verification Program Resolution is as:

a. Closed Item

b. D Deviation

Date Reported to PG&E

4. Scheduled for TES Semimonthly Report No. February

5. Resolution based on the following documentation:

PGandE Completion Sheet IDVP File NO. 9014 Revision O signed 821203.

Based on additional information shown as an attachment to the above described Completion Sheet, it is concluded that specification requirements have been met.

6. Program Resolution is:

To close this file and issue an IDVP Completion Report.

7. Potential Program Resolution Report signed by C. D. Lundin (SWEC)

830112

Type Name/Organization 830117 (Approved/Program Marager)

File No. $=\frac{9014}{3}$

IDVP COMPLETION REPORT

ized this item as a Closed It	tem.
as been informed by PG&E that	t no physical modification:
oplied by PG&E in response t	
aterorized this item as eithe	
D Error. The PG&E documen	t so informing the IDVP is

		ERROR REPORT	File No.	9015
		Class: C A,B,C or D	File Revision No PG&E Task No	2
	Dates:	Reported to Program Review Committee	NA	
		Program Review Committee Action	NA	
		Reported to PG&E and Originator	830117	
3.	Schedul Structu	ed for TES Semimonthly Report No. February $F(s)$, system(s), or component(s) invol	ruary , ved:	

Concrete Containment.

4. Description of Error:

Concrete placements reports reflect lower strength than called for in the design strength column of the report (3000psi).

The compressive strength of these placements did not meet design requirements.

5. Significance of Error:

Because of additional information attached to PGandE Resolution Sheet IDVP File No. 9015 Revision O signed 821208, it is concluded that the mentioned placements either were not part of the designed structural foundation or the strength of the concrete meets the requirements of the intended application.

Therefore, there is no safety significance regarding this item.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

7.	Potential Er	ror Report signed b		
8.	Signatures:	NA	Type Name/Organization	Date 830117
		For Program Review -71-	Committee Approved/Progr	ram Manager

File No. 9015
File Revision No. 3

IDVP COMPLETION REPORT

-110	above i i ie itamos. Is compilere
1.	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which recategorized this item as a Closed Item.
	Based on additional information provided by PGandE PGandE Resolution Sheet IDVP File No. 9015, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has considered that the resolution is in compliance with
	established criteria. No physical modifications are required.
2.	Signature: 20. E. Gogan 830117
	Approval/Program Manager

	ERROR REPORT	File No.	9016
	Class: C A,B,C or D	File Revision No PG&E Task No	2
Dates:	Reported to Program Review Committee	NA	
	Program Review Committee Action	NA	
Schedul.	d for TES Sominanthly Comments		
Structu	re(s) system(s) or component(s) involve	uary ,	
	Schedu 1	Dates: Reported to Program Review Committee Program Review Committee Action Reported to PG&E and Originator Scheduled for TES Semimonthly Report No. Febr	Dates: Reported to Program Review Committee Program Review Committee Action Reported to PG&F and Originator Reported to PG&F and Originator Reported to PG&F and Originator

4. Description of Error:

Specification 8831R states "Aluminum grout shall not be used within the containment structure".

Field records show that there were two instances where aluminum powder was used in grout within the containment.

5. Significance of Error:

Violation of specification requirements.

Additional information shown as an attachment to PGandE Completion Sheet IDVP File No. 9016 Revision O signed 821208 indicates that:

- 1. The aluminum used would not be exposed to containment spray.
- 2. The total amount of aluminum allowed in the containment, as specified in the FSAR, has not been exceeded.
- 6. Recommendation:

To close this file and issue an IDVP Completion Report.

7.	Potential Er	ror Report 3	igned by	CONTRACTOR OF THE PARTY OF THE	undin (SWEC)	on	830112
8.	Signatures:			Type Na	me/Organization		Date 830117
		For Program	Review (Committee	Approved/Pr	ogram	Manager

1	File	No.	9016		
File	Revision	No.	3		

IDVP COMPLETION REPORT

			is a Pro		olution R	eport	which
			formation pro			igned	821208
c	nsidered	that the	resolution No physical	is in	complianc	ce wit	th
			No physical			requi	red

		1	TRCTAR RORRE	File	No. 901
		C	lass: $\frac{C}{A,B,C \text{ or } D}$	File Revision	No. 2
			A, B, C OF U	PG&E Task	No
1.	Dates:	Reported to Program Program Review Comm	ittee Action	NA	
2.	Schedul Structu	Reported to PG&E an ed for TES Semimont@ re(s), system(s), or	ly Report No. Fet	830117 bruary , olved:	
eac	tor Cool	ant System.			
4.	Descrip	tion of Error:			
490	bolts u	sed in lieu of A307 I	bolts.		
325	bolts u	sed in lieu of A490 I	bolts.		
Seve	ral bolt	ed joints lack lock	washers, which	were required per	
engi	neering	drawings.			
5.	Signifi	cance of Error:			
/iol	ation of	design requirements			
Base	d on ad	ditional information	shown as an att	achment to PGandE	
Reso	lution S	heet IDVP File No. 9	017 Revision 0 si	gned 821208, it is	
conc	luded th	at there is no safet	y significance re	garding this item.	
6.	Recommer	ndation:			
	1				
10 C	lose thi	s file and issue an	IDVP Completion R	eport.	
7	Potont:	1.5		to towns	
	rotentia	1 Error Report signe		on _Organization on _	830112
8.	Signatur	es: NA	Type Name/	or gair ization	Date 830117

File No. 901/
File Revision No. 3

IDVP COMPLETION REPORT

1.	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which recategorized this item as a Closed Item.
	Based on additional information provided by PGandE PGandE Resolution Sheet IDVP File No. 9017, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has considered that the resolution is in compliance with established criteria. No physical modifications are required.
2.	Signature: 21. 87 6 830117 Approval/Program Manager

	ERROR REPORT	File No. 9018
	Class: $\frac{C}{A,B,C}$ or D	File Revision No. 2 PG&E Task No.
1.	Dates: Reported to Program Review Committee	NA NA
2.		ebruary ,

Reactor Coolant System.

4. Description of Error:

Specification 8752 page 3-14 para. 6.3 states that "welding sha 1 be performed by welders who have been qualified in accordance with ASME IX, 1971 and any additional requirements of the applicable codes and standards.

Manufacturer's record of welder performance qualification tests did not meet ASME IX requirements for one welder.

No objective evidence could be found that Westinghouse requirement for use of mockups in qualification was met.

5. Significance of Error:

ASME IX requirements may have been violated.

Additional information shown on PGandE Completion Sheet IDVP File No. 9018 Revision O signed 821208, indicates that:

- 1. Although the welder qualification is nuclear, it is an isolated incident, futhermore the weld was later radiographed and found acceptable.
- 2. The use of mockups for welder qualification is imposed by Westinghouse over and above the ASME IX requirements.

It is concluded that there is no safety significance regarding this item.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

7.	Potential E	or Report signed by	C. D. Lundin	(SWEC) on	830112
8.	Signatures:		Type Name/Or		Date 830117
		For Program Review	Committee	Approved/Progra	m Manager

File No. 9018

IDVP COMPLETION REPORT

LIIC	above the number is complete.
1.	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which recategorized this item as a Closed Item.
	Based on additional information provided by PGandE PGandE Completion Sheet IDVP File No. 9018, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has considered that the resolution is in compliance with established criteria. No physical modifications are required.
2.	Signature: 2/E Grape 830117 Approval/Program Manager

	EFROR REPORT	File No. 90	20
	Class: C A,B,C or D	File Revision No. 2 PG&E Task No.	
1.	Dates: Reported to Program Review Committee	NA	
	Program Review Committee Action	NA	
_	Reported to PG&E and Originator	830117	
2.	Scheduled for TES Semimonthly Report No. Febr	ruary ,	

Reactor Coolant System.

4. Description of Error:

The requirements of ASME IX, 1971 as specified in specification 3752 page 3.20 para. 7.2 on radiographic inspection reports (material thickness, source distance and geometric unsharpness) are not met.

5. Significance of Error:

Violation of specification requirements.

Based on additional information shown as an attachment to PGandE Completion Sheet IDVP File No. 9020 Revision O signed 821208 is concluded that there is no safety significance regarding this item.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

7. Potential Error Report signed by C. D. Lundin (SWEC) on 830112

8. Signatures: NA Type Name/Organization Date 830117

For Program Review Committee Approved/Program Manager -79-

File No. 9020
File Revision No. 3

IDVP COMPLETION REPORT

	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which recategorized this item as a Closed Item.
	Based on additional information provided by PGandE PGandE Completion Sheet IDVP File No. 9020, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has considered that the resolution is in compliance with established criteria. No physical modifications are required.
2.	Signature: 21. 8. 6 0 830117
	Approval/Program Manager

ERROR REPORT 9021 File No. Class: File Revision No. 2 A.B.C or D PG&E Task No. NA 1. Dates: Reported to Program Review Committee Program Review Committee Action NA Reported to PG&E and Originator 830117 2. Scheduled for TES Semimonthly Report No. February , Structure(s), system(s), or component(s) involved:

Concrete Containment.

4. Description of Error:

Concrete surface conditions on 3 identified interior walls do not meet specification 8831R requirements, section 5-17 para. 10.1.

5. Significance of Error:

Impact on spec. requirements.

Additional information shown as an attachment to PGandE Completion Sheet IDVP File No. 9021 Revision O signed 821208 indicates that there is no acceptance criteria regarding air bubbles. Recent visual inspection by experienced personnel concluded that there is no safety significance regarding this item.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

7. Potential Error Report signed by C. D. Lundin (SWEC) on 830112

8. Signatures: NA Type Name/Organization Date 830117

For Program Review Committee Approved/Program Manager

	File	No.	9021
File	Revision	No.	3

IDVP COMPLETION REPORT

	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which
	recategorized this item as a Closed Item.
	X Based on additional information provided by PGandE
	PGandE Completion Sheet IDVP File No. 9021, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has
	considered that the resolution is in compliance with
	established criteria. No physical modifications are required.
	2/88 920117
2.	Signature: 2. E. Gorg. 830117
	Approval/Program Manager

	ERROR REPORT	File	No.	9022
	Class: C A,B,C or D	File Revision PG&E Task		-
1.	Dates: Reported to Program Review Committee Program Review Committee Action	NA NA	NO.	
2.	Reported to PG&E and Originator Scheduled for TES Semimonthly Report No. Febri Structure(s), system(s), or component(s) involv	830210 uary ved:		
BMI	Tubing Welds.			
4.	Description of Error:			

5. Significance of Error:

The quality of the weld could impair the structural requirements.

Voltage/amperage requirements of weld procedure 3500/2 were not met.

Based on additional information shown as attachment A to PGandE Completion Sheet, IDVP File No. 9022, signed 830109, is concluded that there is no safety significance regarding this item.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

7.	Potential	Error	Report	signed t			(SWEC)	on	830204
8.	Signature		NA		Туре	Name/Or	rganization Approved/P	WECOM	Date 830210
		For	r Progra	m Review	Committe	e	Approved/P	rogran	m Manager

File No. 9022'
File Revision No. 3

IDVP COMPLETION REPORT

The DCNPP Independent Design Verification Program (IDVP) effort related to the above File Number is complete.

1.	The action which completes the IDVP effort is:	
	File Revision No is a Program Resolution Report recategorized this item as a Closed Item.	which
	X Based on additional information provided by PGandE PGandE Completion Sheet, IDVP File No. 9022, signed 830109	
	the Findings Review Committee has recommended and the IDVP considered that the resolution is in compliance with established criteria. No physical modifications are required.	th
2	Signature O2 Crossing for W E. Comer 830210	

Approval/Program Manager

	ERROR REPORT	File No. 90
	Class: C	File Revision No. 2
	A,B,C or D	PG&E Task No.
	gram Review Committee	NA
	Committee Action E and Originator	NA 830117
 Scheduled for TES Semimor Structure(s), system(s) 	onthly Report No. Feb	ruary .
eactor Coolant System.		
4. Description of Error:		
oltage/amperage requirements	of weld procedure 3500	0-1 were not met.
5. Significance of Error:		
/iolation of specification re	equirements .	
Additional information shown	as an attachment to	PGandE Completion
Sheet IDVP File No. 9023 Re		
final nondestructure examin	ation confirms that	acceptable weld
There is no safety significa	nce regarding this ite	em.
6. Recommendation:		
To close this file and issue	an IDVP Completion Re	eport.
7. Potential Error Report	signed by C. D. Lundin	
8. Signatures: NA	-	Organization Oate
o. signatures:	n Review Committee	Approved/Program Manage

-85-

File No. 9023
File Revision No. 3

IDVP COMPLETION REPORT

The DCNPP Independent Design Verification Program (IDVP) effort related to the above File Number is complete.

c.	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which recategorized this item as a Closed Item.
	Based on additional information provided by PGandE PGandE Completion Sheet IDVP File No. 9023, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has considered that the resolution is in compliance with established criteria. No physical modifications are required.
2.	Signature: 2/- E- Gay 830117 Approval/Program Manager

13

			ERROR REPORT	File No. 9025
			Class: C	File Revision No. 2
			A,B,C or D	PG&E Task No.
2.	Schedule	Program Review Reported to PG& d for TES Semim	gram Review Committee Committee Action E ard Originator onthly Report No. Feb , or component(s) invo	NA NA 830211
BMI	Tubing S	Supports.		
4.	Descript	ion of Error:		
5/1	6" drille	ed holes on one	tubing support do not	appear on drawing.
5.	Signific	ance of Error:		
	at an ove	erstress condit	ion could exist beca	use of the reduced
Sh	eet, IDVP veloped w	File No. 9025,	wn as an attachment A t Revision O, reveal th loads are applied. s item.	nat low stresses are
6.	Recommen	ndation:		
То	close th	is file and iss	ue an IDVP Completion	Report.
7.	Potentia	al Error Report	argined by	tak (SWEC) on 830204
			Type Name	/Organization Date

	File	No.	9025
File	Revision	No.	3

IDVP COMPLETION REPORT

	File Revision No is a Program Resolution Report which
	recategorized this item as a Closed Item.
X	Based on additional information provided by PGandE PGandE Completion Sheet, IDVP File No. 9025, Rev. 0, signed 830109 the Findings Review Committee has recommended and the IDVP has
	considered that the resolution is in compliance with established criteria. No physical modifications are required.
	Approval/Program Manager

		ERROR REPORT	File No. 9027
		Class: C	File Revision No. 2
		A,B,C or D	PG&E Task No.
1.	Program Review Co		NA NA
2.	Reported to PG&E Scheduled for TES Semimor Structure(s), system(s),	thly Report No. Febru	
BMI	Tub ing.		
4.	Description of Error:		•
	vidence was found that li table welds was performed		
5.	Significance of Error:		
Vio	lation of specification re	quirements.	
Add	itional information shown	in PGandE Completion	Sheet IDVP File
		ataon indicates that	thic nanticular

Additional information shown in PGandE Completion Sheet IDVP File No. 9027 Revision O signed 821208, indicates that this particular weld was exempted from the requirements for liquid peretrant examination of stainless steel welds, therefore there was no violation of specification 8752.

6. Recommendation:

To close this file and issue an IDVP Completion Report.

7.	Potential Er	ror Report signed by	C. D. Lundin (SWEC) on 830112
8.	Signatures:		Type Name/Organization Date 330117
		For Program Review (Committee Approved/Program Manager

	File	No.	9027
File	Revision	No.	3

IDVP COMPLETION REPORT

1.	The action which completes the IDVP effort is:
	File Revision No is a Program Resolution Report which
	recategorized this item as a Closed Item.
	X Based on additional information provided by PGandE
	PGandE Completion Sheet IDVP File No. 9027, Rev. 0, signed 821208
	the Findings Review Committee has recommended and the IDVP has
2.	the Findings Review Committee has recommended and the IDVP has considered that the resolution is in compliance with

	PROGRAM RESOLUTION REPORT File No.	9028
	File Revision No.	2
1.	Resolution of an: \(\Delta\) Open Item: \(\Delta\) Class Error	
2.	Independent Design Verification Program Resolution is as:	
	a. 🖸 Closed Item b. 🗆 Deviation	
	c. □ Open Item with future action by PG&E: Task	
	Date Reported to PG&E 830117	
4.	Scheduled for TES Semimonthly Report No. February	
	Resolution based on the following documentation:	

Information provided by PGandE indicates that change notice 18 to specification 8752 revised the requirements for weld numbers and welder identification numbers to be as applicable per codes, standards, specifications, drawings or construction direction. These documents did not include this requirement, therefore, there was no violation of specification 8752.

6. Program Resolution is:

To close this file and issue an IDVP Completion Report.

7.	Potential Program Res Report signed by		on 8	30112
8.	Signature: 2	Type Name/Organi. ation 830117 Appr	oved/Program	Date Manager)

	File	No.	9028
File	Revision	No.	3

IDVP COMPLETION REPORT

X	File Revision No. 2 is a Program Resolution Report which
	recategorized this item as a Closed Item.
	The IDVP has been informed by PG&E that no physical modifications will be applied by PG&E in response to File Revision No, which recategorized this item as either a Deviation or as a Class C or Class D Error. The PG&E document so informing the IDVP is
	nature: 2 5 600 830117

**TELEDYNE ENGINEERING SERVICES

APPENDIX A

TELEDYNE ENGINEERING SERVICES

APPENDIX A

LIST OF TABLES

A-1 Lookahead Report

A-2 IDVP Schedule Relative to DCNPP-1 3-Step Licensing

LIST OF FIGURES

Phase I Schedule

Phase II Schedule

**TELEDYNE ENGINEERING SERVICES

TABLE A-1

LOOKAHEAD REPORT

FEBRUARY 11, 1983 THROUGH MARCH 11, 1983

DATE(S)	LOCATION	SUBJECT	PARTICIPANTS
2/14/83	Room 110 Phillips Building Bethesda, MD	NRC/BNL Meeting on Diablo Canyon Unit 1 Design Verification Effort	NRC/BNL (TES/DCP also in Attendance)
2/23/83 (Tentative)	SWEC Boston, MA	Discussion of Phase II EOIs	TES/DCP/SWEC

TELEDYNE ENGINEERING SERVICES

TABLE A-2

IDVP SCHEDULE RELATIVE 70

DCNPP-1 3-STEP LICENSING*

	IDVP REPORTS			
ACTIVITY	FUEL LOAD	LOW POWER	FULL POWER	
Phase I	Status 3-1-83	Final 4-15-83		
Phase II	Status 3-1-83	Status 4-15-83	Final 6-1-83	
ITP-QA .	Status 3-1-83		Final 6-1-83	
Construction QA	Status 3-1-83		Final 6-1-83	
PG&E/W Interface	Final 3-1-83			
Hosgri Spectra	Final 3-1-83			
Non-Hosgri Spectra	Status 3-1-83		Final 6-1-83	
Verification of ITP Action	Status 3-15-83	Status 4-30-83	Status 6-15-83	

^{*}The dates shown on this Table are those of the PG&E (Crane) to NRC (Eisenhut) dated December 2, 1982.

PHASE I IDVP SCHEDULE AS OF FEBRUARY 11, 1983

1	RLCA	DESIGN CHAIN	
2 1	TES	QA AUDIT & REVIE.	
2.11	RFR	I ITP-QA	S
3 1	RLCA	BUILDINGS	C
3.11	RLCA	HOSGRI SPECTRA	140
3.2	FLCA	NON - HOSGRI	152155C
	RLCA	PIPING	103-103-103-119-119-119-119-119-119-119-119-1138
5	RLCA	PIPE SUPPORTS	30 104 1 C
6 1	RLCA	SMALL BORE PIPG.	105-105
7 1	RLCA	EQUIP. (ANAL.)	
7.1	RLCA	VALVES	108I
7.2	RLCA	ELECT. EQUIPMENT	110-A
7.3	RLCA	TANKS	
7.4	RLCA	- Heart	-107-1
7.5	RLCA		109-109-1
7.6	RLCA	HVAC COMPONENTS	111-111-111-124A
8 1	RLCA	EQUIPMENT (TEST)	144I
9	RLCA	CONDUIT SUPPORT	113
10	RLCA	HVAC DUCT SUPT.	11315
11	TES	PGLE TO MSSS INT.	
12	TES	CONTAIN. ANNULUS	127————————————————————————————————————
13	RLCA	VERIF. OF SOILS	13 156 A
3.1	RLCA	INTAKE STRUCTURE	132-132154156149A
3.2	RLCA	OWST	133-10
3.3	RLCA	BURTED TANKS	134A
3.4	RLCA	BURIED PIPING	135-≜
14	RLEA		1471
15	RLCA		13I
16	TES		
	TES		

PHASE II IDVP SCHEDULE AS OF FEBRUARY 11, 1983

0 1	ORGAN	SUBJECT		OCTOBER NOVEMBER DECEMBER JANUARY	
- 1			-1	1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21	#
, i	RER	DES.CH (NON-SWEC)	151-	201-201-29	
. 1	RFR	CONTRACTOR LIST	si-	9	
. !	SWEC	DES. CHAIN (SWEC)	si-	292	1
!	RFR	QA. & DESIG.PRAC.	3 -	203-203-203-	
1	SWEC	AFW RPT.	si-	20427	234I
1	SWEC	AFW FOW.DIV.RPT.	S	205-205-22	
1	SWEC	AFW ELECTRICAL	si-	20625	236I
1	SWEC	CRYP POWER DIV.	Sir	20720720	37I-245A
1	SWEC	CRUP ELECT. DIV.	si-	208-26-	238I
i	SWEC	RPT. 4160 V DIST. RPT.	151-	209-24-	2391
i	SWEC	RAD. ANAL. RPT.	151-	21021017	233I
i	SWEC	F/T ANAL. RPT.	Isi-	212-212-14-	
i	SWEC	PIPE BREAK POWER	isi-	213-213-23	1
i	SWEC	I DIVISION RET.	151-	214	II
1	SWEC	CONST.QUAL.ASSUR	151-	228-	
	RLCA	PIPING	151-		А
1	RLCA	PIPE SUPPORTS	151-		А
		1	151-		216I
1	RLCA	EQUIPMENT SUFT.	151-		
1	RLCA		151-		2501
21		RUPTURE REST.	151-	21828	1
1	SWEC	I CRUP I/C DIV.	151-	219-219-10-	2431
1	SWEC	FIRE PROT. POWER	1 1	221-221-21-	
1	JWEL	FIFE LINE CRACKS	151-	***	RFT(6-1 & 6-15)
)	TES	PHASE II KEPOKI	ISI-	S	
	TES	REL. TO FUEL	11	5224234	
2	SWEC	ADD VERIFICATION			2491
3	SWEC	I VERIF. OF DCF	1 1		226-1
. 1	RLCA	I VERIF. OF DCP	1 1		5227
4	TES	I RELATIVE TO LOW	1 1		
L	EGEND :-	****		or never 116	
	20	1-99 ISSUE OR REV	isio	ON OF TER SAMELE OR ADDITIONAL VERIFICATION	
				TO ADDITIONAL SAMPLE OR ADDITIONAL VERIFICATION TO INITIAL SAMPLE	TELEDYNE ENGINEERING SERVICES

STONE & WEBSTER ENGINEERING CORPORATION



245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRESS ALL CORRESPONDENCE TO P.O. BOX 2325, BOSTON, MASS. 02107

W. U. TELEX: 94-0001 94-0977

BOSTON NEW YORK CHERRY HILL, N.J. DENVER CHICAGO HOUSTON PORTLAND OREGON WASHINGTON, D.C.

DESIGN REPORTS EXAMINATIONS CONSULTING ENGINEERING

DCS-275Q

Mr. G. A. Maneatis, Executive Vice President Facilities Development Pacific Gas and Electric Company 77 Beale Street San Francisco, CA 94106

February 11, 1983 J.O. No. 14296.10

Mr. H. R. Denton, Director Office of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Mr. R.H. Engelken, Regional Administrator Region V U.S. Nuclear Regulatory Commission 1450 Maria Lane, Suite 210 Walnut Creek, CA 94956

Dr. W. E. Cooper Teledyne Engineering Services 130 Second Avenue Waltham, MA 02254

Docket No. 50-275 Diablo Canyon Unit 1 License No. DPR-76

SWEC FEBRUARY SEMIMONTHLY REPORT

Gentlemen:

SWEC has issued no Open Item Reports related to the Construction Quality Assurance Evaluation since the January Semimonthly Report.

Very truly yours,

F. Sestak, Jr.

Project Manager, Diablo Canyon Nuclear Power Plant

Enclosure

cc: H. Schierling (2)

Frank Sestallig.

R.R. Fray

R.F. Reedy

E.T. Denison

H.H. Brown

D.F. Fleischaker

J.R. Reynolds

B. Norton

A.C. Gehr

ROBERT L. CLOUD ASSOCIATES, INC.
125 UNIVERSITY AVENUE
BERKELEY, CALIFORNIA 94710
(415) 841.9298

P105-4 February 11, 1983

Mr. G.A. Maneatis, Executive Vice President Facilities and Electric Resources Development Pacific Gas and Electric Company 77 Beale Street
San Francisco, California 94106

VMr. H.R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. R.H. Engelken, Regional Administrator Region V U.S. Nuclear Regulatory Commission 1450 Maria Lane, Suite 210 Walnut Creek, California 94596

Docket No. 50-275 Diablo Canyon Unit 1 License No. DPR-76

Gentlemen:

Enclosed please find Open Item Reports 1113 and 6002 Revision O, issued by Robert L. Cloud and Associates during the prior reporting period.

As required by DCNPP-IDVP-PP-005, Revision 2, individuals assigned by this organization to the IDVP have completed an acceptable statement regarding potential or apparent conflicts of interest.

Yours truly,

Edward Denison

Enclosure

cc: R. Fray

R. Reedy

F. Sestak W. Cooper

H. Schierling

M. Strumwasser

J. Reynolds

D. Fleischaker

B. Norton A. Gehr

Dupe 8302180488

	i sile Per	vision No. 0
1 -	Sate reported to PG&E and TES February 1, 1983	15 1011 1.0.
,	Scheduled forRLCA (Originator) Semimonth	ly Poppet the Fohrusey
3.	Responsive to PG&E Technical Program: Task	(if applicable)
4.	Prepared as a result of:	
	a.	
	b. D Field Inspection Deficiency	
	c. X Independent Calculation Deficiency	
	d. □ Seismic Input Deficiency	
	e. Design Methodology Deficiency	
	f. □ Other Deficiency	
5.	Structure(s), system(s) or component(s) involved:	

Component Cooling Water Pump

6. Description of Concern:

Results of design and independent verification analysis differ by more than 15%.

7. Significance of Concern:

All stresses below allowable.

8. Recommendation:

Closed item.

Educard Donin 21/83 Marian Marian

. 0	Pata reported to BCCC and TES						
2.	Date reported to PG&E and TES 2/4/83 Scheduled for RICA (Originator) Semimonthly Responsive to PG&E Technical Program: Task Prepared as a result of:	Report No. February 19 (if applicable)	63				
	a. QA Audit and Review Report of b. Field Inspection Deficiency c. Independent Calculation Deficiency d. Seismic Input Deficiency						
5.	e. □ Design Methodology Deficiency f. ☑ Other Deficiency Structure(s), system(s) or component(s) involved:						

IDVP Phase II Initial Sample: Rupture Restraints

6. Description of Concern:

Diablo Canyon letter DCVP-TES-748 describes a program for reanalysis of rupture restraints on a representative sampling basis to assure conformance with the licensing criteria.

7. Significance of Concern:

This DCP program provides for reanalysis of a sample of rupture restraints larger than the initial sample planned by the IDVP.

8. Recommendation:

This item combines with EOI 1098 as an Error Class A or B. The IDVP will prepare a program similiar to ITR # 8 Rev. 0 "Verification of DCP Corrective Action" for verification of Phase II rupture restraints through review of the DCP current activities.