



Lawrence Livermore National Laboratory

June 13, 1984
WOW: 84-22

Mr. Phillip J. Morrill, Project Manager
U. S. Nuclear Regulatory Agency, Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

REGION V 105

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PROGRESS REPORT, MAY 1984
TECHNICAL ASSISTANCE FOR INSPECTION OF DIABLO CANYON DESIGN VERIFICATION
PROGRAM, FIN B8552 (UNIT 1) AND FIN A0753 (UNIT 2).

1. Project Description

As a consequence of an Independent Design Verification Program, many modifications and additions to the piping and electrical raceway support systems and building structural steel are being implemented at the Diablo Canyon Nuclear Power Plant. The LLNL is assisting the NRC Region V office in assessing the adequacy of this work.

2. Progress - May 1984

Inspections continued in Unit 2 at a reduced level of effort covering 57 Class I piping supports and 22 electrical raceway supports. (Details are provided in Attachment 1.) Minor variations were found on 16 items that will require follow-up.

The items selected for inspection during this report period are within guidelines provided by the staff in a letter from P. Morrill to W. Wade dated 5/11/84. The letter also states that the Unit 1 inspection work under this program is considered complete and that all remaining resources, including the funds in FIN B8552, are to be applied to the inspection of Unit 2. A summary of the number of all items inspected as of May 14, 1984 is shown on Attachment 4.

3. Funding

The detailed report of expenditures for this period is provided in Attachments 2 & 3.

4. Personnel, Subcontracts, and Consultants

Mark Eli provided temporary assistance to a similar Region V inspection program at San Onofre Nuclear Generating Station during the weeks of 4/30 - 5/4 and 5/21 - 5/25 and firm commitments to other work by backup personnel reduced the level-of-effort during the report period.

8410020026 840910
PDR ADOCK 05000275
G PDR

5. Meetings/Travel

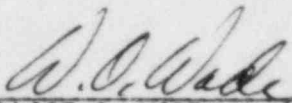
None

6. Concerns

None

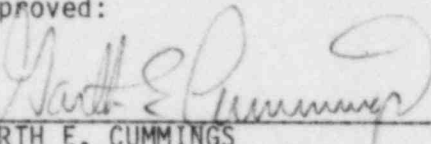
7. Plans

Inspections are to continue in Unit 2.



WALLACE O. WADE
PROJECT MANAGER
EG&G MECHANICAL ENGINEERING DEPARTMENT

Approved:



GARTH E. CUMMINGS
DEPUTY PROGRAM LEADER
NUCLEAR SYSTEM SAFETY PROGRAM

WOW:cog

Attachment

Distribution:

LLNL

G. Cummings, L-91
J. Johnson, L-91 *mi/om*
R. Langland, L-90
M. Eli, L-390
C. Meier, L-90 *OK*
J. Selan, L-777
R. White, L-777

NRC

R. Gilbert
D. Kirsch
H. Canter
T. Bishop
E. Frigillana

EG&G/SRO

A. Debeling
R. Pong
C. Morton

ATTACHMENT 1

LOG NUM	LOC	UNIT	ITEM	PART NUMBER	START DATE	COMPLETE DATE	CRIT	CONTACTS	AFF	STATUS	STATUS DATE	MAN INSP HRS
E1087	TURBINE BLDG	2	RACEWAY SUPPORT	S-60B-A-104-2-14	5/21/84	5/24/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/23/84	JCS 4.0 CHM
E1088	AUX BLDG	2	RACEWAY SUPPORT	S-88-11-GA-85-1-317	5/21/84	5/24/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/24/84	CHM 2.0
E1089	PENETRAT BLDG	2	RACEWAY SUPPORT	S-239-F2-85-1-300	5/21/84		QCP E9	MORRISON	BE	MVR	5/24/84	CHM 3.0
E1090	TURBINE BLDG	2	RACEWAY SUPPORT	S-235-18-A-85-15-128	5/21/84	5/24/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/24/84	CHM 2.0
E1091	AUX BLDG	2	RACEWAY SUPPORT	S-244-416-100-2-283	5/21/84	5/24/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/24/84	CHM 2.0
E1092	AUX BLDG	2	RACEWAY SUPPORT	S-244-36GE-100-2-313	5/21/84	5/24/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/24/84	CHM 2.0
E1093	CONTAINMENT	2	RACEWAY SUPPORT	S-18-1-F-117-2-83	5/29/84	5/30/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/30/84	CHM 2.0
E1094	AUX BLDG	2	RACEWAY SUPPORT	S-401B-GA-115-3-122	5/21/84		QCP E9	MORRISON	BE	NCR	5/31/84	CHM 5.0
E1095	TURBINE BLDG	2	RACEWAY SUPPORT	S-1022-C-119-1-2	5/21/84		QCP E9	MORRISON	BE	IR	5/21/84	CHM 5.0
E1096	AUX BLDG	2	RACEWAY SUPPORT	S-48-L-GA-100-3-14	5/21/84		QCP E9	MORRISON	BE	MVR	5/23/84	JCS 4.0 CHM
E1097	AUX BLDG	2	RACEWAY SUPPORT	S-83-2-GE-100-1-69	5/21/84	5/23/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/23/84	JCS 4.0 CHM
E1098	AUX BLDG	2	RACEWAY SUPPORT	S-87-27-H-100-4-91	5/21/84	5/24/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/24/84	CHM 2.0
E1099	AUX BLDG	2	RACEWAY SUPPORT	S-202-32-GE-100-1-19	5/29/84		QCP E9	MORRISON	BE	RECORDS	5/31/84	CHM 3.0
E1100	AUX BLDG	2	RACEWAY SUPPORT	S-87-12-CS-117-4-404	5/29/84	5/31/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/31/84	CHM 2.0
E1101	AUX BLDG	2	RACEWAY SUPPORT	S-244-13-GA-100-3-88	5/30/84	5/31/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/21/84	CHM 2.0
E1102	CONTAINMENT	2	RACEWAY SUPPORT	S-197C-G-91-8-25	5/30/84	5/31/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/31/84	CHM 2.0
E1103	CONTAINMENT	2	RACEWAY SUPPORT	S-21C-G-140-4-22	5/30/84	5/31/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/31/84	CHM 2.0
E1104	TURBINE BLDG	2	RACEWAY SUPPORT	S-176A-A-104-5-15	5/30/84		QCP E9	MORRISON	BE	MVR	5/31/84	CHM 4.0
E1105	CONTAINMENT	2	RACEWAY SUPPORT	S-217-3-G-91-1-15	5/30/84		QCP E9	MORRISON	BE	MVR	5/31/84	CHM 4.0
E1106	AUX BLDG	2	RACEWAY SUPPORT	S-19A-GA-100-5-57	5/30/84	5/31/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/31/84	CHM 2.0
E1107	TURBINE BLDG	2	RACEWAY SUPPORT	S-20-A-85-15-140	5/30/84	5/31/84	QCP E9	MORRISON	BE	ACC-W/O-QA	5/31/84	CHM 2.0
E1108	CONTAINMENT	2	RACEWAY SUPPORT	S-221-F-9-3-14	5/30/84		QCP E9	MORRISON	BE	MVR	5/31/84	CHM 3.0
E1109	AUX BLDG	2	RACEWAY SUPPORT	S-202-18-K-100-6-104	5/30/84		QCP E9	MORRISON	BE	RECORDS	5/31/84	CHM 2.0
M1062	CONTAINMENT	2	PIPE HANGER	S-50	5/10/84	5/31/84	ESD 223	KULIKOWSKI	BE	WELD	4/12/84	JCS 1.5

							THOMAS	BE		CHM	1.5
							BENTACUR	BE	DR 4730	5/31/84	
									ACCEPTED	5/31/84	
M1095 AUX BLDG	2 PIPE HANGER	2042-3V	5/01/84	5/01/84	ESD 223	WERTS	BE	ACCEPTED	5/01/84	JCS	2.0
						BERNASCONI	PG				
M1096 AUX BLDG	2 PIPE HANGER	2042-4V	5/01/84	5/01/84	ESD 223	WERTS	BE	ACCEPTED	5/01/84	JCS	2.0
						BERNASCONI	PG				
M1097 CONTAINMENT	2 PIPE HANGER	414-340R	5/01/84	5/01/84	ESD 223	WERTS	BE	ACCEPTED	5/01/84	JCS	2.0
						BERNASCONI	PG				
M1098 CONTAINMENT	2 PIPE HANGER	8-51R	5/01/84	5/01/84	ESD 223	WERTS	BE	ACCEPTED	5/01/84	JCS	2.0
						BERNASCONI	PG				
M1099 CONTAINMENT	2 PIPE HANGER	413-169SL	5/01/84	5/01/84	ESD 223	WERTS	BE	ACCEPTED	5/01/84	JCS	1.0
						BERNASCONI	PG				
M1100 CONTAINMENT	2 PIPE HANGER	71-43SL	5/02/84	5/02/84	ESD 225	WERTS	BE	ACCEPTED	5/02/84	JCS	1.0
						BERNASCONI	PG				
M1101 CONTAINMENT	2 PIPE HANGER	6-120R	5/02/84	5/02/84	ESD 223	WERTS	BE	ACCEPTED	5/02/84	JCS	2.0
						BERNASCONI	PG				
M1102 CONTAINMENT	2 PIPE HANGER	9-246SL	5/02/84	5/02/84	ESD 223	WERTS	BE	ACCEPTED	5/02/84	JCS	1.0
						BERNASCONI	PG				
M1103 CONTAINMENT	2 PIPE HANGER	78-245SL	5/02/84		ESD 223	WERTS	BE	MVR 4712	5/02/84	JCS	3.0
						BERNASCONI	PG				
M1104 CONTAINMENT	2 PIPE HANGER	90-47R	5/02/84	5/02/84	ESD 223	WERTS	BE	ACCEPTED	5/02/84	JCS	2.0
						BERNASCONI	PG				
M1105 CONTAINMENT	2 PIPE HANGER	414-56R	5/02/84	5/02/84	ESD 223	WERTS	BE	ACCEPTED	5/02/84	JCS	2.0
						BERNASCONI	PG				
M1106 CONTAINMENT	2 PIPE HANGER	7-2v	5/02/84	5/02/84	ESD 223	WERTS	BE	ACCEPTED	5/02/84	JCS	3.0
						BERNASCONI	PG				
M1107 CONTAINMENT	2 PIPE HANGER	8-46R	5/03/84		ESD 223	WERTS	BE	MVR 4711	5/03/84	JCS	3.0
						BERNASCONI	PG				
M1108 CONTAINMENT	2 PIPE HANGER	412-85V	5/03/84	5/03/84	ESD 223	WERTS	BE	ACCEPTED	5/03/84	JCS	1.0
						BERNASCONI	BE				
M1109 CONTAINMENT	2 PIPE HANGER	412-25SL	5/03/84	5/03/84	ESD 223	WERTS	BE	ACCEPTED	5/03/84	JCS	1.0
						BERNASCONI	PG				
M1110 CONTAINMENT	2 PIPE HANGER	412-66R	5/03/84	5/03/84	ESD 223	WERTS	BE	ACCEPTED	5/03/84	JCS	2.0
						BERNASCONI	PG				
M1111 CONTAINMENT	2 PIPE HANGER	412-78R	5/03/84	5/03/84	ESD 223	WERTS	BE	ACCEPTED	5/03/84	JCS	2.0
						BERNASCONI	PG				
M1119 AUX BLDG	2 PIPE HANGER	949-212R	5/15/84	5/15/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/15/84	RLW	3.0
M1120 CONTAINMENT	2 PIPE HANGER	413-529R	5/15/84	5/15/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/15/84	RLW	.5
M1121 CONTAINMENT	2 PIPE HANGER	413-530R	5/15/84	5/15/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/15/84	RLW	.5
M1122 CONTAINMENT	2 PIPE HANGER	5-2R	5/15/84		ESD 223	BERNASCONI	BE	MVR	5/15/84	RLW	2.0
								4720	5/15/84		
M1123 CONTAINMENT	2 PIPE HANGER	8-12V	5/15/84	5/15/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/15/84	RLW	.5
M1124 CONTAINMENT	2 PIPE HANGER	9-36	5/15/84	5/15/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/15/84	RLW	2.5
M1125 CONTAINMENT	2 PIPE HANGER	414-237SL	5/16/84	5/16/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/16/84	RLW	1.5
M1126 AUX BLDG	2 PIPE HANGER	46-14R	5/16/84	5/16/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/16/84	RLW	2.5
M1127 AUX BLDG	2 PIPE HANGER	47-97R	5/16/84		ESD 223	BERNASCONI	BE	MVR	5/16/84	RLW	3.0
								4720	5/16/84		
M1128 AUX BLDG	2 PIPE HANGER	47-48R	5/17/84	5/17/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/17/84	RLW	1.0
M1129 AUX BLDG	2 PIPE HANGER	413-511R	5/17/84	5/17/84	ESD 223	BERNASCONI	BE	ACCEPTED	5/17/84	RLW	1.0
M1130 AUX BLDG	2 PIPE HANGER	46-20R	5/17/84		ESD 223	BERNASCONI	BE	MVR	5/17/84	RLW	2.0
								4720	5/17/84		
M1131 CONTAINMENT	2 PIPE HANGER	73-14SL	5/21/84	5/21/84	ESD 223	KULIKOWSKI	BE	ACCEPTED	5/21/84	JCS	2.0
						BERNASCONI	BE				
M1132 CONTAINMENT	2 PIPE HANGER	72-40SL	5/22/84	5/22/84	ESD 223	KULIKOWSKI	BE	ACCEPTED	5/22/84	JCS	1.0
						WLD R QA	BERNASCONI	BE			
M1133 CONTAINMENT	2 PIPE HANGER	7-97V	5/22/84		ESD 223	KULIKOWSKI	BE	MVR	5/24/84	JCS	2.0
						BERNASCONI	BE	4724	5/24/84		
M1134 AUX BLDG	2 PIPE HANGER	47-137R	5/22/84	5/22/84	ESD 223	KULIKOWSKI	BE	ACCEPTED	5/22/84	JCS	1.0
						BERNASCONI	BE				

M1135 AUX BLDG	2 PIPE HANGER	42-3R	5/22/84	5/22/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/22/84	JCS	2.0
						BERNASCONI BE				
M1136 AUX BLDG	2 PIPE HANGER	414-207R	5/23/84		ESD 223	KULIKOWSKI BE	MVR	5/24/84	JCS	3.0
						BERNASCONI BE	4725	5/24/84		
M1137 AUX BLDG	2 PIPE HANGER	413-576A	5/23/84	5/23/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/23/84	JCS	1.0
						BERNASCONI BE				
M1138 AUX BLDG	2 PIPE HANGER	413-307R	5/23/84	5/23/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/23/84	JCS	2.0
						BERNASCONI BE				
M1139 CONTAINMENT	2 PIPE HANGER	989-26V	5/23/84	5/23/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/23/84	JCS	1.0
						BERNASCONI BE				
M1140 CONTAINMENT	2 PIPE HANGER	72-10SL	5/23/84	5/23/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/23/84	JCS	2.0
						BERNASCONI BE				
M1141 CONTAINMENT	2 PIPE HANGER	70-28SL	5/23/84		ESD 223	KULIKOWSKI BE	MVR	5/24/84	JCS	2.0
						BERNASCONI BE	4724	5/24/84		
M1142 AUX BLDG	2 PIPE HANGER	48-58R	5/24/84	5/24/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/24/84	JCS	2.0
						BERNASCONI BE				
M1143 AUX BLDG	2 PIPE HANGER	47-126A	5/24/84	5/24/84	ESD 223	KULIKOWSKI BE	ACCEPTED	5/24/84	JCS	1.0
						BERNASCONI BE				
M1144 AUX BLDG	2 PIPE HANGER	948-36S	5/24/84		ESD 223	KULIKOWSKI BE	MVR	5/24/84	JCS	3.0
						BERNASCONI BE	4724	5/24/84		
M1145 AUX BLDG	2 PIPE HANGER	414-231A	5/24/84		ESD 223	KULIKOWSKI BE	RECORDS	5/24/84	JCS	2.0
						BERNASCONI BE				
M1146 AUX BLDG	2 PIPE HANGER	47-148R	5/30/84	5/30/84	ESD 223	THOMAS BE	ACCEPTED	5/30/84	AGD	3.0
						BERNASCONI BE				
M1147 ANNULUS	2 PIPE HANGER	70-12SL	5/30/84	5/30/84	ESD 223	THOMAS BE	ACC-W/O-QA	5/30/84	AGD	3.0
						BERNASCONI BE				
M1148 ANNULUS	2 PIPE HANGER	71-10SL	5/30/84	5/30/84	ESD 223	THOMAS BE	ACCEPTED	5/30/84	AGD	3.0
						BERNASCONI BE				
M1149 ANNULUS	2 PIPE HANGER	70-22SL	5/30/84	5/30/84	ESD 223	THOMAS BE	ACCEPTED	5/30/84	AGD	3.0
						BERNASCONI BE				
M1150 ANNULUS	2 PIPE HANGER	6-24R	5/30/84	5/30/84	ESD 223	THOMAS BE	ACCEPTED	5/30/84	AGD	3.0
						BERNASCONI BE				
M1151 ANNULUS	2 PIPE HANGER	2-41R	5/30/84	5/30/84	ESD 223	THOMAS BE	ACCEPTED	5/30/84	AGD	3.0
						BERNASCONI BE				
M1152 AUX BLDG	2 PIPE HANGER	949-194A	5/31/84	5/31/84	ESD 223	THOMAS BE	ACC-W/O-QA	5/31/84	AGD	4.0
						BERNASCONI BE				

ATTACHMENT 2

UNIT #1 PROJECT FINANCIAL STATUS (THROUGH 31 MAY 1984)*

A. STATUS (Dollars in thousands)

<u>Total Projected Project Cost</u>	<u>Funds Obligated To Date</u>	<u>Balance of Funds Due FY 1983</u>
<u>\$345.0K</u>	<u>\$345.0K</u>	<u>-0-</u>

B. ANALYSIS

	<u>Period</u>	<u>Cumulative</u>
Direct Laboratory Staff Effort (FTE)	<u>0</u>	<u>1.2</u>
Direct Salaries	<u>\$ 0</u>	<u>\$ 36.0</u>
Material and Services (Excluding ADP)	<u>\$ 0</u>	<u>\$ 0</u>
ADP Support	<u>\$ 0</u>	<u>\$ 0</u>
Subcontracts (EG&G, Inc.)	<u>\$ 0.4</u>	<u>\$ 95.0</u>
Travel Expenses	<u>\$ 0</u>	<u>\$ 17.5</u>
Indirect Labor Costs	<u>\$ 0</u>	<u>\$ 34.8</u>
Other (TID)	<u>\$ 0</u>	<u>\$ 0.2</u>
General and Administrative	<u>\$ 1.1</u>	<u>\$ 28.6</u>
 TOTAL	 <u>\$ 1.5</u>	 <u>\$212.1</u>
 Liens		 <u>\$ 0</u>
 Total Including Liens		 <u>\$212.1</u>
 (Percent of Available Funding)		 <u>61%</u>

*NOTE: Figures may differ slightly from final billing.

ATTACHMENT 3

UNIT #2 PROJECT FINANCIAL STATUS (THROUGH 31 MAY 1984)*

A. STATUS (Dollars in thousands)

<u>Total Projected Project Cost</u>	<u>Funds Obligated To Date</u>	<u>Balance of Funds Due FY 1983</u>
<u>\$125.0K</u>	<u>\$125.0K</u>	<u>-0-</u>

B. ANALYSIS

	<u>Period</u>	<u>Cumulative</u>
Direct Laboratory Staff Effort (FTE)	<u>1.0</u>	<u>5.9</u>
Direct Salaries	<u>\$ 4.4</u>	<u>\$ 24.7</u>
Material and Services (Excluding ADP)	<u>\$ 0</u>	<u>\$ 0</u>
ADP Support	<u>\$ 0</u>	<u>\$ 0</u>
Subcontracts (EG&G, Inc.)	<u>\$ 10.4</u>	<u>\$ 31.8</u>
Travel Expenses	<u>\$ 2.9</u>	<u>\$ 8.9</u>
Indirect Labor Costs	<u>\$ 6.2</u>	<u>\$ 27.9</u>
Other (TID)	<u>\$ 0</u>	<u>\$ 0</u>
General and Administrative	<u>\$ 4.3</u>	<u>\$ 8.2</u>
 TOTAL	 <u>\$ 28.2</u>	 <u>\$ 101.5</u>
 Liens		 <u>\$ 0</u>
 Total Including Liens		 <u>\$ 101.5</u>
 (Percent of Available Funding)		 <u>81%</u>

*NOTE: Figures may differ slightly from final billing.

ATTACHMENT 4

DIABLO CANYON INSPECTION SUMMARY
(Data through May 14, 1984)

ITEM	LOCATION	NUMBER	UNIT 1	NUMBER	UNIT 2
			SUB-TOTAL		SUB-TOTAL
<u>MECHANICAL</u>					
HVAC Supports	(Not Recorder)	7		1	
	Auxiliary Bldg.	4		1	
	Turbine Bldg.	4		-	
			<u>15</u>		<u>2</u>
Pipe Hangers	(Not Recorded)	209		-	
	Auxiliary Bldg.	58		19	
	Containment Bldg.	13		42	
	Fuel Handling Bldg.	3		-	
	Penetration Bldg.	2		2	
	Turbine Bldg.	11		-	
	Ventilation Bldg.	-		1	
		<u>296</u>		<u>64</u>	
Spray Hangers	Containment Bldg.	-		56	
			<u>0</u>		<u>56</u>
Rupture Restraints	(Not Recorded)	6		-	
	Containment Bldg.	8		-	
	Penetration Bldg.	3		-	
	Turbine Bldg.	1		-	
			<u>18</u>		<u>0</u>
<u>ELECTRICAL</u>					
Raceway Supports	Auxiliary Bldg.	108		-	
	Containment Bldg.	25		-	
	Intake Bldg.	1		-	
	Penetration Bldg.	3		-	
	Turbine Bldg.	27		-	
	Ventilation Bldg.	2		-	
			<u>166</u>		<u>0</u>
<u>STRUCTURAL</u>					
Containment Annulus		14		69	
Containment Platforms		9		5	
Containment Polar Crane		1		1	
Fuel Handling Bldg.		24		-	
Turbine Bldg. - Switch Gear		12		-	
Turbine Bldg.		3		3	
			<u>63</u>		<u>78</u>