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 FACIL: 50-275 Diablo Canyon Nuclear Power Plant, Unit 1, Pacific Ga 05000275
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 EISENHUT, D.G. Division of Licensing

SUBJECT: Forwards info re Generic Ltr 83-28, "Required Actions Based on Generic Implications of ATWS Events," Action Item 1.2, "Post-Trip Review - Data & Info Capability," per 831107 submittal.

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J. O. SCHUYLER
VICE PRESIDENT
NUCLEAR POWER GENERATION

June 27, 1984

PGandE Letter No.: DCL-84-242

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-275, OL-DPR-76
Docket No. 50-323
Diablo Canyon Units 1 and 2
Generic Letter No. 83-28, Action Item 1.2
Post-Trip Review - Data and Information Capability

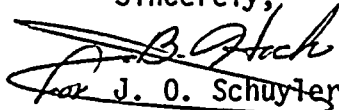
Dear Mr. Eisenhut:

On November 7, 1983, PGandE submitted to the NRC a description of actions planned for Diablo Canyon Units 1 and 2 to comply with Generic Letter 83-28, "Required Actions Based on Generic Implications of ATWS Events." One of the actions was to provide a description of the plant's ability to access, display, and record the data required for post-trip reviews, as requested in Item 1.2, POST-TRIP REVIEW - DATA AND INFORMATION CAPABILITY, of the Generic Letter.

The enclosure provides the information requested and follows the Item 1.2 format.

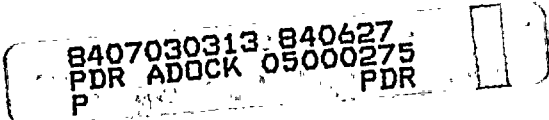
Kindly acknowledge receipt of this material on the enclosed copy of this letter and return it in the enclosed addressed envelope.

Sincerely,


J. O. Schuyler

Enclosure

cc: J. B. Martin
Service List



ENCLOSURE

RESPONSE TO ACTION ITEM 1.2 OF GENERIC LETTER 83-28,
"POST-TRIP REVIEW - DATA AND INFORMATION CAPABILITY"

"1. Capability for assessing sequence of events (on-off indications)"

- "1. Brief description of equipment (e.g., plant computer, dedicated computer, strip chart)"

PGandE Response

The Main Annunciator and the P-250 Plant Computer provide hard copy listings of the sequence of events. Both systems receive this information from the Solid State Protection System (SSPS).

- "2. Parameters monitored"

PGandE Response

The Main Annunciator monitors over 1,300 digital plant parameters and records the actuation of all of them for later review. They are listed in PGandE Drawing No. 101876, "Main Annunciator Input List" (233 pages) which is available for review at PGandE. Attachment 1 lists those digital inputs to the P-250 plant computer which will start a sequence of events printout, and which are also shown on the sequence of events output. Attachment 2 lists the digital input signals monitored by the Emergency Response Facility Data System (ERFDS).

- "3. Time discrimination between events"

PGandE Response

The time discrimination between events for the Main Annunciator is effectively 2.3 milliseconds. This figure accounts for multiple events occurring at approximately the same time. The time discrimination for the sequence of events inputs to the P-250 is 1/60 second. The ERFDS time discrimination is 1 second.

"4. Format for displaying data and information"

PGandE Response

Attachment 3, "Main Annunciator Sample Output", shows the format for displaying the data on the Main Annunciator. Attachment 4, "P-250 Sequence of Events Sample Output," shows the format for displaying the data output from the P-250.

"5. Capability for retention of data and information"

PGandE Response

Both the Main Annunciator and the P-250 provide hardcopy output. Administrative Procedure A-100 S1 specifies that all recorded events on the Main Annunciator typewriter and the Sequence of Events printout from the P-250 be examined after a reactor trip, and the applicable events recorded on the Reactor Trip Review Sheet (or attached to it). The procedure further specifies that the Reactor Trip Review Sheet be microfilmed and indexed in PGandE's Records Management System where they are retained for the life of the plant.

"6. Power source(s) (e.g., Class 1E, non-Class 1E, non-interruptible)"

PGandE Response

The power source for the Main Annunciator is Vital Bus "H" with backup 125V DC battery supply from Vital Bus "F". The power source for the P-250 is Vital Bus "F" with backup 125V DC battery supply from Vital Bus "H". Both vital busses and both battery banks are Class 1E. The power sources are classified "uninterruptible".

"2. Capability for assessing the time history of analog variables needed to determine the cause of unscheduled reactor shutdowns, and the functioning of safety-related equipment."

"7. Brief description of equipment (e.g., plant computer, dedicated computer, strip charts)"

PGandE Response

The time histories of analog variables are provided both by the P-250 Plant Computer and by the Recall Display portion of the ERFDS. The ERFDS is a computer based system for data acquisition, storage and display, that satisfies the requirements of NUREG-0737, Supplement 1.

- "2. Parameters monitored, sampling rate, and basis for selecting parameters and sampling rate"

PGandE Response

Attachment 5, "P-250 Post-Trip Review Analog and Calculated Values," lists the analog and calculated values collected for post-trip review by the P-250. The post-trip review program in the P-250 samples and records the values listed in the Attachment every 8 seconds. A second post-trip review program simultaneously samples and records the seven values marked with an asterisk in the Attachment every 2 seconds. The values and sampling rates chosen for these two programs were based on PGandE's engineering judgment, with the assistance of Westinghouse, the supplier of the nuclear steam supply system and the P-250 hardware and software.

Attachment 6, "ERFDS Analog Signals," lists the analog signals monitored by the ERFDS. This system also monitors the digital signals. Regulatory Guide 1.97, Rev. 3 provided the basis for selecting parameters. The sampling rate is approximately 1 sample per second.

- "3. Duration of time history (minutes before trip and minutes after trip)"

PGandE Response

The post-trip review program in the P-250 plant computer provides 2 minutes of data prior to the trip and 3 minutes of data after the trip.

The time history available from the ERFDS Recall Recorder (a magnetic-tape data logger) extends from 120 minutes before an event to 300 minutes after the event.

- "4. Format for displaying data including scale (readability) of time histories"

PGandE Response

Attachment 7, "P-250 Post-Trip Review Sample Output," shows the format for displaying the data collected by the P-250. The ERFDS data display including output formatting is defined by the user. The user can choose between a printed output and a graphics output. The finest time resolution is 1 second in the delog mode. In the graphics output, the engineering units on the vertical axis can be displayed with a range of as little as 1% of full scale in the delog mode.

- "5. Capability for retention of data, information, and physical evidence (both hardware and software)"

PGandE Response

The P-250 provides a paper printout of the transient data required for post-trip review. The ERFDS data is normally recorded on magnetic tape, but can also be simultaneously recorded on a line printer and on a treated-paper printer connected to the four channel monochrome video display. Administrative Procedure A-100 S1 specifies that transient data records be marked and retained for further analysis if deemed pertinent by the Shift Foreman, Shift Technical Advisor or Plant Engineer. Plots of plant parameters deemed pertinent to the transient are to be attached to the Reactor Trip Review Sheet, and the package is to be permanently stored in the Records Management System (a computer-indexed microfilm storage and retrieval system).

- "6. Power source(s) (e.g., Class 1E, non-Class 1E, non-interruptible)"

PGandE Response

The power source for the P-250 is Vital Bus "F" with backup 125 VDC battery supply from Vital Bus "H". The battery bank and both vital busses are Class 1E. The portions of the ERFDS that operate continuously (the data acquisition and data storage subsystems) are likewise powered from the Class 1E vital busses, with Class 1E 125V DC battery backup. These power sources are classified "uninterruptible".

The portions of the ERFDS that respond to user demands (displays and printers and their control processors) are powered by non-Class 1E sources, but they can be manually switched over to a vital bus if necessary.

- "3. Other data and information provided to assess the cause of unscheduled reactor shutdowns."

PGandE Response

All of the data and information needed to assess the cause of unscheduled reactor shutdowns are provided by the equipment and software described in the above paragraphs.

- "4. Schedule for any planned changes to existing data and information capability."

PGandE Response

The current hardware and software at Diablo Canyon complies with the requirements of GL 83-28; therefore, no changes are currently scheduled.

LIST OF ATTACHMENTS

1. P-250 Digital Inputs That Start a Sequence of Events Printout
2. ERFDS Digital Inputs
3. Main Annunciator Sample Output
4. P-250 Sequence of Events Sample Output
5. P-250 Post-Trip Review Analog and Calculated Values
6. ERFDS Analog Signals
7. P-250 Post-Trip Review Sample Output



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Attachment 1

P-250 DIGITAL INPUTS THAT START A SEQUENCE OF EVENTS PRINTOUT

<u>Sequence Number</u>	<u>Symbols</u>	<u>Description</u>
24	F0403D	RCL LO FLO & P-8 PROT TRIP
34	F0234D	RCL LO FLO & P-7 PROT TRIP
60	F0493D	STML HI FLO S.I. & PROT TRIP
67	F2800D	SPARE BISTABLE
73	L0406D	SG 1-1 LO-LO LVL PROT TRIP
79	L0426D	SG 1-2 LO-LO LVL PROT TRIP
85	L0466D	SG 1-3 LO-LO LVL PROT TRIP
91	L0466D	SG 1-4 LO-LO LVL PROT TRIP
95	L0483D	PZR HI LVL PROT TRIP
104	N0005D	PWR RNGE CH'S HI FLUX PROT TRIP
109	N0010D	PWR RNGE CH'S LO FLUX PROT TRIP
117	N0020D	INTMED RNGE CH-1 HI FLUX PROT
118	N0021D	INTMED RNGE CH-2 HI FLUX PROT
119	N0022D	INTMED RNGE HI FLUX BLOC TRAIN-A
121	N0024D	INTMED RNGE CH-1 HI FLUX PROT TRIP
122	N0025D	PWR RNGE CH-1 HI FLUX RATE ACT
123	N0026D	PWR RNGE CH-2 HI FLUX RATE ACT
124	N0027D	PWR RNGE CH-3 HI FLUX RATE ACT
125	N0028D	PWR RNGE CH-4 HI FLUX RATE ACT
126	N0029D	PWR RNGE CH'S HI FLUX RATE TRIP
127	N0030D	SOURCE RNGE CH-1 HI FLUX PROT
128	N0031D	SOURCE RNGE CH-2 HI FLUX PROT
133	N0036D	SOURCE RNGE HI FLUX PROT TRIP
200	P0407D	STML 1-1 HI DP TRIP & S.I. INIT
204	P0427D	STML 1-2 HI DP TRIP & S.I. INIT
208	P0447D	STML 1-3 HI DP TRIP & S.I. INIT
212	P0467D	STML 1-4 HI DP TRIP & S.I. INIT
216	P0483D	PZR HI PRESS PROT TRIP
221	P0488D	PZR LO PRESS PROT TRIP
234	P1003D	CONMT HI PRESS TRIP & S.I. INIT
245	T0498D	RCL OT-DT PROT TRIP
246	T0499D	RCL OP-DT PROT TRIP
253	V0324D	RCP BUS UV & P-7 PROT TRIP
257	Y0004D	REACT MANUAL TRIP SW-1
258	Y0005D	REACT MANUAL TRIP SW-2
259	Y0006D	REACT MAIN TRIP BKR-A
260	Y0007D	REACT MAIN TRIP BKR-B
262	Y0026D	REACT AUX TRIP BKR-A
263	Y0027D	REACT AUX TRIP BKR-B
339	Y0324D	RCP BUS UF & P-7 PROT TRIP
343	Y0390D	TURB TRIP & P-7 PROT TRIP
348	Y0400D	RCP 1-1 BKR OPEN PROT ACT

<u>Sequence Number</u>	<u>Symbols</u>	<u>Description</u>
349	Y0401D	SG 1-1 LO LVL & FWF PROT TRIP
352	Y0420D	RCP 1-2 BKR OPEN PROT ACT
353	Y0421D	SG 1-2 LO LVL & FWF PROT TRIP
354	Y0440D	RCP 1-3 BKR OPEN PROT ACT
355	Y0441D	SG 1-3 LO LVL & FWF PROT TRIP
356	Y0460D	RCP 1-4 BKR OPEN PROT ACT
357	Y0461D	SG 1-4 LO LVL & FWF PROT TRIP
358	Y0480D	PRESUZER LO P SI CAUSE RE
368	Y0707D	SPARE BISTABLE
433	Y0920D	SIS MANUAL SW-1 PROT & SI TRIP
434	Y0921D	SIS MANUAL SW-2 PROT & SI TRIP
470	Y2018D	TURB GEN L.O. CLR TEMP CONT
483	Y2200D	SPARE DIGITAL
484	Y2201D	SPARE DIGITAL
509	Y2809D	GEN H2 CLRS TEMP CONT

Attachment 2

ERFDS DIGITAL INPUTS

PT.NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
345	*CRDM*POS*	*DRPI*****	DRPI
355	SG1*FW*ISO	**FCV438**	POS 214
371	SG2*FW*ISO	**FCV439**	POS 216
396	SG3*FW*ISO	**FCV440**	POS 218
352	SG4*FW*ISO	**FCV441	POS 220
377	*SG1*MSIV*	**FCV41***	POS 376
376	*SG2*MSIV*	**FCV42***	POS 378
401	*SG3*MSIV*	**FCV43***	POS 380
400	*SG4*MSIV*	**FCV44***	POS 382
407	*SG4*MSIV*	*BP**FCV22	POS 183
383	*SG3*MSIV*	*BP**FCV23	POS 185
382	*SG2*MSIV*	*BP**FCV24	POS 187
363	*SG1*MSIV*	*BP**FCV25	POS 189
379	*SG1*BLDN*	ISO*FCV760	POS 354
362	*SG1*BLDN*	ISO*FCV151	POS 336
259	*SG1*BLDN*	ISO*FCV250	POS 356
378	*SG2*BLDN*	ISO*FCV761	POS 200
258	*SG2*BLDN*	ISO*FCV154	POS 334
257	*SG2*BLDN*	ISO*FCV248	POS 352
403	*SG3*BLDN*	ISO*FCV762	POS 196
406	*SG3*BLDN*	ISO*FCV157	POS 332
381	*SG3*BLDN*	ISO*FCV246	POS 348
402	*SG4*BLDN*	ISO*FCV763	POS 192
405	*SG4*BLDN*	ISO*FCV160	POS 330
380	*SG4*BLDN*	ISO*FCV244	POS 344

PT.NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
441	*SG1*SPLY*	*FW*FCV510	POS 510
440	*SG2*SPLY*	*FW*FCV520	POS 520
447	*SG3*SPLY*	*FW*FCV530	POS 530
446	*SG4*SPLY*	*FW*FCV540	POS 540
375	*SG1*SPLY*	AFW*LCV106	POS 46
374	*SG2*SPLY*	AFW*LCV107	POS 47
373	*SG3*SPLY*	AFW*LCV108	POS 48
372	*SG4*SPLY*	AFW*LCV109	POS 49
390	*SG1*10***	DUMP	POS 33
389	*SG2*10***	DUMP	POS 39
388	*SG3*10***	DUMP	POS 44
395	*SG4*10***	DUMP	POS 80
294	*AFW*TURB*	STM**FCV37	FCV 37
260	*AFW*TURB*	STM**FCV38	FCV 38
251	**PRT*ISO*	**8034A***	POS 947
275	**PRT*ISO*	**8034B**	POS 804
274	**PRT*ISO*	**8045****	POS 950
273	**PRT*ISO*	**8029****	POS1021
280	**PORV****	**PCV455C*	POS 16
296	**PORV****	**PCV456**	POS 17
256	**PORV****	**PCV474**	POS 18
265	PORV*BLOCK	*VLV*8000A	8000A
284	PORV*BLOCK	*VLV*8000B	8000B
307	PORV*BLOCK	*VLV*8000C	8000C
415	PZR*DETCT*	SV**POT116	POT 116

PT.NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
414	PZR*DETCT*	SV*POT 117	POT 117
413	PZR*DETCT*	SV*POT 118	POT 118
250	**LETDOWN*	ISO**8149A	POS 237
272	**LETDOWN*	ISO**8152*	POS 246
249	**LETDOWN*	ISO**8149B	POS 240
248	**LETDOWN*	ISO**8149C	POS 243
291	*RCP*SEAL*	ISO**8112*	POS1129
271	*RCP*SEAL*	ISO**8100*	POS 250
298	*ACCUM*N2*	ISC **8880*	POS 877
299	ECCS*TEST*	ISO**8871*	POS 874
279	ECCS*TEST*	ISO**8961*	POS 890
278	ECCS*TEST*	ISO**8883*	POS 883
255	*PZR*SMPL*	ISO**9354A	POS 297
277	*PZR*SMPL*	ISO**9354B	POS1312
254	*PZR*SMPL*	ISO**9355A	POS 303
276	*PZR*SMPL*	ISO**9355B	POS1313
253	*RCS*SMPL*	ISO**9356A	POS1075
283	*RCS*SMPL*	ISO**9356B	POS1314
252	ACCUM*SMPL	*ISO*9357A	POS1087
282	ACCUM*SMPL	*ISO*9357B	POS1319
290	**RCP*CCW*	ISO*FCV749	POS 897
270	**RCP*CCW*	ISO*FCV363	POS 898
263	**RCP*CCW*	ISO*FCV750	POS1073
289	**RCP*CCW*	ISO*FCV357	POS 899
269	**RCP*CCW*	ISO*FCV356	POS 896

PT.NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
297	**EX*LTDN*	ISO*FCV361	POS 911
288	CCW*HDR*C*	ISO*FCV355	POS 895
281	*FIRE*HDR*	ISO*FCV633	POS1311
364	**INS*AIR*	ISO*FCV682	POS 686
404	**INS*AIR*	ISO*FCV584	POS1035
361	CNMT*ISO*	FCV655/657	POS 1106/ 1110
387	CNMT*ISO*	FCV654/656	POS 1104/ 1108
435	DRN*TK*N2*	ISO*FCV260	POS 1211
431	DRN*TK*ISO	**FCV255**	POS 1193
434	DRN*TK*ISO	**FCV256**	POS 1196
433	DRN*TK*ISO	**FCV257**	POS 1199
430	DRN*TK*ISO	**FCV258**	POS 1202
429	RC*DRN*PP*	ISO*FCV253	POS 1187
432	RC*DRN*PP*	ISO*FCV254	POS 1190
360	CNMT*PURG	**FCV660**	POS 1117
386	CNMT*PURG	**FCV661**	POS 1131
367	CNMT*PURG	**RCV11***	POS 1189
385	CNMT*PURG	**RCV12***	POS 1192
384	CNMT*ISO*	FCV663/664	POS 1124/ 1126
391	CNMT*ISO*	FCV679/681	POS 1176/ 1159
366	*VAC*PRES*	REL*FCV662	POS 1132
365	CNMT*VENT	**FCV678**	POS 1133
319	*ACC*TK*1*	VENT*8875A	POS 827
318	*ACC*TK*2*	VENT*8875B	POS 845
317	*ACC*TK*3*	VENT*8875C	POS 855

PT. NO.	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
316	*ACC*TK*4*	VENT*8875D	POS 865
423	RCP*1*BKR*	STATUS*A**	
422	RCP*2*BKR*	STATUS*A**	
421	RCP*3*BKR*	STATUS*A**	
420	RCP*4*BKR*	STATUS*A**	
427	RCP*1*BKR*	STATUS*B**	
426	RCP*2*BKR*	STATUS*B**	
425	RCP*3*BKR*	STATUS*B**	
424	RCP*4*BKR*	STATUS*B**	
323	PZR*HEATER	**1*****	
354	**SPARE**	*****	
353	**SPARE**	*****	
320	PZR*HEATER	**4*****	
351	PZR*SPRAY*	VLVPCV455A	PCV455A
350	PZR*SPRAY*	VLVPCV455B	PCV455B
303	**PZR*AUX*	SPRAY*8145	8145
394	**PZR*AUX*	SPRAY*8148	8148
445	**INV*Y1*	*UNDERVOLT	
444	**INV*Y2*	*UNDERVOLT	
451	**INV*Y3*	*UNDERVOLT	
450	**INV*Y4*	*UNDERVOLT	
449	**INV*Y11	*UNDERVOLT	
311	500KV*BKR*	*532*****	
310	500KV*BKR*	*542*****	
309	500KV*BKR*	*622*****	

PT. NO.	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
308	500KV*BKR*	*632*****	
315	500KV*BKR*	*642*****	
314	500KV*BKR*	*722*****	
313	500KV*BKR*	*732*****	
312	500KV*BKR*	*742*****	
327	**CONT*RM*	VENT*MD*1*	
326	**CONT*RM*	VENT*MD*2*	
325	**CONT*RM*	VENT*MD*3*	
324	**CONT*RM*	VENT*MD*4*	
358	**CONT*RM*	*DMPRS*3**	
398	**CONT*RM*	*DMPRS*3A*	
357	**CONT*RM*	*DMPRS*2**	
397	**CONT*RM*	*DMPRS*2A*	
399	**CONT*RM*	PR*FAN*S98	
359	**CONT*RM*	PR*FAN*S99	
331	*FHB*DMPR*	*M30*****	
330	*FHB*DMPR*	*M31*****	
329	**FHB*FAN*	*S1*****	
328	**FHB*FAN*	*S2*****	
335	**FHB*FAN*	*E4*****	
334	**FHB*FAN*	*E5*****	
333	**FHB*FAN*	*E6*****	
411	*AUX*BLDG*	*BLD*MD***	
410	*AUX*BLDG*	*B&SG*MD**	
409	*AUX*BLDG*	*SG*MD****	

PT. NO.	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
332	*AUX*BLDG*	FAN*S31/32	
339	*AUX*BLDG*	FAN*E1/2**	
338	*AUX*BLDG*	DP*M1A&B**	
337	*AUX*BLDG*	DP*M2A&2B*	
336	*AUX*BLDG*	DP*M4A/4B*	
343	*AUX*BLDG*	DP*M8A&B**	
342	*AUX*BLDG*	DP*M13A&B*	
341	*AUX*BLDG*	DP*M14A&B*	
340	*AUX*BLDG*	DP*M15A&B*	
347	*AUX*BLDG*	DP*M17A/B*	
346	*AUX*BLDG*	DP*M26A&B*	
438	CFCU1*EMER	*DP*ALGMT*	
262	CFCU1*FAN*	**1*****	
437	CFCU2*EMER	*DP*ALGMT*	
261	CFCU2*FAN*	**2*****	
436	CFCU3*EMER	*DP*ALGMT*	
268	CFCU3*FAN*	**3*****	
443	CFCU4*EMER	*DP*ALGMT*	
295	CFCU4*FAN*	**4*****	
442	CFCU5*EMER	*DP*ALGMT*	
285	CFCU5*FAN*	**5*****	
266	*RX*TRIP**	*SIG*TRN*A	
286	*RX*TRIP**	*SIG*TRN*B	
267	*SIS*TRAIN	*A*****	
287	*SIS*TRAIN	*B*****	

PT. NO.	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
419	CNMT*ISO*	*PHASE*A**	
418	CNMT*ISO*	*PHASE*B**	
393	CNMT*SPRA	*PP1*BKR**	
302	CNMT*SPRA	*PP2*BKR**	
428	**SUMP*PP*	ISO*FCV500	POS 1205
439	**SUMP*PP*	ISO*FCV501	POS 1208
306	**SPARE***	*****	
264	**SPARE***	*****	
305	**SPARE***	*****	
293	**SPARE***	*****	
292	**SPARE***	*****	
301	**SPARE***	*****	
300	**SPARE***	*****	
304	**SPARE***	*****	
322	**SPARE***	*****	
344	**SPARE***	*****	
349	**SPARE***	*****	
348	**SPARE***	*****	
356	**SPARE***	*****	
392	**SPARE***	*****	
321	**SPARE***	*****	
408	**SPARE***	*****	
417	**SPARE***	*****	
416	**SPARE***	*****	
448	**SPARE***	*****	

Attachment 3
MAIN ANNUNCIATOR SAMPLE OUTPUT

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N085458 387 1220 N P-250 COMPUTER UNDER FREQ OR UNDERVOLTAGE
A085517 753 0131 A OVER TEMP DELTA T 1/4
N085521 983 0131 N OVER TEMP DELTA T 1/4
A085525 436 0131 A OVER TEMP DELTA T 1/4
N085536 229 0131 N OVER TEMP DELTA T 1/4
T000291 000 0000 R = SEQUENTIAL OPERATIONS TEST = UNIT-2 =
'90000 011 0000 T = SEQUENTIAL OPERATIONS TEST = UNIT-2 =
J90721 736 0320 N LEON ORIFICE DOWNSTRM RV TEMP HI
A090802 292 0589 A FWP TURB 2-2 EMERG L.O. PP RUN
N090802 308 0586 N FWP TURB 2-2 EMERG DC SPLY AND CONT UV
A090805 399 0586 A FWP TURB 2-2 EMERG DC SPLY AND CONT UV
N090805 425 0586 N FWP TURB 2-2 EMERG DC SPLY AND CONT UV
A090805 451 0586 A FWP TURB 2-2 EMERG DC SPLY AND CONT UV
N090807 103 0589 N FWP TURB 2-2 EMERG L.O. PP RUN
A091908 410 0576 A FWP TURB 2-1 L.O. PP STBYST
A091909 645 0565 A FWP TURB 2-1 OIL FILTER DELTA P HI
N091909 990 0565 N FWP TURB 2-1 OIL FILTER DELTA P HI
N091910 086 0576 N FWP TURB 2-1 L.O. PP STBYST
A091910 112 0565 A FWP TURB 2-1 OIL FILTER DELTA P HI
N091910 258 0565 N FWP TURB 2-1 OIL FILTER DELTA P HI
A091959 972 0591 A FWP TURB 2-2 L.O. PP SIBY START
N092001 216 0591 N FWP TURB 2-2 L.O. PP STBY START
A092036 749 0591 A FWP TURB 2-2 L.O. PP STBY START
A092040 658 0576 A FWP TURB 2-1 L.O. PP STBYST
A092041 570 0565 A FWP TURB 2-1 OIL FILTER DELTA P HI
N092041 872 0565 N FWP TURB 2-1 OIL FILTER DELTA P HI
N092158 593 1252 N P-250 COMPUTER AXIAL OFFSET
A092242 814 1252 A P-250 COMPUTER AXIAL OFFSET
N092244 145 0591 N FWP TURB 2-2 L.O. PP STBY START
A092245 138 0591 A FWP TURB 2-2 L.O. PP SIBY START
N092245 505 0591 N FWP TURB 2-2 L.O. PP STBY START
A092251 036 0591 A FWP TURB 2-2 L.O. PP STBY START
N092516 744 0591 N FWP TURB 2-2 L.O. PP STBY START
N092519 987 0576 N FWP TURB 2-1 L.O. PP STBYST
N093706 490 1003 N GEN PCB 642 TRIP
A094444 097 0576 A FWP TURB 2-1 L.O. PP STBYST
A094444 950 0565 A FWP TURB 2-1 OIL FILTER DELTA P HI
N094445 244 0565 N FWP TURB 2-1 OIL FILTER DELTA P HI
A094445 356 0565 A FWP TURB 2-1 OIL FILTER DELTA P HI
N094445 511 0565 N FWP TURB 2-1 OIL FILTER DELTA P HI
A094449 295 0591 A FWP TURB 2-2 L.O. PP STBY START
N094755 969 0065 N STM GEN 2-3 LO FW FLO STMF/FWF NISH 1/2
N094755 977 0040 N PZR PRESS LO 1/4
A094951 946 0589 A FWP TURB 2-2 EMERG L.O. PP RUN
N094951 959 0586 N FWP TURB 2-2 EMERG DC SPLY AND CONT UV
A095000 449 0586 A FWP TURB 2-2 EMERG DC SPLY AND CONT UV
N095000 475 0586 N FWP TURB 2-2 EMERG DC SPLY AND CONT UV
A095000 501 0586 A FWP TURB 2-2 EMERG DC SPLY AND CONT UV
N095000 540 0586 N FWP TURB 2-2 EMERG DC SPLY AND CONT UV
A095000 548 0586 A FWP TURB 2-2 EMERG DC SPLY AND CONT UV
N095002 463 0589 N FWP TURB 2-2 EMERG L.O. PP RUN
A095432 038 0626 A AUX BLDG ANNUN ALARM
A095621 821 0589 A FWP TURB 2-2 EMERG L.O. PP RUN
N095621 834 0586 N FWP TURB 2-2 EMERG DC SPLY AND CONT UV
N095752 397 0589 N FWP TURB 2-2 EMERG L.O. PP RUN
A095753 440 0589 A FWP TURB 2-2 EMERG L.O. PP RUN
N095757 704 0589 N FWP TURB 2-2 EMERG L.O. PP RUN
A095801 725 0589 A FWP TURB 2-2 EMERG L.O. PP RUN
T000291 000 0000 R = SEQUENTIAL OPERATIONS TEST = UNIT-2 =
N100000 013 0000 T = SEQUENTIAL OPERATIONS TEST = UNIT-2 =
A101205 758 0700 A TURB LO VAC TRIP
A101210 710 0712 A EH SYS PRESS LO
N101213 651 0557 N FWP TURB 2-1 TRIP
N101221 004 0700 N TURB LO VAC TRIP
A101221 103 0700 A TURB LO VAC TRIP
N101221 298 0700 N TURB LO VAC TRIP
N101228 193 1002 N VIB 7 LOOSE PARTS MONITORING SYSTEM
N101300 370 0712 N EH SYS PRESS LO

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ALARM INPUT

MILLISECONDS

HOURS, MINUTES, SECONDS

P-250 SEQUENCE OF EVENTS SAMPLE OUTPUT

SEQUENCE OF EVENTS RECORD EXAMPLE

Example 1: (Alarm Typewriter)

1744	SEQUENCE OF EVENTS RECORD, FIRST EVENT AT H17			M43	S13
T0499D	RCL OVERPWR DT CAUS RE	TR	C	0*	
T0499D	RCL OVERPWR DT CAUS RE	NT TR	C	28	
Y0004D	REAC MANUAL TR 1 CAUS RE	TR	C	126	
Y0004D	REAC MANUAL TR 1 CAUS RE	NT TR	C	161	
N0005D	PWR RNG CHAN HI Q CAUS RE	TR	C	308	
N0005D	PWR RNG CHAN HI Q CAUS RE	NT TR	C	339	
Y0005D	REAC MANUAL TR 2 CAUS RE	TR	C	429	
Y0005D	REAC MANUAL TR 2 CAUS RE	NT TR	C	467	
Y0006D	REAC MAIN TR BKR A	NT TR	C	547	
Y0006D	REAC MAIN TR BKR A	TR	C	600	
Y0007D	REAC MAIN TR BKR B	NT TR	C	687	
Y0007D	REAC MAIN TR BKR B	TR	C	729	
N0010D	PWR RNG CHAN LO Q CAUS RE	TR	C	818	
N0010D	PWR RNG CHAN LO Q CAUS RE	NT TR	C	850	
N0021D	INTERM RNG 2 HI Q CAUS RE	TR	C	1129	
N0021D	INTERM RNG 2 HI Q CAUS RE	NT TR	C	1174	
Y0026D	REAC AUX TR BKR A	NT TR	C	1249	
Y0026D	REAC AUX TR BKR A	TR	C	1269	
Y0026D	REAC AUX TR BKR A	NT TR	C	1271	
Y0026D	REAC AUX TR BKR A	TR	C	1274	
Y0027D	REAC AUX TR BKR B	NT TR	C	1401	
Y0027D	REAC AUX TR BKR B	TR	C	1433	
1748	END SEQUENCE OF EVENTS RECORD				

* This column records elapsed time from the first event, in sixtieths of a second.

Note: TR=tripped; NT TR=not tripped
 CAUS=cause
 RE=reactor
 BKR=breaker

Attachment 5

P-250 POST-TRIP REVIEW ANALOG AND CALCULATED VALUES

DIABLO CANYON POWER PLANT AP LISTING				
SEQ	SYMBOL	DESCRIPTION	UNITS	
69	1.0400A	STH GEN 1-1 LVL-2	PC	
70	1.0401A	STH GEN 1-1 LVL-3	PC	
71	1.0402A	STH GEN 1-1 LVL-4	PC	
72	1.0403A	STH GEN 1-1 WIDE RNGE LVL	PC	
73	1.0420A	STH GEN 1-2 LVL-1	PC	
74	1.0421A	STH GEN 1-2 LVL-3	PC	
75	1.0422A	STH GEN 1-2 LVL-4	PC	
76	1.0423A	STH GEN 1-2 WIDE RNGE LVL	PC	
77	1.0440A	STH GEN 1-3 LVL-1	PC	
78	1.0441A	STH GEN 1-3 LVL-3	PC	
79	1.0442A	STH GEN 1-3 LVL-4	PC	
80	1.0443A	STH GEN 1-3 WIDE RNGE LVL	PC	
81	1.0460A	STH GEN 1-4 LVL-2	PC	
82	1.0461A	STH GEN 1-4 LVL-3	PC	
83	1.0462A	STH GEN 1-4 LVL-4	PC	
84	1.0463A	STH GEN 1-4 WIDE RNGE LVL	PC	
85	1.0480A	PZR LVL-1	PC	
86	1.0481A	PZR LVL-2	PC	
87	1.0482A	PZR LVL-3	PC	
88	1.0483A	PZR LVL CONT SETPOINT	PC	
104	N0041A	PWR RNGE DET-1 TOP FLUX	VOLTS	
105	N0042A	PWR RNGE DET-1 BOT FLUX	VOLTS	
106	N0043A	PWR RNGE DET-2 TOP FLUX	VOLTS	
107	N0044A	PWR RNGE DET-2 BOT FLUX	VOLTS	
108	N0045A	PWR RNGE DET-3 TOP FLUX	VOLTS	
109	N0046A	PWR RNGE DET-3 BOT FLUX	VOLTS	
110	N0047A	PWR RNGE DET-4 TOP FLUX	VOLTS	
111	N0048A	PWR RNGE DET-4 BOT FLUX	VOLTS	
* 112	N0049A	PWR RNGE CH-1 FLUX	PC	
* 113	N0050A	PWR RNGE CH-2 FLUX	PC	
* 114	N0051A	PWR RNGE CH-3 FLUX	PC	
* 115	N0052A	PWR RNGE CH-4 FLUX	PC	
* 155	P0398A	TURB FIRST STAGE PRESS-1	PC	
* 156	P0399A	TURB FIRST STAGE PRESS-2	PC	
157	P0400A	STM GEN 1-1 STM PRESS-1	PSIG	
158	P0401A	STM GEN 1-1 STM PRESS-2	PSIG	
159	P0402A	STM GEN 1-1 STM PRESS-4	PSIG	
160	P0420A	STM GEN 1-2 STM PRESS-1	PSIG	
161	P0421A	STM GEN 1-2 STM PRESS-2	PSIG	
162	P0422A	STM GEN 1-2 STM PRESS-3	PSIG	
163	P0440A	STM GEN 1-3 STM PRESS-1	PSIG	
164	P0441A	STM GEN 1-3 STM PRESS-2	PSIG	
165	P0442A	STM GEN 1-3 STM PRESS-3	PSIG	
166	P0460A	STM GEN 1-4 STM PRESS-1	PSIG	
167	P0461A	STM GEN 1-4 STM PRESS-2	PSIG	
168	P0462A	STM GEN 1-4 STM PRESS-4	PSIG	
169	P0480A	PZR PRESS-1	PSIG	
170	P0481A	PZR PRESS-2	PSIG	
171	P0482A	PZR PRESS-3	PSIG	
172	P0483A	PZR PRESS-4	PSIG	
185	P1000A	CONTMT PRESS-1	PSIG	

DIABLO CANYON POWER PLANT AP LISTING

SEQ	SYMBOL	DESCRIPTION	UNITS
186	P1001A	CONMTT PRESS-2	PSIG
187	P1002A	CONMTT PRESS-3	PSIG
188	P1003A	CONMTT PRESS-4	PSIG
324	T0400A	RCL 1-1 TAVG	DEGF
325	T0403A	RCL 1-1 DELTA T	PC
326	T0406A	RCL 1-1 T COLD	DEGF
327	T0407A	RCL 1-1 OVER PWR DELTA T SETPT	PC
328	T0410A	RCL 1-1 OVER TEMP DELTA T SETPT	PC
337	T0420A	RCL 1-2 TAVG	DEGF
338	T0423A	RCL 1-2 DELTA T	PC
339	T0426A	RCL 1-2 T COLD	DEGF
340	T0427A	RCL 1-2 OVER PWR DELTA T SETPT	PC
341	T0430A	RCL 1-2 OVER TEMP DELTA T SETPT	PC
350	T0440A	RCL 1-3 TAVG	DEGF
351	T0443A	RCL 1-3 DELTA T	PC
352	T0446A	RCL 1-3 T COLD	DEGF
353	T0447A	RCL 1-3 OVER PWR DELTA T SETPT	PC
354	T0450A	RCL 1-3 OVER TEMP DELTA T SETPT	PC
363	T0460A	RCL 1-4 TAVG	DEGF
364	T0463A	RCL 1-4 DELTA T	PC
365	T0466A	RCL 1-4 T COLD	DEGF
366	T0467A	RCL 1-4 OVER PWR DELTA T SETPT	PC
367	T0470A	RCL 1-4 OVER TEMP DELTA T SETPT	PC
377	T0481A	PZR STM TEMP	DEGF
* 382	T0496A	RCS TREF	DEGF
383	T0497A	RCS AUCT DELTA T	PC
384	T0499A	RCS AUCT TAVG	DEGF

DIABLO CANYON POWER PLANT AP LISTING

SEQ	SYMBOL	DESCRIPTION	UNITS
67	F0403A	STM GEN 1-1 FW FLO-1	KBH
68	F0404A	STM GEN 1-1 FW FLO-2	KBH
69	F0405A	STM GEN 1-1 STM FLO-1	KBH
70	F0406A	STM GEN 1-1 STM FLO-2	KBH
74	F0421A	STM GEN 1-2 FW FLO-1	KBH
75	F0424A	STM GEN 1-2 FW FLO-2	KBH
76	F0425A	STM GEN 1-2 STM FLO-1	KBH
77	F0426A	STM GEN 1-2 STM FLO-2	KBH
81	F0443A	STM GEN 1-3 FW FLO-1	KBH
82	F0444A	STM GEN 1-3 FW FLO-2	KBH
83	F0445A	STM GEN 1-3 STM FLO-1	KBH
84	F0446A	STM GEN 1-3 STM FLO-2	KBH
88	F0463A	STM GEN 1-4 FW FLO-1	KBH
89	F0464A	STM GEN 1-4 FW FLO-2	KBH
90	F0465A	STM GEN 1-4 STM FLO-1	KBH
91	F0466A	STM GEN 1-4 STM FLO-2	KBH
122	N0031A	SOURCE RNGE DET-1 LOG FLUX	DKCS
123	N0032A	SOURCE RNGE DET-2 LOG FLUX	DKCS
124	N0035A	INTHEP RNGE DET-1 LOG FLUX	NCAHP
125	N0036A	INTHEP RNGE DET-2 LOG FLUX	NCAHP

Note: Asterisk (*) values are sampled by both the 8-second and the 2-second programs.

Attachment 6

ERFDS ANALOG SIGNALS

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
1	SRNIS*CNIS	*CPS*NI31B	NI31B
2	SRNIS*RATE	*DPM*NI31D	NI31D
3	SRNIS*CNIS	*CPS*NI32B	NI32B
4	SRNIS*RATE	*DPM*NI32D	NI32D
5	IRNIS*LVL*	*AMP*NI35B	NI35B
6	IRNIS*RATE	*DPM*NI35D	NI35D
7	IRNIS*LVL*	*AMP*NI36B	NI36B
8	IRNIS*RATE	*DPM*NI36D	NI36D
9	PRNIS*PWR*	**8*NI41B**	NI41B
10	PRNIS*PWR*	**8*NI42B**	NI42B
11	PRNIS*PWR*	**8*NI43B**	NI43B
12	PRNIS*PWR*	**8*NI44B**	NI44B
13	BORON*CONC	*PPM*CEL5*	CEL5*
14	*RCS*PRES*	**PT403***	PT403
15	*RCS*PRES*	**PT405***	PT405
16	**PZR*LVL*	**LT461***	LT461
17	**PZR*LVL*	**LT460***	LT460
18	**PZR*LVL*	**LT459***	LT459
19	T-COLD*LP1	**TE413B**	TE413B
20	T-COLD*LP2	**TE423B**	TE423B
21	T-COLD*LP3	**TE433B**	TE433B
22	T-COLD*LP4	**TE443B**	TE443B
23	T-HOT*LP1*	**TE413A**	TE413A
24	T-HOT*LP2*	**TE423A**	TE423A
25	T-HOT*LP3*	**TE433A**	TE433A

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
26	T-HOT*LP4*	**TE443A**	TE443A
27	*RVLIS*PLM	**LR199***	LR199
28	*RVLIS*PLM	**LR202***	LR202
29	*RVLIS*NR*	**LR200***	LR200
30	*RVLIS*NR*	**LR203***	LR203
31	*RVLIS*WR*	**LR201***	LR201
32	*RVLIS*WR*	**LR204***	LR204
33	*SUBCOOL**	MARG*YM31*	YM31
34	**INCORE**	**T/C*3***	TT- 3
35	**INCORE**	**T/C*8***	TT- 8
36	**INCORE**	**T/C*10**	TT-10
37	**INCORE**	**T/C*11**	TT-11
38	**INCORE**	**T/C*18**	TT-18
39	**INCORE**	**T/C*20**	TT-20
40	**INCORE**	**T/C*22**	TT-22
41	**INCORE**	**T/C*23**	TT-23
42	**INCORE**	**T/C*24**	TT-24
43	**INCORE**	**T/C*31**	TT-31
44	**INCORE**	**T/C*38**	TT-38
45	**INCORE**	**T/C*39**	TT-39
46	**INCORE**	**T/C*40**	TT-40
47	**INCORE**	**T/C*41**	TT-41
48	**INCORE**	**T/C*48**	TT-48
49	**INCORE**	**T/C*54**	TT-54
50	**INCORE**	**T/C*55**	TT-55

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
51	**INCORE**	**T/C*56**	TT-56
52	**INCORE**	**T/C*60**	TT-60
53	**INCORE**	**T/C*65**	TT-65
54	HEAD*REGN*	**T/C*25**	TT-25
55	**INCORE**	T/C*MAX*A*	
56	**INCORE**	T/C*MAX*B*	
57	T/C*COLD**	JCT*T*TE62	TE-62
58	T/C*COLD**	JCT*T*TE64	TE-64
59	*ACCUM*1**	PRES*PT960	PT-960
60	*ACCUM*1**	PRES*PT961	PT-961
61	*ACCUM*2**	PRES*PT962	PT962
62	*ACCUM*2**	PRES*PT963	PT963
63	*ACCUM*3**	PRES*PT964	PT964
64	*ACCUM*3**	PRES*PT965	PT965
65	*ACCUM*4**	PRES*PT966	PT966
66	*ACCUM*4**	PRES*PT967	PT967
67	*ACCUM*1**	LVL*IT950*	IT950
68	*ACCUM*1**	LVL*IT951*	IT951
69	*ACCUM*2**	LVL*IT952*	IT952
70	*ACCUM*2**	LVL*IT953*	IT953
71	*ACCUM*3**	LVL*IT954*	IT954
72	*ACCUM*3**	LVL*IT955*	IT955
73	*ACCUM*4**	LVL*IT956*	IT956
74	*ACCUM*4**	LVL*IT957*	IT957
75	SI*PUMP*1*	FLOW*FT918	FT918

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
76	SI*PUMP*2*	FLOW*FT922	FT922
77	CHRG*BIT**	FLOW*FT917	FT917
78	EMERG*B10*	FLOW*FT113	FT113
79	**VCT*LVL*	**LT112***	LT112
80	*CHRG*HDR*	FLOW*FT128	FT128
81	**LETDOWN*	FLOW*FT134	FT134
82	*RWS*LVL*	**LT920***	LT920
83	*RWS*LVL*	**LT922***	LT922
84	RHR*1*FLOW	**FT970B**	FT970B
85	RHR*2*FLOW	**FT971B**	FT971B
86	RHR*HX*OUT	*T**TE639*	TE639
87	RHR*HX*OUT	*T**TE649*	TE649
88	**PRT*LVL*	**LT470***	LT470
89	*PRT*TEMP*	**TE471***	TE471
90	*PRT*PRES*	**PT472***	PT472
91	CNTMT*PRES	*WR**PT938	PT938
92	CNTMT*PRES	*WR**PT939	PT939
93	CNTMT*PRES	*NR**PT935	PT935
94	CNTMT*PRES	*NR**PT936	PT936
95	CNTMT*TEMP	**TR26****	TR26
96	CNTMT*H2**	CONC*CEL82	CEL82
97	CNTMT*H2**	CONC*CEL83	CEL83
98	CNTMT*SUMP	*LVL*IT942	IT942
99	CNTMT*SUMP	*LVL*IT943	IT943
100	*SG*1*LVL*	*WR**IT501	IT501

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
101	*SG*2*LVL*	*WR**LT502	LT502
102	*SG*3*LVL*	*WR**LT503	LT503
103	*SG*4*LVL*	*WR**LT504	LT504
104	*SG*1*LVL*	*NR**LT517	LT517
105	*SG*1*LVL*	*NR**LT518	LT518
106	*SG*2*LVL*	*NR**LT527	LT527
107	*SG*2*LVL*	*NR**LT528	LT528
108	*SG*3*LVL*	*NR**LT537	LT537
109	*SG*3*LVL*	*NR**LT538	LT538
110	*SG*4*LVL*	*NR**LT547	LT547
111	*SG*4*LVL*	*NR**LT548	LT548
112	SG*1*PRES*	**PT514***	PT514
113	SG*1*PRES*	**PT515***	PT515
114	SG*2*PRES*	**PT524***	PT524
115	SG*2*PRES*	**PT525***	PT525
116	SG*3*PRES*	**PT534***	PT534
117	SG*3*PRES*	**PT535***	PT535
118	SG*4*PRES*	**PT544***	PT544
119	SG*4*PRES*	**PT545***	PT545
120	*SG*1*STM*	FLOW*FT512	FT512
121	*SG*1*STM*	FLOW*FT513	FT513
122	*SG*2*STM*	FLOW*FT522	FT522
123	*SG*2*STM*	FLOW*FT523	FT523
124	*SG*3*STM*	FLOW*FT532	FT532
125	*SG*3*STM*	FLOW*FT533	FT533

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
126	*SG*4*STM*	FLOW*FT542	FT542
127	*SG*4*STM*	FLOW*FT543	FT543
128	*SG*1*FW**	FLOW*FT510	FT510
129	*SG*1*FW**	FLOW*FT511	FT511
130	*SG*2*FW**	FLOW*FT520	FT520
131	*SG*2*FW**	FLOW*FT521	FT521
132	*SG*3*FW**	FLOW*FT530	FT530
133	*SG*3*FW**	FLOW*FT531	FT531
134	*SG*4*FW**	FLOW*FT540	FT540
135	*SG*4*FW**	FLOW*FT541	FT541
136	*SG*1*AFW*	FLOW**FT50	FT50
137	*SG*2*AFW*	FLOW**FT77	FT77
138	*SG*3*AFW*	FLOW**FT78	FT78
139	*SG*4*AFW*	FLOW**FT79	FT79
140	*AFW*SPLY*	SG1*LCV110	POT110
141	*AFW*SPLY*	SG2*LCV111	POT111
142	*AFW*SPLY*	SG3*LCV115	POT115
143	*AFW*SPLY*	SG4*LCV113	POT113
144	**CST*LVL*	**LT44****	LT44
145	**CST*LVL*	**LT40****	LT40
146	CCW*HDR*A*	FLOW**FT68	FT68
147	CCW*HDR*B*	FLOW**FT65	FT65
148	CCW*HDR*C*	FLOW**FT69	FT69
149	CCW*HX*OUT	*TEMP**TE6	TE6
150	CCW*HX*OUT	*TEMP**TE7	TE7

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
151	CFCU*1*CCW	*FLOW*FT70	FT70
152	CFCU*2*CCW	*FLOW*FT71	FT71
153	CFCU*3*CCW	*FLOW*FT72	FT72
154	CFCU*4*CCW	*FLOW*FT73	FT73
155	CFCU*5*CCW	*FLOW*FT74	FT74
156	GAS*DCY*TK	*1*P*PT152	PT152
157	GAS*DCY*TK	*2*P*PT153	PT153
158	GAS*DCY*TK	*3*P*PT154	PT154
159	PLANT*VENT	*GAS*RE14A	RE14A
160	PLANT*VENT	*GAS*RE14B	RE14B
161	PLANT*VENT	*I**RE32**	RE32
162	SJAE*1*GAS	*MON**RE15	RE15
163	SG*BLOWDN*	RAD**RE19*	RE19
164	MN*STM*RAD	*MON**RE71	RE71
165	MN*STM*RAD	*MON**RE72	RE72
166	MN*STM*RAD	*MON**RE73	RE73
167	MN*STM*RAD	*MON**RE74	RE74
168	CONMT*RAD	*MON**RE2*	RE2
169	CONMT*H1*	*RAD**RE30	RE30
170	CONMT*H1*	*RAD**RE31	RE31
171	*SEAL*TBL*	*RAD**RE7*	RE7
172	BUS*F*4KV*	**VOLTS***	
173	**BAT*1***	**VOLTS***	
174	**BAT*1***	**AMPS****	
175	BUS*F*480V	*VOLTS*AC*	

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
176	BAT*CHRG*1	**VOLTS***	
177	BAT*CHRG*1	**AMPS****	
178	BUS*G*4KV*	**VOLTS***	
179	**BAT*2***	**VOLTS***	
180	**BAT*2***	**AMPS****	
181	BUS*G*480V	*VOLTS*AC*	
182	BAT*CHRG*2	**VOLTS***	
183	BAT*CHRG*2	**AMPS****	
184	BUS*H*4KV*	**VOLTS***	
185	**BAT*3***	**VOLTS***	
186	**BAT*3***	**AMPS****	
187	BUS*H*480V	*VOLTS*AC*	
188	BAT*CHRG**	32**VOLTS*	
189	BAT*CHRG**	32**AMPS**	
190	BAT*CHRG**	21**VOLTS*	
191	BAT*CHRG**	21**AMPS**	
192	BAT*CHRG**	31**VOLTS*	
193	BAT*CHRG**	31**AMPS**	
194	**12KV*SU*	*XFMR*1***	
195	**SPARE***	*****	
196	PZR*HEATER	**2*****	
197	**SPARE***	*****	
198	**SPARE***	*****	
199	**SPARE***	*****	
200	PZR*HEATER	**3*****	

PT NO	DESCRIPTOR 2 LINES X 10		CUSTOMER PT. NO.
201	**SPARE**	*****	
202	**SPARE**	*****	
203	**SPARE**	*****	
204	**SPARE**	*****	
205	**SPARE**	*****	
206	**SPARE**	*****	
207	**SPARE**	*****	
208	**SPARE**	*****	
209	**SPARE**	*****	
210	**SPARE**	*****	
211	**SPARE**	*****	
212	**SPARE**	*****	
213	**SPARE**	*****	
214	**SPARE**	*****	
215	**SPARE**	*****	
216	**SPARE**	*****	
217	**SPARE**	*****	
218	**SPARE**	*****	
219	PLANT*VENT	*GAS*RE33*	RE 33
220	**SPARE**	*****	
221	**SPARE**	*****	
222	**SPARE**	*****	
223	**SPARE**	*****	
224	**SPARE**	*****	
225	**SPARE**	*****	

POST-TRIP REVIEW SAMPLE OUTPUT

(Ncte: Reduced for presentation)

