TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PRODUCTION

REACTOR BUILDING CONTAINMENT INTEGRATED LEAK RATE TEST BROWNS FERRY NUCLEAR PLANT UNIT 1 CONDUCTED FEBRUARY 20 THROUGH 23, 1980

DOCKET NUMBER 50 - 259

Submitted to
The United States Nuclear Regulatory Commission
Pursuant to
Facility Operating License Number DPR-33

1.0 Introduction

As prescribed in Browns Ferry Nuclear Plant (BFNP) unit 1 technical specification 4.7.A.2, the leakage of air from the boundary forming the reactor building primary containment is limited to 2 percent of containment air mass per day at the calculated peak accident pressure P_a. In conformance with Title 10, Code of Federal Regulations, Part 50, Appendix J, Browns Ferry technical specifications require that reactor building integrated leak rate tests be performed as part of the startup and the surveillance programs to demonstrate continuing leak-tight integrity.

An inservice reactor building containment integrated leak rate test (CILRT) was successfully completed on Browns Ferry unit 1 by personnel of the Tennessee Valley Authority (TVA) on February 23, 1980. This test was conducted in accordance with a plant approved surveillance instruction, BF SI 4.7.A.2, which is on file at the plant site. This surveillance instruction implements the requirements of Browns Ferry unit 1 technical specifications and Appendix J to 10 CFR 50. The American National Standard for Containment Testing, ANSI N45.4-1972, and the proposed American Nuclear Society Standard for Containment Testing, N-274, provided guidance for the procedure implemented by the surveillance instruction.

Browns Ferry unit 1 is a boiling-water reactor employing a steel pressure suppression containment and rated 3,293 megawatts thermal. The Final Safety Analysis Report defines the

calculated peak accident pressure P_a to be 49.6 psig. The reactor building containment is divided into two major compartments--the drywell, enclosing the reactor and the forced recirculation system, and a pressure suppression pool chamber. These two compartments are connected by blowdown pipes that terminate below the suppression chamber pool level. Vacuum breakers are provided to ensure that the suppression chamber is never pressurized with respect to the drywell. For the performance of this containment integrated leak rate test (CILRT), these vacuum breakers were mechanically locked open to ensure pressure equalization between the drywell and the suppression chamber.

This report outlines the objectives, principal events, and special equipment used and provides analysis of the test results for the CILRT completed on February 23 on Browns Ferry unit 1.

2.0 Test Purpose and Results

A. Test Purpose

The principal objective of the CILRT was to demonstrate the leak-tight integrity of the reactor building containment for return to power operation. For Browns Ferry unit 1, the leak-tight integrity is defined by technical specification 4.7.A.2 and the preoperational CILRT to be that the leakage of air from containment not exceed 0.04437 percent per hour (1.06488 percent per day) of containment air mass at a reduced pressure of $P_a/2$.

Another objective of the CILRT was to determine if any degradation of the structure forming the containment may have occurred since the performance of the preoperational CILRT. A pretest inspection of the containment surface was performed to identify the presence of any gross deformities of the structure.

In addition to the items already mentioned, a special inspection of the Contol Rod Drive (CRD) hatch was conducted at test pressure. The CRD hatch was identified as an item of noncompliance during the BFNP unit 3 CILRT, conducted November 21 through 25, 1979, since a temporary CRD hatch was installed to facilitate pressurization for that CILRT.

B. Test Results

The leakage rate measured in the 24-hour CILRT was 0.0285 percent of containment air mass per hour (0.6846 percent per day) at a reduced pressure of 25 psig. The observed 95-percent upper confidence limit for this measured leak rate was 0.0288 percent of containment air mass per hour (0.6922 percent per day). This measured leak rate represents 64.3 percent of that allowed under technical specification 4.7.A.2.

After the completion of the CILRT, a supplemental forced leakage verification test was conducted to check the results of the CILRT. A forced leak of 0.8608 percent of containment mass per day was imposed on the containment. The

leak rate measured for the 4½-hour verification test was 1.3244 percent of containment air mass per day. Agreement as prescribed by Appendix J between the CILRT and the verification test was -0.149 L_T which is well within the ± 0.250 L_T required by the technical specification.

A pretest inspection of the containment surfaces revealed no abnormal degradation of the reactor building containment structure.

However, penetrations X-49, X-51, X-203, and X-217 had spare lines penetrating the containment which did not meet the requirments of Appendix J to 10 CFR 50. These lines were capped, strength tested at 65 psig and checked for leakage using a soap solution. No observable leakage was detected.

The inspection and leak check of the CRD hatch revealed no deformation, pull away or observable leakage.

3.0 Conduct of Test

Prior to the start of the CILRT, local leak rate tests (LLRT) on the containment closures (hatches with resilient seals), bellows, and electrical penetrations were conducted in conformance with surveillance instruction BF SI 4.7.A.2.g-2. LLRT on the valves forming the boundary of the primary containment were conducted in conformance with surveillance instruction BF SI 4.7.A.2.g-3 with the exception of valve 71-40. All valves met satisfactory leakage requirements prior to performance of

the CILRT. Valve 71-40 is installed in a process system which remained in service during the CILRT and, therefore, was not subjected to test pressure during the CILRT. Following the CILRT this valve was repaired and successfully leak tested. The single personnel airlock was tested separately in conformance with BF SI 4.7.A.2.g-1. A summary of all LLRT testing performed since the CILRT in August of 1976 is included in Appendix B of this report.

The following is a sequence of significant events during the CILRT.

Date and Time	Event
2-20-80 2100	Started pressurization of drywell.
2-20-80 2305	Excessive water accumulation in drywell sump. Depressurizing drywell to evaluate leakage problem.
2-21-80 1100	Operations found two drain valves on "A" feedwater line open.
2-21-80 1235	Started pressurization of drywell.
2-21-80 1545	Completed drywell pressurization. Starting stabilization period and containment leak checks.
2-21-80 1945	After four hours of stabilization began test on sample No. 25.
2-22-80 1041	HE-9 is reading 16° below other DPE's in torus. Eliminated from calculations and reweighted HE-8 and 10.

2-22-80	1720-1750	Operations pumped down torus without notifying test director. This caused a sharp drop in pressure which caused the leak rate to drop. Awaiting stabilization of leak rate.
2-23-80	1245	Torus water level shows a 1.25-inch drop, however, there was no corresponding pressure drop as when the torus was pumped down.
2-23-80	1950	LI 64-66, a redundant torus water level instrument, indicates a constant water level while LI 64-54 indicates a change in water level has occurred. Operations reports that LI 64-54 has a history of drifting after the torus has been pumped down.
2-23-80	2000	Torus water level data will be extrapolated, based upon previous data starting with sample No. 262 and continuing until the end of the test.
2-23-80	2250	Stopped CILRT at sample 305.
2-23-80	2324	Started verification test.
2-24-80	0452	Completed verification test.

4.0 Measurements and Calculations

A. Test Equipment

Table 1 lists the equipment, range, accuracy, and repeatability. All test equipment was calibrated by the TVA Central Laboratories or other facilities with standards traceable to the National Bureau of Standards. After the installation of all special test equipment inside containment, each sensor was checked for functional operation. Upon test completion and depressurization, each sensor was again checked to ensure adherence to calibration.

B. Sensor Location

Table 2 lists the final volumetric weighting factor for each temperature and dewpoint sensor based on a 2-compartment model. Figures 1 through 7 identify sensor locations. The pressure sensors were divided up so that two sensors measured drywell pressure through pressure transmitter line PT 64-50 and two sensors measured torus pressure through pressure transmitter line PT 64-21. A fifth pressure sensor measured the barometric pressure at the test station.

C. Computer-Based Acquisition and Data Reduction System

Containment parameter measurements for the Browns Ferry unit 1 CILRT were made and collected by a microprocessor-based data acquisition system. This raw data was automatically presented to a portable minicomputer system for correction to calibration curves and reduction to containment leak rate. Statistical confidence levels of the calculated results were reported automatically to the test director as the data

was acquired. Figure 8 depicts the functional relationship of the acquisition and data analysis system.

All calculations performed by the minicomputer system were in conformance with the procedures outlined in ANS N-274 (draft).

Source listings for all computer programs are on file with the Division of Nuclear Power, Controls and Test Branch, in Chattanooga, Tennessee. Table 3 identifies the principal function of each computer program.

D. Instrument Rejection

The data presented in this report reflects the test results following the deletion of certain instruments. The following table lists the sensor deleted by location, as shown in figures 1 through 7, and the reason for the sensor being deleted.

Sensor Location	Discussion
HE-9	This instrument was reading 16°F below the other DPE's located in the torus. It is suspected that the dewcell solution was disturbed on the instrument.
HE-6	This instrument was reported as being out of tolerance by a post-test calibration check at TVA Central Laboratories.

Sensor Location	Discussion
HE-4 and HE-7	These instruments were damaged when received by TVA Central Laboratories and a post-test calibration check could not be performed.

5.0 Data Analysis

The previous sections of this report have described the general test conduct, calculation methods, and test equipment. In this section the events and problems that influenced the test results are discussed and used to draw conclusions on the performance of the Browns Ferry unit 1 CILRT.

A. Discussion of Graphical and Tabular Results

The CILRT was concluded on February 23, 1980, after accumulating approximately 49 hours of data. The test was extended past the 24 hour requirement due to several events which arose during the course of testing. One event, in which an instrument supplying torus water level malfunctioned, resulted in extrapolation of torus water levels toward the end of the test. Therefore some data are discussed in terms of corrected (or extrapolated) and uncorrected data. Figures 9 and 10 are graphs of the corrected/uncorrected containment air mass for the CILRT. The graph axes are absolute air mass versus test time. The slope of the least squares fit line to this data is the reported leak rate. Figures 11 and 12 are graphs of the corrected/uncorrected calculated

containment air mass leak rates versus test time for the CILRT. Figure 13 is a graph of containment average pressure versus test time, and figure 14 is a graph of containment average temperature versus test time. Also, a listing of torus water levels (corrected/uncorrected) are included in tables 4 and 5 and shown in figures 19 and 20 respectively. A listing of reactor pressure vessel levels are included in table 6.

Following a minimum stabilization time of 4 hours, the CILRT was started and had been in progress for approximately 21 hours when an abrupt change in mass, mass leak rate, temperature, and pressure occurred. These perturbations occurred when Operations personnel pumped down the torus water level (by about 5 inches) in order to stay within revised technical specification limits. This abrupt change in the leak rate required that the test be extended to allow the leak rate to stabilize and complete the CILRT with data comparable to that before the change in conditions occurred.

The leak rate was stabilizing following the torus water level change when at about 41 hours into the test, another apparent abrupt change in mass, and mass leak rate was noted (see figures 10 and 12). Examination of the parameters being measured indicated that the torus water level had dropped by about 1.25 inches. This time, however, there was no corresponding drop in temperature and pressure as had occurred previously when the torus had been pumped down. This drop would be expected if on actual level drop had occurred. Further investigation revealed that the redundant torus

water level instrument had not registered a change in level and that no operations had been performed to change the torus water level. In addition, Operations personnel reported that the particular instrument supplying torus water level information to the CILRT computer had a history of instrument drift subsequent to changes in water level. Based upon this information it was concluded that an actual change in torus water level had not occurred. Further since there had been no significant changes in the other parameters being measured it was concluded that the mass and mass leak rate had not actually changed. But the computer printout of mass and mass leak rate still reflected the mathematical change in volume and thus provided an erroneous inconsistency in the data.

However, evaluation of the parameters affected by this event indicated that existing data could be utilized using a constantly increasing torus water level, without compromising the test results. This analysis was based upon the fact that the torus water level had exhibited a constant rate of increase throughout the test. This increase in torus water level during the CILRT is consistent with past test experience and indicates that the level instrument was tracking properly. Thus it was reasonable to assume that the torus water levels subsequent to the instrument drift could be represented by extrapolation of the preceding data. In doing so, to ensure that the rate of level rise reflected the current conditions, the torus level rise was averaged

over the samples immediately following the actual torus pump down through the sample immediately preceding the instrument drift (samples 153 through 261). Once the rate of increase was determined, it was included in the computer program and, therefore, the computer calculation from sample 262 through sample 305, which are included in the CILRT, reflect the extrapolated torus water level. See tables 4 and 5 for the corrected and uncorrected torus water levels.

The extrapolation of torus water levels was not utilized during the verification test. For the verification test the CILRT torus water level instrument was recalibrated and placed into service.

During the verification test the torus water level was monitored periodically and was found to be increasing slightly from the level which the instrument indicated following recalibration. This provided supportive evidence that the instrument was tracking properly during the verification test.

For the verification test, see figure 15 for the mass versus time plot, figure 16 for the mass leak rate versus time plot, figure 17 for the average containment pressure versus time plot, and figure 18 for the average containment temperature versus time plot.

B. Instrumentation Performance

The instrumentation error analysis of appendix A indicates that the instrumentation used in the unit 1 CILRT was extremely accurate in the determination of the containment leak rate, and it far surpassed the recommendation of N274 that the measuring system be capable of detecting 0.25 L_t. Using the ISG guidelines as developed in appendix A, the CILRT duration could be reduced to 8 hours without impact if stable containment conditions were present.

The loss of four dewcells had no significant effect on the ISG due to the number of sensors employed initially (see paragraph 4.0.D).

6.0 Tabulated Test Results

6.1 25-Psig CILRT

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CONTAINMENT LEAKAGE MEASUREMENT
TEST SUMMARY

SAMPLE	HOURS SINCE START	AVERAGE TEMPERATURE (DEG F.)	CORRECTED PRESSURE (PSIA)	TOTAL MASS OF AIR (LBM)	P-T-P LEAK RATE (% PER DAY)	TOTAL TIME LEAK RATE (% PER DAY)	MASS LEAK RATE (% PER DAY)
25	0.000	62.3186	40.1342	62386.98	0.0000000	0.0000000	0.0000000
26	0.167	62.3877	40.1370	62383.76	0.7431249	0.7431249	0.7442085
27	0.333	62.4043	40.1268	62364.17	4.5214314	2.6326804	2.6329355
28	0.500	62.4266	40.1309	62366.84	-0.6179937	1.5493962	1.8458943
29	0.667	62.4207	40.1347	62374.67	-1.8059977	0.7104631	0.9575254
30	0.833	62.4297	40.1238	62355.42	4.4442954	1.4568900	1.2019205
31	1.000	62.4401	40.1256	62357.45	-0.4689420	1.1358694	1.1105303
32	1.167	62.4252	40.1258	62359.31	-0.4285819	0.9124579	0.9439071
33	1.333	62.4300	40.1243	62355.13	0.9663106	0.9191346	0.8678072
34	1.500	62.4155	40.1184	62347.60	1.7368972	1.0099262	0.8766502
35	1.667	62.4188	40.1179	62345.81	0.4142109	0.9503417	0.8601417
36	1.833	62.4230	40.1175	62343.70	0.4870533	0.9081827	0.8365858
[illegible]	2.000	62.4187	40.1119	62334.89	2.0359876	1.0020273	0.8613623
[illegible]	2.167	62.4093	40.1138	62338.50	-0.8344505	0.8607716	0.8287309
39	2.333	62.4133	40.1136	62336.67	0.4232969	0.8295072	0.7976353
40	2.500	62.4214	40.1090	62328.04	1.9936030	0.9070292	0.8030081
41	2.667	62.4324	40.1135	62333.57	-1.2800336	0.7704461	0.7659329
42	2.833	62.4321	40.1121	62330.22	0.7744508	0.7706426	0.7404200
43	3.000	62.4356	40.1106	62327.55	0.6161863	0.7620280	0.7195731
44	3.167	62.4436	40.1079	62321.54	1.3910768	0.7950584	0.7138940
45	3.333	62.4439	40.1068	62319.56	0.4565648	0.7781047	0.7069346
46	3.500	62.4544	40.1074	62317.40	0.4992630	0.7648040	0.6984146
47	3.667	62.4637	40.1108	62320.78	-0.7805430	0.6945794	0.6764709
48	3.833	62.4696	40.1070	62313.89	1.5907488	0.7334607	0.6684678
49	4.000	62.4731	40.1088	62314.57	-0.1552150	0.6964291	0.6547341
50	4.167	62.4526	40.1065	62314.72	-0.0352131	0.6671721	0.6378706
51	4.333	62.4665	40.1060	62311.36	0.7764909	0.6713411	0.6257683
52	4.500	62.4875	40.0986	62296.55	3.4220879	0.7730981	0.6366547
53	4.667	62.5213	40.1023	62296.30	0.0559959	0.7474903	0.6413928
54	4.833	62.5236	40.0999	62291.77	1.0479969	0.7578032	0.6477280
55	5.000	62.5325	40.0957	62282.61	2.1189756	0.8030571	0.6623979
56	5.167	62.5306	40.0970	62284.36	-0.4044839	0.7641143	0.6676745
57	5.333	62.5290	40.0963	62282.31	0.4724450	0.7549775	0.6714887
58	5.500	62.5399	40.0972	62281.25	0.2464835	0.7395514	0.6723398
59	5.667	62.5471	40.0943	62274.72	1.5095508	0.7621177	0.6770285
60	5.833	62.5412	40.0926	62272.71	0.4652904	0.7536150	0.6800694
61	6.000	62.5470	40.0932	62272.04	0.1544146	0.7369576	0.6802332
62	6.167	62.5819	40.0934	62266.91	1.1863155	0.7490405	0.6826198
63	6.333	62.5846	40.0951	62268.30	-0.3215013	0.7208762	0.6804912
[illegible]	6.500	62.5910	40.0931	62263.11	1.2017473	0.7331446	0.6807240
65	6.667	62.5965	40.0904	62258.05	1.1686745	0.7439780	0.6826522

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CONTAINMENT LEAKAGE MEASUREMENT
TEST SUMMARY

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66	6.833	62.6084	40.0919	62257.84	0.0497045	0.7270461	0.6821647
67	7.000	62.6278	40.0895	62250.33	1.7350955	0.7509690	0.6852228
68	7.167	62.6286	40.0909	62250.57	-0.0551337	0.7322298	0.6856130
69	7.333	62.6183	40.0880	62246.79	0.8740006	0.7354077	0.6865215
70	7.500	62.6123	40.0849	62241.67	1.1843382	0.7453278	0.6884847
71	7.667	62.6328	40.0838	62236.41	1.2185328	0.7555507	0.6917396
72	7.833	62.6301	40.0822	62233.41	0.6939157	0.7542033	0.6946427
73	8.000	62.6520	40.0842	62233.55	-0.0325467	0.7378182	0.6955053
74	8.167	62.6651	40.0833	62229.52	0.9324921	0.7417456	0.6966261
75	8.333	62.6439	40.0804	62225.93	0.8290897	0.7434502	0.6981753
76	8.500	62.6443	40.0810	62225.80	0.0298217	0.7294517	0.6979145
77	8.667	62.6637	40.0824	62224.67	0.2631183	0.7204729	0.6967789
78	8.833	62.6600	40.0825	62223.35	0.3056206	0.7126324	0.6949923
79	9.000	62.6675	40.0802	62218.34	1.1594802	0.7208535	0.6942366
80	9.167	62.6653	40.0806	62219.82	-0.3436322	0.7015208	0.6915941
81	9.333	62.6621	40.0783	62215.08	1.0971853	0.7085359	0.6899383
82	9.500	62.6626	40.0728	62205.12	2.3051689	0.7364289	0.6912417
83	9.667	62.6589	40.0709	62202.32	0.6481612	0.7348740	0.6924586
84	9.833	62.6682	40.0730	62203.32	-0.2324637	0.7184939	0.6919628
85	10.000	62.6672	40.0669	62192.56	2.4914699	0.7479302	0.6942222
86	10.167	62.6644	40.0675	62193.88	-0.3048738	0.7306909	0.6950653
87	10.333	62.6677	40.0630	62185.45	1.9513316	0.7502766	0.6975878
88	10.500	62.6794	40.0667	62188.63	-0.7351767	0.7267284	0.6977348
89	10.667	62.6808	40.0622	62181.57	1.6339372	0.7408191	0.6991924
90	10.833	62.6922	40.0634	62180.70	0.2016662	0.7325116	0.7000350
91	11.000	62.6974	40.0648	62183.15	-0.5673363	0.7128501	0.6988903
92	11.330	62.7108	40.0634	62176.73	0.7511404	0.7138932	0.6980325
93	11.496	62.7137	40.0616	62173.54	0.7383986	0.7142123	0.6972955
94	11.663	62.7112	40.0617	62173.37	0.0407002	0.7045828	0.6957878
95	11.830	62.7225	40.0597	62169.21	0.9628660	0.7081745	0.6947058
96	11.996	62.7248	40.0613	62170.02	-0.1882420	0.6957326	0.6927562
97	12.163	62.7334	40.0625	62170.30	-0.0633151	0.6853313	0.6902093
98	12.330	62.7381	40.0619	62167.76	0.5873410	0.6839796	0.6877021
99	12.496	62.7569	40.0594	62161.23	1.5114759	0.6949485	0.6861580
100	12.663	62.7726	40.0612	62161.93	-0.1602073	0.6837036	0.6839706
101	12.830	62.7981	40.0543	62146.83	3.4963510	0.7200890	0.6847864
102	12.996	62.8180	40.0531	62143.11	0.8618795	0.7218643	0.6856421
103	13.163	62.8285	40.0533	62141.59	0.3510984	0.7171510	0.6860598
104	13.330	62.8381	40.0593	62149.15	-1.7519720	0.6863723	0.6842352
105	13.496	62.8812	40.0552	62137.53	2.6932728	0.7110227	0.6843277
106	13.663	62.9068	40.0553	62133.97	0.8244311	0.7123663	0.6846490

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107	13.830	62.9234	40.0591	62137.42	-0.7995767	0.6941889	0.6836906
108	13.996	62.9512	40.0549	62126.52	2.5248816	0.7158747	0.6842104
109	14.163	62.9596	40.0526	62120.71	1.3466741	0.7232299	0.6853086
110	14.330	62.9853	40.0600	62128.52	-1.8086271	0.6938631	0.6843676
111	14.496	63.0071	40.0578	62122.36	1.4281349	0.7022351	0.6840510
112	14.663	63.0340	40.0572	62117.04	1.2319701	0.7081987	0.6841006
113	15.083	63.0900	40.0590	62111.68	0.4934362	0.7021597	0.6838257
114	15.250	63.1096	40.0617	62113.12	-0.3340743	0.6908472	0.6828195
115	15.416	63.1324	40.0574	62102.95	2.3587732	0.7087628	0.6830329
116	15.583	63.1603	40.0545	62094.44	1.9741201	0.7221969	0.6841722
117	15.750	63.1725	40.0581	62099.16	-1.0939672	0.7030264	0.6840668
118	15.916	63.1913	40.0636	62104.58	-1.2575706	0.6825619	0.6825259
119	16.083	63.2099	40.0548	62088.53	3.7196050	0.7138695	0.6831870
120	16.250	63.2271	40.0559	62087.30	0.2845423	0.7094532	0.6835289
[illegible]	16.416	63.2462	40.0609	62092.08	-1.1076782	0.6910532	0.6827385
[illegible]	16.583	63.2938	40.0565	62079.13	3.0056460	0.7141675	0.6834194
123	16.750	63.3105	40.0591	62081.87	-0.6367952	0.7007520	0.6832044
124	16.916	63.3413	40.0632	62083.41	-0.3579817	0.6903408	0.6824255
125	17.083	63.3694	40.0609	62076.20	1.6729566	0.6998457	0.6822384
126	17.250	63.4010	40.0581	62067.77	1.9566747	0.7118986	0.6828259
127	17.416	63.3985	40.0630	62074.38	-1.5337793	0.6904889	0.6822625
128	17.583	63.3885	40.0619	62074.35	0.0063413	0.6840017	0.6812068
129	17.750	63.3890	40.0569	62066.14	1.9043312	0.6953680	0.6809006
130	17.916	63.3995	40.0580	62066.02	0.0289925	0.6891658	0.6802699
131	18.083	63.4115	40.0594	62066.93	-0.2112179	0.6808792	0.6791851
132	18.250	63.4363	40.0539	62053.74	3.0586672	0.7024577	0.6793852
133	18.416	63.4600	40.0617	62062.93	-2.1325438	0.6769106	0.6781321
134	18.583	63.5049	40.0611	62056.19	1.5629085	0.6847822	0.6773895
135	18.750	63.5471	40.0617	62051.16	1.1680403	0.6890240	0.6769300
136	18.916	63.5871	40.0613	62045.47	1.3192945	0.6945133	0.6767746
137	19.083	63.6239	40.0666	62048.07	-0.6027005	0.6832091	0.6761108
138	19.250	63.6620	40.0695	62048.03	0.0099745	0.6773811	0.6751888
139	19.416	63.6683	40.0715	62049.65	-0.3761059	0.6683530	0.6737786
140	19.583	63.7039	40.0681	62039.30	2.4010832	0.6829857	0.6732072
141	19.750	63.7163	40.0670	62035.49	0.8855594	0.6846541	0.6727811
142	19.961	63.7250	40.0700	62038.16	-0.4876325	0.6722524	0.6717236
143	20.128	63.7361	40.0648	62026.44	2.7207646	0.6890846	0.6715720
144	20.295	63.7418	40.0647	62025.54	0.2077243	0.6851227	0.6711662
145	20.461	63.7512	40.0644	62023.01	0.5874819	0.6842994	0.6708773
146	20.628	63.7599	40.0653	62022.03	0.2286000	0.6806076	0.6703491
147	20.795	63.7669	40.0607	62013.34	2.0173168	0.6912298	0.6704082

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SAMPLE	HOURS SINCE START	AVERAGE TEMPERATURE (DEG F.)	CORRECTED PRESSURE (PSIA)	TOTAL MASS OF AIR (LBM)	P-T-P LEAK RATE (% PER DAY)	TOTAL TIME LEAK RATE (% PER DAY)	MASS LEAK RATE (% PER DAY)
148	20.961	63.7592	40.0590	62010.40	0.6813706	0.6911190	0.6704832
149	21.128	63.7586	40.0583	62010.41	-0.0009068	0.6856584	0.6702486
150	21.295	63.7604	40.0601	62018.13	-1.7946936	0.6663350	0.6691600
151	21.461	63.6326	39.9213	62086.24	-15.8095026	0.5390728	0.6622456
152	21.628	63.5808	39.7723	62133.02	-10.8528795	0.4517104	0.6515898
153	21.795	63.5662	39.5988	62120.90	2.8098805	0.4696518	0.6421968
154	21.961	63.6914	39.6018	62110.08	2.5083537	0.4850472	0.6338173
155	22.128	63.7493	39.5986	62097.30	2.9631052	0.5036082	0.6266698
156	22.214	63.7681	39.5999	62096.61	0.3104047	0.5028581	0.6197835
157	22.295	63.7802	39.5978	62087.34	4.4185424	0.5170298	0.6138464
158	22.461	63.7950	39.5968	62086.79	0.1286808	0.5141444	0.6080751
159	22.688	63.8403	39.5934	62072.48	2.4422777	0.5332686	0.6032488
160	22.795	63.8409	39.5927	62072.07	0.1468897	0.5314526	0.5985265
161	22.961	63.8566	39.5891	62063.70	1.9414039	0.5416188	0.5944599
162	23.128	63.7882	39.5820	62059.83	0.8992958	0.5441620	0.5906257
[illegible]	23.295	63.8435	39.5851	62056.80	0.7017121	0.5452627	0.5870124
[illegible]	23.461	63.9060	39.5872	62051.56	1.2169609	0.5499901	0.5837920
165	23.628	63.9512	39.5886	62046.68	1.1315937	0.5540487	0.5807627
166	23.795	63.9923	39.5898	62042.65	0.9353004	0.5566841	0.5780461
167	23.961	64.0474	39.5962	62044.95	-0.5332312	0.5491254	0.5750620
168	24.128	64.0995	39.5999	62042.55	0.5555767	0.5491489	0.5722093
169	24.295	64.1309	39.6030	62042.77	-0.0498771	0.5450423	0.5692739
170	24.461	64.1586	39.6047	62040.89	0.4350510	0.5442764	0.5664250
171	25.552	64.2622	39.5868	61995.03	1.6271056	0.5901033	0.5654073
172	25.699	64.2667	39.5926	62003.00	-2.0975523	0.5747826	0.5638210
173	25.866	64.2583	39.5806	61983.25	4.5863824	0.6004573	0.5633804
174	26.032	64.2487	39.5752	61974.83	1.9570547	0.6090595	0.5633773
175	26.199	64.2298	39.5668	61962.53	2.8572440	0.6232455	0.5640013
176	26.366	64.2135	39.5623	61958.36	0.9688663	0.6253881	0.5646053
177	26.533	64.1886	39.5550	61947.34	2.5603137	0.6374357	0.5658166
178	26.699	64.1601	39.5472	61938.06	2.1570964	0.6468249	0.5672548
179	26.866	64.1173	39.5405	61932.47	1.3008103	0.6508229	0.5688700
180	27.033	64.0970	39.5378	61929.99	0.5756531	0.6503335	0.5703873
181	27.199	64.0938	39.5465	61944.41	-3.3542018	0.6259516	0.5709776
182	27.366	64.0910	39.5356	61926.28	4.2139850	0.6476284	0.5723289
183	27.532	64.0865	39.5302	61916.98	2.1623724	0.6566989	0.5740249
184	27.699	64.0807	39.5258	61910.06	1.6093256	0.6623598	0.5758919
185	27.866	64.0789	39.5297	61916.30	-1.4522591	0.6497816	0.5771791
186	28.033	64.0697	39.5215	61903.98	2.8653941	0.6628299	0.5789329
187	28.199	64.0746	39.5176	61896.68	1.6987102	0.6688731	0.5808982
188	28.366	64.0661	39.5171	61896.01	0.1563471	0.6658552	0.5826696

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SAMPLE	HOURS SINCE START	AVERAGE TEMPERATURE (DEG F.)	CORRECTED PRESSURE (PSIA)	TOTAL MASS OF AIR (LBM)	P-T-P LEAK RATE (% PER DAY)	TOTAL TIME LEAK RATE (% PER DAY)	MASS LEAK RATE (% PER DAY)
189	28.533	64.0515	39.5207	61903.15	-1.6616559	0.6523318	0.5839279
190	28.699	64.0389	39.5111	61889.02	3.2874892	0.6674834	0.5856674
191	28.866	64.0486	39.5103	61885.29	0.8677203	0.6685998	0.5874380
192	29.032	64.0478	39.5102	61884.58	0.1663766	0.6657097	0.5890806
193	29.199	64.0266	39.5017	61873.66	2.5397408	0.6762931	0.5910580
194	29.366	64.0258	39.4968	61863.63	2.3360758	0.6856019	0.5932502
195	29.533	64.0245	39.4998	61868.62	-1.1625863	0.6752235	0.5950565
196	29.699	64.0270	39.4949	61858.63	2.3271718	0.6843832	0.5971212
197	29.866	64.0131	39.4891	61851.34	1.6954081	0.6899438	0.5992867
198	30.033	64.0216	39.4843	61840.73	2.4701908	0.6997087	0.6017777
199	30.199	64.0289	39.4808	61833.41	1.7049968	0.7051731	0.6043930
200	30.366	64.0525	39.4820	61831.97	0.3355778	0.7031274	0.6068115
201	30.532	64.0573	39.4791	61824.09	1.8353608	0.7092173	0.6093486
202	30.699	64.0606	39.4796	61824.96	-0.2028323	0.7042742	0.6116940
203	30.866	64.0518	39.4747	61817.98	1.6271675	0.7091773	0.6141105
204	31.033	64.0426	39.4790	61823.73	-1.3408270	0.6982297	0.6161332
[illegible]	31.199	64.0399	39.4767	61820.05	0.8591031	0.6990473	0.6181093
[illegible]	31.366	64.0357	39.4805	61826.54	-1.5117112	0.6873761	0.6196758
207	31.533	64.0453	39.4844	61831.54	-1.1651028	0.6776370	0.6208914
208	31.699	64.0445	39.4820	61826.11	1.2657433	0.6806691	0.6221625
209	31.866	64.0381	39.4790	61821.54	1.0632433	0.6826207	0.6234469
210	32.032	64.0367	39.4751	61813.38	1.9002874	0.6888652	0.6248941
211	32.199	64.0116	39.4756	61817.15	-0.8778793	0.6807948	0.6260856
212	32.366	63.9809	39.4671	61806.81	2.4101140	0.6895844	0.6274719
213	32.533	63.9507	39.4657	61806.38	0.0991700	0.6865540	0.6287185
214	32.699	63.9408	39.4625	61801.89	1.0468708	0.6883404	0.6300791
215	32.866	63.9242	39.4595	61797.90	0.9304172	0.6895235	0.6313384
216	33.033	63.9193	39.4610	61801.16	-0.7598061	0.6822448	0.6323962
217	33.199	63.9103	39.4513	61784.77	3.8209460	0.6978179	0.6339370
218	33.366	63.9043	39.4514	61786.23	-0.3403927	0.6926467	0.6352391
219	33.532	63.9022	39.4467	61776.93	2.1681848	0.6998750	0.6367376
220	33.699	63.9065	39.4472	61776.28	0.1501923	0.6971483	0.6381330
221	33.866	63.8957	39.4449	61772.63	0.8506554	0.6978627	0.6394602
222	34.033	63.8989	39.4434	61768.58	0.9449118	0.6990273	0.6408463
223	34.199	63.9037	39.4417	61764.73	0.8972164	0.6999496	0.6421955
224	34.366	63.9139	39.4409	61762.11	0.6121492	0.6994943	0.6435083
225	34.533	63.8974	39.4417	61763.52	-0.3295919	0.6945420	0.6446657
226	34.699	63.9102	39.4412	61760.47	0.7114552	0.6945891	0.6457332
227	34.866	63.9186	39.4413	61758.90	0.3651101	0.6929960	0.6468289
228	35.032	63.9417	39.4404	61753.77	1.1961724	0.6953321	0.6478941
229	35.199	63.9710	39.4434	61754.32	-0.1283943	0.6914368	0.6488166

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SAMPLE	HOURS SINCE START	AVERAGE TEMPERATURE (DEG F.)	CORRECTED PRESSURE (PSIA)	TOTAL MASS OF AIR (LBM)	P-T-P LEAK RATE (% PER DAY)	TOTAL TIME LEAK RATE (% PER DAY)	MASS LEAK RATE (% PER DAY)
230	35.366	63.9875	39.4425	61749.74	1.0687085	0.6931632	0.6498235
231	35.533	63.9992	39.4429	61747.59	0.5017720	0.6922411	0.6507465
232	35.699	64.0286	39.4377	61736.15	2.6688731	0.7013394	0.6519123
233	35.866	64.0190	39.4380	61736.84	-0.1613104	0.6973394	0.6529374
234	36.033	64.0272	39.4329	61726.42	2.4292300	0.7052355	0.6541154
235	36.199	64.0321	39.4349	61729.11	-0.6271132	0.6991333	0.6551288
236	36.366	64.0375	39.4293	61720.23	2.0706155	0.7053207	0.6562894
237	36.532	64.0490	39.4344	61725.73	-1.2844347	0.6963080	0.6572134
238	36.699	64.0433	39.4324	61723.08	0.6194876	0.6959291	0.6580586
239	36.866	64.0297	39.4247	61712.12	2.5578122	0.7042214	0.6591209
240	37.033	64.0381	39.4278	61716.19	-0.9503944	0.6968188	0.6599569
241	37.199	64.0451	39.4281	61715.68	0.1185149	0.6942227	0.6607410
242	37.366	64.0686	39.4304	61715.32	0.0847844	0.6915010	0.6613583
243	37.533	64.0684	39.4259	61707.55	1.8123071	0.6963929	0.6621845
244	37.699	64.0706	39.4230	61702.84	1.0986954	0.6981182	0.6629596
245	37.866	64.0727	39.4233	61702.36	0.1120960	0.6955325	0.6636851
246	38.032	64.0872	39.4218	61698.30	0.9483315	0.6965945	0.6644295
[illegible]	38.199	64.0931	39.4223	61698.36	-0.0136938	0.6935002	0.6650155
[illegible]	38.366	64.1228	39.4212	61692.79	1.3003926	0.6960737	0.6657307
249	38.532	64.1489	39.4208	61687.62	1.2059115	0.6982215	0.6664832
250	38.699	64.1541	39.4267	61696.31	-2.0293670	0.6865753	0.6668710
251	38.866	64.1646	39.4242	61690.80	1.2858444	0.6890835	0.6673865
252	39.032	64.1704	39.4189	61682.36	1.9707218	0.6944637	0.6679825
253	39.199	64.2049	39.4220	61682.46	-0.0246281	0.6914083	0.6684940
254	39.366	64.2322	39.4222	61678.70	0.8797426	0.6921638	0.6690035
255	39.532	64.2548	39.4232	61675.72	0.6941895	0.6921391	0.6695498
256	39.699	64.2203	39.4152	61668.53	1.6794434	0.6962050	0.6701316
257	39.866	64.2075	39.4151	61668.84	-0.0729886	0.6929935	0.6706700
258	40.032	64.2099	39.4174	61671.36	-0.5872325	0.6876900	0.6710137
259	40.199	64.2082	39.4177	61672.45	-0.2545361	0.6837965	0.6712446
260	40.366	64.2013	39.4108	61661.75	2.4969635	0.6911631	0.6717009
261	40.532	64.1865	39.4075	61656.72	1.1755120	0.6930991	0.6722270
262	40.699	64.1883	39.4077	61656.32	0.0930783	0.6906381	0.6726025
263	40.866	64.1817	39.4027	61648.63	1.7948887	0.6950574	0.6731192
264	41.032	64.1768	39.3978	61640.89	1.8079633	0.6994898	0.6737712
265	41.199	64.1759	39.3949	61636.03	1.1357702	0.7012003	0.6743786
266	41.366	64.1618	39.3961	61639.30	-0.7640458	0.6953351	0.6748739
267	41.532	64.1700	39.3916	61630.67	2.0152457	0.7005365	0.6754988
268	41.699	64.1882	39.3978	61637.64	-1.6286454	0.6913082	0.6758446
269	41.866	64.2156	39.3985	61635.18	0.5741604	0.6908144	0.6762203
270	42.032	64.2484	39.3995	61632.24	0.6879117	0.6907701	0.6765587

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SAMPLE	HOURS SINCE START	AVERAGE TEMPERATURE (DEG F.)	CORRECTED PRESSURE (PSIA)	TOTAL MASS OF AIR (LBM)	P-T-P LEAK RATE (% PER DAY)	TOTAL TIME LEAK RATE (% PER DAY)	MASS LEAK RATE (% PER DAY)
271	42.199	64.2915	39.3965	61621.55	2.4985926	0.6977890	0.6770549
272	42.366	64.3319	39.3999	61621.42	0.0301142	0.6951602	0.6774794
273	42.532	64.3760	39.4028	61619.93	0.3478739	0.6937829	0.6778655
274	42.699	64.4210	39.4037	61615.20	1.1060417	0.6953394	0.6782142
275	42.866	64.4446	39.4038	61611.51	0.8620108	0.6959459	0.6786507
276	43.032	64.4387	39.4028	61609.45	0.4809930	0.6950899	0.6790487
277	43.199	64.4143	39.3983	61604.04	1.2657399	0.6972302	0.6794700
278	43.366	64.4215	39.4014	61606.71	-0.6247057	0.6921810	0.6797941
279	43.532	64.4386	39.4027	61605.84	0.2017225	0.6902930	0.6800528
280	43.699	64.4743	39.4034	61601.82	0.9406843	0.6912028	0.6803070
281	43.866	64.5098	39.4053	61599.17	0.6198210	0.6909018	0.6805857
282	44.032	64.5518	39.4079	61596.81	0.5507710	0.6903453	0.6808019
283	44.199	64.5825	39.4116	61597.52	-0.1652382	0.6871259	0.6810131
284	44.366	64.5923	39.4074	61588.46	2.1191094	0.6924034	0.6812763
285	44.532	64.5901	39.4083	61589.56	-0.2583908	0.6888562	0.6814507
286	44.699	64.5984	39.4045	61581.80	1.8160919	0.6929717	0.6817304
287	44.866	64.6048	39.4031	61577.91	0.9081605	0.6937274	0.6820576
288	46.616	64.6101	39.3909	61552.51	0.5655575	0.6886380	0.6822739
289	46.783	64.6150	39.3893	61548.75	0.8779457	0.6892708	0.6824844
290	46.950	64.6077	39.3866	61544.43	1.0110309	0.6903645	0.6826628
291	47.116	64.5971	39.3830	61539.47	1.1603925	0.6919723	0.6829134
292	47.283	64.5978	39.3871	61545.36	-1.3778059	0.6847443	0.6830048
293	47.450	64.6378	39.3877	61540.86	1.0531392	0.6859881	0.6830926
294	47.616	64.6653	39.3888	61538.58	0.5336288	0.6854292	0.6832015
295	47.783	64.6713	39.3862	61533.19	1.2607976	0.6873759	0.6833552
296	47.950	64.6768	39.3853	61530.41	0.6515836	0.6872204	0.6834795
297	48.116	64.6663	39.3822	61526.16	0.9939587	0.6882354	0.6836225
298	48.283	64.6780	39.3829	61525.01	0.2687061	0.6867740	0.6837603
299	48.450	64.6791	39.3827	61523.89	0.2624574	0.6853023	0.6838459
300	48.616	64.6990	39.3773	61512.23	2.7273765	0.6921755	0.6840650
301	48.783	64.7015	39.3795	61514.84	-0.6110033	0.6877536	0.6841856
302	48.950	64.7002	39.3765	61509.53	1.2439059	0.6895877	0.6843457
303	49.116	64.7353	39.3823	61513.81	-1.0010637	0.6838967	0.6843880
304	49.283	64.7629	39.3792	61505.13	2.0332716	0.6883628	0.6845143
305	49.450	64.7788	39.3801	61503.96	0.2715409	0.6869445	0.6846346

6.2 25-Psig Verification

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SAMPLE	HOURS SINCE START	AVERAGE TEMPERATURE (DEG F.)	CORRECTED PRESSURE (PSIA)	TOTAL MASS OF AIR (LBM)	P-T-P LEAK RATE (% PER DAY)	TOTAL TIME LEAK RATE (% PER DAY)	MASS LEAK RATE (% PER DAY)
1	0.000	64.7341	39.3443	61821.66	0.0000000	0.0000000	0.0000000
2	0.117	64.7379	39.3415	61816.15	1.8344965	1.8344964	1.8364304
3	0.233	64.7569	39.3412	61814.06	0.6950908	1.2645391	1.2669618
4	0.350	64.7642	39.3423	61814.93	-0.2873661	0.7473844	0.7419285
5	0.467	64.7555	39.3368	61806.59	2.7734990	1.2537382	1.0450865
6	0.583	64.7439	39.3339	61804.05	0.8459330	1.1720974	1.1013041
7	0.700	64.7558	39.3342	61802.11	0.6463533	1.0844656	1.0742755
8	0.817	64.7678	39.3294	61792.51	3.1954527	1.3858234	1.2393123
9	0.933	64.7804	39.3278	61788.94	1.1879553	1.3610077	1.3130918
10	1.050	64.7950	39.3275	61786.22	0.9066769	1.3104863	1.3287629
11	1.167	64.7915	39.3257	61783.44	0.9262302	1.2720166	1.3182695
12	1.283	64.7899	39.3230	61778.65	1.5937059	1.3011861	1.3231603
13	1.400	64.7626	39.3198	61776.76	0.6284045	1.2450992	1.3016226
14	1.517	64.7607	39.3132	61765.93	3.6066053	1.4265083	1.3554989
15	1.633	64.7470	39.3137	61768.81	-0.9577658	1.2563028	1.3324726
16	1.750	64.7354	39.3065	61758.74	3.3506956	1.3958110	1.3615512
17	1.867	64.7179	39.3041	61756.16	0.8589661	1.3622117	1.3709917
18	1.983	64.6965	39.3017	61754.03	0.7106289	1.3238479	1.3664566
19	2.100	64.6898	39.3013	61754.80	-0.2562068	1.2360367	1.3366181
20	2.217	64.6816	39.2950	61745.43	3.1237125	1.3351856	1.3413532
21	2.333	64.6776	39.2958	61746.80	-0.4582141	1.2455649	1.3209741
22	2.450	64.6658	39.2894	61738.81	2.6599202	1.3127972	1.3217889
23	2.567	64.6651	39.2879	61735.62	1.0636392	1.3014098	1.3196753
24	2.683	64.6764	39.2871	61732.95	0.8892328	1.2834395	1.3141596
25	2.800	64.6680	39.2840	61728.09	1.6184270	1.2973078	1.3119823
26	2.917	64.6584	39.2814	61724.34	1.2526298	1.2954453	1.3100322
27	3.033	64.6516	39.2803	61723.15	0.3958655	1.2608304	1.3011431
28	3.150	64.6598	39.2755	61714.90	2.7468183	1.3157336	1.3046920
29	3.267	64.6692	39.2759	61714.69	0.0703290	1.2712618	1.2992686
30	3.383	64.6526	39.2730	61710.41	1.4287248	1.2766050	1.2953659
31	3.500	64.6360	39.2702	61707.46	0.9807699	1.2666874	1.2903782
32	3.617	64.6397	39.2654	61700.01	2.4833074	1.3058060	1.2930399
33	3.733	64.6477	39.2621	61692.52	2.4985838	1.3429174	1.3014385
34	3.850	64.6562	39.2607	61689.43	1.0305629	1.3333893	1.3073286
35	3.967	64.6629	39.2581	61684.98	1.4815670	1.3376565	1.3130231
36	4.083	64.6598	39.2516	61674.55	3.4790633	1.3986046	1.3276845
37	4.200	64.6551	39.2543	61679.14	-1.5313075	1.3173389	1.3273404
38	4.317	64.6480	39.2503	61673.64	1.8359910	1.3312496	1.3294678
39	4.433	64.6595	39.2490	61670.79	0.9487731	1.3211272	1.3299272
40	4.550	64.6615	39.2498	61671.58	-0.2619673	1.2805612	1.3243928

Tables and Figures

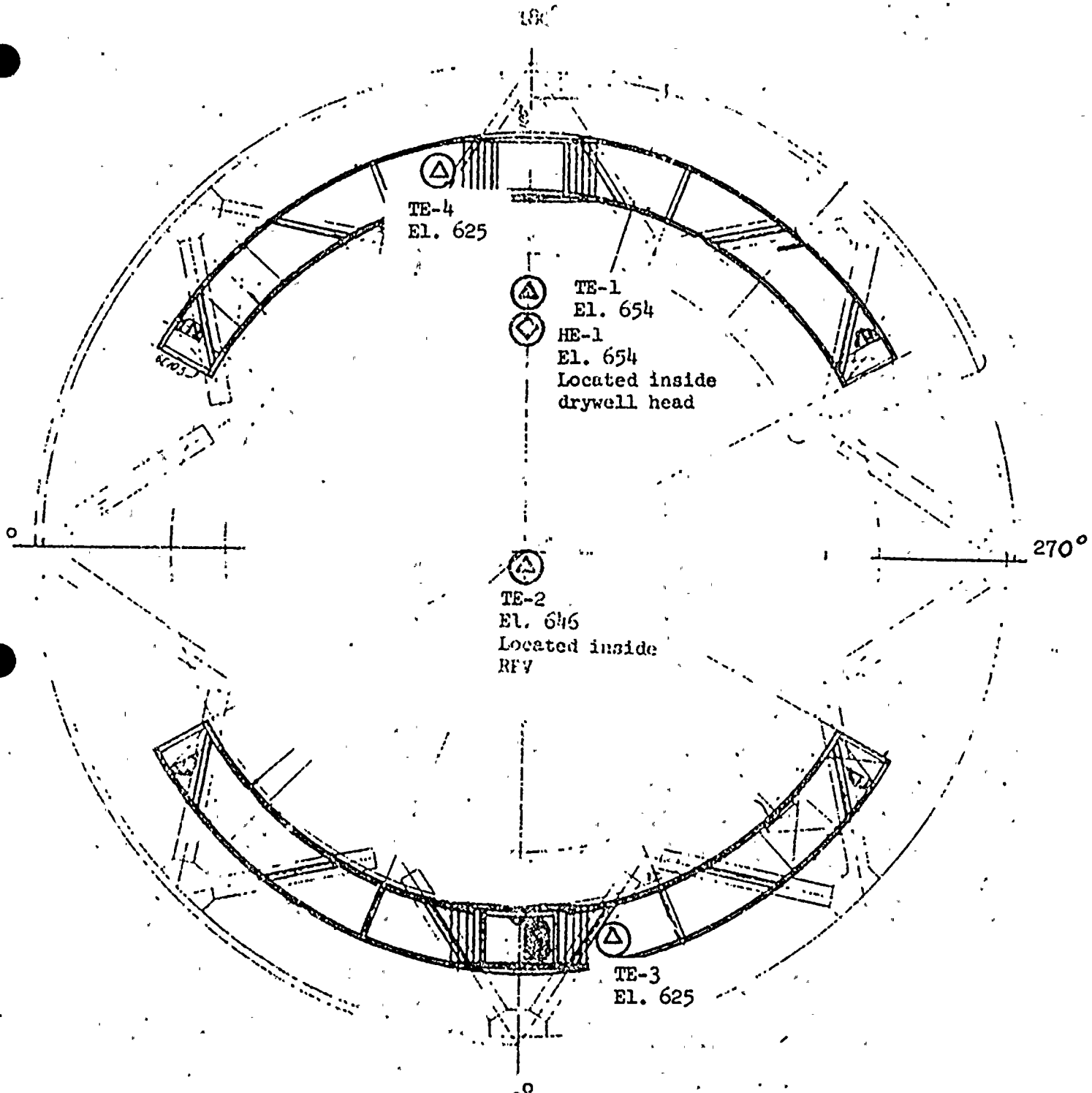
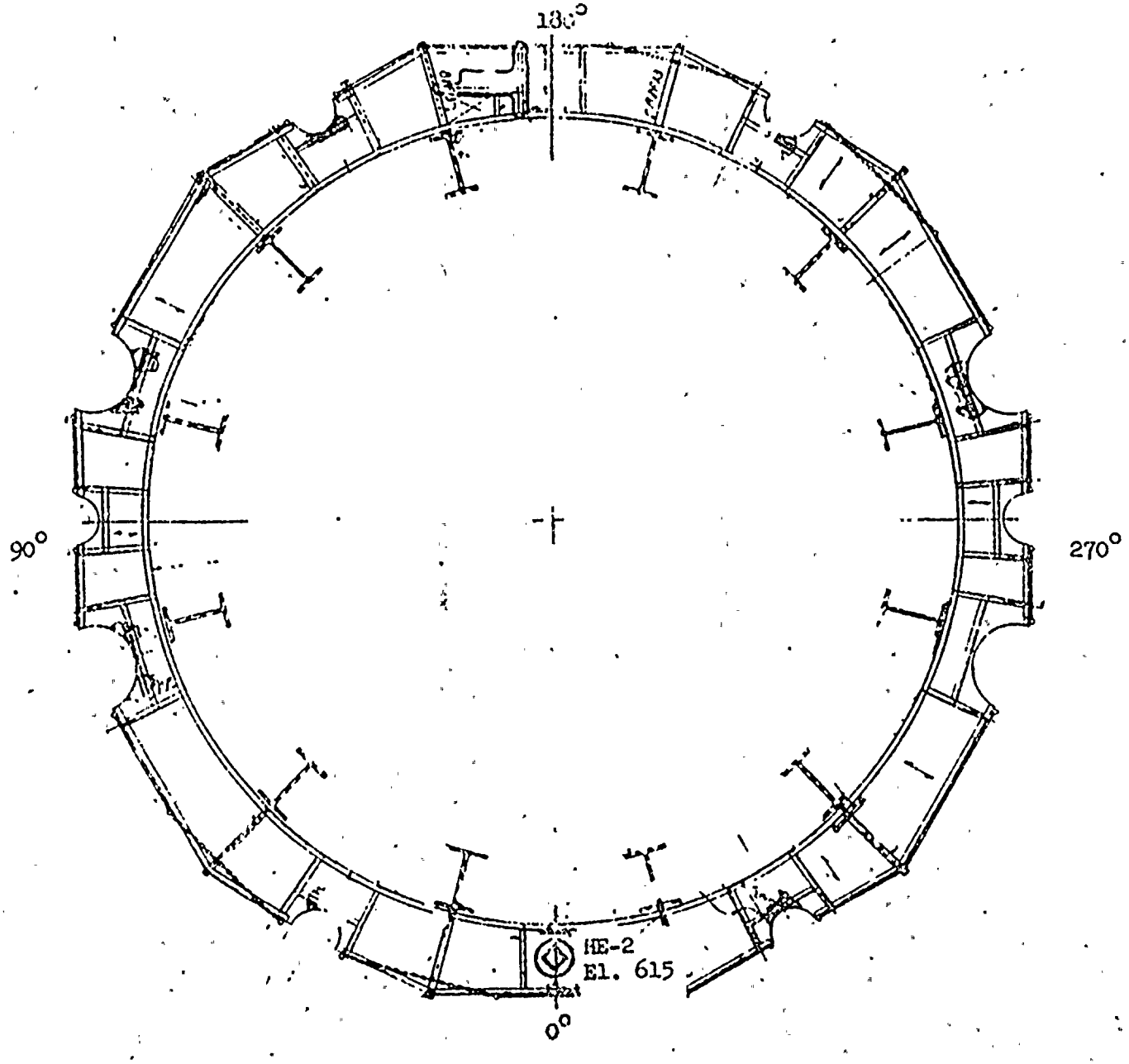


FIGURE 1

△ RTD Location, 4 required
Lower RTD 3 feet below grating (TE-3 and TE-4)

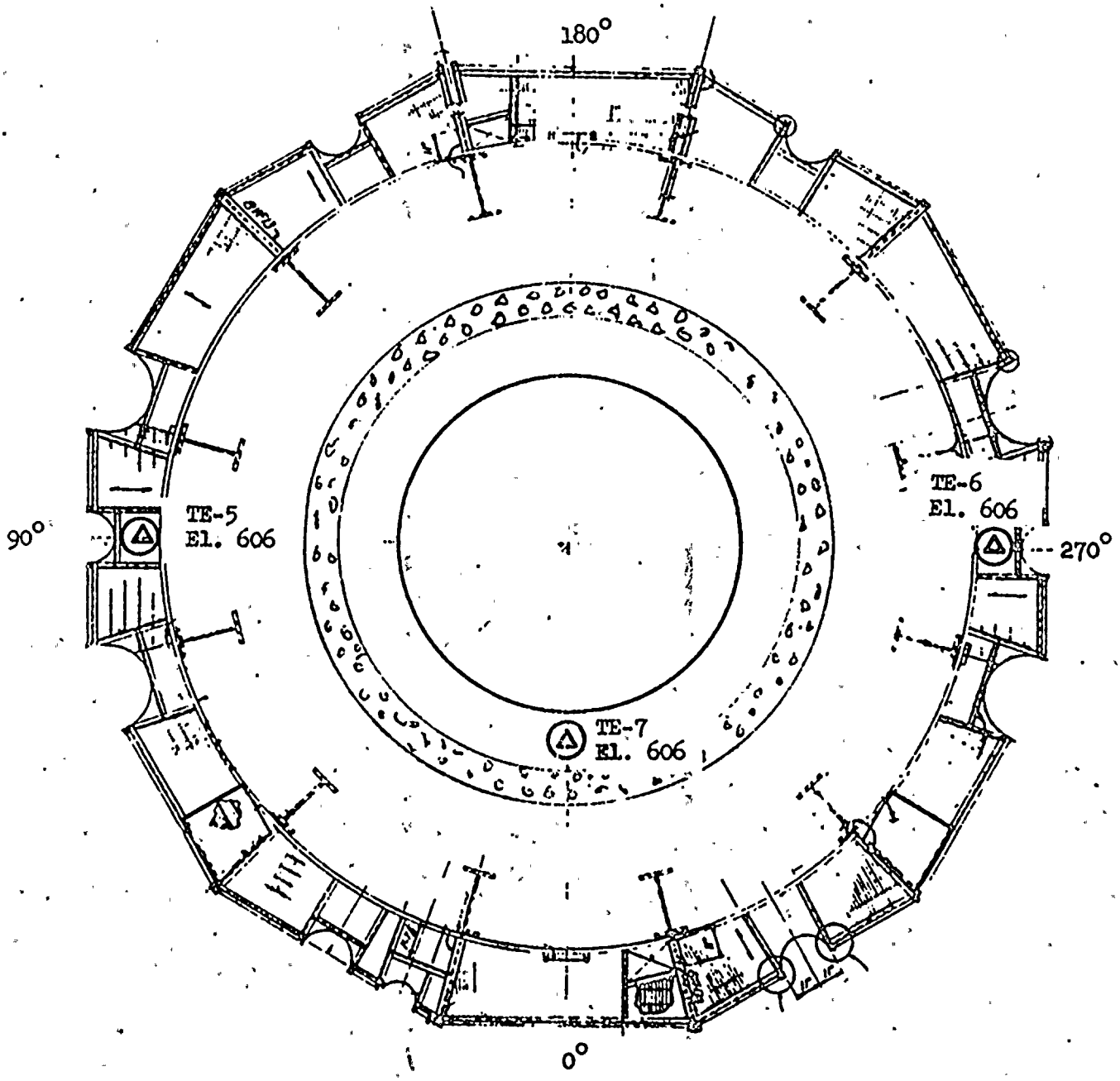


PLAN - EL 616'-0"

FIGURE 2

48N982

◇ Dewcell Location, 1 required.
Lower dewcell 1/2 foot below grating.

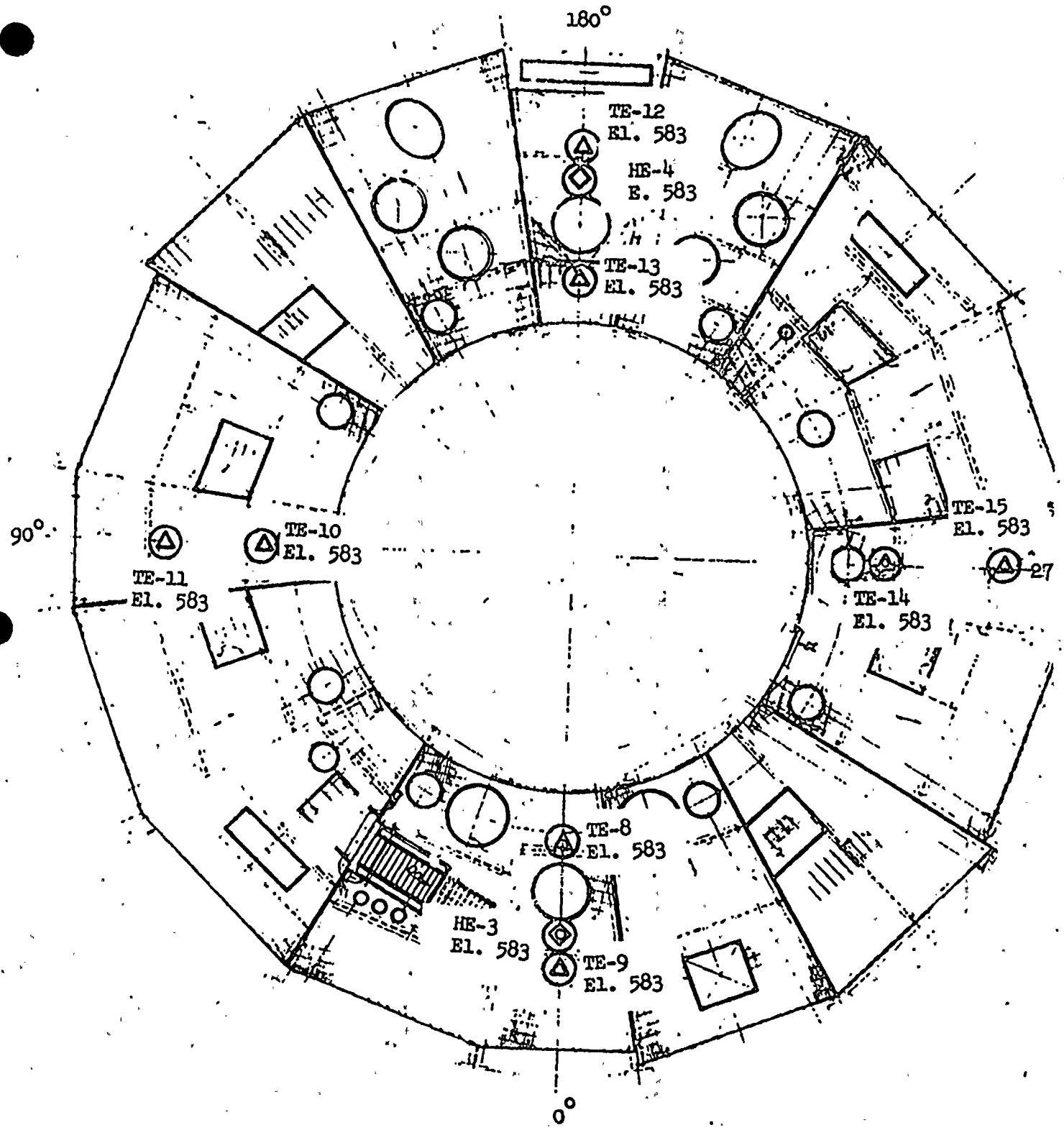


PLAN-EL 604-0"
Top of steel El 603'-11"

FIGURE 3

48N981

△ RTD Location, 3 required
RTD located 2 feet above grating (TE-5 and TE-6)
TE-7 located between RPV and sacrificial shield



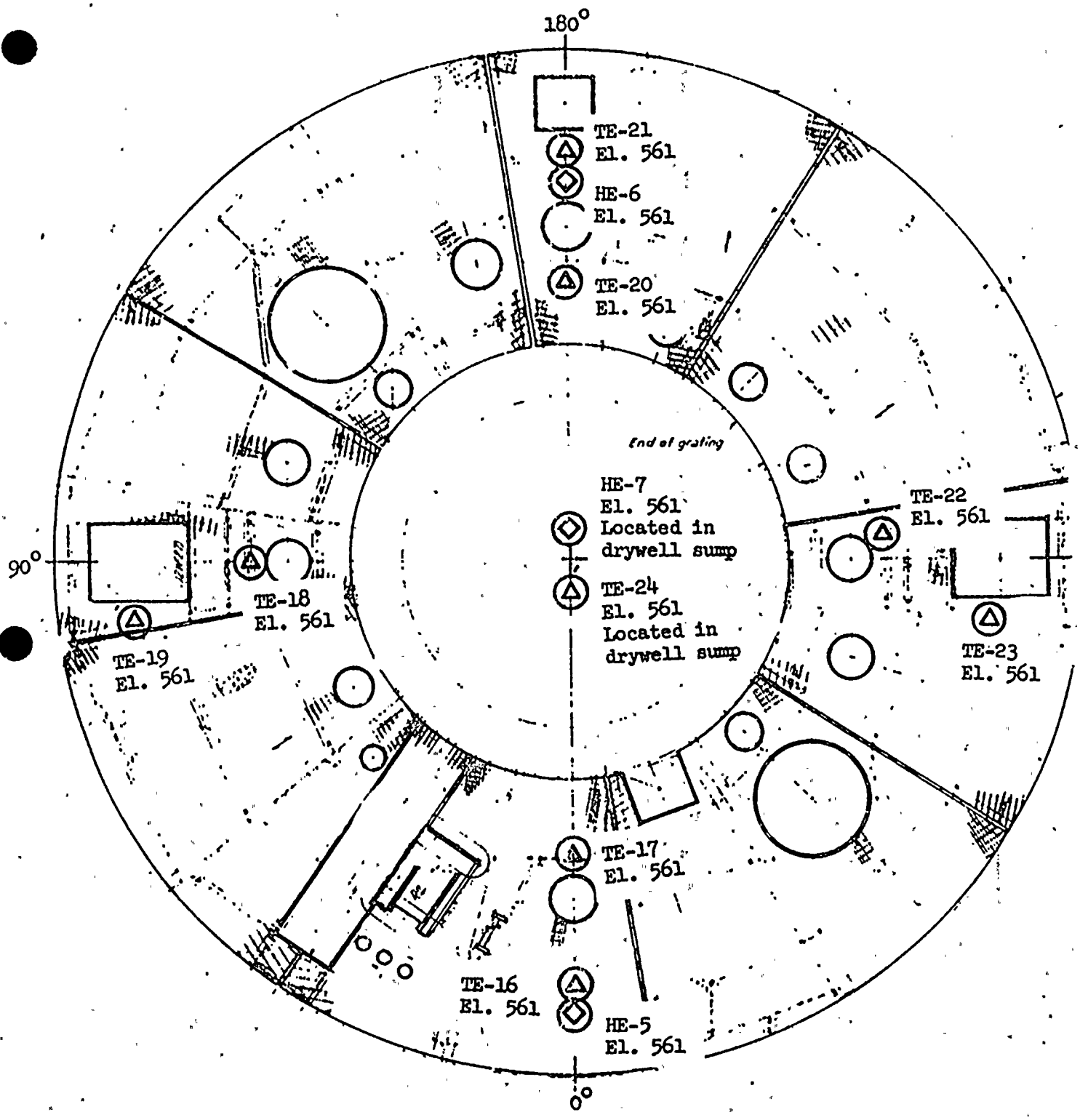
PLAN - EL 584'-11"
Top of steel 584'-9"

48N917

FIGURE 4

△ RTD Location, 8 required
Lower RTD 2 feet below grating

◇ Dewcell Location, 2 required
Lower dewcell 2 feet below grati



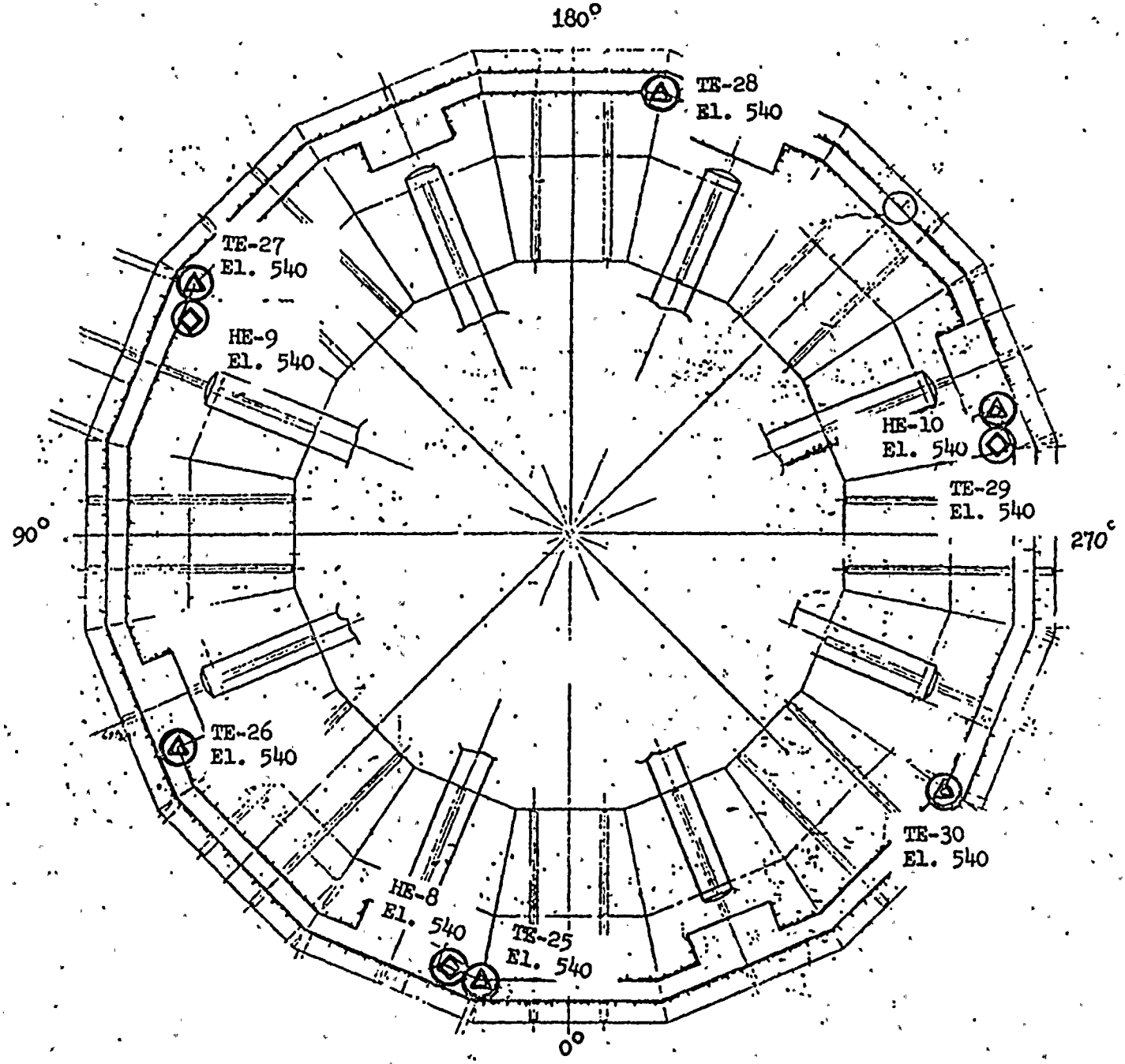
PLAN EL 563'-2"
Bp of steel El 563-0"

48N916

FIGURE 5

△ RTD Location, 9 required
Lower RTD 2 feet below grating

◇ Dewcell Location, 3 required
Lower dewcell 2 feet below grating



Suppression Chamber
Walkway Grating
FIGURE 6

◇ Dewcell Location, 3 required
△ RTD Location, 6 required
RTD and Dewcell to be tied to top of handrail

Walkway Elevation El = 537.0

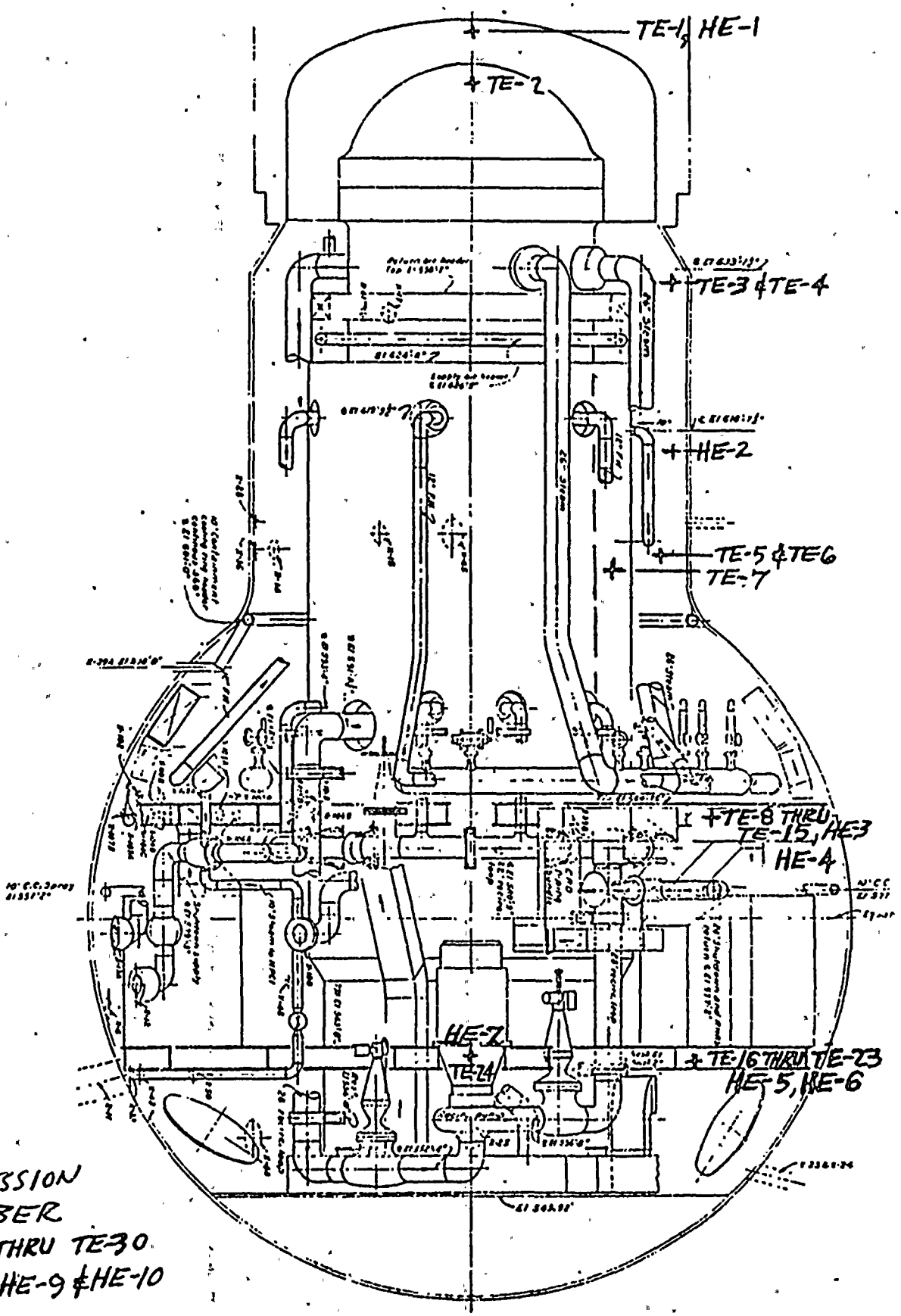

TE-1, HE-1
TE-2
TE-3 & TE-4
HE-2
TE-5 & TE-6
TE-7
TE-8 THRU TE-15, HE-3
HE-4
HE-7
TE-24
TE-16 THRU TE-23
HE-5, HE-6
SUPPRESSION CHAMBER
TE-25 THRU TE-30
HE-8, HE-9 & HE-10
SECTION D-D

FIGURE 7

COMPUTER BASE ACQUISITION AND DATA REDUCTION SYSTEM

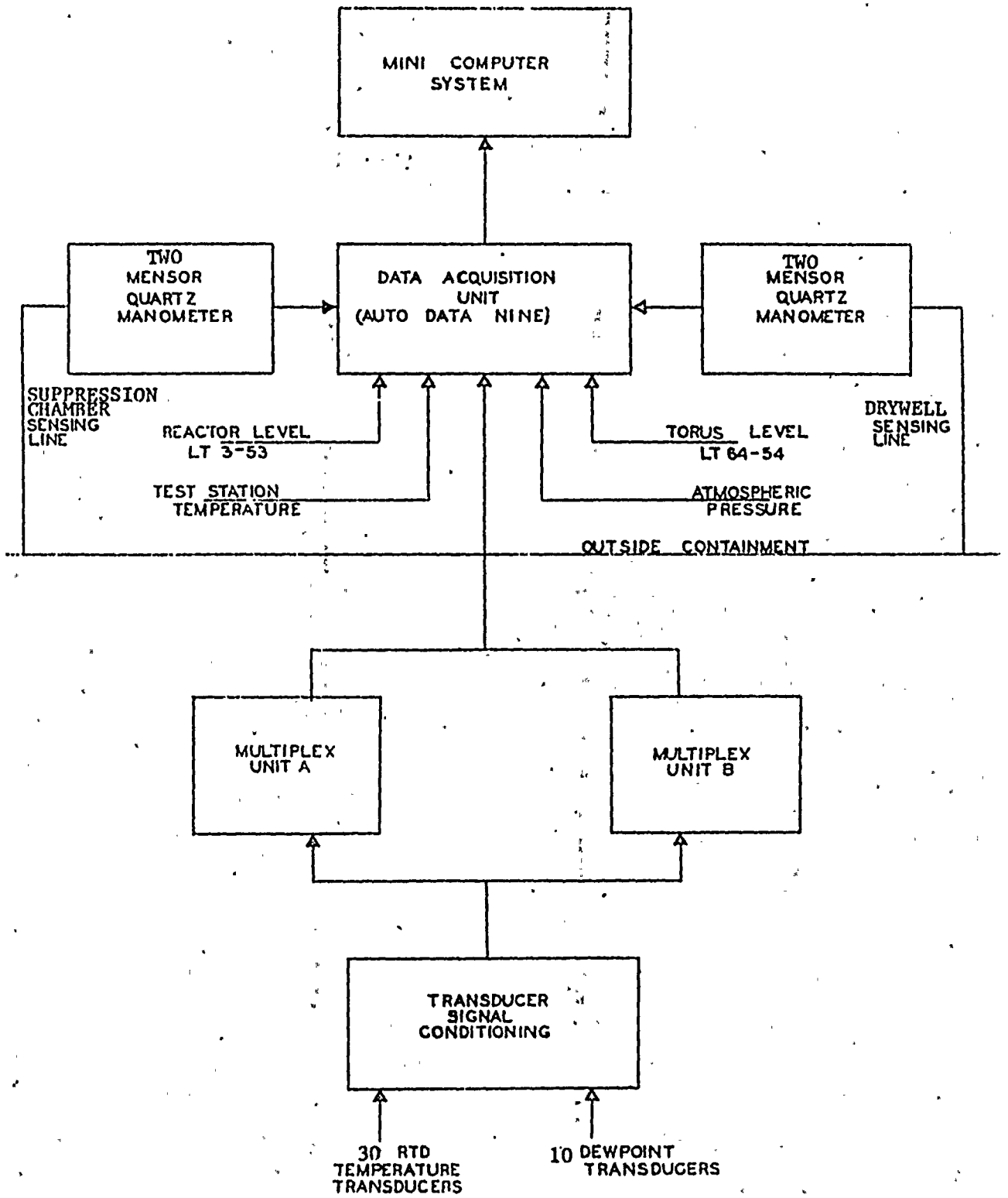


FIGURE 8

FIGURE 9

CORRECTED

MASS PLOT

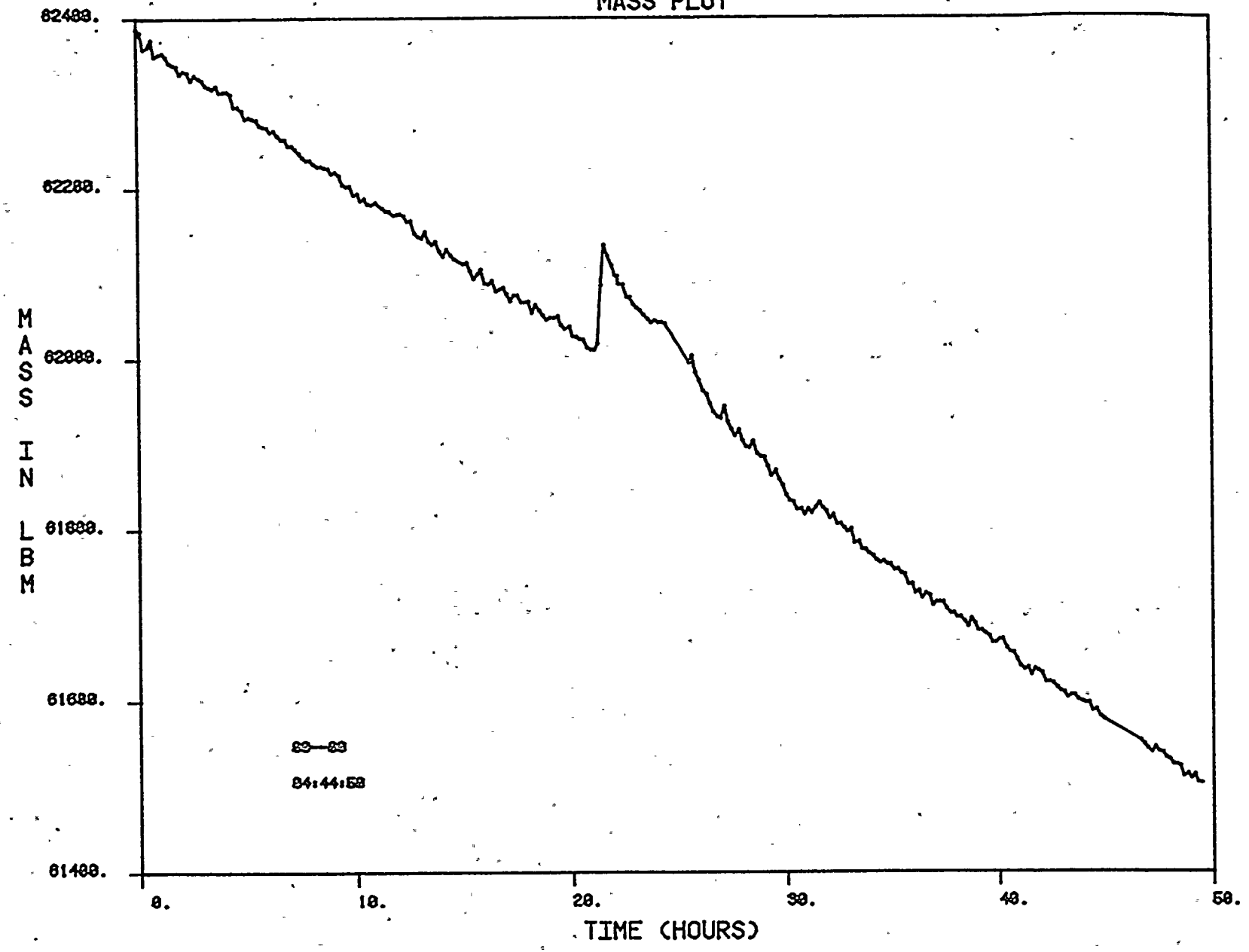


FIGURE 10

Uncorrected

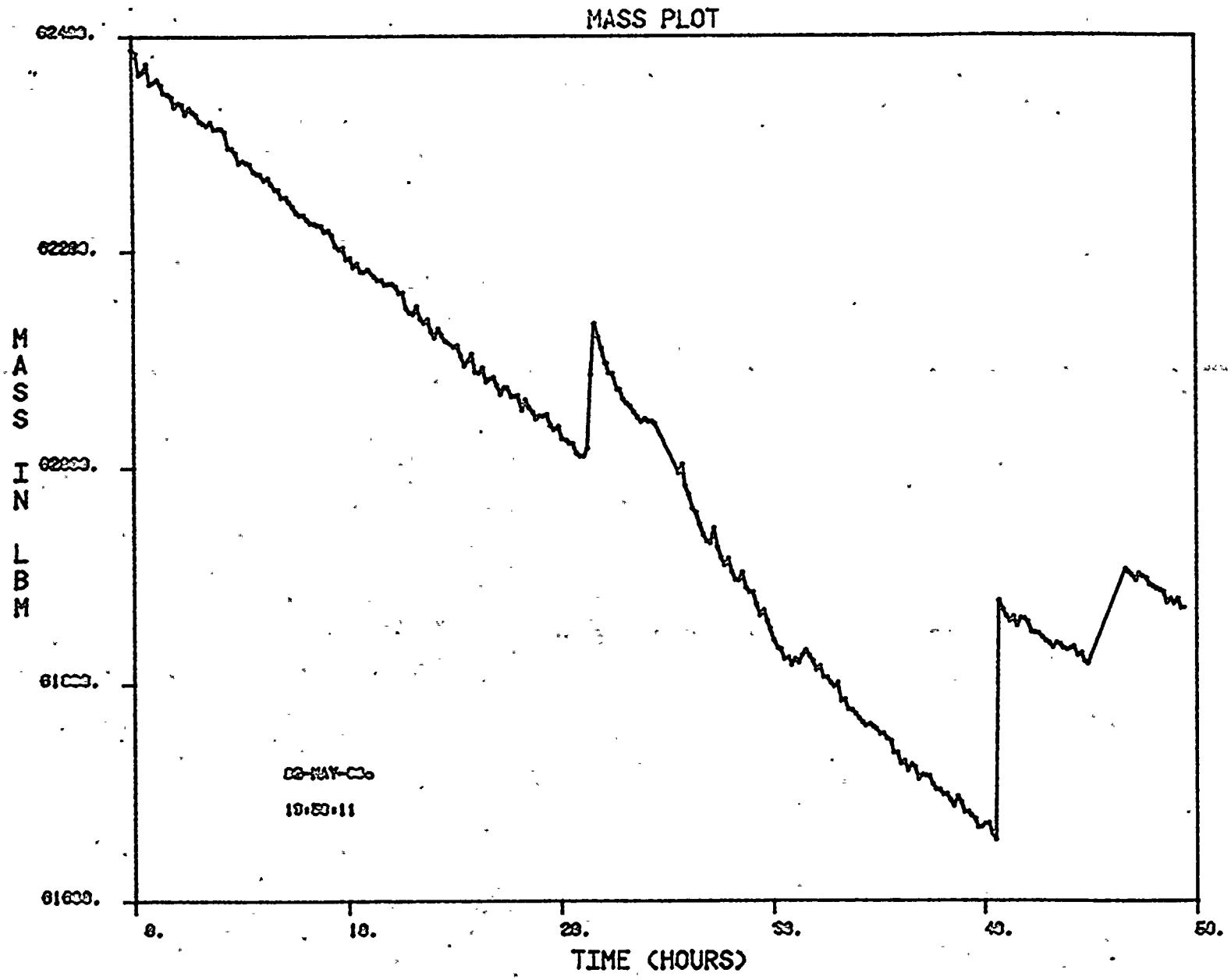


FIGURE 11
Corrected

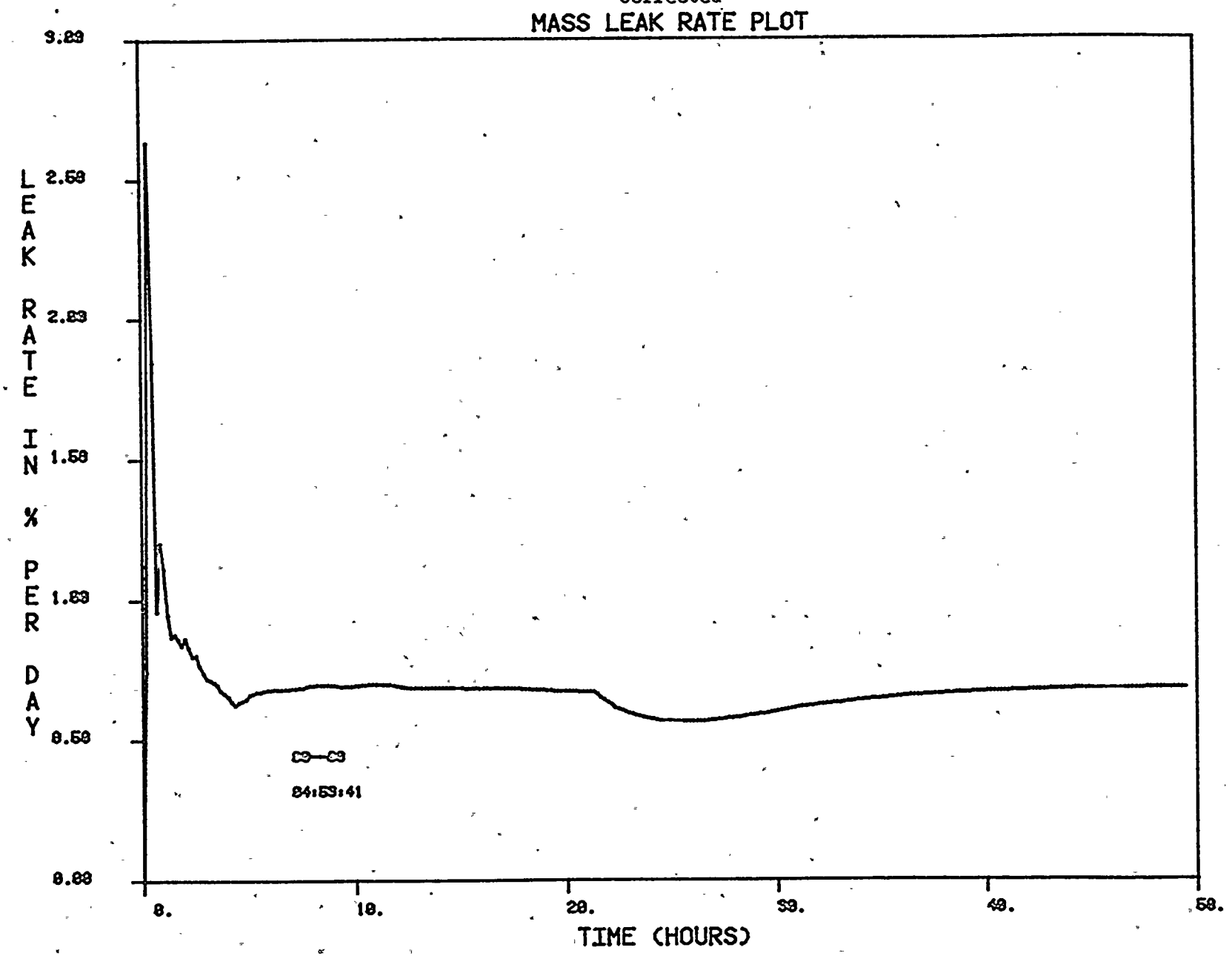


FIGURE 12

Uncorrected

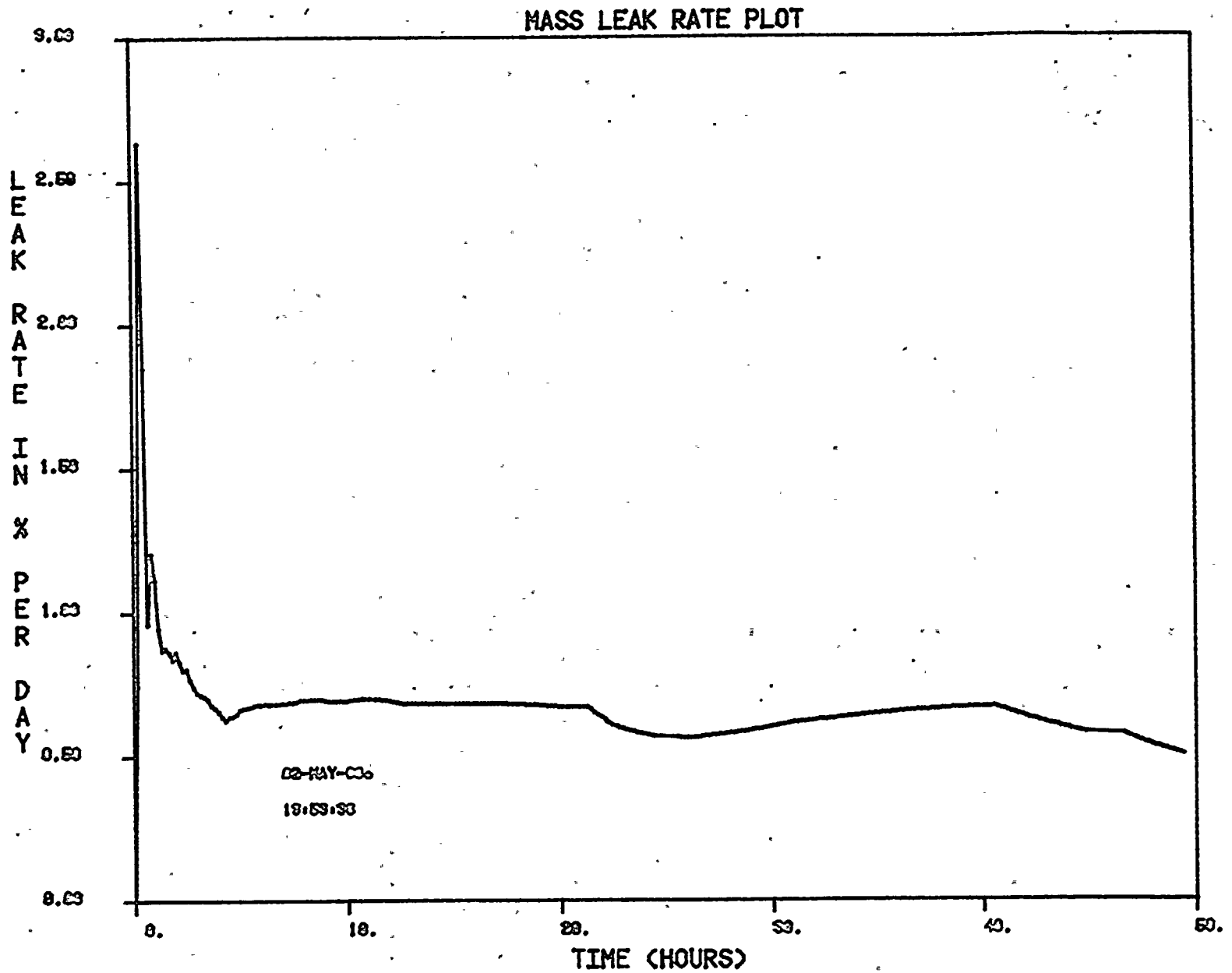


FIGURE 13

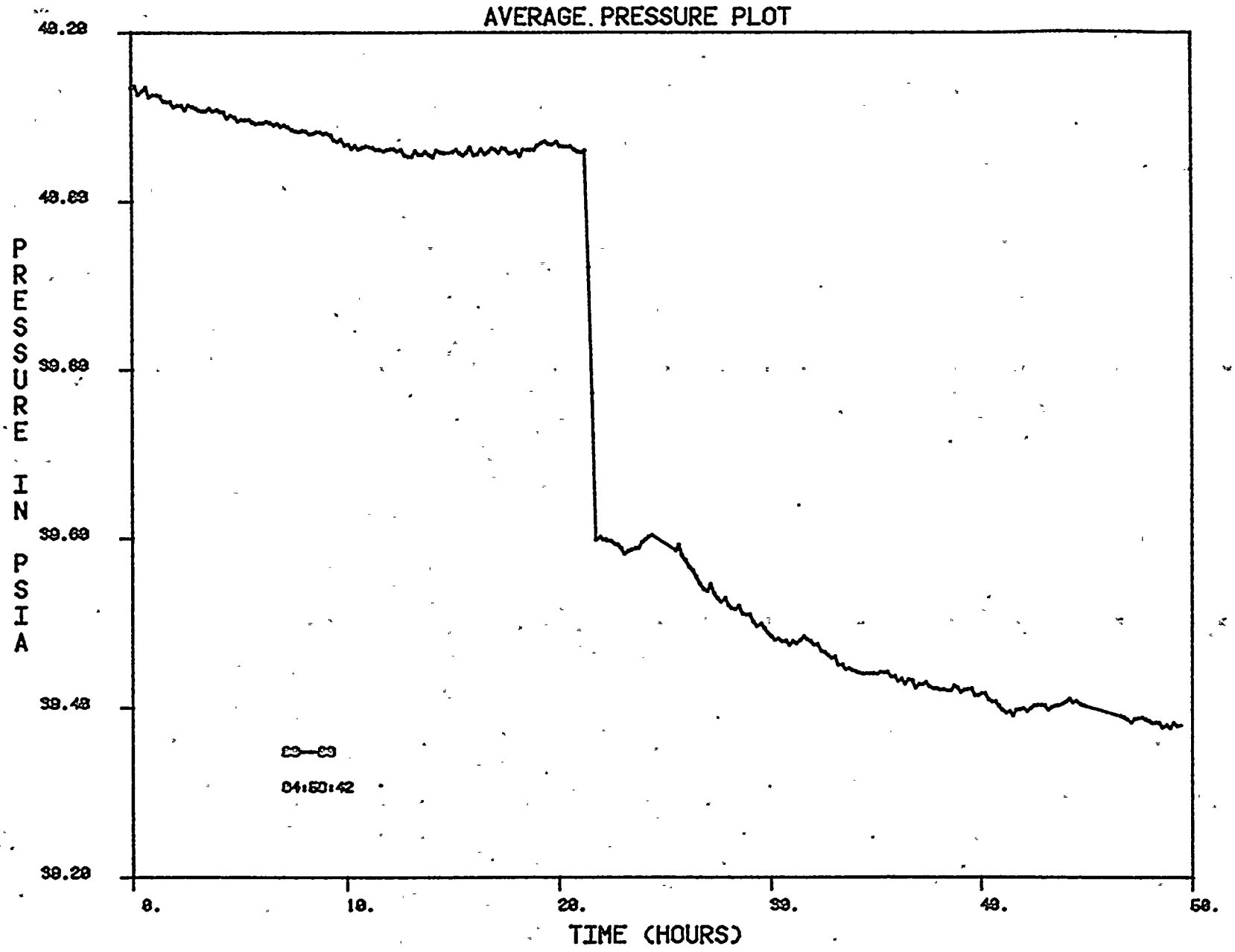

AVERAGE. PRESSURE PLOT
40.20
40.00
39.80
39.60
39.40
39.20
PRESSURE IN PSIA
C3—C3
04:50:42
0.
10.
20.
30.
40.
50.
TIME (HOURS)

FIGURE 14

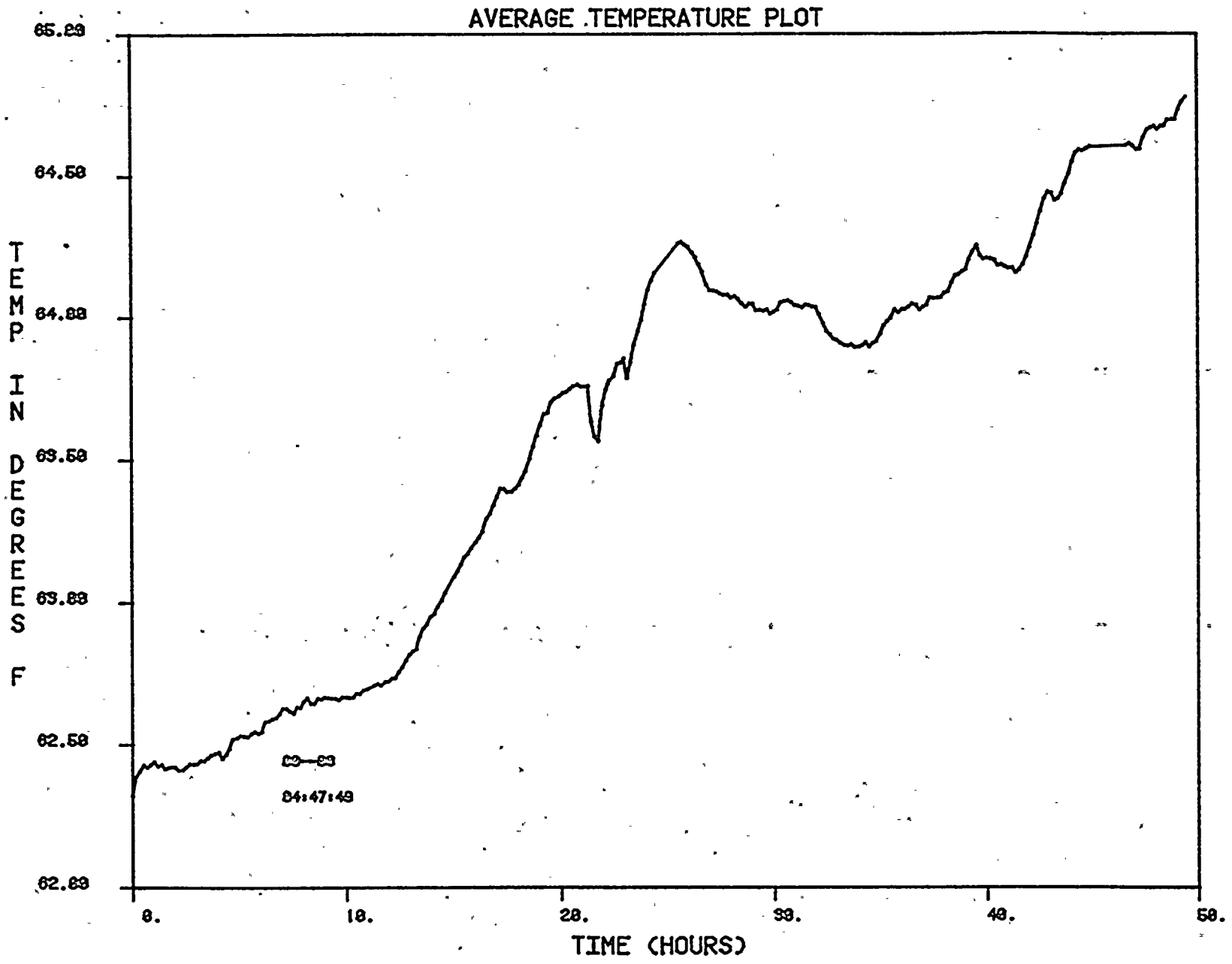

AVERAGE TEMPERATURE PLOT
65.00
64.50
64.00
63.50
63.00
62.50
62.00
TEMP IN DEGREES F
00—00
04:47:49
0.
10.
20.
30.
40.
50.
TIME (HOURS)

FIGURE 15
Verification Test

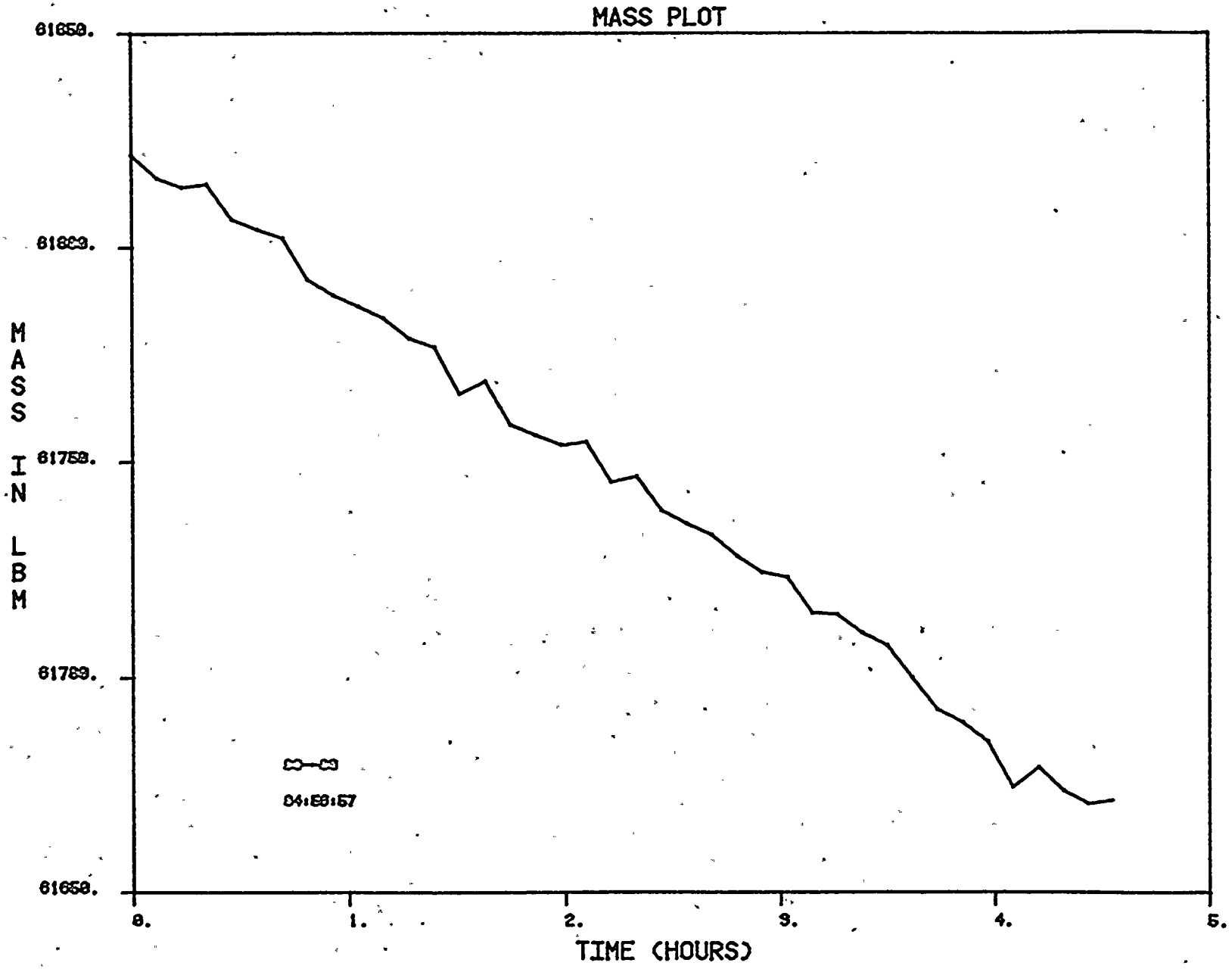


FIGURE 16
Verification Test

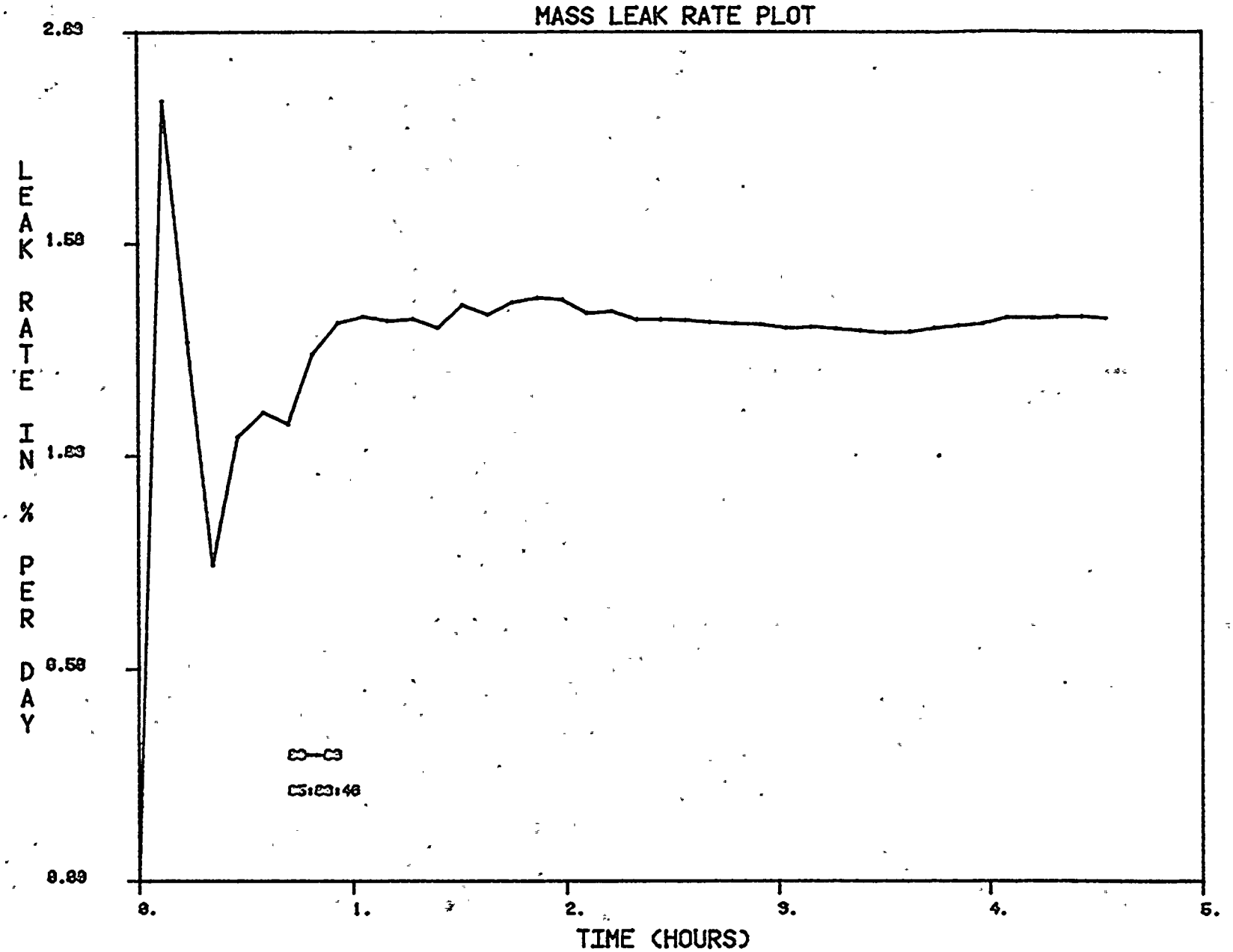


FIGURE 17
Verification Test

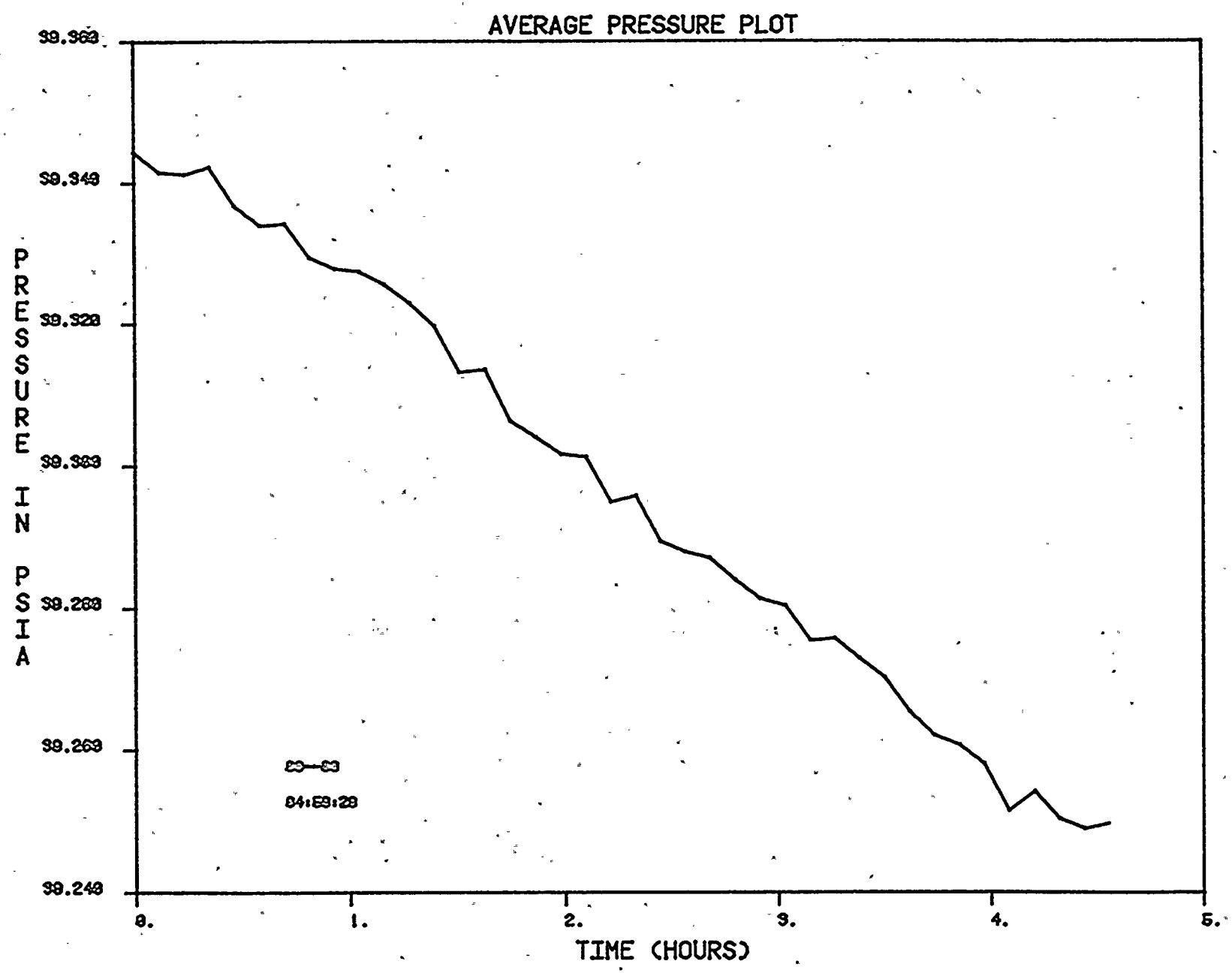
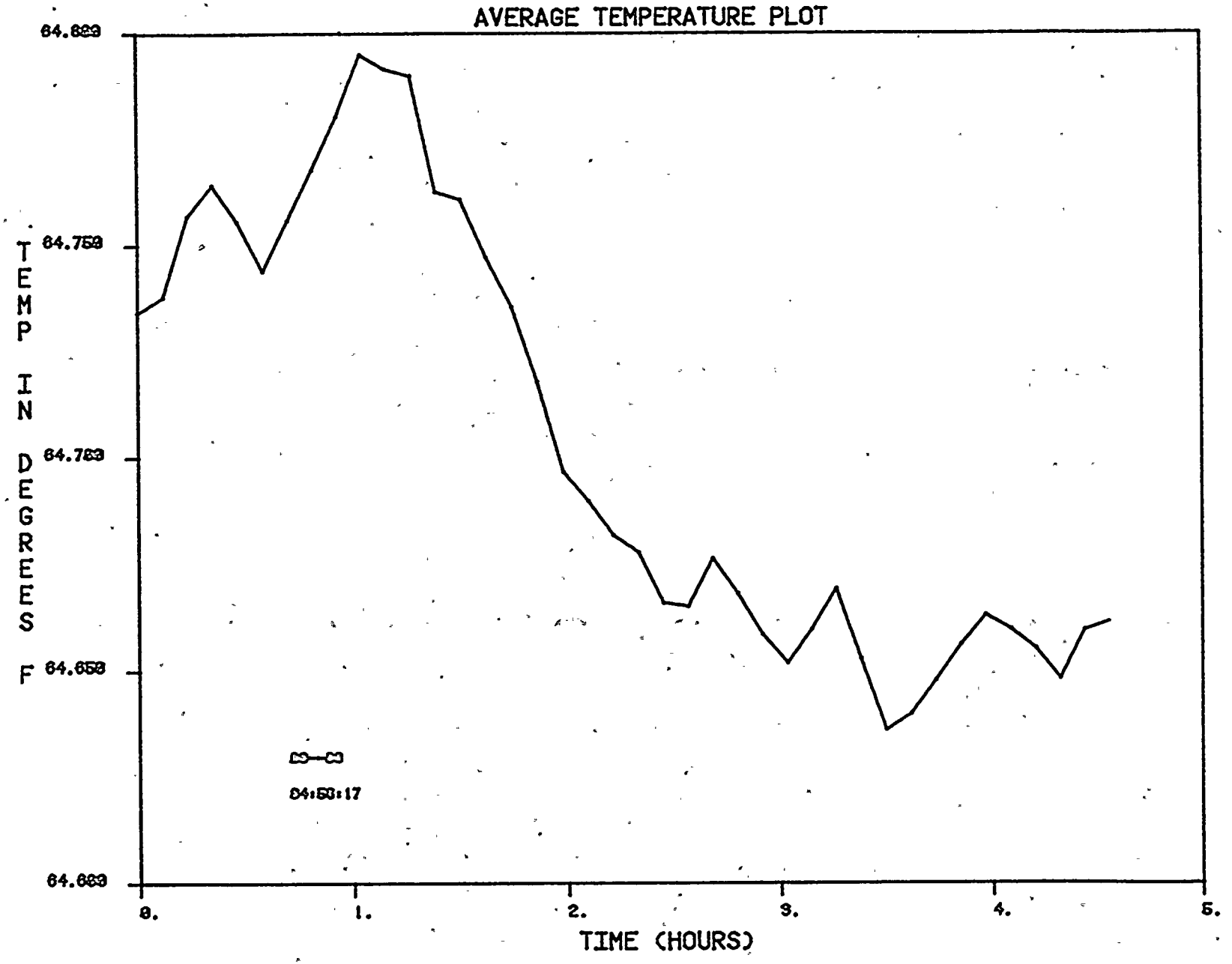


FIGURE 18
Verification Test



READY

FIGURE 19

CONTAINMENT TEST SECTION SUPPRESSION CHAMBER WATER LEVEL BFNP UNIT 1

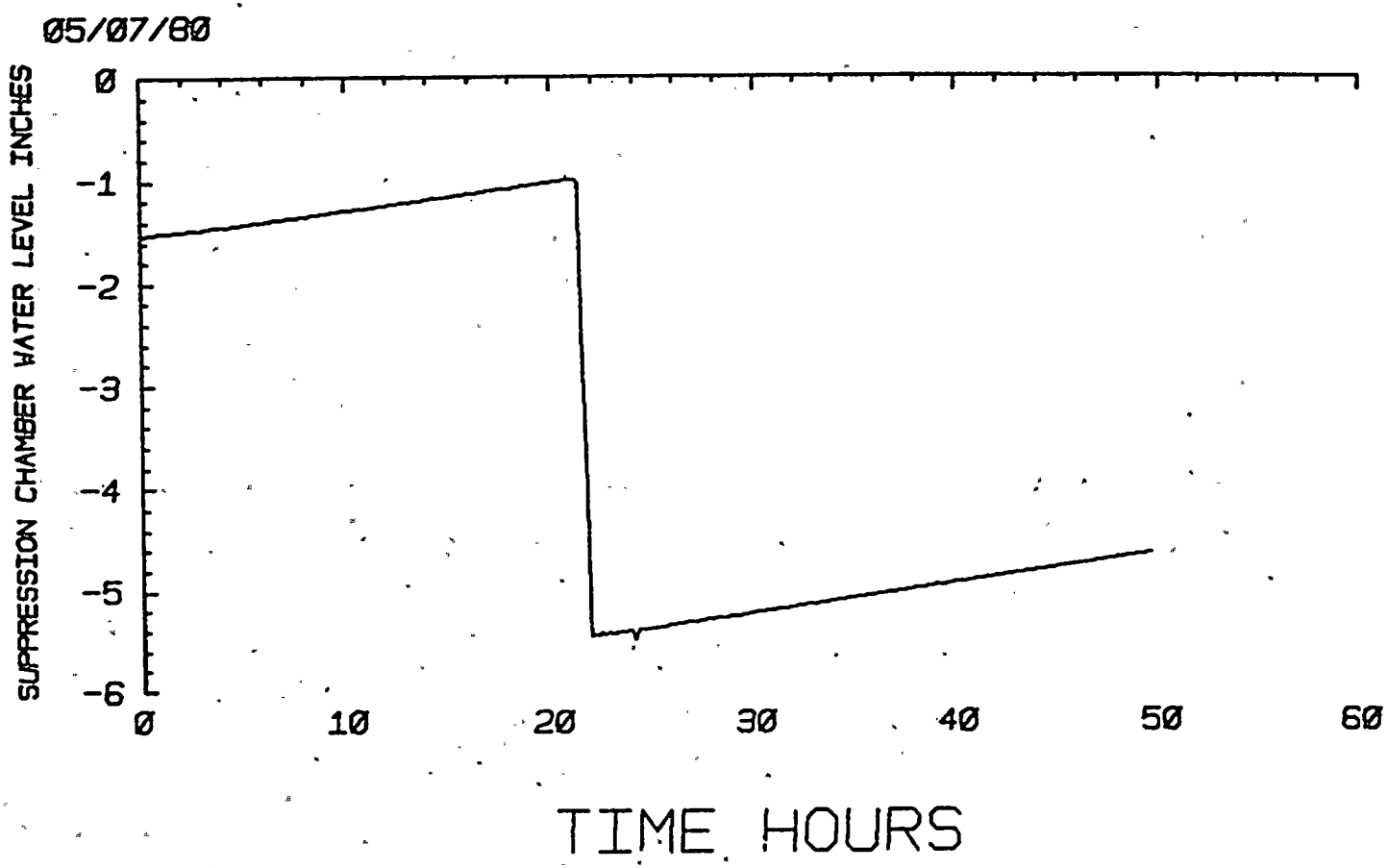


FIGURE 20

CONTAINMENT TEST SECTION
UNCORRECTED SUPPRESSION CHAMBER WATER LEVEL
BFNP UNIT 1

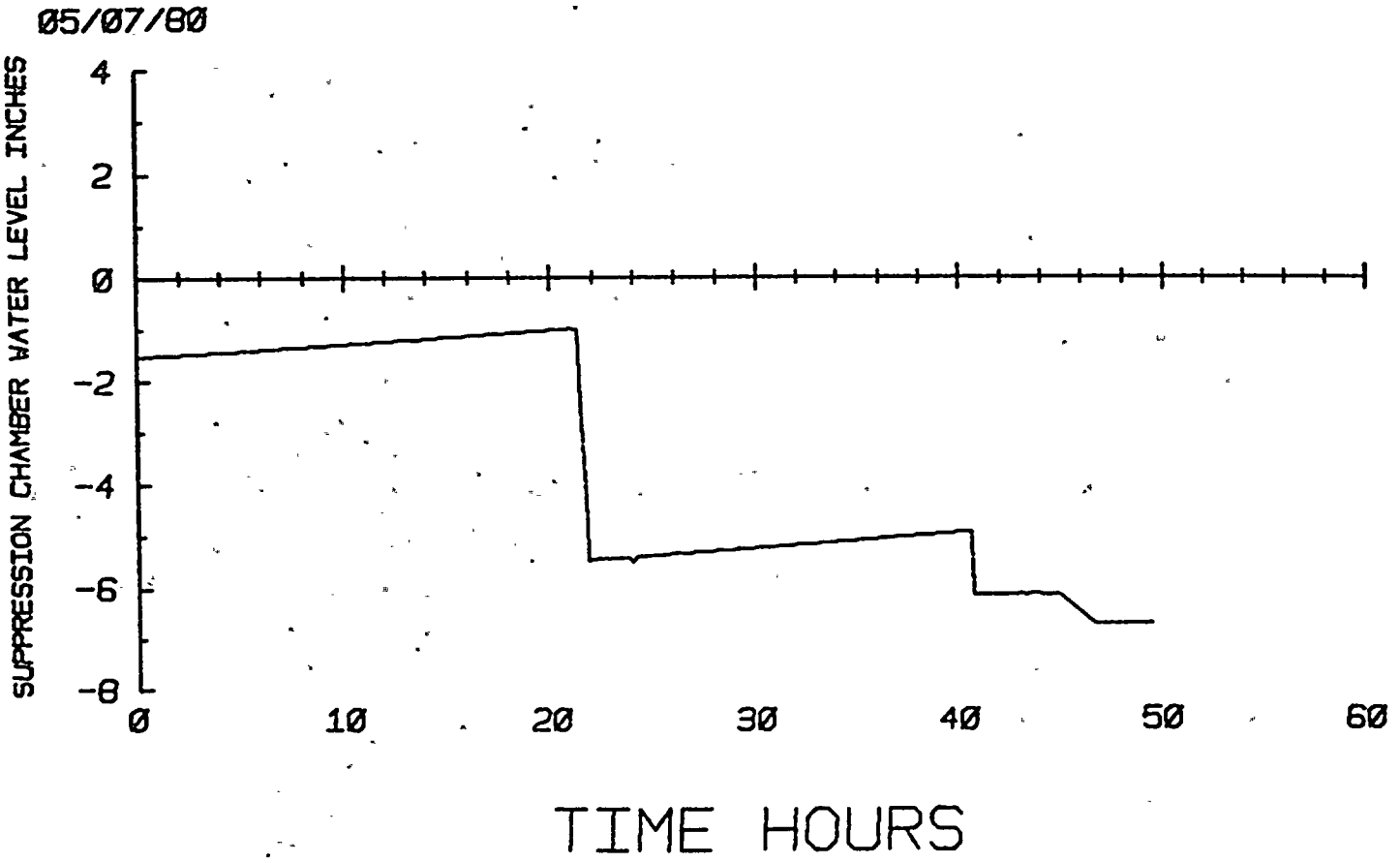


TABLE 1

Measured Parameter	Manufacturer and Model No.	Approximate Number Used	Instrument Specification	
Containment Temperature	Leeds & Northrup Model No. 178055	30	Range: Accuracy: Repeatability:	0-250°F ±0.1°F ±0.01°F
Containment Pressure	Mensor Corporation Model No. 10100-001	4	Range: Accuracy: Repeatability:	0-100 psia, 400,000 counts F.S. ±0.015% reading ±0.0005% reading
Containment Dewpoint	Foxboro Corporation Model No. 2701 RG	10	Range: Accuracy: Repeatability:	-50 to +142°F ±1°F dewpoint ±0.10°F
Analog to Digital Converter	Acurex Corp. Autodata Nine	1	Accuracy:	±0.001°F dewpoint ±0.001°F temperature ±1 count pressure
Atmospheric Pressure	Mensor Corp. Model No. 10100-001	1	Range: Accuracy: Repeatability:	0-30 psia, 400,000 counts F.S. ±0.015% reading ±0.0005% reading
Verification Flow	Fischer-Porter Rotameter 3/8" Model No. FP3F-3/8-25-5 1" Model No. FP135-G-10/55 OR	1	Range: Accuracy:	3/8" tube 0-90,000 SCCM; 1" tube 0-230,000 SCCM ±1% F.S.
	Teledyne-Hastings Mass Flowmeter Model No. AHL-5 with H-3M Transducer	1	Range: Accuracy	0-5 SCFM ±1% F.S.
Mensor Chamber Temperature	Princo ASTM 19L	5	Range: Accuracy:	49° to 57°C ±0.12°C
Suppression Chamber water Level	Plant Process Transmitter Model LT 64-54	1	Range: Accuracy:	±25 inches of water ±5 % F.S.
Reactor Vessel Water Level	Plant Process Transmitter Model LT-3-53	1	Range: Accuracy:	0-60 inches of water ±5% F.S.

TABLE 2
VOLUMETRIC WEIGHTING GROUPS

Segment Number	Number of Transducers	Segment Volume	Volumetric Weight Per Sensor By Compartment (Percent) See Note
Temperature			
I	1	8,300.87	4.9824
II	8	50,299.72	3.7739
III	8	55,908.76	4.1947
IV	4	30,862.61	4.6311
V	1	5,585.39	3.3525
VI	1	8,101.92	4.8629
VII	1	7,545.95	4.5292
VIII	6	133,240.00	16.6667
Dewpoint			
I & II	1	58,600.59	35.17
III	1	55,908.76	33.56
IV, V, VI, VII	2	52,095.87	15.63
VIII	2	133,240.00	50.0000

Note: Segment VIII consists of the suppression chamber and is considered here as a independent volume from the drywell.

TABLE 3
CONTAINMENT LEAKAGE MEASUREMENT
MINICOMPUTER ROUTINE SUMMARY

Routine Name	
FORE	a. Automatically scquire, store, and correct raw data to calibration curves. b. Calculate volumetric weighted containment air mass and leak rate as defined by ANS N-274 (draft). c. Print for each sample a summary with average parameters and containment leak rate.
LIST	Provide a summary for all samples from test start of average parameters, including calculated containment leak rate.
TALLY	a. Calculate statistical confidence levels for the measured leak rate from the test start. b. Provide a summary comparison of reportable leak rates as defined by ANS N-274 (draft).
BASE	a. Allow test director to change the sample considered the test base. b. Provide a summary for each sample leak rate recalculated with a shift in the test base.

TABLE 4

SUPPRESSION CHAMBER WATER LEVELS

Corrected

SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)
25	-1.53	26	-1.53	27	-1.52	28	-1.51	29	-1.52
30	-1.51	31	-1.51	32	-1.51	33	-1.50	34	-1.50
35	-1.50	36	-1.49	37	-1.49	38	-1.48	39	-1.48
40	-1.48	41	-1.47	42	-1.47	43	-1.47	44	-1.46
45	-1.46	46	-1.45	47	-1.45	48	-1.45	49	-1.44
50	-1.44	51	-1.44	52	-1.44	53	-1.43	54	-1.43
55	-1.42	56	-1.42	57	-1.41	58	-1.41	59	-1.40
60	-1.40	61	-1.39	62	-1.39	63	-1.38	64	-1.38
65	-1.38	66	-1.37	67	-1.37	68	-1.36	69	-1.36
70	-1.36	71	-1.35	72	-1.35	73	-1.35	74	-1.34
75	-1.33	76	-1.33	77	-1.32	78	-1.31	79	-1.31
80	-1.31	81	-1.31	82	-1.30	83	-1.30	84	-1.29
85	-1.28	86	-1.29	87	-1.28	88	-1.27	89	-1.27
90	-1.26	91	-1.27	92	-1.25	93	-1.25	94	-1.24
95	-1.24	96	-1.24	97	-1.23	98	-1.22	99	-1.22
100	-1.22	101	-1.21	102	-1.21	103	-1.20	104	-1.20
105	-1.20	106	-1.19	107	-1.19	108	-1.18	109	-1.17
110	-1.17	111	-1.17	112	-1.16	113	-1.15	114	-1.15
115	-1.14	116	-1.14	117	-1.14	118	-1.13	119	-1.13
120	-1.12	121	-1.11	122	-1.11	123	-1.11	124	-1.10
125	-1.10	126	-1.09	127	-1.08	128	-1.08	129	-1.08
130	-1.07	131	-1.07	132	-1.06	133	-1.06	134	-1.05
135	-1.05	136	-1.04	137	-1.04	138	-1.04	139	-1.03
140	-1.03	141	-1.02	142	-1.02	143	-1.01	144	-1.01
145	-1.00	146	-1.00	147	-0.99	148	-0.99	149	-0.99
150	-1.02	151	-2.49	152	-4.00	153	-5.44	154	-5.44
155	-5.43	156	-5.43	157	-5.41	158	-5.42	159	-5.41
160	-5.41	161	-5.41	162	-5.40	163	-5.40	164	-5.40
165	-5.39	166	-5.39	167	-5.38	168	-5.37	169	-5.37
170	-5.37	171	-5.34	172	-5.33	173	-5.32	174	-5.32
175	-5.31	176	-5.32	177	-5.30	178	-5.30	179	-5.30
180	-5.29	181	-5.29	182	-5.28	183	-5.27	184	-5.27
185	-5.27	186	-5.26	187	-5.26	188	-5.25	189	-5.25
190	-5.25	191	-5.24	192	-5.23	193	-5.23	194	-5.22
195	-5.22	196	-5.21	197	-5.21	198	-5.20	199	-5.20
200	-5.20	201	-5.18	202	-5.19	203	-5.18	204	-5.17
205	-5.17	206	-5.17	207	-5.17	208	-5.16	209	-5.15
210	-5.14	211	-5.14	212	-5.14	213	-5.13	214	-5.12
215	-5.12	216	-5.12	217	-5.11	218	-5.11	219	-5.10
220	-5.10	221	-5.09	222	-5.08	223	-5.08	224	-5.08
225	-5.07	226	-5.07	227	-5.06	228	-5.06	229	-5.05
230	-5.05	231	-5.04	232	-5.04	233	-5.03	234	-5.02
235	-5.02	236	-5.02	237	-5.01	238	-5.01	239	-5.00
240	-5.00	241	-4.99	242	-4.99	243	-4.98	244	-4.98
245	-4.97	246	-4.97	247	-4.96	248	-4.96	249	-4.95
250	-4.94	251	-4.94	252	-4.94	253	-4.93	254	-4.93
255	-4.92	256	-4.92	257	-4.91	258	-4.90	259	-4.90
260	-4.90	261	-4.89	262	-4.88	263	-4.88	264	-4.87
265	-4.87	266	-4.86	267	-4.86	268	-4.85	269	-4.85
270	-4.84	271	-4.84	272	-4.83	273	-4.83	274	-4.82
275	-4.82	276	-4.81	277	-4.81	278	-4.80	279	-4.80
280	-4.79	281	-4.79	282	-4.78	283	-4.78	284	-4.78
285	-4.77	286	-4.77	287	-4.76	288	-4.71	289	-4.70
290	-4.70	291	-4.69	292	-4.69	293	-4.68	294	-4.68
295	-4.67	296	-4.67	297	-4.66	298	-4.66	299	-4.66
300	-4.65	301	-4.65	302	-4.64	303	-4.64	304	-4.63
305	-4.63								

TABLE 5

SUPPRESSION CHAMBER WATER LEVELS

Uncorrected

SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)	SAMPLE NUMBER	SC LEVEL (INCHES)
25	-1.53	26	-1.53	27	-1.52	28	-1.51	29	-1.52
30	-1.51	31	-1.51	32	-1.51	33	-1.50	34	-1.50
35	-1.50	36	-1.49	37	-1.49	38	-1.48	39	-1.48
40	-1.48	41	-1.47	42	-1.47	43	-1.47	44	-1.46
45	-1.46	46	-1.45	47	-1.45	48	-1.45	49	-1.44
50	-1.44	51	-1.44	52	-1.44	53	-1.43	54	-1.43
55	-1.42	56	-1.42	57	-1.41	58	-1.41	59	-1.40
60	-1.40	61	-1.39	62	-1.39	63	-1.38	64	-1.38
65	-1.38	66	-1.37	67	-1.37	68	-1.36	69	-1.36
70	-1.36	71	-1.35	72	-1.35	73	-1.35	74	-1.34
75	-1.33	76	-1.33	77	-1.32	78	-1.31	79	-1.31
80	-1.31	81	-1.31	82	-1.30	83	-1.30	84	-1.29
85	-1.28	86	-1.29	87	-1.28	88	-1.27	89	-1.27
90	-1.26	91	-1.27	92	-1.25	93	-1.25	94	-1.24
95	-1.24	96	-1.24	97	-1.23	98	-1.22	99	-1.22
100	-1.22	101	-1.21	102	-1.21	103	-1.20	104	-1.20
105	-1.20	106	-1.19	107	-1.19	108	-1.18	109	-1.17
110	-1.17	111	-1.17	112	-1.16	113	-1.15	114	-1.15
115	-1.14	116	-1.14	117	-1.14	118	-1.13	119	-1.13
120	-1.12	121	-1.11	122	-1.11	123	-1.11	124	-1.10
125	-1.10	126	-1.09	127	-1.08	128	-1.08	129	-1.08
130	-1.07	131	-1.07	132	-1.06	133	-1.06	134	-1.05
135	-1.05	136	-1.04	137	-1.04	138	-1.04	139	-1.03
140	-1.03	141	-1.02	142	-1.02	143	-1.01	144	-1.01
145	-1.00	146	-1.00	147	-0.99	148	-0.99	149	-0.99
150	-1.02	151	-2.49	152	-4.00	153	-5.44	154	-5.44
155	-5.43	156	-5.43	157	-5.41	158	-5.42	159	-5.41
160	-5.41	161	-5.41	162	-5.40	163	-5.40	164	-5.40
165	-5.39	166	-5.39	167	-5.38	168	-5.37	169	-5.37
170	-5.37	171	-5.34	172	-5.33	173	-5.32	174	-5.32
175	-5.31	176	-5.32	177	-5.30	178	-5.30	179	-5.30
180	-5.29	181	-5.29	182	-5.28	183	-5.27	184	-5.27
185	-5.27	186	-5.26	187	-5.26	188	-5.25	189	-5.25
190	-5.25	191	-5.24	192	-5.23	193	-5.23	194	-5.22
195	-5.22	196	-5.21	197	-5.21	198	-5.20	199	-5.20
200	-5.20	201	-5.18	202	-5.19	203	-5.18	204	-5.17
205	-5.17	206	-5.17	207	-5.17	208	-5.16	209	-5.15
210	-5.14	211	-5.14	212	-5.14	213	-5.13	214	-5.12
215	-5.12	216	-5.12	217	-5.11	218	-5.11	219	-5.10
220	-5.10	221	-5.09	222	-5.08	223	-5.08	224	-5.08
225	-5.07	226	-5.07	227	-5.06	228	-5.06	229	-5.05
230	-5.05	231	-5.04	232	-5.04	233	-5.03	234	-5.02
235	-5.02	236	-5.02	237	-5.01	238	-5.01	239	-5.00
240	-5.00	241	-4.99	242	-4.99	243	-4.98	244	-4.98
245	-4.97	246	-4.97	247	-4.96	248	-4.96	249	-4.95
250	-4.94	251	-4.94	252	-4.94	253	-4.93	254	-4.93
255	-4.92	256	-4.92	257	-4.91	258	-4.90	259	-4.90
260	-4.90	261	-4.89	262	-6.14	263	-6.13	264	-6.13
265	-6.13	266	-6.13	267	-6.13	268	-6.12	269	-6.13
270	-6.12	271	-6.13	272	-6.12	273	-6.12	274	-6.12
275	-6.12	276	-6.11	277	-6.12	278	-6.12	279	-6.11
280	-6.11	281	-6.11	282	-6.13	283	-6.13	284	-6.13
285	-6.13	286	-6.13	287	-6.13	288	-6.72	289	-6.72
290	-6.72	291	-6.72	292	-6.71	293	-6.72	294	-6.72
295	-6.71	296	-6.71	297	-6.72	298	-6.71	299	-6.70
300	-6.71	301	-6.71	302	-6.71	303	-6.71	304	-6.71
305	-6.71								

TABLE 6

REACTOR VESSEL WATER LEVELS

SAMPLE NUMBER	RX LEVEL (INCHES)	SAMPLE NUMBER	RX LEVEL (INCHES)	SAMPLE NUMBER	RX LEVEL (INCHES)	SAMPLE NUMBER	RX LEVEL (INCHES)	SAMPLE NUMBER	RX LEVEL (INCHES)
25	23.15	26	23.03	27	23.00	28	22.93	29	22.83
30	22.74	31	22.67	32	22.61	33	22.55	34	22.56
35	22.57	36	22.57	37	22.57	38	22.55	39	22.53
40	22.52	41	22.51	42	22.49	43	22.47	44	22.46
45	22.45	46	22.45	47	22.46	48	22.48	49	22.51
50	22.48	51	22.52	52	22.54	53	22.57	54	22.61
55	22.65	56	22.68	57	22.71	58	22.71	59	22.70
60	22.69	61	22.70	62	22.72	63	22.70	64	22.69
65	22.73	66	22.77	67	22.85	68	22.95	69	23.02
70	23.12	71	23.17	72	23.17	73	23.16	74	23.19
75	23.24	76	23.28	77	23.32	78	23.33	79	23.35
80	23.35	81	23.37	82	23.36	83	23.35	84	23.40
85	23.42	86	23.43	87	23.43	88	23.40	89	23.38
90	23.35	91	23.32	92	23.23	93	23.21	94	23.15
95	23.10	96	23.06	97	23.02	98	22.97	99	22.91
100	22.84	101	22.76	102	22.67	103	22.66	104	22.60
105	22.53	106	22.51	107	22.45	108	22.40	109	22.39
110	22.33	111	22.28	112	22.27	113	22.15	114	22.11
115	22.03	116	22.00	117	21.94	118	21.84	119	21.77
120	21.71	121	21.58	122	21.47	123	21.41	124	21.33
125	21.23	126	21.18	127	21.08	128	20.99	129	20.94
130	20.90	131	20.81	132	20.75	133	20.68	134	20.57
135	20.53	136	20.48	137	20.42	138	20.38	139	20.34
140	20.35	141	20.36	142	20.33	143	20.40	144	20.44
145	20.49	146	20.50	147	20.52	148	20.51	149	20.50
150	20.40	151	20.30	152	20.24	153	20.26	154	20.29
155	20.34	156	20.37	157	20.40	158	20.46	159	20.55
160	20.58	161	20.62	162	20.67	163	20.72	164	20.78
165	20.83	166	20.89	167	20.96	168	21.03	169	21.11
170	21.19	171	21.23	172	21.17	173	21.20	174	21.24
175	21.26	176	21.28	177	21.28	178	21.27	179	21.25
180	21.21	181	21.08	182	21.04	183	21.04	184	21.03
185	20.95	186	20.90	187	20.91	188	20.90	189	20.81
190	20.81	191	20.84	192	20.77	193	20.80	194	20.85
195	20.79	196	20.80	197	20.84	198	20.90	199	20.93
200	20.97	201	20.99	202	21.02	203	21.04	204	21.06
205	21.06	206	20.96	207	20.90	208	20.88	209	20.91
210	20.91	211	20.95	212	20.96	213	21.00	214	21.00
215	21.05	216	21.03	217	21.10	218	21.12	219	21.15
220	21.20	221	21.20	222	21.20	223	21.22	224	21.23
225	21.21	226	21.22	227	21.24	228	21.22	229	21.20
230	21.23	231	21.25	232	21.24	233	21.12	234	21.06
235	20.92	236	20.80	237	20.75	238	20.61	239	20.52
240	20.44	241	20.33	242	20.27	243	20.18	244	20.09
245	19.98	246	19.86	247	19.77	248	19.67	249	19.57
250	19.46	251	19.35	252	19.29	253	19.18	254	19.16
255	19.09	256	19.03	257	18.91	258	18.85	259	18.80
260	18.73	261	18.67	262	18.59	263	18.56	264	18.51
265	18.44	266	18.32	267	18.28	268	18.21	269	18.12
270	18.07	271	18.04	272	18.00	273	17.97	274	17.96
275	17.98	276	18.06	277	18.12	278	18.20	279	18.20
280	18.21	281	18.31	282	18.41	283	18.51	284	18.59
285	18.53	286	18.54	287	18.54	288	17.91	289	17.89
290	17.90	291	17.85	292	17.77	293	17.75	294	17.72
295	17.66	296	17.63	297	17.60	298	17.58	299	17.57
300	17.57	301	17.50	302	17.47	303	17.43	304	17.39
305	17.34								

APPENDIX A

INSTRUMENTATION ERROR ANALYSIS

APPENDIX A

Instrumentation Error Analysis:
(as defined in Appendix G, ANS N274 Draft No. 2, Revision 3)

Assumed conditions at the time of the test:

P = 25 + 14.696 = 39.696 psia

T = 459.67°+82 = 541.67°R

T_{dp} = 60°F dewpoint

t = 24 hours

Using the absolute method:

1. Total abosolute pressure:

   Number of sensors: 4

   Range: 0-100 psia

   Measurement system repeatability error (E_p) =

   $\pm$0.0005% reading = $\pm$0.000198 psia

   $\xi_p = \frac{1}{400{,}000} \times 100 \text{ psia} = 0.00025 \text{ psia}$

   $$e_p = \frac{\pm\left[(E_p)^2 + (\xi_p)^2\right]^{1/2}}{(\#\text{sensors})^{\frac{1}{2}}} = \pm 0.0001595 \text{ psia}$$

2. Water vapor pressure

   Number of sensors: 6 (see note 1)

   Sensor repeatability error (E): $\pm$0.1°F

   Measurement system error (ξ), excluding sensor: $\pm$0.001°F

   $$e_{pv} = \frac{\pm\left[(E_{pv})^2 + (\xi)^2\right]^{1/2}}{\#\text{sensors}^{\frac{1}{2}}}$$

   E_{pv} = $\pm$0.1°F (0.0092 psia/°F) = $\pm$0.00092 psia

$\mathcal{E}_{pv} = \pm 0.001^{\circ}F\ (0.0092\ psia/^{\circ}F) = \pm 0.0000092\ psia$

$e_{pv} = \pm 0.0003756\ psia$

3. Temperature

Number of sensors: 30

Sensor repeatability error (E): $\pm 0.01^{\circ}R$

Measurement system error ($\mathcal{E}$) excluding sensor: $\pm 0.001^{\circ}R$

$$e_T = \pm \frac{[(E_T)^2 + (\mathcal{E}_T)^2]^{1/2}}{\#sensors^{\frac{1}{2}}}$$

$e_T = \pm 0.001835^{\circ}R$

4. ISG

$$ISG = \pm \frac{2400}{t}\left[2\left(\frac{e_p}{p}\right)^2 + 2\left(\frac{e_{pv}}{p}\right)^2 + 2\left(\frac{e_T}{T}\right)^2\right]^{1/2}$$

$$ISG = \pm \frac{2400}{24}\left[2\left[\frac{0.0001595}{39.696}\right]^2 + 2\left[\frac{0.0003756}{39.696}\right]^2 + 2\left[\frac{0.001835}{541.67}\right]^2\right]^{1/2}$$

$ISG = \pm 0.001454\ \%/day$

Notes: 1. Test started with ten dewcells. Four dewcells were found to be inoperative.

APPENDIX A
DEFINITION OF SYMBOLS

P - Absolute pressure, psia

T - Temperature, degrees Rankine

T_{dp} - Temperature, dewpoint

t - Time, hours

E - Measurement system repeatability error

ξ - Error associated with the sensor

ISG - Instrumentation selection guide

e - Error associated with measurement of change in a given parameter

Subscripts

T - Temperature

P - Pressure

PV - Vapor pressure

APPENDIX B

SUMMARY OF TYPES B AND C TESTING

PERFORMED ON BROWNS FERRY NUCLEAR PLANT UNIT 1

TABLE OF CONTENTS

APPENDIX B

1.0 Introduction

Appendix J to 10CFR50 and Browns Ferry technical specifications require that the total leakage from all penetrations subject to types B and C testing be less than 0.60 La for return to power operations. Technical specifications 4.7.A.2.i requires that the leakage through each main steam isolation valve be less than 11.5 SCFH, in addition to the total leakage requirement. This appendix presents a summary of all local leak rate testing performed on Browns Ferry Unit 1 since the CILRT completed in August of 1976.

2.0 Summary

Tables B-1, B-3, and B-5 lists the type B and type C testing performed on Browns Ferry Unit 1 since the CILRT conducted in August of 1976. Testing was performed in accordance with plant approved surveillance instructions BF SI 4.7.A.2.g-1, BF SI 4.7.A.2.g-2, and BF SI 4.7.A.2.g-3 which are on file at the plant site. Tables B-2, B-4, and B-6 summarize results of tests performed since August 1976 for cycles 1, 2, and 3 respectively. The total as left leakage for type B and C tests were 120.1492 SCFH for cycle 1, 320.6890 SCFH for cycle 2, and 143.8487 SCFH for cycle 3. All of these values are below the 60 percent La limit of 655.9216 SCFH.

3.0 Analysis of Data

The type C tests of cycle 1 are divided into two types of test mediums - air and water. The leakage rates for water tested valves were included to provide the total type C leakage, without regard to the qualifications of the system in which the valves were installed. Subsequent cycles provide a dichotomy of the water tested valves which is explained in the respective summary for cycles 2 and 3.

In addition, during cycle 2 some valves which are considered as nonwater sealed during a DBA were tested with water and the measured leakage rate was converted to equivalent air leakage. Experience indicated that the leak rate penalty for using water-to-air conversions was more severe than TVA should accept, therefore, a technical specification change was submitted requiring all valves that are not water sealed during a DBA be tested with air. The cycle 3 testing reflects this change.

The as found leakage rates for all 3 cycles are primarily impacted by the failure of the main steam isolation valves to meet the required criteria of 11.5 SCFH. The main steam isolation valves are tested with air applied between the inboard and outboard valves. This tends to lift the inboard main steam isolation valves off their seats. It is believed that the direction the test pressure is applied to the inboard main steam isolation valves contributes to the increased failure rate.

TABLE B-1
TYPE C TEST SUMMARY
TESTING FOR CYCLE 1 - UNIT 1

I. WATER TEST

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-8	Main Steam Drain				
	1-55/56	AF	9-17-77	0.0000	
	1-55/56	AL		0.0000	0.0000
X-9A	Feedwater Line A				
	3-558	AF/AL	9-21-77	0.4562	0.4562
	3-554/73-45	AF/AL	9-21-77	0.0119	
	3-554/73-44	AF/AL	9-21-77	0.0107	
	3-554	AF/AL		N/A	
X-210A	Shutdown Cooling System				
	12-738	AF/AL	9-15-77	0.0036	
	12-741	AF/AL	9-15-77	0.0047	0.0047
X-41	Recirculation Water Quality Sampling				
	43-13/14	AF/AL	9-16-77	0.0018	0.0018
X-225A	Water Quality and Sampling System				
	43-28A	AF/AL	9-16-77	0.0073	0.0073
	43-28B	AF/AL	9-16-77	0.018	
X-225B	Water Quality and Sampling System				
	43-29A	AF	9-17-77	0.0137	
	43-29B	AF	9-17-77	0.0240	0.0240

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-42	Standby Liquid Control Injection				
	63-525	AF	9-17-77	0.1737	
	63-525	AL	10-3-77	0.0161	
	63-526	AF/AL	9-17-77	0.0678	0.0678
X-14	RWCU Suction				
	69-1	AF/AL	10-5-77	0.0942	
	69-2	AF/AL	10-5-77	0.1496	0.1496
X-212	RCIC Turbine Exhaust				
	71-14/580	AF	9-14-77	22.9458	
	71-14/580	AF	9-18-77	0.4039	0.4039
X-221	RCIC Pump Discharge				
	71-32/592	AF/AL	9-14-77	0.0050	0.0050
X-214	HPCI Turbine Exhaust				
	73-23/603	AF	9-14-77	57.3429	
	73-23/603	AL	12-21-77	0.4170	0.4170
X-222	HPCI Pump Discharge				
	73-24/609	AF/AL	9-14-77	0.0906	0.0906
X-12	Shutdown Cooling Suction				
	74-47	AF/AL	10-7-77	0.4407	
	74-48	AF/AL	10-7-77	0.6997	0.6997
X-13A	Ipci Injection				
	74-53	AF	9-15-77	5.1903	
	74-53	AL	9-20-77	0.0042	
	74-54	AF	9-15-77	5.1158	
	74-54	AL	9-20-77	0.0107	0.0107

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-211A	RHR Return to Torus/ Pump test				
	74-57/58	AF/AL	10-7-77	0.0487	0.0487
X-39A	Containment Spray				
	74-60/61	AF/AL	9-16-77	0.2566	0.2566
X-13B	Lpci Injection				
	74-67	AF/AL	10-4-77	0.2554	
	74-68	AF/AL	10-4-77	0.5287	0.5287
X-211B	RHR Return to Torus/ Pump Test				
	74-71/72	AF/AL	10-7-77	0.0535	0.0535
X-39B	Containment Spray				
	74-74/75	AF/AL	10-7-77	0.0107	0.0107
X-17	Head Spray Injection				
	74-77/78	AF/AL	10-3-77	0.0036	0.0036
X-213B	Torus Drain				
	74-722	AF	9-18-77	0.1088	
	74-722	AL	11-17-77	0.1426	0.1426
X-16A	Core Spray Injection				
	75-25	AF	9-28-77	0.0059	
	75-26	AF	9-28-77	51.3169	
	75-26	AL	11-16-77	0.2138	0.2138
X-16B	Core Spray Injection				
	75-53	AF	9-17-77	0.1018	
	75-54	AF	9-17-77	26.0571	
	75-54	AL	11-10-77	1.6324	1.6324

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-227A	Core Spray - Torus High Level				
	75-57/58	AF	9-15-77	3.6977	
	75-57/58	AL	10-30-77	0.0546	0.0546
X-18	Drywell Sump Discharge				
	77-2A/2B	AF/AL	9-15-77	0.0190	0.0190
X-19	Drywell Sump Discharge				
	77-15A/15B	AF/AL	9-15-77	0.0249	0.0249
X-36	CRD Return Line				
	85-573	AF/AL	9-18-77	0.0119	
	85-576	AF	9-18-77	0.0116	
	85-576	AL	12-21-77	0.0238	0.0238
X-9B	Feedwater Line B				
	3-572	AF/AL	10-5-77	0.8696	0.8696
	3-568/71-40/ 69-579	AF/AL	10-5-77	0.3664	
	3-568/71-39/ 69-579	AF/AL	10-5-77	0.6415	
	85-576	AL			
Total leakage from water tested valves				170.0993	6.2208

II AIR TEST

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-7A	Main Steam Line A				
	1-14/15	AF	9-17-77	3829.0386	
	1-15	AL	10-25-77	0.2178	
	1-14	AL	10-25-77	3.1411	3.1411

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-7B	Main Steam Line B				
	1-26/27	AF	9-17-77	1428.1522	
	1-27	AL	10-22-77	0.0104	
	1-26	AL	10-22-77	0.2660	0.2660
X-7C	Main Steam Line C				
	1-37/38	AF	9-17-77	682.8222	
	1-37/38	AL	10-4-77	10.6314	10.6314
X-7D	Main Steam D				
	1-51/52	AF	9-17-77	2119.9728	
	1-52	AL	10-30-77	0.0610	
	1-51	AL	10-30-77	1.1485	1.1485
X-22	Control Air Discharge				
	32-336	AF	9-19-77	3.9639	
	32-336	AL	9-27-77	0.0000	
	32-2163	AF/AL	9-19-77	0.4845	0.4845
X-48	Control Air Suction				
	32-62/63	AF/AL	10-21-77	3.0061	3.0061
X-25	Containment Purge And Inerting Supply				
	64-17/18/19/76-24	AF	9-15-77	1215.1540	
	64-17/18/19/76-24	AL	9-30-77	4.6731	4.6731
X-205	Torus Vacuum Relief				
	64-20 CV	AF	9-16-77	311.3624	
	64-20 CV	AL	10-4-77	0.1187	0.1187
	64-21 CV	AF	9-16-77	89.6832	
	64-21 CV	AL	9-22-77	17.2488	17.2488

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-231	Ventilation 64-29/30/32/33. 84-19	AF	9-16-77	398.3599	
	64-29/30/32/33. 84-19	AL	10-2-77	7.5224	7.5224
X-26	Drywell Ventilation Exhaust 64-31/34/139/140, 84-20	AF	9-17-77	3.5170	
	64-31/34/139/140, 84-20	AL	9-29-77	0.0000	0.0000
X-10	RCIC Steam Supply 71-2/3	AF/AL	9-18-77	2.2735	2.2735
X-11	HPCI Steam Supply 73-2/3	AF	9-15-77	5.5393	
	73-2/3	AL	9-18-77	0.3561	0.3561
X-205	Torus Vacuum Relief 76-17/18/19	AF/AL	9-15-77	0.0000	0.0000
X-51a	Containment Air Monitor 76-215	AF	9-17-77	0.5568	
	76-215	AL	9-26-77	0.0439	
	76-217	AF/AL	9-18-77	0.1118	0.1118
X-229f	Containment Air Monitor 76-220	AF	9-19-77	5.7151	
	76-220	AL	9-26-77	0.0219	0.0219
	76-222	AF	9-17-77	0.4603	
	76-222	AL	10-3-77	0.0000	

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X229e	Containment Air Monitor				
	76-225	AF	9-19-77	16.6903	
	76-225	AL	9-26-77	0.0614	0.0614
	76-226	AF	9-18-77	2.1921	
	76-226	AL	10-25-77	0.0000	
X-516	Containment Air Monitor				
	76-229	AF	9-17-77	4.3841	
	76-229	AL	9-26-77	0.0307	
	76-230	AF/AL	9-18-77	0.0789	0.0789
X-220b	Containment Air Monitor				
	76-237	AF/AL	9-17-77	0.1578	0.1578
	76-239	AF/AL	9-17-77	0.0000	
X-220a	Containment Air Monitor				
	76-242	AF/AL	9-17-77	0.1008	0.1008
	76-243	AF/AL	9-18-77	0.0000	
X-46a	Containment Air Monitor				
	76-248	AF/AL	9-17-77	0.2061	0.2061
	76-250	AF	9-18-77	0.1096	
X-46b	Containment Air Monitor				
	76-253	AF/AL	9-18-77	0.0438	
	76-254	AF/AL	9-18-77	0.1035	0.1035
X-25	Containment Purge and Inerting Supply				
	84-8A/600	AF/AL	9-15-77	0.0000	0.0000
X-205	Torus Vacuum Relief				
	84-8B/601	AF/AL	9-16-77	0.0000	0.0000

TABLE B-1

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-205	Torus Vacuum Relief 84-8C/603	AF/AL	9-17-77	0.0000	0.0000
X-25	Containment Purge and Inerting Supply 84-80/602	AF/AL	9-15-77	0.0000	0.0000
X-50a & b	Radiation Monitoring System 90-254A/254B/255	AF/AL	9-17-77	0.1011	0.1011
X-50c	Radiation Monitoring System 90-257A/257B	AF/AL	9-17-77	0.0879	0.0879
Total leakage from air tested valves				13949.9790	51.9014

TABLE B-1
TYPE B TEST SUMMARY
TESTING FOR CYCLE 1 - UNIT 1

Bellows

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage, SCFH As Left	As Left Date
7A Inboard	0.0003	9-20-77	0.0003	9-20-77
Outboard	0.0003	9-20-77	0.0003	9-20-77
7B Inboard	0.0009	9-20-77	0.0009	9-20-77
Outboard	0.0021	9-20-77	0.0021	9-20-77
7C Inboard	0.0000	9-20-77	0.0000	9-20-77
Outboard	0.0006	9-20-77	0.0006	9-20-77
7D Inboard	0.0003	9-20-77	0.0003	9-20-77
Outboard	0.0000	9-20-77	0.0000	9-20-77
8 Inboard	0.0004	9-21-77	0.0004	9-21-77
Outboard	0.0001	9-21-77	0.0001	9-21-77
9A Inboard	0.0006	9-20-77	0.0006	9-20-77
Outboard	0.0003	9-20-77	0.0003	9-20-77
9B Inboard	0.3336	9-21-77	0.3336	9-21-77
Outboard	0.0000	9-20-77	0.0000	9-20-77
10 Inboard	0.0000	9-20-77	0.0000	9-20-77
Outboard	0.0011	9-21-77	0.0011	9-21-77
11 Inboard	0.0009	9-22-77	0.0009	9-22-77
Outboard	0.0010	9-22-77	0.0010	9-22-77
12 Inboard	0.0007	9-21-77	0.0007	9-21-77
Outboard	0.0005	9-21-77	0.0005	9-21-77
13A Inboard	0.0015	9-21-77	0.0015	9-21-77
Outboard	0.0000	9-21-77	0.0000	9-21-77
13B Inboard	0.0011	9-21-77	0.0011	9-21-77
Outboard	0.0000	9-21-77	0.0000	9-21-77
14 Inboard	0.0037	9-21-77	0.0037	9-21-77
Outboard	0.0812	9-21-77	0.0812	9-21-77
16A Inboard	0.0002	9-21-77	0.0002	9-21-77
Outboard	0.0004	9-21-77	0.0004	9-21-77
16B Inboard	0.0000	9-21-77	0.0000	9-21-77
Outboard	0.0056	9-21-77	0.0056	9-21-77
17 Inboard	0.0090	9-21-77	0.0090	9-21-77
Outboard	0.0007	9-21-77	0.0007	9-21-77
Total leakage	0.4471		0.4471	

TABLE B-1
TYPE B TEST SUMMARY
TESTING FOR CYCLE 1 - UNIT 1

Electrical

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage. SCFH As Left	As Left Date
100A EC	0.0510	9-20-77	0.0510	9-20-77
B BD	0.0507	9-20-77	0.0507	9-20-77
C BE	0.1005	9-20-77	0.1005	9-20-77
D BF	0.0606	9-20-77	0.0606	9-20-77
E BG	0.0606	9-20-77	0.0606	9-20-77
F BH	0.0626	9-20-77	0.0626	9-20-77
G DC	0.0742	9-20-77	0.0742	9-20-77
101A AB	0.0262	10-1-77	0.0262	10-1-77
B AA	0.0249	10-1-77	0.0249	10-1-77
C AF	0.0619	10-1-77	0.0619	10-1-77
D AE	0.0524	10-1-77	0.0524	10-1-77
102 CA	0.1086	9-20-77	0.1086	9-20-77
103 DG	0.0925	9-20-77	0.0925	9-20-77
104A ED	0.0288	9-20-77	0.0288	9-20-77
B DB	0.0366	9-20-77	0.0366	9-20-77
C BC	0.0383	9-20-77	0.0383	9-20-77
D CB	0.0818	9-20-77	0.0818	9-20-77
E EE	0.0479	9-20-77	0.0479	9-20-77
F EF	0.0009	9-20-77	0.0009	9-20-77
105B AC	0.0125	10-1-77	0.0125	10-1-77
C AD	0.3994	10-2-77	0.3994	10-2-77
D EG Spare	0.0001	9-20-77	0.0001	9-20-77
106A DA	0.0353	9-20-77	0.0353	9-20-77
B BA	0.0327	9-20-77	0.0327	9-20-77
107A BA	0.0603	9-20-77	0.0603	9-20-77
B	0.0419	9-20-77	0.0419	9-20-77
108A EA	0.0003	10-1-77	0.0003	10-1-77
B DE	0.1306	9-20-77	0.1306	9-20-77
109 DD	0.1020	9-20-77	0.1020	9-20-77
110A EB	0.1050	10-2-77	0.1050	10-2-77
110B DF	0.0745	9-20-77	0.0745	9-20-77
219 FH	0.0001	9-22-77	0.0001	9-22-77
Total leakage	2.0557		2.0557	

TABLE B-1
TYPE B TEST SUMMARY
TESTING FOR CYCLE 1 - UNIT 1

Resilient Seals

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage, SCFH As Left	As Left Date
1A Equip. Hatch	0.0252	12-29-77	0.0252	12-29-77
1B Equip. Hatch	0.0354	9-14-77	0.0368	12-29-77
4 DWHA	0.0002	9-22-77	0.0002	9-22-77
6 CRD	0.0023	9-14-77	0.0019	1-10-78
25A Tip	0.0001	9-22-77	0.0001	9-22-77
35B Tip	0.0000	9-22-77	0.0000	9-22-77
35C Tip	0.0002	9-22-77	0.0002	9-22-77
35D Tip	0.0000	9-22-77	0.0000	9-22-77
35E Tip	0.0000	9-22-77	0.0000	9-22-77
35F Tip	0.0000	9-22-77	0.0000	9-22-77
35G Tip	0.0000	9-22-77	0.0000	9-22-77
47 Pot	0.0001	9-21-77	0.0001	9-21-77
200a	0.0004	9-13-77	0.0004	9-13-77
200b	0.0003	9-13-77	0.0003	9-13-77
Drywell Head	93.2001	9-14-77	0.1415	1-12-78
A30°	0.0161	10-1-77	0.0039	10-16-77
45°	0.0106	10-1-77	0.0014	10-11-77
90°	0.0107	10-1-77	0.0039	10-16-77
135°	0.0104	10-1-77	0.0049	10-11-77
180°	0.0247	10-1-77	0.0046	10-19-77
225°	0.0097	10-1-77	0.0002	10-13-77
270°	0.0093	10-1-77	0.0002	10-13-77
315°	0.0092	10-1-77	0.0014	10-19-77
Personnel Air Lock	6.8892	9-13-77	59.2970	1-10-78
	100.2542		59.5242	

TABLE B-2
TOTAL LEAKAGE SUMMARY
TESTING FOR CYCLE 1 - UNIT 1

Type B Leakage		
I	Bellows	0.4471 SCFH
II	Electrical	2.0557 SCFH
III	Resilient Seals	59.5242 SCFH
Type C Leakage		
I	Air Tested Isolation Valves	51.9014 SCFH
II	Water Tester Valves	6.2208 SCFH
Total leakage prior to return to power operation Type B and C leakage		120.1492 SCFH

TABLE B-3
TYPE C TEST SUMMARY
TESTING FOR CYCLE 2 - UNIT 1

I.A WATER TESTED ISOLATION VALVES BELOW SUPPRESSION POOL WATER LEVEL

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-210	Auxiliary Boiler Steam Supply				
	12-738	AF/AL	11-28-78	0.0000	
	12-741	AF/AL	11-28-78	0.0225	0.0225
X-225A	Water Quality and Sampling System				
	43-28A	AF	12-1-78	0.2244	
	43-28A	AL	12-1-78	0.0030	
	43-28B	AF	12-1-78	2.8800	
	43-28B	AL	12-16-78	0.0046	0.0046
X-225B	Water Quality and Sampling System				
	43-29A	AF/AL	12-1-78	0.0029	0.0029
	43-29B	AF	12-1-78	2.9846	
	43-29B	AL	12-16-78	0.0000	
X-227A	Core Spray - Torus High Level				
	75-57/58	AF/AL	11-30-78	0.0585	0.0585
X-213B	Torus Drain				
	74-722	AF/AL	11-23-78	0.2142	0.2142
X-212	RCIC Turbine Exhaust				
	71-14/580	AF	11-30-78	54.0000	
	71-14/580	AL	12-6-78	0.1485	0.1485
X-221	RCIC Pump Discharge				
	71-32/592	AF/AL		0.0189	0.0189
X-214	HPCI Turbine Exhaust				
	73-23/603	AF	11-30-78	20.2500	
	73-23/603	AL	12-11-78	0.0270	0.0270

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-222	HPCI Pump Discharge 73-24/609	AF	11-30-78	0.0023	0.0023
Total leakage				77.6737	0.4994

I.B WATER TESTED ISOLATION VALVES - CLOSED-LOOP

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-13A	LPCI Injection				
	74-53	AF/AL	12-29-78	0.8773	
	74-54	AF/AL	12-19-78	0.0180	0.8773
X-211A	RHR Return to Torus/Pump Test				
	74-57/58	AF	12-20-78	0.5562	0.5562
X-39A	Containment Spray				
	74-60/61	AF	12-19-78	0.4230	0.4230
X-13B	LPCI Injection				
	74-67	AF/AL	12-1-78	0.1329	
	74-68	AF/AL	12-1-78	1.1172	1.1172
X-211B	RHR Return to Torus/ Pump Test				
	74-71/72	AF/AL	11-27-78	0.0378	0.0378
X-39B	Containment Spray				
	74-74/75	AF/AL	11-27-78	0.2790	0.2790

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-17	Head Spray Injection 74-77/78	AF	12-1-78	0.0108	0.0108
X-16A	Core Spray Injection				
	75-25	AF/AL	12-27-78	0.0090	
	75-26	AF/AL	12-28-78	0.0450	0.0450
X-16B	Core Spray Injection				
	75-53	AF	11-29-78	0.0000	
	75-54	AF	11-29-78	0.5580	0.5580
Total leakage				4.0642	3.9043

II AIR TESTS

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-7A	MSIV Line A				
	1-14/15	AF	11-28-78	2196.0000	
	1-15	AL	12-27-78	0.0000	
	1-14	AL	12-27-78	0.0604	0.0604
X-7B	MSIV Line B				
	1-26/27	AF	11-28-78	29.7412	8.1802
	1-26/27	AL	11-29-78	8.1802	
X-7C	MSIV Line C				
	1-37/38	AF	11-28-78	2807.7569	
	1-38	AL	12-26-78	0.0000	
	1-37	AL	12-29-78	10.1771	10.1771

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-7D	MSIV Line D				
	1-51/52	AF	11-28-78	2196.0000	
	1-51/52	AL	12-11-78	20.4776	
	1-52	AL	12-5-78	10.6946	10.6946
	1-51	AL	12-5-78	9.7830	
X-18	Drywell Sump Discharge				
	77-2A/2B	AF/AL	12-22-78	0.0484	0.0484
X-19	Drywell Sump Discharge				
	77-15A/15B	AF/AL	12-26-78	0.1762	0.1762
X-22	Control Air Discharge				
	32-336	AF/AL	12-2-78	0.3700	0.3700
	32-2163	AF/AL	12-2-78	0.2334	
X-41	Recirculation Water Quality Sampling				
	43-13	AF/AL	12-2-78	0.0668	
	43-14	AF/AL	12-2-78	0.0668	0.0668
X-8	Main Steam Drain				
	1-55/56	AF/AL	12-30-78	0.4867	0.4867
X-48	Control Air Suction				
	32-62/63	AF/AL	12-2-78	0.6446	0.6446
X-25	Containment Purge and Inerting Supply				
	64-17,18,19,76-24	AF	11-23-78	793.2256	
	64-17,18,19,76-24	AL	12-13-78	1.6838	1.6838
X-205	Torus Vacuum Relief				
	64-20 CV	AF/AL	11-19-78	0.8225	0.8225

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-205	Torus Vacuum Relief				
	64-21 CV	AF/AL	11-29-78	8.2246	8.2246
X-231	Ventilation				
	64-29/30/32/33,84-19	AF	11-23-78	721.8250	
	64-29/30/32/33,84-19	AL	12-5-78	3.4008	3.4008
X-26	Drywell Ventilation Exhaust				
	64-31/34/139/140,84-20	AF	11-30-78	6.2065	
	64-31/34/139/140,84-20	AL	12-12-78	0.3520	0.3520
X-10	RCIC Steam Supply				
	71-2/3	AF/AL	11-28-78	0.3112	0.3112
X-11	HPCI Steam Supply				
	73-2/3	AF/AL	11-29-78	6.2240	6.2240
X-205	Torus Vacuum Relief				
	76-17/18/19	AF	11-30-78	0.0000	0.0000
X-51a	Containment Air Monitor				
	76-215	AF/AL	12-1-78	0.0000	0.0000
	76-217	AF/AL	12-1-78	0.0000	
X-229f	Containment Air Monitor				
	76-220	AF/AL	12-1-78	0.1553	0.1553
	76-222	AF/AL	12-3-78	0.0000	
X-229e	Containment Air Monitor				
	76-225	AF/AL	12-1-78	0.0843	0.0843
	76-226	AF/AL	12-3-78	0.0000	
X-51b	Containment Air Monitor				
	76-229	AF/AL	12-1-78	0.0000	
	76-230	AF/AL	12-1-78	0.0000	0.0000

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-220b	Containment Air Monitor				
	76-237	AF/AL	12-1-78	0.1198	
	76-239	AF/AL	12-3-78	0.0000	0.1198
X-220a	Containment Air Monitor				
	76-242	AF/AL	12-1-78	0.1420	0.1420
	760243	AF/AL	12-3-78	0.0000	
X-46a	Containment Air Monitor				
	76-248	AF/AL	12-1-78	0.0000	
	76-250	AF/AL	12-1-78	0.0000	0.0000
X-46b	Containment Air Monitor				
	76-253	AF/AL	12-1-78	0.0000	
	76-254	AF/AL	12-1-78	0.0000	0.0000
X-25	Containment Purge and Inerting Supply				
	84-8A/600	AF	11-28-78	11.1144	
	84-8A/600	AL	12-14-78	0.0000	0.0000
X-205	Torus Vacuum Relief				
	84-8B/601	AF	11-27-78	20.9148	
	84-8B/601	AL	12-19-78	0.0486	0.0486
X-205	Torus Vacuum Relief				
	84-8C/603	AF/AL	11-28-78	0.0000	0.0000
X-25	Containment Purge and Inerting Supply				
	84-8D/602	AF	11-28-78	2.8008	
	84-8D/602	AL	1-1-79	0.3315	0.3315
X-50a & b	Radiation Monitoring System				
	90-254A/254B/255	AF/AL	12-1-78	0.0710	0.0710

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-50C	Radiation Monitoring System 90-257A/257B	AF/AL	12-1-78	0.1176	0.1176
Total leakage				8782.3894	52.9940

III WATER TESTS CONVERTED TO EQUIVALENT AIR LEAKAGE

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Convert to Air (SCFH)	Penetration Leakage (SCFH)
				Water Tests		
X-14	RWCU Suction					
	69-1	AF	11-28-78	0.0468	6.1519	6.1519
	69-1	AL	11-28-78	0.0468	6.1519	6.1519
	69-2	AF	11-28-78	0.0360	5.0075	
	69-2	AL	11-28-78	0.0360	5.0075	
X-12	Shutdown Cooling Suction					
	74-47	AF/AL	11-27-78	0.5010	39.5114	39.5114
	74-48	AF/AL	11-28-78	0.1170	12.6238	
	74-661/662	AF/AL	11-27-78	0.0056	1.1632	
X-42	Standby Liquid Control Injection					
	63-525	AF/AL	12-1-78	0.0070	1.3857	
	63-526	AF/AL	11-30-78	0.0407	5.5135	5.5135
X-9A	Feedwater Line A					
	3-558	AF/AL	12-4-78	1.1705	76.8842	76.8842
	3-554/73-45	AF	12-4-78	1.0125	68.6171	
	3-554/73-45	AL	12-16-78	0.0855		
	3-554/73-44	AF	12-3-78	0.0090	1.6877	

TABLE B-3

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Convert to Air (SCFH)	Penetration Leakage (SCFH)
				Water Tests		
X-9B	Feedwater Line B					
	3-572	AF/AL	11-30-78	1.1302	74.7997	74.7997
	3-568	AF	11-29-78	1.3352	85.2493	
	3-568	AL	1-2-79	0.2403	22.2025	
	69-579	AF/AL	11-29-78	0.0534	6.8227	
	71-39	AF/AL	11-28-78	0.0735	8.7660	
	71-40	AF	11-30-78	36.0494	1131.3219	
	71-40	AL	1-2-79	0.2403	22.2025	
	85-576	AF/AL	11-29-78	0.0325	4.6214	
Total leakage				41.6203	1530.1270	202.8607

TABLE B-3
TYPE B TEST SUMMARY
TESTING FOR CYCLE 2 - UNIT 1

Electrical

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage, SCFH As Left	As Left Date
100A EC	0.0000	12-3-78	0.0000	12-3-78
B BD	0.0621	12-3-78	0.0621	12-3-78
C BE	0.0615	12-3-78	0.0615	12-3-78
D BF	0.0369	12-3-78	0.0369	12-3-78
E BG	0.0615	12-3-78	0.0615	12-3-78
F BH	0.0492	12-3-78	0.0492	12-3-78
G DC	0.0621	12-3-78	0.0621	12-3-78
101A AB	0.0408	12-4-78	0.0408	12-4-78
B AA	0.0517	12-4-78	0.0517	12-4-78
C AF	0.0624	12-7-78	0.0624	12-7-78
D AE	0.0529	12-3-78	0.0529	12-3-78
102 CA	0.0931	12-3-78	0.0931	12-3-78
103 DG	0.0492	12-3-78	0.0492	12-3-78
104A ED	0.0313	12-2-78	0.0313	12-2-78
B DB	0.0661	12-3-78	0.0661	12-3-78
C BC	0.0926	12-3-78	0.0926	12-3-78
D CB	0.0246	12-3-78	0.0246	12-3-78
E EE	0.0788	12-4-78	0.0788	12-4-78
F EF	0.0003	12-4-78	0.0003	12-4-78
105B AC	0.0259	12-4-78	0.0259	12-4-78
C AD	0.0081	12-3-78	0.0081	12-3-78
D EG Spare	0.0036	12-3-78	0.0036	12-3-78
106A DA	0.0626	12-2-78	0.0626	12-2-78
B BA	0.0783	12-2-78	0.0783	12-2-78
107A BA	0.0677	12-3-78	0.0677	12-3-78
B	0.0153	12-2-78	0.0153	12-2-78
108A EA	0.0051	12-3-78	0.0051	12-3-78
B DE	0.0917	12-4-78	0.0917	12-4-78
109 DD	0.0930	12-3-78	0.0930	12-3-78
110A EB	0.0794	12-3-78	0.0794	12-3-78
110B DF	0.0872	12-4-78	0.0872	12-4-78
219 FH	0.0001	12-26-78	0.0001	12-26-78
Total leakage	1.5951		1.5951	

TABLE B-3
TYPE B TEST SUMMARY
TESTING FOR CYCLE 2 - UNIT 1

Resilient Seals

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage, SCFH As Left	As Left Date
1A	2.3925	11-27-78	0.0132	1-12-79
1B	0.0200	11-27-78	0.0281	1-12-79
4	0.0013	1-13-79	0.0013	1-13-79
6	0.0002	11-27-78	0.0002	1-11-79
35A	0.0000	12-4-78	0.0000	12-4-78
35B	0.0000	12-4-78	0.0000	12-4-78
35C	0.0000	12-4-78	0.0000	12-4-78
35D	0.0000	12-4-78	0.0000	12-4-78
35E	0.0000	12-4-78	0.0000	12-4-78
35F	0.0000	12-4-78	0.0000	12-4-78
35G	0.0000	12-4-78	0.0000	12-4-78
47	0.0001	1-5-78	0.0001	1-5-78
200A	0.0004	11-27-78	0.0025	1-16-79
200B	0.0015	11-27-78	0.0000	1-11-79
Drywell Head	14.9534	11-27-78	0.0070	1-15-79
Az 0°	0.0056	1-13-79	0.0056	1-13-79
45°	0.0001	1-13-79	0.0001	1-13-79
90°	0.0041	1-13-79	0.0041	1-13-79
135°	0.2679	1-13-79	0.0003	1-14-79
180°	0.0001	1-12-79	0.0001	1-12-79
225°	0.0073	1-13-79	0.0073	1-13-79
270°	0.0005	1-10-79	0.0005	1-10-79
315°	0.0003	1-12-79	0.0003	1-20-79
Total leakage	17.6553		0.0707	
Personnel Air Lock	105.1218 SCFH	11-27-78	58.6927 SCFH	1-20-79

TABLE B-4
TOTAL LEAKAGE SUMMARY
TESTING FOR CYCLE 2 - UNIT 1

Type B Leakage		
I	Bellows	0.0721
II	Electricals	1.5951
III	Resilient Seals	0.0707
IV	Personnel Air Lock Door	58.6927
Type C Leakage		
I	Air Tested Isolation Valves	52.9940
II	Isolation Valves Tested with Water and Converted to Equivalent Air Leakage	202.8607
III	Isolation Valves that Terminate Below Suppression Chamber Water Level (See Note 2)	0.4994
IV	Isolation Valves that are Located In Closed-Loop, Seismic Class I Lines that are Water Sealed (See Note 1)	3.9043

Note 1: This leakage is not included in the total leakage rate but is reported per paragraph III A i(d) of 10CFR50, Appendix J.

Note 2: This leakage shall not be included in the total leakage rate if the total water leak rate is less than 20 781 cubic feet per 30 days or 28.86 SCFH.

Total leakage prior to return to power operation 320.6890
Type B and C leakage

TABLE B-5
TYPE C TEST SUMMARY
TESTING FOR CYCLE 3 - UNIT 1

I.A WATER TEST (ISOLATION VALVES THAT TERMINATE BELOW THE SUPPRESSION CHAMBER WATER LEVEL)

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-212	RCIC Turbine Exhaust				
	71-14/580	AF	1-6-80	14.2941	
	71-14/580	AL	2-19-80	0.3852	0.3852
X-221	RCIC Pump Discharge				
	71-32/592	AF	1-7-80	44.1818	
	71-32/592	AL	1-16-80	0.1584	0.1584
X-214	HPCI Turbine Exhaust				
	73-23/603	AF	1-7-80	22.0889	
	73-23/603	AL	1-12-80	0.0612	0.0612
X-222	HPCI Pump Discharge				
	73-24/609	AF/AL	1-7-80	0.0574	0.0574
X-213B	Torus Drain				
	74-722	AF/AL	1-5-80	0.1316	0.1316
X-227A	Core Spray - Torus High Level				
	75-57/58	AF	1-9-80	0.6378	
	75-57/58	AL	2-9-80	0.5586	0.5586
X-225A	Water Quality and Sampling System				
	43-28A	AF/AL	1-4-80	0.0027	0.0027
	43-28B	AF	1-4-80	0.1479	
	43-28B	AL	1-20-80	0.0013	

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-225B	Water Quality and Sampling System				
	43-29A	AF	1-19-80	0.0019	
	43-29A	AL	2-9-80	0.0015	
	43-29B	AF	1-7-80	2.7000	
	43-29B	AL	2-9-80	0.0043	0.0043
X-210	Auxiliary Boiler Steam Supply				
	12-738	AF/AL	1-4-80	0.0030	
	12-741	AF/AL	1-4-80	0.0091	0.0091
X-228	Demineralized Water				
	2-1143	AF/AL	1-5-80	0.0030	0.0030
I.A Water tests total leakage				81.4022	1.3715

I.B WATER TEST (ISOLATION VALVES LOCATED IN CLOSED-LOOP, SEISMIC CLASS, LINES THAT A REWATER SEALED)

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-13A	LPCI Injection				
	74-53	AF/AL	1-9-80	0.0108	
	74-54	AF/AL	1-9-80	0.0693	0.0693
X-13B	LPCI Injection				
	74-67	AF/AL	1-6-80	0.1575	
	74-68	AF/AL	1-6-80	0.3015	0.3015
X-211A	RHR Return to Torus/Pump Test				
	74-57/58	AF/AL	1-10-80	1.3615	1.3613

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-211B	RHR Return to Torus/Pump Test 74-71/72	AF/AL	1-6-80	6.0902	6.0902
X-39A	Containment Spray 74-60/61	AF/AL	1-9-80	0.5209	0.5209
X-39B	Containment Spray 74-74/75	AF	1-6-80	0.7364	
	74-74/75	AL	1-6-80	0.3150	0.3150
X-16A	Core Spray Injection 75-25	AF/AL	1-9-80	0.0000	0.0000
	75-26	AF/AL	1-9-80	0.0000	
X-17	Head Spray Injection 74-77/78	AF/AL	1-6-80	0.0000	0.0000
X-16B	Core Spray Injection 75-53	AF/AL	1-5-80	0.4894	
	75-54	AF/AL	1-5-80	1.2926	1.2926
I.B Water tests total leakage				9.3667	9.9508

II AIR TESTS

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-7A	Main Steam Line A 1-15	AF	1-8-80	664.3706	
	1-15	AL	2-1-80	0.0000	
	1-14	AF	1-8-80	3060.1044	
	1-14	AL	2-8-80	1.7314	1.7314

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-7B	Main Steam Line B				
	1-27	AF/AL	1-9-80	9.3492	9.3492
	1-26	AF	1-9-80	29.3541	
	1-26	AL	2-5-80	6.4511	
X-7C	Main Steam Line C				
	1-38	AF	1-10-80	3122.0518	
	1-38	AL	3-5-80	3.7087	
	1-37	AF	1-10-80	67.3185	
	1-37	AL	2-7-80	6.3618	6.3618
X-7D	Main Steam Line D				
	1-52	AF	1-12-80	133.2914	
	1-52	AL	2-6-80	0.0000	
	1-51	AF	1-12-80	3426.8873	
	1-51	AL	2-9-80	3.2714	3.2714
X-231	Ventilation				
	64-29/30/32	AF	1-8-80	7.1751	
	64-33	AF	1-8-80	3734.2978	7.3136
	84-19	AF	1-8-80	30.5446	
	64-29/30/32/33,84-19	AL	1-22-80	7.3136	
X-18	Drywell Sump Discharge				
	77-2A/2B	AF/AL	1-8-80	0.0000	0.0000
X-19	Drywell Sump Discharge				
	77-15A/15B	AF	1-8-80	0.0173	
	77-15A/15B	AL	2-9-80	0.0732	0.0732
X-22	Control Air Discharge				
	32-336	AF/AL	1-10-80	0.1724	
	32-2163	AF/AL	1-10-80	0.3846	0.3846

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-41	Recirculation Water Quality Sampling				
	43-13	AF	2-13-80	0.0619	
	43-13	AL	2-15-80	0.1979	0.1979
	43-14	See Note 2			
X-8	Main Steam Drain				
	1-55/56	AF	1-7-80	1.7050	
	1-55/57	AL	2-10-80	0.7508	0.7508
X-48	Control Air Suction				
	32-62/63	AF/AL	1-9-80	0.3986	0.3986
X-21	Service Air				
	33-10 (See note 1)	AF		N/A	
	33-10	AL	2-14-80	0.3543	
	3-785	AF/AL	2-12-80	0.5968	
	33-785	AL	3-9-80	0.5305	0.5305
X-25	Containment Purge and Inerting Supply				
	64-17/18/19/76-24	AF	1-8-80	28.7865	
	76-24	AF	1-8-80	1702.7509	13.0535
	64-17/18/19/76-24	AL	3-9-80	13.0535	
X-205	Torus Vacuum Relief				
	64-20 CV	AF/AL	1-6-80	4.1751	4.1751

Note 1 Replaced by 33-1070 (installed this outage)

X-205	Torus Vacuum Relief				
	64-21 CV	AF/AL	1-6-80	5.7795	5.7795

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-26	Drywell Ventilation Exhaust				
	64-31/34/139/140, 84-20	AF	1-8-80	2.7562	
	64-31/34/139/140, 84-20	AL	2-18-80	0.0000	0.0000
X-20	Demineralized Water				
	2-1192	AF/AL	2-6-80	0.0000	
	2-1383	AF/AL	2-6-80	0.0000	0.0000
X-10	RCIC Steam Supply				
	71-2/3	AF/AL	1-5-80	0.2876	0.2876
X-11	HPCI Steam Supply				
	73-2/3	AF/AL	1-5-80	4.3970	4.3970
X-205	Torus Vacuum Relief				
	76-17/18/19	AF/AL	1-6-80	0.0000	0.0000
X-51a	Containment Air Monitor				
	76-215	AF/AL	1-9-80	0.0000	0.0000
	76-217	AF	1-9-80	2.8621	
	76-217	AL	1-17-80	0.0000	
X-229f	Containment Air Monitor				
	76-220	AF/AL	1-10-80	0.0509	0.0509
	76-222	AF/AL	1-11-80	0.0000	
X-229e	Containment Air Monitor				
	76-225	AF/AL	1-10-80	0.0000	
	76-226	AF/AL	1-11-80	0.0000	0.0000

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-51b	Containment Air Monitor				
	76-229	AF/AL	1-9-80	0.0000	
	76-230	AF/AL	1-9-80	0.0000	0.0000
X-220b	Containment Air Monitor				
	76-237	AF/AL	1-10-80	0.0000	
	76-239	AF/AL	1-11-80	0.0420	0.0420
X-220a	Containment Air Monitor				
	76-242	AF/AL	1-10-80	0.0000	
	76-243	AF/AL	1-11-80	0.0000	0.0000
X-46a	Containment Air Monitor				
	76-248	AF/AL	1-9-80	0.0000	
	76-250	AF/AL	1-9-80	0.0000	0.0000
X-46b	Containment Air Monitor				
	76-253	AF/AL	1-9-80	0.0000	
	76-254	AF/AL	1-9-80	0.0000	0.0000
X-25	Containment Purge and Inerting Supply				
	84-8A/600	AF/AL	1-4-80	0.0000	0.0000
X-205	Torus Vacuum Relief				
	84-8B/601	AF/AL	1-4-80	0.0000	0.0000
X-205	Torus Vacuum Relief				
	84-8C/603	AF/AL	1-4-80	0.0000	0.0000
X-25	Containment Purge and Inerting Supply				
	84-8D/602	AF	1-4-80	239.1905	
	84-8D/602	AL	1-5-80	0.0000	0.0000

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-50a & b	Radiation Monitoring System				
	90-257A/257B	AF/AL	1-6-80	0.0000	0.0000
X-50c	Radiation Monitoring System				
	90-257A/257B	AF/AL	1-6-80	0.0000	0.0000
X-14	RWCU Suction				
	69-1	AF	1-7-80	16.1643	
	69-1	AL	1-7-80	3.4574	3.4574
	69-2	AF/AL	1-7-80	0.0000	
X-42	Standby Liquid Control Injection				
	63-525	AF/AL	2-10-80	0.1794	0.1794
	63-526	AF/AL	1-9-80	0.0000	
X-12	Shutdown Cooling Suction				
	74-47	AF/AL	2-7-80	0.3100	
	74-48	AF/AL	2-7-80	5.9413	5.9413
	74-661/662	AF/AL	2-7-80	0.7086	
X-9A	Feedwater Line A				
	3-558	AF	1-6-80	29.2852	
	3-558	AL	2-4-80	9.9561	
	3-554	AF		80.6004	
	3-554	AL	2-7-80	16.5934	16.5934
	73-45	AF	1-10-80	29.1229	
	73-45	AL	2-7-80	11.2836	
	73-44	AF/AL	1-10-80	0.0000	

TABLE B-5

Penetration Number	System Name	Remarks	Test Date	Individual Leakage (SCFH)	Penetration Leakage (SCFH)
X-9B	Feedwater Line B				
	3-572	AF	1-23-80	77.6542	
	3-572	AL	2-13-80	3.6692	3.6692
	3-568	AF	1-24-80	4656.0000	
	3-568	AL	2-11-80	2.8789	
	69-579	AF	1-30-80	9.7795	
	69-579	AL	2-14-80	0.4736	
	85-576	AF/AL	2-13/80	0.7301	
	71-40	AF	2-3-80	322.5324	
	71-40	AL	3-1-80	1.8388	
	71-39	AF/AL	2-20-80	3.3466	
X-37C	Recirculation System				
	68-508 (See note 2)	AL	1-17-80	0.1373	
	68-550 (See note 2)	AL	1-17-80	0.2745	0.2745
X-38C	Recirculation System				
	68-523 (See note 2)	AL	1-17-80	0.0000	
	68-555 (See note 2)	AL	1-17-80	0.0000	0.0000
X-27e	Containment Inerting System				
	76-49 thru 68 were not installed this outage				
II Air tests total leakage				1277.0786	88.2638

Note 1 69-624 not added this outage.
Note 2 68-508/523/550/555 were added outage.

TABLE B-3
TYPE B TEST SUMMARY
TESTING FOR CYCLE 3 - UNIT 1

Bellows

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage, SCFH As Left	As Left Date
7A Inboard	0.0002	1-12-80	0.0002	1-12-80
Outboard	0.0005	1-12-80	0.0005	1-12-80
7B Inboard	0.0018	1-12-80	0.0018	1-12-80
Outboard	0.0005	1-12-80	0.0005	1-12-80
7C Inboard	0.0000	1-12-80	0.0000	1-12-80
Outboard	0.0012	1-12-80	0.0012	1-12-80
7D Inboard	0.0093	1-12-80	0.0093	1-12-80
Outboard	0.0004	1-12-80	0.0004	1-12-80
8 Inboard	0.0002	1-12-80	0.0002	1-12-80
Outboard	0.0002	1-12-80	0.0002	1-12-80
9A Inboard	0.0001	1-12-80	0.0001	1-12-80
Outboard	0.0003	1-12-80	0.0003	1-12-80
9B Inboard	0.0155	1-12-80	0.0155	1-12-80
Outboard	0.0118	1-12-80	0.0118	1-12-80
10 Inboard	0.0003	1-12-80	0.0003	1-12-80
Outboard	0.0015	1-12-80	0.0015	1-12-80
11 Inboard	0.0000	1-12-80	0.0000	1-12-80
Outboard	0.0000	1-12-80	0.0000	1-12-80
12 Inboard	0.0001	1-13-80	0.0001	1-13-80
Outboard	0.0003	1-13-80	0.0003	1-13-80
13A Inboard	0.0002	1-13-80	0.0002	1-13-80
Outboard	0.0004	1-13-80	0.0004	1-13-80
13B Inboard	0.0010	1-13-80	0.0010	1-13-80
Outboard	0.0003	1-13-80	0.0003	1-13-80
14 Inboard	0.0014	1-12-80	0.0014	1-12-80
Outboard	0.0025	1-12-80	0.0025	1-12-80
16A Inboard	0.0000	1-10-80	0.0000	1-10-80
Outboard	0.0003	1-10-80	0.0003	1-10-80
16B Inboard	0.0000	1-10-80	0.0000	1-10-80
Outboard	0.0078	1-10-80	0.0078	1-10-80
17 Inboard	0.0201	1-10-80	0.0181	1-14-80
Outboard	0.0009	1-10-80	0.0009	1-10-80
Total leakage	0.0791		0.0771	

TABLE B-3
TYPE B TEST SUMMARY
TESTING FOR CYCLE 3 - UNIT 1

Resilient Seals

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage. SCFH As Left	As Left Date
1A	0.0051	1-4-80	0.0062	3-1-80
1B	0.0009	1-4-80	0.0021	2-26-80
4	0.0004	1-10-80	0.0004	1-10-80
6	0.0001	1-4-80	0.0003	3-5-80
35A	0.0000	1-11-80	0.0000	1-11-80
35B	0.0000	1-11-80	0.0000	1-11-80
35C	0.0000	1-11-80	0.0000	1-11-80
35D	0.0000	1-11-80	0.0000	1-11-80
35E	0.0000	1-11-80	0.0000	1-11-80
35F	0.0000	1-11-80	0.0000	1-11-80
35G	0.0001	1-11-80	0.0001	1-11-80
47	0.0000	1-10-80	0.0000	1-10-80
200A	0.0003	1-4-80	0.0001	3-5-80
200B	0.0006	1-4-80	0.0000	3-6-80
Drywell Head	0.0462	1-4-80	0.0846	2-17-80
AZ 0°	0.0103	1-8-80	0.0002	2-10-80
45°	0.0010	1-8-80	0.0003	2-10-80
90°	0.0100	1-8-80	0.0000	2-10-80
135°	0.0371	1-8-80	0.0371	1-8-80
180°	0.0003	1-8-80	0.0003	1-8-80
225°	0.1256	1-8-80	0.0001	2-10-80
270°	0.1112	1-8-80	0.0004	2-10-80
315°	0.0791	1-8-80	0.0002	2-10-80
Personnel Air Lock	77.8244	1-4-80	42.7761	2-9-80
Total leakage	0.4283		0.1324	
	78.2527		42.9085	

TABLE B-3
TYPE B TEST SUMMARY
TESTING FOR CYCLE 3 - UNIT 1

Electrical

Leakage Path	Leakage, SCFH As Found	As Found Date	Leakage, SCFH As Left	As Left Date
100A EC	0.0621	1-13-80	0.0621	1-13-80
B BD	0.0388	1-13-80	0.0388	1-13-80
C BE	0.0309	1-14-80	0.0309	1-14-80
D BF	0.0495	1-14-80	0.0495	1-14-80
E BG	0.0371	1-14-80	0.0371	1-14-80
F BH	0.0309	1-14-80	0.0309	1-14-80
G DC	0.0310	1-13-80	0.0310	1-13-80
101A AB	0.0328	1-13-80	0.0328	1-13-80
B AA	0.0187	1-13-80	0.0187	1-13-80
C AF	0.0543	1-13-80	0.0543	1-13-80
D AE	0.0328	1-13-80	0.0328	1-13-80
102 CA	0.0774	1-13-80	0.0774	1-13-80
103 DG	0.0866	1-14-80	0.0866	1-14-80
104A ED	0.0657	1-13-80	0.0657	1-13-80
B DB	0.0328	1-13-80	0.0328	1-13-80
C BC	0.0394	1-13-80	0.0394	1-13-80
D CB	0.0866	1-14-80	0.0866	1-14-80
E EE	0.0521	1-14-80	0.0521	1-14-80
F EF	0.0009	1-14-80	0.0009	1-14-80
105A Spare	N/A		N/A	
105B AC	0.0312	1-13-80	0.0312	1-13-80
105C AD	0.0310	1-13-80	0.0310	1-13-80
105D EG	0.0004	1-13-80	0.0004	1-13-80
106A DA	0.0698	1-13-80	0.0698	1-13-80
106B BB	0.0310	1-13-80	0.0310	1-13-80
107A BA	0.0466	1-13-80	0.0466	1-13-80
107B	0.0684	1-13-80	0.0684	1-13-80
108A EA	0.0004	1-13-80	0.0004	1-13-80
108B DE	0.0327	1-14-80	0.0327	1-14-80
109 DD	0.0657	1-13-80	0.0657	1-13-80
110A EB	0.0394	1-13-80	0.0394	1-13-80
110B DF	0.0000	1-14-80	0.0000	1-14-80
219 FA	0.0000	1-14-80	0.0000	1-14-80
Total leakage	1.2770		1.2770	

TABLE B-6
TOTAL LEAKAGE SUMMARY
TESTING FOR CYCLE 3 - UNIT 1

Type B Leakage		
I	Bellows	0.0771
II	Electrical	1.2770
III	Resilient Seals	42.9085
Type C Leakage		
I	Air Tested Isolation Valves	88.2638
II	Isolation Valves Tested with Water and Converted to Equivalent Air Leakage	N/A
III	Isolation Valves that Terminate Below Suppression Chamber Water Level (See Note 2)	1.3715
IV	Isolation Valves that are Located In Closed-Loop, Seismic Class I Lines that are Water Sealed (See Note 1)	9.9508

Note 1: This leakage is not included in the total leakage rate but is reported per paragraph III A i (d) of 10CFR50, Appendix J.

Note 2: This leakage shall not be included in the total leakage rate if the total water leak rate is less than 20 781 cubic feet per 30 days or 28.86 SCFH.

Total leakage prior to return to power operation 143.8487 SCFH
Type B and C Leakage

ENCLOSURE 1

REGULATORY DOCKET FILE COPY

BROWNS FERRY NUCLEAR POWER PLANT

Locations used in Vital Area Analysis - Unit 1

Abbreviations	Description
1. ULSF*	Upper Level of Spent Fuel Area - Elevation 664 ft. of Reactor Building.
2. CR*	Control Room - Located at 617 ft. Elevation.
3. AUXIRM1**	Auxillary Instrument Room No. 1 (Unit 1) - Located at 593 ft. Elevation of the Control Bay.
4. RC*	Reactor Containment.
5. BATBD1	Battery Board No. 1 - Located in DC Equipment Room No. 1 at 593 ft. Elevation of Control Bay - Unit 1.
6. BATBD2	Battery Board No. 2 - Located in DC Equipment Room No. 2 at 593 ft. Elevation of Control Bay - Unit 2.
7. BATRM1	Battery Room No. 1 - Located at the 593 ft. Elevation of the Control Bay of Unit 1.
8. BATRM2	Battery Room No. 2 - Located at the 593 ft. Elevation of the Control Bay of Unit 2.
9. SDRMA*	Shutdown Room A - Located at the 621 ft. Elevation of the Reactor Building.
10. MSVT	Main Steam Vault - Located at the 564 ft. Elevation of the Reactor Building.
11. TORUS*	Suppression Chamber - Located at the 519 ft. Elevation of the Reactor Building.
12. HPCI	High Pressure Coolant Injection Pump Room - Located at the 541 ft. Evelation on the Southwest Corner of the Reactor Building.
13. HXCLRM	Heat Exchanger Clean Up Room - Located at the 593 ft. Elevation of the Reactor Building.

* Type I vital area

** To be treated as a Type I vital area based on the potential for disabling the automatic portion of the Reactor Protection System (RPS) from this location.

14.	SDRMB	Shutdown Room B - Located at the 593 ft. Elevation of the Reactor Building.
15.	480SDBD1A	480 Volt Shut Down Board 1A - Located at the 621 ft. Elevation of the Reactor Building.
16.	480SDBD1B	480 Volt Shut Down Board 1B - Located at the 621 ft. Elevation of the Reactor Building.
17.	NWRB	North West Corner Room of the Reactor Building - Evaluation 519 ft.
18.	250RMOVBDC	25000 Volt Reactor Motor Operated Valve Board - Located at the 565 ft. Elevation of the reactor Building.
19.	CST	Condensate Storage Tank (No. Indicates Unit No.).
20.	480-MO-STG-Bld	480 Volt Motor Control Center - Located at the Storage Building.
21.	SWRB	South West Corner Room of the Reactor Building at 519 ft. Elevation.
22.	RHRHXWRM	Residual Heat Removal System Heat Exchanger West Room Located on the 593 ft. Elevation of the Reactor Building.
23.	PERACC	Personnel Access Area - Located at the 565 ft. Elevation of the Reactor Building.
24.	PPTUM	Pipe Tunnel from CST Tank to the Reactor Building.
25.	NERB	North East Corner Room of the Reactor Building - Located at the 519 ft. Elevation.
26.	MOV1D	480 Volt Reactor Motor Operated Valve Board 1K - Located at the 593 ft. Elevation of the Reactor Building.
27.	SERB	South East Corner Room of the Reactor Building - Located at the 519 ft. Elevation.
28.	RHRHXERM	Residual Heat Removal System Heat Exchanger East Room - Located on the 593 ft. Elevation of the Reactor Building.
29.	MOV1C	480 Volt Reactor Motor Operated Valve Board 1C - Located at the 565 ft. Elevation of the Reactor Building.

30.	565RB	565 ft. Elevation of the Reactor Building.
31.	593RB	593 ft. Elevation of the Reactor Building.
32.	SDRMC	Shutdown Room C - Located at the 621 ft. Elevation of the Reactor Building Unit 2
33.	SDRMD	Shutdown Room D - Located at the 593 ft. Elevation of the Reactor Building Unit 2
34.	DGRMA	Diesel Generator Room A - Located on the West Side of the Reactor Unit 1 at the 565 ft. Elevation of the Diesel Generator Building.
35.	PUMPRMA	Pump Room A - Located at the Pumping Station.
36.	PUMPRMB	Pump Room B - Located at the Pumping Station.
37.	PUMPRMC	Pump Room C - Located at the Pumping Station.
38.	PUMPRMD	Pump Room D - Located at the Pumping Station.
39.	DGHL	Diesel Generator Hall - Hall Way Just Outside of the Diesel Generator Rooms.
40.	SBC	4160 Volt Shutdown Board C - Located at the 621 ft. Elevation of the Reactor Building Unit 2 (Board C is located in SDRMC - See Location No. 32 Above).
41.	SDD	4160 Volt Shutdown Board D - Located at the 593 ft. Elevation of the Reactor Building Unit 2 (Board D is Located in SDRMD - See Location No. 33 Above).
42.	DGRMB	Diesel Generator Room B - Located in the DG Building at the 565 ft. Elevation.
43.	DGRMC	Diesel Generator Room C - Located in the DG Building at the 565 ft. Elevation.
44.	DGRMD	Diesel Generator Room D - Located in the DG Building at the 565 ft. Elevation.

ENCLOSURE 2

Browns Ferry Unit 1

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

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BBBB3BB9     WW      WW  RRRRRRRR    RRRRRRRR      00000      IIIIII  FFFFFFFFFF  BWRROIF
BBB3BB9B3    WW      WW  RRRRRRRRR   RRRRRRRRR    0000000     IIIIII  FFFFFFFFFF  BWRROIF
BB      BB   WW      WW  RR      RR  RR      RR   00   00       II    FF          BWRROIF
BB      BB   WW      WW  RR      RR  RR      RR   00   00       II    FF          BWRROIF
B9B3B3B3B8   WW      WW  RRRRRRRRR   RRRRRRRRR   00   00       II    FFFFFFFF    BWRROIF
BBBBBBB3BB   WW  WW  WW  RRRRRRRR    RRRRRRRR    00   00       II    FFFFFFFF    BWRROIF
BB      BB   WW WWWW WW  RR    RR    RR    RR   00   00       II    FF          BWRROIF
BB      BB   WWWW  WWWW  RR    RR    RR    RR   00   00       II    FF          BWRROIF
BBBBBBBBB9   WWW    WWW  RR      RR  RR      RR   0000000     IIIIII  FF          BWRROIF
BBBBBBBBB    WW      WW  RR      RR  RR      RR    00000      IIIIII  FF          BWRROIF
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BWR8B

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

* * * * FAULT TREE [illegible]NT TABLE * * * *
(BWR8-MAY)

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GS	SO	PST	PPT
2	RMR-BWR	OG	3	IN , RSNFC IN , RRCC IN , RFRADSRC				X	
3	RSNFC	AG	3	IN , RSNFA IN , DSNFCB OUT, RMR-BWR					
4	RRCC	OG	4	IN , RORO IN , RDSO IN , RORF OUT, RMR-BWR					
5	RFRADSRC	AG	3	IN , RFRADS IN , DRCBB OUT, RMR-BWR					
6	RSNFA	OG	3	IN , RSFA IN , RNFA OUT, RSNFC					
7	DSNFCB	OG	4	IN , SF-DO-DOSB-O IN , SF-PV-SEBU-B IN , SF-FL-FSSB-O OUT, RSNFC					
8	RSFA	OG	5	IN , SF-PV-SHCK-B IN , SF-MOPL IN , SF-SA-SFA-P IN , SF-OSPL OUT, RSNFA					
9	RNFA	UE	1	OUT, RSNFA					
10	SF-DO-DOSB-O	BE	1	OUT, DSNFCB					
11	SF-PV-SEBU-B	BE	1	OUT, DSNFCB					
12	SF-FL-FSSB-O	BE	1	OUT, DSNFCB					
13	SF-PV-SHCK-B	BE	1	OUT, RSFA					
14	SF-MOPL	OG	3	IN , SF-TK-POOL-B IN , SF-COOL-O OUT, RSFA					
15	SF-SA-SFA-P	BE	1	OUT, RSFA					

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	SOT	SPT
16	SF-DSPL	OG	3	IN , SF-SA-CRIT-R IN , SF-SA-FLPL-B OUT, RSFA				
17	SF-TK-POOL-B	BE	1	OUT, SF-MOPL				
18	SF-COOL-D	UE	1	OUT, SF-MOPL				
19	SF-SA-CRIT-R	BE	1	OUT, SF-DSPL				
20	SF-SA-FLPL-B	BE	1	OUT, SF-DSPL				
21	RFRADS	OG	4	IN , RSWS IN , RLWS IN , RGWS OUT, RFRADSRC				
22	BRCBB	UE	1	OUT, RFRADSRC				
23	RSWS	UE	1	OUT, RFRADS				
24	RLWS	UE	1	OUT, RFRADS				
25	RGWS	OG	3	IN , RCAPS IN , RRAPS OUT, RFRADS				
26	RCAPS	UE	1	OUT, RGWS				
27	RRAPS	UE	1	OUT, RGWS				
28	RDRO	OG	3	IN , RODFM IN , ROWFM OUT, RRCC				
29	RDSO	OG	3	IN , RDCS IN , RDHS OUT, RRCC				
30	RDRF	UE	1	OUT, RRCC				
31	RODFM	AG	4	IN , CBDFM IN , PCBB IN , PCBBB OUT, RDRO				
32	ROWFM	UE	1	OUT, RDRO				
33	RDCS	UE	1	OUT, RDSO				
34	RDHS	UE	1	OUT, RDSO				

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSOT	SSPT
35	CB8FM	OG	4	IN , FM-TI IN , FM-LOCA IN , FM-PC-B OUT, RODFM			
36	PCBB	UE	1	OUT, RODFM			
37	RCBBB	UE	1	OUT, RODFM			
38	FM-TI	AG	3	IN , TI-RS IN , T-HS-D OUT, CBDFM			
39	FM-LOCA	OG	3	IN , LLI-HSD IN , SLI-HSD OUT, CB8FM			
40	FM-PC-B	OG	3	IN , PCB-PC-LP-B IN , PCB-RV-01-B OUT, CB8FM			
41	PCB-PC-LP-B	BE	1	OUT, FM-PC-B			
42	PCB-RV-01-B	BE	1	OUT, FM-PC-B			
43	LLI-HSD	AG	3	IN , LL-HSD IN , LLI OUT, FM-LOCA			
44	SLI-HSD	AG	3	IN , SL-HSD IN , SLI OUT, FM-LOCA			
45	LL-HSD	OG	5	IN , ECIL-D IN , ECRL-D IN , RPS-D OUT, LLI-HSD OUT, ADS-LL-HSD		X	X
46	LLI	OG	3	IN , PCB-LLOCA-PP-B IN , PCB-PC-01-B OUT, LLI-HSD			
47	SL-HSD	OG	4	IN , RPS-D IN , ECIS-D IN , ECBS-D OUT, SLI-HSD			
48	SLI	OG	3	IN , PCB-PC-01-B IN , PCB-SLOCA-PP-B OUT, SLI-HSD			

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSOT	SSPT
49	ECIL-D	AG	4	IN , CSSA-IHR IN , CSSB-IHR IN , LPCIA-OR-B OUT, LL-MSD			
50	ECRL-D	UE	1	OUT, LL-MSD			
51	RPS-D	BE	3	OUT, LL-MSD OUT, SL-MSD OUT, RSS-D			
52	ADS-LL-MSD	OG	3	IN , LL-MSD IN , ADS-D OUT, CINS-D			
53	PCB-LLOCA-PP-B	OG	5	IN , PCB-RXCLUP-PP-B IN , PCB-LARGE-PP-B IN , PCB-ADS-VV-D IN , PCB-RHR-LOPRES-B OUT, LLI			
54	PCB-PC-01-B	BE	2	OUT, LLI OUT, SLI			
55	PCB-SLOCA-PP-B	OG	4	IN , PCB-MSD-PP-B IN , PCB-HPCI-PP-B IN , PCB-RCIC-PP-B OUT, SLI			
56	ECIS-D	AG	4	IN , HPCIO-IHR IN , ADS-LPCIAB-D IN , ADS-CSSAB-D OUT, SL-MSD			
57	ECRS-D	UE	1	OUT, SL-MSD			
58	RSS-D	AG	2	IN , RPS-D OUT, I-MS-D			
59	HPCIO-IHR	OG	5	IN , HPCIO-PMD-MS IN , HPCIO-PH-L IN , HPCIO-CS-PMS OUT, ECIS-D OUT, HPCI-RCIC-D		X	X
60	ADS-LPCIAB-D	OG	3	IN , LPCIAB-IHR IN , ADS-D OUT, ECIS-D			
61	ADS-CSSAB-D	OG	3	IN , ADS-D IN , CSSAB-IHR OUT, ECIS-D			

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	SOT	PST	PPT
62	LPCIAB-IHR	OG	3	IN , LPCIA-IHR IN , LPCIB-IHR OUT, ADS-LPCIAB-D					
63	ADS-D	UE	3	OUT, ADS-LL-HSD OUT, ADS-LPCIAB-D OUT, ADS-CSSAB-D					
64	LPCIA-IHR	OG	5	IN , LPCIA-PMD-HS IN , LPCIA-PM-L IN , LPCIA-CS-PMS OUT, LPCIAB-IHR OUT, LPCIA-OR-B				X	X
65	LPCIB-IHR	OG	5	IN , LPCIB-PMD-HS IN , LPCIB-PM-L IN , LPCIB-CS-PMS OUT, LPCIAB-IHR OUT, LPCIA-OR-B				X	X
66	CSSAB-IHR	AG	3	IN , CSSA-IHR IN , CSSB-IHR OUT, ADS-CSSAB-D					
67	CSSA-IHR	OG	5	IN , CSSA-PMD-HS IN , CSSA-PM-L IN , CSSA-CS-PMS OUT, ECIL-D OUT, CSSAB-IHR				X	X
68	CSSB-IHR	OG	5	IN , CSSB-PMD-HS IN , CSSB-PM-L IN , CSSB-CS-PMS OUT, ECIL-D OUT, CSSAB-IHR				X	X
69	TI-RS	OG	3	IN , OI-RC IN , IHR-CP OUT, FH-TI					
70	T-HS-D	OG	5	IN , RSS-D IN , CHIES-D IN , CINS-D IN , RV-OPS-D OUT, FH-TI					
71	OI-RC	UE	1	OUT, TI-RS					
72	IHR-CP	OG	6	IN , PCS-PP-B IN , PCS-FV-D IN , PCS-PM-L IN , PCS-HS-CD-L					

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GS	SO	PST	PT
				IN , PCS-CS-B ; OUT, TI-RS					
73	PCS-PP-B	BE	1	OUT, IHR-CP					
74	PCS-FV-D	BE	1	OUT, IHR-CP					
75	PCS-PM-L	OG	3	IN , PCS-PM-D IN , LOSPW OUT, IHR-CP					
76	PCS-HS-CD-L	UE	1	OUT, IHR-CP					
77	PCS-CS-B	BE	1	OUT, IHR-CP					
78	CHTES-D	UE	1	OUT, T-MS-D					
79	CINS-D	AG	3	IN , ADS-LL-MSD IN , HPCI-RCIC-D OUT, T-MS-D					
80	RV-OPS-D	AG	3	IN , SV-ROP-D IN , RV-ROP-D OUT, T-MS-D					
81	SV-ROP-D	UE	1	OUT, RV-OPS-D					
82	RV-ROP-D	UE	1	OUT, RV-OPS-D					
83	HPCI-RCIC-D	AG	3	IN , HPCIO-IHR IN , RCICO-IHR OUT, CINS-D					
84	RCICO-IHR	OG	4	IN , RCICO-PMO-HS IN , RCICO-PM-L IN , RCICO-CS-PMS OUT, HPCI-RCIC-D					
85	PCB-MSD-PP-B	AG	3	IN , MSD-MOVV8-CO IN , MSD-PP-B OUT, PCB-SLOCA-PP-B					
86	PCB-HPCI-PP-B	OG	3	IN , PCB-HPCI-VVPP-B IN , PCB-HPCI-VVVV-B OUT, PCB-SLOCA-PP-B					
87	PCB-RCIC-PP-B	OG	3	IN , PCB-RCIC-VVPP-D IN , PCB-RCIC-VVP-D OUT, PCB-SLOCA-PP-B					
88	MSD-MOVV8-CO	BE	1	OUT, PCB-MSD-PP-B					

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GS	SOT	SPT
89	MSD-PP-B	BE	1	OUT, PCB-MSD-PP-B				
90	PCB-HPCI-VVPP-B	AG	3	IN , HPCI-MOVV4-OC IN , HPCI-PP-B OUT, PCB-HPCI-PP-B				
91	PCB-HPCI-VVVV-B	AG	4	IN , HPCI-MOVV4-OC IN , HPCI-MOVV5-OC IN , HPCI-PPPP-B OUT, PCB-HPCI-PP-B				
92	PCB-RCIC-VVPP-D	AG	3	IN , RCIC-MOV2-OO IN , RCIC-PP-B OUT, PCB-RCIC-PP-B				
93	PCB-RCIC-VVP-D	AG	4	IN , RCIC-MOV2-OO IN , RCIC-MOV3-OO IN , RCIC-PPPP-B OUT, PCB-RCIC-PP-B				
94	HPCI-MOVV4-OC	BE	2	OUT, PCB-HPCI-VVPP-B OUT, PCB-HPCI-VVVV-B				
95	HPCI-PP-B	BE	1	OUT, PCB-HPCI-VVPP-B				
96	HPCI-MOVV5-OC	BE	1	OUT, PCB-HPCI-VVVV-B				
97	HPCI-PPPP-B	BE	1	OUT, PCB-HPCI-VVVV-B				
98	RCIC-MOV2-OO	BE	2	OUT, PCB-RCIC-VVPP-D OUT, PCB-RCIC-VVP-D				
99	RCIC-PP-B	BE	1	OUT, PCB-RCIC-VVPP-D				
100	RCIC-MOV3-OO	BE	1	OUT, PCB-RCIC-VVP-D				
101	RCIC-PPPP-B	BE	1	OUT, PCB-RCIC-VVP-D				
102	LPCIA-OR-B	OG	3	IN , LPCIA-IHR IN , LPCIB-IHR OUT, ECIL-D				
103	PCS-PH-D	UE	1	OUT, PCS-PH-L				
104	LOSPW	BE	9	OUT, PCS-PH-L OUT, AC-4160-BS3A-NP OUT, AC-4160-BS3A-AP OUT, AC-4160-BS3B-NP OUT, AC-4160-BS3B-AP OUT, AC-4160-BS3C-NP OUT, AC-4160-BS3C-AP OUT, AC-4160-BS8D-NP				

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	G S S P S O I I
				OUT, AC-4160-0S3D-AP		
105	PCB-RXCLUP-PP-B	AG	3	IN , RXCLUP-69-1-OC IN , RXCLUP-PP-B OUT, PCB-LLOCA-PP-B		
106	PCB-LARGE-PP-B	BE	1	OUT, PCB-LLOCA-PP-B		
107	PCB-ADS-VV-D	BE	1	OUT, PCB-LLOCA-PP-B		
108	PCB-RHR-LOPRES-B	AG	3	IN , RHR-HOV48-CO IN , RHR-HOV47-CO OUT, PCB-LLOCA-PP-B		
109	RXCLUP-69-1-OC	BE	1	OUT, PCB-RXCLUP-PP-B		
110	RXCLUP-PP-B	BE	1	OUT, PCB-RXCLUP-PP-B		
111	RHR-HOV48-CO	BE	1	OUT, PCB-RHR-LOPRES-B		
112	RHR-HOV47-CO	BE	1	OUT, PCB-RHR-LOPRES-B		
113	HPCIO-PHD-HS	OG	4	IN , HPCIO-HX-RX-B IN , HPCIO-PP-PHD-B IN , HPCIO-VV-PHD OUT, HPCIO-IHR		
114	HPCIO-PH-L	AG	2	IN , HPCIO-TO-PHH OUT, HPCIO-IHR		
115	HPCIO-CS-PHS	AG	3	IN , HPCIO-TKTOR IN , HPCIO-TKCST OUT, HPCIO-IHR		
116	HPCIO-HX-RX-B	BE	1	OUT, HPCIO-PHD-HS		
117	HPCIO-PP-PHD-B	BE	1	OUT, HPCIO-PHD-HS		
118	HPCIO-VV-PHD	OG	3	IN , HPCI-73-34-OC IN , HPCI-73-44-CC OUT, HPCIO-PHD-HS		
119	HPCIO-TO-PHH	OG	3	IN , HPCIO-PHH-D IN , HPCIO-PHH-SS OUT, HPCIO-PH-L		
120	HPCIO-TKTOR	OG	4	IN , HPCIO-TORVV-PHS IN , HPCIO-TORPP-B IN , HPCIO-TK-TOR-B OUT, HPCIO-CS-PHS		
121	HPCIO-TKCST	OG	4	IN , HPCIO-CSIVV-PHS		

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	G S S P S O T T
				IN , HPCI0-CSTPP-B		
				IN , HPCI0-TK-CST-B		
				OUT, HPCI0-CS-PMS		
122	HPCI0-TORVV-PMS	OG	3	IN , HPCI-73-26-CC		
				IN , HPCI-73-27-CC		
				OUT, HPCI0-TKTOR		
123	HPCI0-TORPP-B	BE	1	OUT, HPCI0-TKTOR		
124	HPCI0-TK-TOR-B	BE	1	OUT, HPCI0-TKTOR		
125	HPCI0-CSTVV-PMS	OG	3	IN , HPCI-CST-VV-PMS		
				IN , HPCI-73-40-OC		
				OUT, HPCI0-TKCST		
126	HPCI0-CSTPP-B	BE	1	OUT, HPCI0-TKCST		
127	HPCI0-TK-CST-B	BE	1	OUT, HPCI0-TKCST		
128	HPCI-73-34-OC	BE	1	OUT, HPCI0-VV-PHD		
129	HPCI-73-44-CC	BE	1	OUT, HPCI0-VV-PHD		
130	HPCI-73-26-CC	BE	1	OUT, HPCI0-TORVV-PMS		
131	HPCI-73-27-CC	BE	1	OUT, HPCI0-TORVV-PMS		
132	HPCI-CST-VV-PMS	AG	4	IN , HPCI-2-170-OC		
				IN , HPCI-2-166-OC		
				IN , HPCI-2-162-OC		
				OUT, HPCI0-CSTVV-PMS		
133	HPCI-73-40-OC	BE	1	OUT, HPCI0-CSTVV-PMS		
134	HPCI-2-170-OC	BE	1	OUT, HPCI-CST-VV-PMS		
135	HPCI-2-166-OC	BE	1	OUT, HPCI-CST-VV-PMS		
136	HPCI-2-162-OC	BE	1	OUT, HPCI-CST-VV-PMS		
137	HPCI0-PMH-D	OG	4	IN , HPCI0-PMH-AUX		
				IN , HPCI0-PMH-3		
				IN , HPCI0-PMH-CSG		
				OUT, HPCI0-TD-PMH		
138	HPCI0-PMH-SS	OG	3	IN , HPCI0-PMH-VV		
				IN , HPCI0-PMH-PP		
				OUT, HPCI0-TD-PMH		
139	HPCI0-PMH-AUX	OG	3	IN , HPCI0-PMH-COOL		
				IN , HPCI0-PMH-LUB		

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	SOT	SPT
				OUT, HPCIO-PMH-D				
140	HPCIO-PMH-B	BE	1	OUT, HPCIO-PMH-D				
141	HPCIO-PMH-CSG	BE	1	OUT, HPCIO-PMH-D				
142	HPCIO-PMH-VV	OG	6	IN , HPCI-73-2-OC IN , HPCI-73-3-OC IN , HPCI-73-19-OC IN , HPCI-73-18-OC IN , HPCI-73-16-CC OUT, HPCIO-PMH-SS				
143	HPCIO-PMH-PP	BE	1	OUT, HPCIO-PMH-SS				
144	HPCIO-PMH-COOL	BE	1	OUT, HPCIO-PMH-AUX				
145	HPCIO-PMH-LUB	BE	1	OUT, HPCIO-PMH-AUX				
146	HPCI-73-2-OC	BE	1	OUT, HPCIO-PMH-VV				
147	HPCI-73-3-OC	BE	1	OUT, HPCIO-PMH-VV				
148	HPCI-73-19-OC	BE	1	OUT, HPCIO-PMH-VV				
149	HPCI-73-18-OC	BE	1	OUT, HPCIO-PMH-VV				
150	HPCI-73-16-CC	BE	1	OUT, HPCIO-PMH-VV				
151	RCICO-PMD-HS	OG	4	IN , RCICO-HX-RX-B IN , RCICO-PP-PMD-B IN , RCICO-VV-PMD OUT, RCICO-IHR				
152	RCICO-PM-L	AG	2	IN , RCICO-TD-PMR OUT, RCICO-IHR				
153	RCICO-CS-PMS	AG	3	IN , RCICO-TKTOR IN , RCICO-TKCST OUT, RCICO-IHR				
154	RCICO-HX-RX-B	BE	1	OUT, RCICO-PMD-HS				
155	RCICO-PP-PMD-B	BE	1	OUT, RCICO-PMD-HS				
156	RCICO-VV-PMD	OG	3	IN , RCIC-71-37-OC IN , RCIC-71-39-CC OUT, RCICO-PMD-HS				
157	RCICO-TD-PMR	OG	3	IN , RCICO-PMR-D IN , RCICO-PMR-SS OUT, RCICO-PM-L				

Example

PP = Piping
VV - Valves
PMD - Pump motor discharge
HX - Heat Exchanger
RX = Reactor Containment
IHR = Inadequate Heat Removal
B = Breach
RCIC = Reactor Core Isolation Cooling.

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	SOT	PST	PPT
158	RCIC0-TKTOR	OG	4	IN , RCIC0-TORVV-PHS IN , RCIC0-TORPP-B IN , RCIC0-TK-TOR-B OUT, RCIC0-CS-PHS					
159	RCIC0-TKCST	OG	4	IN , RCIC0-CSTVV-PHS IN , RCIC0-CSTPP-B IN , RCIC0-TK-CST-B OUT, RCIC0-CS-PHS					
160	RCIC0-TORVV-PHS	OG	4	IN , RCIC-71-16-OC IN , RCIC-71-17-CC IN , RCIC-71-18-CC OUT, RCIC0-TKTOR					
161	RCIC0-TORPP-B	BE	1	OUT, RCIC0-TKTOR					
162	RCIC0-TK-TOR-B	BE	1	OUT, RCIC0-TKTOR					
163	RCIC0-CSTVV-PHS	OG	3	IN , RCIC-CST-VV-PHS IN , RCIC-71-19-OC OUT, RCIC0-TKCST					
164	RCIC0-CSTPP-B	BE	1	OUT, RCIC0-TKCST					
165	RCIC0-TK-CST-B	BE	1	OUT, RCIC0-TKCST					
166	RCIC-71-37-OC	BE	1	OUT, RCIC0-VV-PMD					
167	RCIC-71-39-CC	BE	1	OUT, RCIC0-VV-PMD					
168	RCIC-71-16-OC	BE	1	OUT, RCIC0-TORVV-PHS					
169	RCIC-71-17-CC	BE	1	OUT, RCIC0-TORVV-PHS					
170	RCIC-71-18-CC	BE	1	OUT, RCIC0-TORVV-PHS					
171	RCIC-CST-VV-PHS	AG	4	IN , RCIC-2-170-OC IN , RCIC-2-166-OC IN , RCIC-2-162-OC OUT, RCIC0-CSTVV-PHS					
172	RCIC-71-19-OC	BE	1	OUT, RCIC0-CSTVV-PHS					
173	RCIC-2-170-OC	BE	1	OUT, RCIC-CST-VV-PHS					
174	RCIC-2-166-OC	BE	1	OUT, RCIC-CST-VV-PHS					
175	RCIC-2-162-OC	BE	1	OUT, RCIC-CST-VV-PHS					
176	RCIC0-PMR-D	OG	4	IN , RCIC0-PMR-AUX IN , RCIC0-PMR-B					

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	SOT	SPT
				IN , RCIC0-PMR-CSG				
				OUT, RCIC0-ID-PMR				
177	RCIC0-PMR-SS	OG	3	IN , RCIC0-PMR-VV				
				IN , RCIC0-PMR-PP				
				OUT, RCIC0-ID-PMR				
178	RCIC0-PMR-AUX	OG	3	IN , RCIC0-PMR-COOL				
				IN , RCIC0-PMR-LUB				
				OUT, RCIC0-PMR-D				
179	RCIC0-PMR-B	BE	1	OUT, RCIC0-PMR-D				
180	RCIC0-PMR-CSG	BE	1	OUT, RCIC0-PMR-D				
181	RCIC0-PMR-VV	OG	6	IN , RCIC-71-3-OC				
				IN , RCIC-71-8-CC				
				IN , RCIC-71-2-OC				
				IN , RCIC-71-9-OC				
				IN , RCIC-71-10-OC				
				OUT, RCIC0-PMR-SS				
182	RCIC0-PMR-PP	BE	1	OUT, RCIC0-PMR-SS				
183	RCIC0-PMR-COOL	BE	1	OUT, RCIC0-PMR-AUX				
184	RCIC0-PMR-LUB	BE	1	OUT, RCIC0-PMR-AUX				
185	RCIC-71-3-OC	BE	1	OUT, RCIC0-PMR-VV				
186	RCIC-71-8-CC	BE	1	OUT, RCIC0-PMR-VV				
187	RCIC-71-2-OC	BE	1	OUT, RCIC0-PMR-VV				
188	RCIC-71-9-OC	BE	1	OUT, RCIC0-PMR-VV				
189	RCIC-71-10-OC	BE	1	OUT, RCIC0-PMR-VV				
190	LPCIA-PMD-HS	OG	4	IN , LPCIA-HX-RX-B				
				IN , LPCIA-PP-PMD-B				
				IN , LPCIA-VV-PMD				
				OUT, LPCIA-IHR				
191	LPCIA-PM-L	AG	3	IN , LPCIA-MD-PMA				
				IN , LPCIA-MD-PMC				
				OUT, LPCIA-IHR				
192	LPCIA-CS-PMS	AG	3	IN , LPCIA-IKIOR				
				IN , LPCIA-IKCST				
				OUT, LPCIA-IHR				
193	LPCIA-HX-RX-B	BE	1	OUT, LPCIA-PMD-HS				

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GS	SOT	SPT
194	LPCIA-PP-PHD-B	BE	1	OUT, LPCIA-PHD-HS				
195	LPCIA-VV-PHD	OG	4	IN , LPCIA-HXCTVV-D IN , LPCIA-FCV52-OC IN , LPCIA-FCV53-CC OUT, LPCIA-PHD-HS				
196	LPCIA-HD-PHA	OG	3	IN , LPCIA-PHA-D IN , LPCIA-PHA-EPW OUT, LPCIA-PH-L				
197	LPCIA-HD-PHC	OG	3	IN , LPCIA-PHC-D IN , LPCIA-PHC-EPW OUT, LPCIA-PH-L				
198	LPCIA-TKTOR	OG	4	IN , LPCIA-TORVV-PHS IN , LPCIA-TORPP-B IN , LPCIA-TK-TOR-B OUT, LPCIA-CS-PHS				
199	LPCIA-TKCST	OG	4	IN , LPCIA-CSTVV-PHS IN , LPCIA-CSTPP-B IN , LPCIA-TK-CST-B OUT, LPCIA-CS-PHS				
200	LPCIA-TORVV-PHS	AG	4	IN , LPCIA-FCV12-OC IN , LPCIA-FCV1-OC IN , LPCIAB-CTV-D OUT, LPCIA-TKTOR				
201	LPCIA-TORPP-B	BE	1	OUT, LPCIA-TKTOR				
202	LPCIA-TK-TOR-B	BE	1	OUT, LPCIA-TKTOR				
203	LPCIA-CSTVV-PHS	AG	3	IN , LPCIA-HCV11-CC IN , LPCIA-HCV23-CC OUT, LPCIA-TKCST				
204	LPCIA-CSTPP-B	BE	1	OUT, LPCIA-TKCST				
205	LPCIA-TK-CST-B	BE	1	OUT, LPCIA-TKCST				
206	LPCIA-HXCTVV-D	AG	4	IN , LPCIA-HCV10-OC IN , LPCIA-HCV22-OC IN , LPCIAB-CTVV-D OUT, LPCIA-VV-PHD				
207	LPCIA-FCV52-OC	BE	1	OUT, LPCIA-VV-PHD				
208	LPCIA-FCV53-CC	BE	1	OUT, LPCIA-VV-PHD				
209	LPCIA-HCV10-OC	BE	1	OUT, LPCIA-HXCTVV-D				

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	OST	PST
210	LPCIA-HCV22-OC	BE	1	OUT, LPCIA-HX6TVV-D				
211	LPCIAB-CTVV-D	OG	4	IN , LPCIA-HCV150-OC IN , LPCIA-FCV46-CC OUT, LPCIA-HXCTVV-D OUT, LPCIB-HXCTVV-D			X	X
212	LPCIB-HXCTVV-D	AG	4	IN , LPCIAB-CTVV-D IN , LPCIB-HCV33-OC IN , LPCIB-HCV44-OC OUT, LPCIB-VV-PMD				
213	LPCIA-HCV150-OC	BE	1	OUT, LPCIAB-CTVV-D				
214	LPCIA-FCV46-CC	BE	1	OUT, LPCIAB-CTVV-D				
215	LPCIA-FCV12-OC	BE	1	OUT, LPCIA-TORVV-PMS				
216	LPCIA-FCV1-OC	BE	1	OUT, LPCIA-TORVV-PMS				
217	LPCIAB-CTV-D	OG	4	IN , LPCIA-CTBVV-D IN , LPCIA-CTVV-D OUT, LPCIA-TORVV-PMS OUT, LPCIB-TORVV-PMS			X	X
218	LPCIA-CTBVV-D	AG	3	IN , LPCIA-FCV36-CC IN , LPCIA-FCV25-CC OUT, LPCIAB-CTV-D				
219	LPCIA-CTVV-D	AG	3	IN , LPCIA-FCV13-CC IN , LPCIA-FCV2-CC OUT, LPCIAB-CTV-D				
220	LPCIB-TORVV-PMS	AG	4	IN , LPCIAB-CTV-D IN , LPCIB-FCV35-OC IN , LPCIB-FCV24-OC OUT, LPCIB-TKTOR				
221	LPCIA-FCV36-CC	BE	1	OUT, LPCIA-CTBVV-D				
222	LPCIA-FCV25-CC	BE	1	OUT, LPCIA-CTBVV-D				
223	LPCIA-FCV13-CC	BE	1	OUT, LPCIA-CTVV-D				
224	LPCIA-FCV2-CC	BE	1	OUT, LPCIA-CTVV-D				
225	LPCIA-HCV11-CC	BE	1	OUT, LPCIA-CSTVV-PMS				
226	LPCIA-HCV23-CC	BE	1	OUT, LPCIA-CSTVV-PMS				
227	LPCIA-PMA-D	OG	4	IN , LPCIA-PMA-AUX IN , LPCIA-PMA-B				

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSOT	SSPT
				IN , LPCIA-PMA-CSG			
				OUT, LPCIA-MD-PMA			
228	LPCIA-PMA-EPW	OG	2	IN , AC-4160-BS3A			
				OUT, LPCIA-MD-PMA			
229	LPCIA-PMA-AUX	OG	3	IN , LPCIA-PMA-COOL			
				IN , LPCIA-PMA-LUB			
				OUT, LPCIA-PMA-D			
230	LPCIA-PMA-D	BE	1	OUT, LPCIA-PMA-D			
231	LPCIA-PMA-CSG	BE	1	OUT, LPCIA-PMA-D			
232	AC-4160-BSBA	OG	4	IN , EP-BS-SBA-D		X	X
				IN , AC-4160-BS3A-PS			
				OUT, LPCIA-PMA-EPW			
				OUT, CSSA-PMA-EPW			
233	LPCIA-PMA-COOL	BE	1	OUT, LPCIA-PMA-AUX			
234	LPCIA-PMA-LUB	BE	1	OUT, LPCIA-PMA-AUX			
235	LPCIA-PMC-D	OG	4	IN , LPCIA-PMC-AUX			
				IN , LPCIA-PMC-B			
				IN , LPCIA-PMC-CSG			
				OUT, LPCIA-MD-PMC			
236	LPCIA-PMC-EPW	OG	2	IN , AC-4160-BS9B			
				OUT, LPCIA-MD-PMC			
237	LPCIA-PMC-AUX	OG	3	IN , LPCIA-PMC-COOL			
				IN , LPCIA-PMC-LUB			
				OUT, LPCIA-PMC-D			
238	LPCIA-PMC-B	BE	1	OUT, LPCIA-PMC-D			
239	LPCIA-PMC-CSG	BE	1	OUT, LPCIA-PMC-D			
240	AC-4160-BS0B	OG	4	IN , EP-BS-SB3-D		X	X
				IN , AC-4160-BS0B-PS			
				OUT, LPCIA-PMC-EPW			
				OUT, CSSA-PMC-EPW			
241	LPCIA-PMC-COOL	BE	1	OUT, LPCIA-PMC-AUX			
242	LPCIA-PMC-LUB	BE	1	OUT, LPCIA-PMC-AUX.			
243	LPCIB-PMD-HS	OG	4	IN , LPCIB-HX-RX-B			
				IN , LPCIB-PP-PMD-B			
				IN , LPCIB-VV-PMD			
				OUT, LPCIB-IHR			

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GS	SO	SST	PT
244	LPCIB-PM-L	AG	3	IN , LPCIB-MD-PMB IN , LPCIB-MD-PMD OUT, LPCIB-IHR					
245	LPCIB-CS-PMS	AG	3	IN , LPCIB-TKTOR IN , LPCIB-TKCST OUT, LPCIB-IHR					
246	LPCIB-HX-RX-B	BE	1	OUT, LPCIB-PMD-HS					
247	LPCIB-PP-PMD-B	BE	1	OUT, LPCIB-PMD-HS					
248	LPCIB-VV-PMD	OG	4	IN , LPCIB-HXCIVV-D IN , LPCIB-FCV66-OC IN , LPCIB-FCV67-CC OUT, LPCIB-PMD-HS					
249	LPCIB-MD-PMB.	OG	3	IN , LPCIB-PMB-D IN , LPCIB-PMB-EPW OUT, LPCIB-PM-L					
250	LPCIB-MD-PMD	OG	3	IN , LPCIB-PMD-D IN , LPCIB-PMD-EPW OUT, LPCIB-PM-L					
251	LPCIB-TKTOR	OG	4	IN , LPCIB-TORVV-PMS IN , LPCIB-TORPP-B IN , LPCIB-TK-TOR-B OUT, LPCIB-CS-PMS					
252	LPCIB-TKCST	OG	4	IN , LPCIB-CSTVV-PMS IN , LPCIB-CSTPP-B IN , LPCIB-TK-CST-B OUT, LPCIB-CS-PMS					
253	LPCIB-TORPP-B	BE	1	OUT, LPCIB-TKTOR					
254	LPCIB-TK-TOR-B	BE	1	OUT, LPCIB-TKTOR					
255	LPCIB-CSTVV-PMS	AG	3	IN , LPCI-HCV39-CC IN , LPCIB-HCV45-CC OUT, LPCIB-TKCST					
256	LPCIB-CSTPP-B	BE	1	OUT, LPCIB-TKCST					
257	LPCIB-TK-CST-B	BE	1	OUT, LPCIB-TKCST					
258	LPCIB-FCV66-OC	BE	1	OUT, LPCIB-VV-PMD					
259	LPCIB-FCV67-CC	BE	1	OUT, LPCIB-VV-PMD					
260	LPCIB-HCV33-OC	BE	1	OUT, LPCIB-HXCIVV-D					

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	SS	SO	SP	PT
261	LPCIB-HCV44-OC	BE	1	OUT, LPCIB-HXCTVV-D					
262	LPCIB-FCV35-OC	BE	1	OUT, LPCIB-TORVV-PHS					
263	LPCIB-FCV24-OC	BE	1	OUT, LPCIB-TORVV-PHS					
264	LPCI-HCV34-CC	BE	1	OUT, LPCIB-CSTVV-PHS					
265	LPCIB-HCV45-CC	BE	1	OUT, LPCIB-CSTVV-PHS					
266	LPCIB-PMB-D	OG	4	IN , LPCIB-PMB-AUX IN , LPCIB-PMB-B IN , LPCIB-PMB-CSG OUT, LPCIB-MD-PMB					
267	LPCIB-PMB-EPW	OG	2	IN , AC-4160-BSBC OUT, LPCIB-MD-PMB					
268	LPCIB-PMB-AUX	OG	3	IN , LPCIB-PMB-COOL IN , LPCIB-PMB-LUB OUT, LPCIB-PMB-D					
269	LPCIB-PMB-B	BE	1	OUT, LPCIB-PMB-D					
270	LPCIB-PMB-CSG	BE	1	OUT, LPCIB-PMB-D					
271	AC-4160-BSBC	OG	4	IN , EP-BS-SBC-D IN , AC-4160-BSBC-PS OUT, LPCIB-PMB-EPW OUT, CSSB-PMB-EPW				X	X
272	LPCIB-PMB-COOL	BE	1	OUT, LPCIB-PMB-AUX					
273	LPCIB-PMB-LUB	BE	1	OUT, LPCIB-PMB-AUX					
274	LPCIB-PMD-D	OG	4	IN , LPCIB-PMD-AUX IN , LPCIB-PMD-B IN , LPCIB-PMD-CSG OUT, LPCIB-MD-PMD					
275	LPCIB-PMD-EPW	OG	2	IN , AC-4160-BSBD OUT, LPCIB-MD-PMD					
276	LPCIB-PMD-AUX	OG	3	IN , LPCIB-PMD-COOL IN , LPCIB-PMD-LUB OUT, LPCIB-PMD-D					
277	LPCIB-PMD-B	BE	1	OUT, LPCIB-PMD-D					
278	LPCIB-PMD-CSG	BE	1	OUT, LPCIB-PMD-D					
279	AC-4160-BSBD	OG	4	IN , EP-BS-SBD-D				X	X

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GS	SOT	PST
				IN , AC-4160-BS10-PS				
				OUT, LPCIB-PMD-EPW				
				OUT, CSSB-PMD-EPW				
280	LPCIB-PMD-COOL	BE	1	OUT, LPCIB-PMD-AUX				
281	LPCIB-PMD-LUB	BE	1	OUT, LPCIB-PMD-AUX				
282	CSSA-PMD-HS	OG	4	IN , CSSA-HX-RX-B				
				IN , CSSA-PP-PMD-B				
				IN , CSSA-VV-PMD				
				OUT, CSSA-IHR				
283	CSSA-PM-L	AG	3	IN , CSSA-MD-PMA				
				IN , CSSA-MD-PMC				
				OUT, CSSA-IHR				
284	CSSA-CS-PMS	AG	3	IN , CSSA-TKTOR				
				IN , CSSA-TKCST				
				OUT, CSSA-IHR				
285	CSSA-HX-RX-B	BE	1	OUT, CSSA-PMD-HS				
286	CSSA-PP-PMD-B	BE	1	OUT, CSSA-PMD-HS				
287	CSSA-VV-PMD	OG	5	IN , CSSA-VVO-PMD				
				IN , CSSA-75-23-OC				
				IN , CSSA-75-25-CC				
				IN , CSSA-75-27-OC				
				OUT, CSSA-PMD-HS				
288	CSSA-MD-PMA	OG	3	IN , CSSA-PMA-D				
				IN , CSSA-PMA-EPW				
				OUT, CSSA-PM-L				
289	CSSA-MD-PMC	OG	3	IN , CSSA-PMC-D				
				IN , CSSA-PMC-EPW				
				OUT, CSSA-PM-L				
290	CSSA-TKTOR	OG	4	IN , CSSA-TORVV-PMS				
				IN , CSSA-TORPP-B				
				IN , CSSA-TK-TOR-B				
				OUT, CSSA-CS-PMS				
291	CSSA-TKCST	OG	4	IN , CSSA-CSTVV-PMS				
				IN , CSSA-CSTPP-B				
				IN , CSSA-TK-CST-B				
				OUT, CSSA-CS-PMS				
292	CSSA-TORVV-PMS	AG	3	IN , CSSA-75-11-OC				
				IN , CSSA-75-2-OC				
				OUT, CSSA-TKTOR				

SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	SOT	SPT	P
293 CSSA-TORPP-B	BE	1	OUT, CSSA-TKTOR					
294 CSSA-TK-TOR-B	BE	1	OUT, CSSA-TKTOR					
295 CSSA-CSTVV-PHS	AG	3	IN , CSSA-75-3-CC IN , CSSA-75-12-CC OUT, CSSA-TKCST					
296 CSSA-CSTPP-B	BE	1	OUT, CSSA-TKCST					
297 CSSA-TK-CST-B	BE	1	OUT, CSSA-TKCST					
298 CSSA-VVD-PHD	AG	3	IN , CSSA-75-18-OC IN , CSSA-75-10-OC OUT, CSSA-VV-PHD					
299 CSSA-75-23-OC	BE	1	OUT, CSSA-VV-PHD					
300 CSSA-75-25-CC	BE	1	OUT, CSSA-VV-PHD					
301 CSSA-75-27-OC	BE	1	OUT, CSSA-VV-PHD					
302 CSSA-75-18-OC	BE	1	OUT, CSSA-VVD-PHD					
303 CSSA-75-10-OC	BE	1	OUT, CSSA-VVD-PHD					
304 CSSA-75-11-OC	BE	1	OUT, CSSA-TORVV-PHS					
305 CSSA-75-2-OC	BE	1	OUT, CSSA-TORVV-PHS					
306 CSSA-75-3-CC	BE	1	OUT, CSSA-CSTVV-PHS					
307 CSSA-75-12-CC	BE	1	OUT, CSSA-CSTVV-PHS					
308 CSSA-PHA-D	OG	4	IN , CSSA-PHA-AUX IN , CSSA-PHA-B IN , CSSA-PHA-CSG OUT, CSSA-MD-PHA					
309 CSSA-PHA-EPW	OG	2	IN , AC-4160-BSBA OUT, CSSA-MD-PHA					
310 CSSA-PHA-AUX	OG	3	IN , CSSA-PHA-COOL IN , CSSA-PHA-LUB OUT, CSSA-PHA-D					
311 CSSA-PHA-B	BE	1	OUT, CSSA-PHA-D					
312 CSSA-PHA-CSG	BE	1	OUT, CSSA-PHA-D					
313 CSSA-PHA-COOL	BE	1	OUT, CSSA-PHA-AUX					

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	P G S S P S O T T
314	CSSA-PMA-LUB	BE	1	OUT, CSSA-PMA-AUX		
315	CSSA-PMC-D	OG	4	IN , CSSA-PMC-AUX IN , CSSA-PMC-B IN , CSSA-PMC-CSG OUT, CSSA-MD-PMC		
316	CSSA-PMC-EPW	OG	2	IN , AC-4160-8S38 OUT, CSSA-MD-PMC		
317	CSSA-PMC-AUX	OG	3	IN , CSSA-PMC-COOL IN , CSSA-PMC-LUB OUT, CSSA-PMC-D		
318	CSSA-PMC-B	BE	1	OUT, CSSA-PMC-D		
319	CSSA-PMC-CSG	BE	1	OUT, CSSA-PMC-D		
320	CSSA-PMC-COOL	BE	1	OUT, CSSA-PMC-AUX		
321	CSSA-PMC-LUB	BE	1	OUT, CSSA-PMC-AUX		
322	CSSB-PMD-HS	OG	4	IN , CSSB-HX-RX-B IN , CSSB-PP-PMD-B IN , CSSB-VV-PMD OUT, CSSB-IHR		
323	CSSB-PM-L	AG	3	IN , CSSB-MD-PMB IN , CSSB-MD-PMD OUT, CSSB-IHR		
324	CSSB-CS-PMS	AG	3	IN , CSSB-TKIOR IN , CSSB-TKCST OUT, CSSB-IHR		
325	CSSB-HX-RX-B	BE	1	OUT, CSSB-PMD-HS		
326	CSSB-PP-PMD-B	BE	1	OUT, CSSB-PMD-HS		
327	CSSB-VV-PMD	OG	5	IN , CSSB-VVD-PMD IN , CSSB-75-51-OC IN , CSSB-75-53-CC IN , CSSB-75-55-OC OUT, CSSB-PMD-HS		
328	CSSB-MD-PMB	OG	3	IN , CSSB-PMB-D IN , CSSB-PMB-EPW OUT, CSSB-PM-L		
329	CSSB-MD-PMD	OG	3	IN , CSSB-PMD-D IN , CSSB-PMD-EPW OUT, CSSB-PM-L		

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	G S	S O	P S T	P T
330	CSSB-TKTOR	OG	4	IN , CSSB-TORVV-PHS IN , CSSB-TORPP-B IN , CSSB-TK-TOR-B OUT, CSSB-CS-PHS					
331	CSSB-TKCST	OG	4	IN , CSSB-CSTVV-PHS IN , CSSB-CSTPP-B IN , CSSB-TK-CST-B OUT, CSSB-CS-PHS					
332	CSSB-TORVV-PHS	AG	3	IN , CSSB-75-39-OC IN , CSSB-75-30-OC OUT, CSSB-TKTOR					
333	CSSB-TORPP-B	BE	1	OUT, CSSB-TKTOR					
334	CSSB-TK-TOR-B	BE	1	OUT, CSSB-TKTOR					
335	CSSB-CSTVV-PHS	AG	3	IN , CSSB-75-40-CC IN , CSSB-75-31-CC OUT, CSSB-TKCST					
336	CSSB-CSTPP-B	BE	1	OUT, CSSB-TKCST					
337	CSSB-TK-CST-B	BE	1	OUT, CSSB-TKCST					
338	CSSB-VVD-PHD	AG	3	IN , CSSB-75-46-OC IN , CSSB-75-38-OC OUT, CSSB-VV-PHD					
339	CSSB-75-51-OC	BE	1	OUT, CSSB-VV-PHD					
340	CSSB-75-53-CC	BE	1	OUT, CSSB-VV-PHD					
341	CSSB-75-55-OC	BE	1	OUT, CSSB-VV-PHD					
342	CSSB-75-46-OC	BE	1	OUT, CSSB-VVD-PHD					
343	CSSB-75-38-OC	BE	1	OUT, CSSB-VVD-PHD					
344	CSSB-75-39-OC	BE	1	OUT, CSSB-TORVV-PHS					
345	CSSB-75-30-OC	BE	1	OUT, CSSB-TORVV-PHS					
346	CSSB-75-40-CC	BE	1	OUT, CSSB-CSTVV-PHS					
347	CSSB-75-31-CC	BE	1	OUT, CSSB-CSTVV-PHS					
348	CSSB-PMB-D	OG	4	IN , CSSB-PMB-AUX IN , CSSB-PMB-B IN , CSSB-PMB-CSG OUT, CSSB-MD-PMB					

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSS	OSY	PST
349	CSSB-PMB-EPW	OG	2	IN , AC-4160-BSBC OUT, CSSB-MD-PMB				
350	CSSB-PMB-AUX	OG	3	IN , CSSB-PMB-COOL IN , CSSB-PMB-LUB OUT, CSSB-PMB-D				
351	CSSB-PMB-B	BE	1	OUT, CSSB-PMB-D				
352	CSSB-PMB-CSG	BE	1	OUT, CSSB-PMB-D				
353	CSSB-PMB-COOL	BE	1	OUT, CSSB-PMB-AUX				
354	CSSB-PMB-LUB	BE	1	OUT, CSSB-PMB-AUX				
355	CSSB-PMD-D	OG	4	IN , CSSB-PMD-AUX IN , CSSB-PMD-B IN , CSSB-PMD-CSG OUT, CSSB-MD-PMD				
356	CSSB-PMD-EPW	OG	2	IN , AC-4160-BSBD OUT, CSSB-MD-PMD				
357	CSSB-PMD-AUX	OG	3	IN , CSSB-PMD-COOL IN , CSSB-PMD-LUB OUT, CSSB-PMD-D				
358	CSSB-PMD-B	BE	1	OUT, CSSB-PMD-D				
359	CSSB-PMD-CSG	BE	1	OUT, CSSB-PMD-D				
360	CSSB-PMD-COOL	BE	1	OUT, CSSB-PMD-AUX				
361	CSSB-PMD-LUB	BE	1	OUT, CSSB-PMD-AUX				
362	EP-BS-SBA-D	BE	1	OUT, AC-4160-BSBA				
363	AC-4160-BSBA-PS	AG	3	IN , AC-4160-BSBA-SB IN , AC-4160-BSBA-NP OUT, AC-4160-BSBA				
364	AC-4160-BSBA-SB	OG	3	IN , C3-CSBA-O IN , DG-A-L OUT, AC-4160-BSBA-PS				
365	AC-4160-BSBA-NP	AG	3	IN , LOSPW IN , AC-4160-BSBA-AP OUT, AC-4160-BSBA-PS				
366	C0-CSBA-O	BE	1	OUT, AC-4160-BSBA-SB				
367	DG-A-L	OG	4	IN , DG-A-CSG				

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	P G S	S O T	P T
				IN , DG-A-B				
				IN , DG-A-AUX				
				OUT, AC-4160-BSBA-SB				
368	AC-4160-BSBA-AP	OG	3	IN , LOSPW				
				IN , COMP-MPWT-D				
				OUT, AC-4160-BSBA-NP				
369	COMP-MPWT-D	UE	4	OUT, AC-4160-BSBA-AP				
				OUT, AC-4160-BSBB-AP				
				OUT, AC-4160-BSBC-AP				
				OUT, AC-4160-BSBD-AP				
370	AC-4160-BSBB-NP	AG	3	IN , LOSPW				
				IN , AC-4160-BSBB-AP				
				OUT, AC-4160-BSBB-PS				
371	AC-4160-BSBB-AP	OG	3	IN , LOSPW				
				IN , COMP-MPWT-D				
				OUT, AC-4160-BSBB-NP				
372	AC-4160-BSBC-NP	AG	3	IN , LOSPW				
				IN , AC-4160-BSBC-AP				
				OUT, AC-4160-BSBC-PS				
373	AC-4160-BSBC-AP	OG	3	IN , LOSPW				
				IN , COMP-MPWT-D				
				OUT, AC-4160-BSBC-NP				
374	AC-4160-BSBD-NP	AG	3	IN , LOSPW				
				IN , AC-4160-BSBD-AP				
				OUT, AC-4160-BSBD-PS				
375	AC-4160-BSBD-AP	OG	3	IN , LOSPW				
				IN , COMP-MPWT-D				
				OUT, AC-4160-BSBD-NP				
376	EP-BS-SBB-D	BE	1	OUT, AC-4160-BSBB				
377	AC-4160-BSBB-PS	AG	3	IN , AC-4160-BSBB-NP				
				IN , AC-4160-BSBB-SB				
				OUT, AC-4160-BSBB				
378	AC-4160-BSBB-SB	OG	3	IN , CB-CSBB-D				
				IN , DG-B-L				
				OUT, AC-4160-BSBB-PS				
379	CB-CSBB-D	BE	1	OUT, AC-4160-BSBB-SB				
380	DG-B-L	OG	4	IN , DG-B-CSG				
				IN , DG-B-B				
				IN , DG-B-AUX				

SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSSPP SOTTT
			OUT, AC-4160-BSBB-SB		
381 EP-BS-SBC-D	BE	1	OUT, AC-4160-BSBC		
382 AC-4160-BSBC-PS	AG	3	IN , AC-4160-BSBC-NP IN , AC-4160-BSBC-SB OUT, AC-4160-BSBC		
383 AC-4160-BSBC-SB	OG	3	IN , CB-CSBC-O IN , DG-C-L OUT, AC-4160-BSBC-PS		
384 CB-CSBC-O	BE	1	OUT, AC-4160-BSBC-SB		
385 DG-C-L	OG	4	IN , DG-C-CSG IN , DG-C-B IN , DG-C-AUX OUT, AC-4160-BSBC-SB		
386 EP-BS-SBD-D	BE	1	OUT, AC-4160-BSBD		
387 AC-4160-BSBD-PS	AG	3	IN , AC-4160-BSBD-NP IN , AC-4160-BSBD-SB OUT, AC-4160-BSBD		
388 AC-4160-BSBD-SB	OG	3	IN , CB-CSBD-O IN , DG-D-L OUT, AC-4160-BSBD-PS		
389 CB-CSBD-O	BE	1	OUT, AC-4160-BSBD-SB		
390 DG-D-L	OG	4	IN , DG-D-CSG IN , DG-D-B IN , DG-D-AUX OUT, AC-4160-BSBD-SB		
391 DG-A-CSG	OG	3	IN , DG-A-STSG-D IN , DG-A-LOCP OUT, DG-A-L		
392 DG-A-B	BE	1	OUT, DG-A-L		
393 DG-A-AUX	OG	5	IN , DG-A-COOL IN , DG-A-LUB IN , DG-A-FUEL IN , DG-A-SIS OUT, DG-A-L		
394 DG-A-COOL	BE	1	OUT, DG-A-AUX		
395 DG-A-LUB	BE	1	OUT, DG-A-AUX		

	SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	GSSPT
396	DG-A-FUEL	BE	1	OUT, DG-A-AUX		
397	DG-A-STS	BE	1	OUT, DG-A-AUX		
398	DG-A-STSG-D	BE	1	OUT, DG-A-CSG		
399	DG-A-LOCP	OG	3	IN , EP-BS-DGPNA-D IN , EP-BT-DG125A-B OUT, DG-A-CSG		
400	EP-BS-DGPNA-D	BE	1	OUT, DG-A-LOCP		
401	EP-BT-DG125A-B	BE	1	OUT, DG-A-LOCP		
402	DG-B-CSG	OG	3	IN , DG-B-STSG-D IN , DG-B-LOCP OUT, DG-B-L		
403	DG-B-B	BE	1	OUT, DG-B-L		
404	DG-B-AUX	OG	5	IN , DG-B-COOL IN , DG-B-LUB IN , DG-B-FUEL IN , DG-B-STS OUT, DG-B-L		
405	DG-B-COOL	BE	1	OUT, DG-B-AUX		
406	DG-B-LUB	BE	1	OUT, DG-B-AUX		
407	DG-B-FUEL	BE	1	OUT, DG-B-AUX		
408	DG-B-STS	BE	1	OUT, DG-B-AUX		
409	DG-B-STSG-D	BE	1	OUT, DG-B-CSG		
410	DG-B-LOCP	OG	3	IN , EP-BS-DGPNB-D IN , EP-BT-DG125B-B OUT, DG-B-CSG		
411	EP-BS-DGPNB-D	BE	1	OUT, DG-B-LOCP		
412	EP-BT-DG125B-B	BE	1	OUT, DG-B-LOCP		
413	DG-C-CSG	OG	3	IN , DG-C-STSG-D IN , DG-C-LOCP OUT, DG-C-L		
414	DG-C-B	BE	1	OUT, DG-C-L		
415	DG-C-AUX	OG	5	IN , DG-C-COOL IN , DG-C-LUB		

SET NAME	TYPE	RANK	RELATIONSHIPS	PREFIX	P G S S P S Q T T
			IN , DG-C-FUEL		
			IN , DG-C-STS		
			OUT, DG-C-L		
416 DG-C-COOL	BE	1	OUT, DG-C-AUX		
417 DG-C-LUB	BE	1	OUT, DG-C-AUX		
418 DG-C-FUEL	BE	1	OUT, DG-C-AUX		
419 DG-C-STS	BE	1	OUT, DG-C-AUX		
420 DG-C-STSG-D	BE	1	OUT, DG-C-CSG		
421 DG-C-LOCP	OG	3	IN , EP-BS-DGPNC-D		
			IN , EP-BT-DG125C-B		
			OUT, DG-C-CSG		
422 EP-BS-DGPNC-D	BE	1	OUT, DG-C-LOCP		
423 EP-BT-DG125C-B	BE	1	OUT, DG-C-LOCP		
424 DG-D-CSG	OG	3	IN , DG-D-STSG-D		
			IN , DG-D-LOCP		
			OUT, DG-D-L		
425 DG-D-B	BE	1	OUT, DG-D-L		
426 DG-D-AUX	OG	5	IN , DG-D-COOL		
			IN , DG-D-LUB		
			IN , DG-D-FUEL		
			IN , DG-D-STS		
			OUT, DG-D-L		
427 DG-D-COOL	BE	1	OUT, DG-D-AUX		
428 DG-D-LUB	BE	1	OUT, DG-D-AUX		
429 DG-D-FUEL	BE	1	OUT, DG-D-AUX		
430 DG-D-STS	BE	1	OUT, DG-D-AUX		
431 DG-D-STSG-D	BE	1	OUT, DG-D-CSG		
432 DG-D-LOCP	OG	3	IN , EP-BS-DGPND-D		
			IN , EP-BT-DG125D-B		
			OUT, DG-D-CSG		
433 EP-BS-DGPND-D	BE	1	OUT, DG-D-LOCP		
434 EP-BT-DG125D-B	BE	1	OUT, DG-D-LOCP		

* * * * BLOCK SE[illegible]ATIONS * * * *
(BWR8-MA[illegible])

```
RMR-BWR = RSNFC ! RRCC ! RFRADSRC

RSNFC = RSNFA & DSNFCB

RRCC = RDRO ! RDSO ! RDRF

RFRADSRC = RFRADS & BRCBB

RSNFA = RSFA ! RNFA

DSNFCB = SF-DO-DOSB-D ! SF-PV-SEBU-B ! SF-FL-FSSB-D

RSFA = SF-PV-SHCK-B ! SF-HDPL ! SF-SA-SFA-P ! SF-DSPL

SF-HDPL = SF-TK-POOL-B ! SF-COOL-D

SF-DSPL = SF-SA-CRIT-R ! SF-SA-FLPL-B

RFRADS = RSWS ! RLWS ! RGWS

RSWS = RCAPS ! RRAPS

RDRO = RODFM ! RDWFM

RDSO = RDCS ! RDHS

RODFM = CBBFM & PCBB & RCBBB

CBBFM = FM-TI ! FM-LOCA ! FM-PC-B

FM-TI = TI-RS & T-MS-D

FM-LOCA = LLI-MSD ! SLI-MSD

FM-PC-B = PCB-PC-LP-B ! PCB-RV-01-B
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SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
LLI-HSD = LL-HSD & LLI

SLI-HSD = SL-HSD & SLI

LL-HSD = ECIL-D ! ECRL-D ! RPS-D

LLI = PCB-LLOCA-PP-B ! PCB-PC-01-B

SL-HSD = RPS-D ! ECIS-D ! ECRS-D

SLI = PCB-PC-01-B ! PCB-SLOCA-PP-B

ECIL-D = CSSA-IHR & CSSD-IHR & LPCIA-OR-B

ADS-LL-HSD = LL-HSD ! ADS-D

PCB-LLOCA-PP-B = PCB-RXCLUP-PP-B ! PCB-LARGE-PP-B !

PCB-ADS-VV-D ! PCB-RHR-LOPRES-B

PCB-SLOCA-PP-B = PCB-HSD-PP-B ! PCB-HPCI-PP-B !

PCB-RCIC-PP-B

ECIS-D = HPCIO-IHR & ADS-LPCIAB-D & ADS-CSSAB-D

RSS-D = RPS-D

HPCIO-IHR = HPCIO-PMD-HS ! HPCIO-PM-L ! HPCIO-CS-PMS

ADS-LPCIAB-D = LPCIAB-IHR ! ADS-D

ADS-CSSAB-D = ADS-D ! CSSAB-IHR

LPCIAB-IHR = LPCIA-IHR ! LPCIB-IHR

LPCIA-IHR = LPCIA-PMD-HS ! LPCIA-PM-L ! LPCIA-CS-PMS
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SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
LPCIB-IHR = LPCIB-PHD-HS ! LPCIB-PH-L ! LPCIB-CS-

CSSAB-IHR = CSSA-IHR & CSSB-IHR

CSSA-IHR = CSSA-PHD-HS ! CSSA-PH-L ! CSSA-CS-PHS

CSSB-IHR = CSSB-PHD-HS ! CSSB-PH-L ! CSSB-CS-PHS

TI-RS = OI-RC ! IHR-CP

T-HS-D = RSS-D ! CHTES-D ! CINS-D ! RV-OPS-D

IHR-CP = PCS-PP-B ! PCS-FV-D ! PCS-PH-L ! PCS-HS-CO-L !

PCS-CS-B

PCS-PH-L = PCS-PH-D ! LOSPW

CINS-D = ADS-LL-HSD & HPCI-RCIC-D

RV-OPS-D = SV-ROP-D & RV-ROP-D

HPCI-RCIC-D = HPCIO-IHR & RCICO-IHR

RCICO-IHR = RCICO-PHD-HS ! RCICO-PH-L ! RCICO-CS-PHS

PCB-HSD-PP-B = HSD-HOVV8-CO & HSD-PP-B

PCB-HPCI-PP-B = PCB-HPCI-VVPP-B ! PCB-HPCI-VVVV-B

PCB-RCIC-PP-B = PCB-RCIC-VVPP-D ! PCB-RCIC-VVP-D

PCB-HPCI-VVPP-B = HPCI-HOVV4-OC & HPCI-PP-B

PCB-HPCI-VVVV-B = HPCI-HOVV4-OC & HPCI-HOVV5-OC &

HPCI-PPPP-B
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SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
PCB-RCIC-VVPP-O = RCIC-MOV2-OO & RCIC-PP-B

PCB-RCIC-VVP-O = RCIC-MOV2-OO & RCIC-MOV3-OO &

RCIC-PPPP-B

LPCIA-OR-B = LPCIA-IHR ! LPCIB-IHR

PCB-RXCLUP-PP-B = RXCLUP-69-1-OC & RXCLUP-PP-B

PCB-RHR-LOPRES-B = RHR-MOV48-CO & RHR-MOV47-CO

HPCIO-PMO-HS = HPCIO-HX-RX-B ! HPCIO-PP-PMO-B !

HPCIO-VV-PMO

HPCIO-PH-L = HPCIO-TO-PMH

HPCIO-CS-PMS = HPCIO-TKTOR & HPCIO-TKCST

HPCIO-VV-PMO = HPCI-73-34-OC ! HPCI-73-44-CC

HPCIO-TO-PMH = HPCIO-PMH-O ! HPCIO-PMH-SS

HPCIO-TKTOR = HPCIO-TORVV-PMS ! HPCIO-TORPP-B !

HPCIO-TK-TOR-B

HPCIO-TKCST = HPCIO-CSTVV-PMS ! HPCIO-CSTPP-B !

HPCIO-TK-CST-B

HPCIO-TORVV-PMS = HPCI-73-26-CC ! HPCI-73-27-CC

HPCIO-CSTVV-PMS = HPCI-CST-VV-PMS ! HPCI-73-40-OC

HPCI-CST-VV-PMS = HPCI-2-170-OC & HPCI-2-166-OC &
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HPCI-2-162-OC

HPCIO-PMH-D = HPCIO-PMH-AUX ! HPCIO-PMH-B ! HPCIO-PMH-CSG

HPCIO-PMH-SS = HPCIO-PMH-VV ! HPCIO-PMH-PP

HPCIO-PMH-AUX = HPCIO-PMH-COOL ! HPCIO-PMH-LUB

HPCIO-PMH-VV = HPCI-73-2-OC ! HPCI-73-3-OC !

HPCI-73-19-OC ! HPCI-73-18-OC ! HPCI-73-16-CC

RCICO-PMD-HS = RCICO-HX-RX-B ! RCICO-PP-PMD-B !

RCICO-VV-PMD

RCICO-PM-L = RCICO-TD-PMR

RCICO-CS-PMS = RCICO-TKTOR & RCICO-TKCST

RCICO-VV-PMD = RCIC-71-37-OC ! RCIC-71-39-CC

RCICO-TD-PMR = RCICO-PMR-D ! RCICO-PMR-SS

RCICO-TKTOR = RCICO-TORVV-PMS ! RCICO-TORPP-B !

RCICO-TK-TOR-B

RCICO-TKCST = RCICO-CSTVV-PMS ! RCICO-CSTPP-B !

RCICO-TK-CST-B

RCICO-TORVV-PMS = RCIC-71-16-OC ! RCIC-71-17-CC !

RCIC-71-18-CC

RCICO-CSTVV-PMS = RCIC-CST-VV-PMS ! RCIC-71-19-OC

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

RCIC-CST-VV-PMS = RCIC-2-170-OC & RCIC-2-166-OC &
RCIC-2-162-OC

RCICO-PMR-O = RCICO-PMR-AUX ! RCICO-PMR-O ! RCICO-PMR-CSG

RCICO-PMR-SS = RCICO-PMR-VV ! RCICO-PMR-PP

RCICO-PMR-AUX = RCICO-PMR-COOL ! RCICO-PMR-LUB

RCICO-PMR-VV = RCIC-71-3-OC ! RCIC-71-8-CC ! RCIC-71-2-OC !
RCIC-71-9-OC ! RCIC-71-10-OC

LPCIA-PMO-MS = LPCIA-MX-RX-O ! LPCIA-PP-PMO-O !
LPCIA-VV-PMO

LPCIA-PM-L = LPCIA-MO-PMA & LPCIA-MO-PMC

LPCIA-CS-PMS = LPCIA-TKTOR & LPCIA-TKCST

LPCIA-VV-PMO = LPCIA-MXCTVV-O ! LPCIA-FCV52-OC !
LPCIA-FCV53-CC

LPCIA-MO-PMA = LPCIA-PMA-O ! LPCIA-PMA-EPW

LPCIA-MO-PMC = LPCIA-PMC-O ! LPCIA-PMC-EPW

LPCIA-TKTOR = LPCIA-TORVV-PMS ! LPCIA-TORPP-O !
LPCIA-TK-TOR-O

LPCIA-TKCST = LPCIA-CSTVV-PMS ! LPCIA-CSTPP-O !
LPCIA-TK-CST-O

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
LPCIA-IORVV-PMS = LPCIA-FCV12-OC & LPCIA-FCV1-OC

LPCIAB-CTV-D

LPCIA-CSTVV-PMS = LPCIA-HCV11-CC & LPCIA-HCV23-CC

LPCIA-HXCTVV-D = LPCIA-HCV10-OC & LPCIA-HCV22-OC &

LPCIAB-CTVV-D

LPCIAB-CTVV-D = LPCIA-HCV150-OC ! LPCIA-FCV46-CC

LPCIB-HXCTVV-D = LPCIAB-CTVV-D & LPCIB-HCV33-OC &

LPCIB-HCV44-OC

LPCIAB-CTV-D = LPCIA-CTBVV-D ! LPCIA-CTVV-D

LPCIA-CTBVV-D = LPCIA-FCV36-CC & LPCIA-FCV25-CC

LPCIA-CTVV-D = LPCIA-FCV13-CC & LPCIA-FCV2-CC

LPCIB-IORVV-PMS = LPCIAB-CTV-D & LPCIB-FCV35-OC &

LPCIB-FCV24-OC

LPCIA-PHA-D = LPCIA-PHA-AUX ! LPCIA-PHA-B ! LPCIA-PHA-CSG

LPCIA-PHA-EPW = AC-4160-BSBA

LPCIA-PHA-AUX = LPCIA-PHA-COOL ! LPCIA-PHA-LUB

AC-4160-BSBA = EP-BS-SBA-D ! AC-4160-BSBA-PS

LPCIA-PHC-D = LPCIA-PHC-AUX ! LPCIA-PHC-B ! LPCIA-PHC-CSG

LPCIA-PHC-EPW = AC-4160-BSBB
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
LPCIA-PMC-AUX = LPCIA-PMC-COOL ! LPCIA-PMC-LUB

AC-4160-BSBB = EP-BS-SUB-D ! AC-4160-BSBB-PS

LPCIB-PMD-HS = LPCIB-HX-RX-B ! LPCIB-PP-PMD-B !

LPCIB-VV-PMD

LPCIB-PM-L = LPCIB-MD-PMB & LPCIB-MD-PMD

LPCIB-CS-PHS = LPCIB-TKTOR & LPCIB-TKCST

LPCIB-VV-PMD = LPCIB-HXCTVV-D ! LPCIB-FCV66-OC !

LPCIB-FCV67-CC

LPCIB-MD-PMB = LPCIB-PMB-D ! LPCIB-PMB-EPW

LPCIB-MD-PMD = LPCIB-PMD-D ! LPCIB-PMD-EPW

LPCIB-TKTOR = LPCIB-TORVV-PHS ! LPCIB-TORPP-B !

LPCIB-TK-TOR-B

LPCIB-TKCST = LPCIB-CSTVV-PHS ! LPCIB-CSTPP-B !

LPCIB-TK-CST-B

LPCIB-CSTVV-PHS = LPCI-HCV34-CC & LPCIB-HCV45-CC

LPCIB-PMB-D = LPCIB-PMB-AUX ! LPCIB-PMB-B ! LPCIB-PMB-CSG

LPCIB-PMB-EPW = AC-4160-BSBC

LPCIB-PMB-AUX = LPCIB-PMB-COOL ! LPCIB-PMB-LUB

AC-4160-BSBC = EP-BS-SBC-D ! AC-4160-BSBC-PS
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SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
LPCIB-PMD-D = LPCIB-PMD-AUX ! LPCIB-PMD-B ! LP[redacted]MD-CSG

LPCIB-PMD-EPW = AC-4160-BSBD

LPCIB-PMD-AUX = LPCIB-PMD-COOL ! LPCIB-PMD-LUB

AC-4160-BSBD = EP-BS-SBD-D ! AC-4160-BSBD-PS

CSSA-PMD-HS = CSSA-HX-RX-B ! CSSA-PP-PMD-B ! CSSA-VV-PMD

CSSA-PM-L = CSSA-MD-PMA & CSSA-MD-PMC

CSSA-CS-PMS = CSSA-TKTOR & CSSA-TKCST

CSSA-VV-PMD = CSSA-VVD-PMD ! CSSA-75-23-OC !

CSSA-75-25-CC ! CSSA-75-27-OC

CSSA-MD-PMA = CSSA-PMA-D ! CSSA-PMA-EPW

CSSA-MD-PMC = CSSA-PMC-D ! CSSA-PMC-EPW

CSSA-TKTOR = CSSA-TORVV-PMS ! CSSA-TORPP-B !

CSSA-TK-TOR-B

CSSA-TKCST = CSSA-CSTVV-PMS ! CSSA-CSTPP-B !

CSSA-TK-CST-B

CSSA-TORVV-PMS = CSSA-75-11-OC & CSSA-75-2-OC

CSSA-CSTVV-PMS = CSSA-75-3-CC & CSSA-75-12-CC

CSSA-VVD-PMD = CSSA-75-18-OC & CSSA-75-10-OC

CSSA-PMA-D = CSSA-PMA-AUX ! CSSA-PMA-B ! CSSA-PMA-CSG
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SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
CSSA-PMA-EPW = AC-4160-BSBA

CSSA-PMA-AUX = CSSA-PMA-COOL ! CSSA-PMA-LUB

CSSA-PMC-D = CSSA-PMC-AUX ! CSSA-PMC-9 ! CSSA-PMC-CSG

CSSA-PMC-EPW = AC-4160-BSBB

CSSA-PMC-AUX = CSSA-PMC-COOL ! CSSA-PMC-LUB

CSSB-PMD-HS = CSSB-HX-RX-B ! CSSB-PP-PMD-B ! CSSB-VV-PMD

CSSB-PM-L = CSSB-MD-PMB & CSSB-MD-PMD

CSSB-CS-PMS = CSSB-TKTOR & CSSB-TKCST

CSSB-VV-PMD = CSSB-VVO-PMD ! CSSB-75-51-OC !

CSSB-75-53-CC ! CSSB-75-55-OC

CSSB-MD-PMB = CSSB-PMD-D ! CSSB-PMB-EPW

CSSB-MD-PMD = CSSB-PMD-D ! CSSB-PMD-EPW

CSSB-TKTOR = CSSB-TORVV-PMS ! CSSB-TORPP-B !

CSSB-TK-TOR-B

CSSB-TKCST = CSSB-CSTVV-PMS ! CSSB-CSTPP-B !

CSSB-TK-CST-B

CSSB-TORVV-PMS = CSSB-75-39-OC & CSSB-75-30-OC

CSSB-CSTVV-PMS = CSSB-75-40-CC & CSSB-75-31-CC

CSSB-VVO-PMD = CSSB-75-46-OC & CSSB-75-38-OC
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
CSSB-PMB-D = CSSB-PMB-AUX ! CSSB-PMB-B ! CSSB-PMB-

CSSB-PMB-EPW = AC-4160-BSBC

CSSB-PMB-AUX = CSSB-PMB-COOL ! CSSB-PMB-LUB

CSSB-PMB-D = CSSB-PMB-AUX ! CSSB-PMB-B ! CSSB-PMB-CSG

CSSB-PMB-EPW = AC-4160-BSBD

CSSB-PMB-AUX = CSSB-PMB-COOL ! CSSB-PMB-LUB

AC-4160-BSBA-PS = AC-4160-BSBA-SB & AC-4160-BSBA-NP

AC-4160-BSBA-SB = CB-CSBA-D ! DG-A-L

AC-4160-BSBA-NP = LOSPW & AC-4160-BSBA-AP

DG-A-L = DG-A-CSG ! DG-A-B ! DG-A-AUX

AC-4160-BSBA-AP = LOSPW ! COMP-MPWT-D

AC-4160-BSBB-NP = LOSPW & AC-4160-BSBB-AP

AC-4160-BSBB-AP = LOSPW ! COMP-MPWT-D

AC-4160-BSBC-NP = LOSPW & AC-4160-BSBC-AP

AC-4160-BSBC-AP = LOSPW ! COMP-MPWT-D

AC-4160-BSBD-NP = LOSPW & AC-4160-BSBD-AP

AC-4160-BSBD-AP = LOSPW ! COMP-MPWT-D

AC-4160-BSBD-PS = AC-4160-BSBB-NP & AC-4160-BSBD-SB

AC-4160-BSBB-SB = CB-CSBB-D ! DG-B-L
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
DG-B-L = DG-B-CSG ! DG-B-B ! DG-B-AUX

AC-4160-BSBC-PS = AC-4160-BSBC-NP & AC-4160-BSBC-SB

AC-4160-BSBC-SB = CB-CSBC-O ! DG-C-L

DG-C-L = DG-C-CSG ! DG-C-B ! DG-C-AUX

AC-4160-BSBD-PS = AC-4160-BSBD-NP & AC-4160-BSBD-SB

AC-4160-BSBD-SB = CB-CSBD-O ! DG-D-L

DG-D-L = DG-D-CSG ! DG-D-B ! DG-D-AUX

DG-A-CSG = DG-A-STSG-D ! DG-A-LOCP

DG-A-AUX = DG-A-COOL ! DG-A-LUB ! DG-A-FUEL ! DG-A-STS

DG-A-LOCP = EP-BS-DGPNA-D ! EP-BT-DG125A-B

DG-B-CSG = DG-B-STSG-D ! DG-B-LOCP

DG-B-AUX = DG-B-COOL ! DG-B-LUB ! DG-B-FUEL ! DG-B-STS

DG-B-LOCP = EP-BS-DGPNB-D ! EP-BT-DG125B-B

DG-C-CSG = DG-C-STSG-D ! DG-C-LOCP

DG-C-AUX = DG-C-COOL ! DG-C-LUB ! DG-C-FUEL ! DG-C-STS

DG-C-LOCP = EP-BS-DGPNC-D ! EP-BT-DG125C-B

DG-D-CSG = DG-D-STSG-D ! DG-D-LOCP

DG-D-AUX = DG-D-COOL ! DG-D-LUB ! DG-D-FUEL ! DG-D-STS

DG-D-LOCP = EP-BS-DGPND-D ! EP-BT-DG125D-B
```

* * * * BLOCK SE ATIONS * * * *
(LOCATIO)

SF-PV-SCBU-B = ULSF

SF-SA-FLPL-B = ULSF

ADS-D = CR ! AUXIRH1 ! RC ! BATBD1 & BATBD2 ! BATRH1 &
BATRH2

PCB-RV-01-B = RC

PCB-PC-LP-B = RC

PCB-PC-01-B = RC

SV-ROP-D = RC

RV-ROP-D = RC

HSD-HOVV8-CO = RC ! CR ! SORHA

HSD-PP-B = HSVT

HPCI-HOVV4-OC = RC ! CR ! SORHA

HPCI-PP-B = TORUS

HPCI-HOVV5-OC = CR ! TORUS ! SORHA ! BATBD1 & BATBD2 !
BATRH1 & BATRH2

HPCI-PPPP-B = TORUS ! HPCI

PCB-LARGE-PP-B = RC

PCB-ADS-VV-D = CR ! RC ! SORHA ! AUXIRH1

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
RXCLUP-69-1-0C = CR ! RC ! SDRMA

RXCLUP-PP-B = HXCLRM ! RC

RHR-MOV48-CO = SDRMA ! RC

RHR-MOV47-CO = SDRMB ! TORUS

RCIC-MOV2-00 = RC ! CR ! SDRMB ! 480SD8D1A & 480SD8D1B

RCIC-PP-B = MSVT

RCIC-MOV3-00 = NWRB ! CR ! 250RMOV8DC ! BATBD2 & BATBD1 !

BATRM2 & BATRM1

RCIC-PPPP-B = MSVT ! NWRB

HPCIO-HX-RX-B = RC

HPCIO-PP-PMD-B = HPCI ! MSVT

HPCIO-TORPP-B = TORUS ! HPCI

HPCIO-CSTPP-B = CST ! HPCI

HPCIO-TK-TOR-B = TORUS

HPCI9-TK-CST-B = CST-1 & CST-2 & CST-3

HPCI-73-34-0C = HPCI ! CR ! SDRMA

HPCI-73-44-CC = HPCI ! CR ! SDRMA ! BATBD1 & BATBD2 !

BATRM1 & BATRM2

HPCI-73-26-CC = HPCI ! CR ! SDRMA ! BATBD1 & BATBD2 !
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

BATRM1 & BATRM2

HPCI-73-27-CC = HPCI ! CR ! SORHA ! BATBD1 & BATBD2 !

BATRM1 & BATRM2

HPCI-73-40-OC = HPCI ! CR ! SORHA

HPCI-2-170-OC = CST-1 ! CR ! 480-WO-STG-BLD

HPCI-2-166-OC = CST-2 ! CR ! 480-WO-STG-BLD

HPCI-2-162-OC = CST-3 ! CR ! 480-WO-STG-BLD

HPCIO-PMH-B = HPCI

HPCIO-PMH-CSG = CR

HPCIO-PMH-PP = TORUS ! HPCI

HPCIO-PMH-COOL = HPCI

HPCIO-PMH-LUB = HPCI

HPCI-73-2-OC = RC ! CR ! SORHA

HPCI-73-3-OC = CR ! SORHA ! TORUS

HPCI-73-19-OC = HPCI ! SORHA ! BATBD1 & BATBD2 ! BATRM1 &

BATRM2

HPCI-73-18-OC = HPCI ! SORHA ! BATBD1 & BATBD2 ! BATRM1 &

BATRM2

HPCI-73-16-CC = HPCI ! CR ! SORHA ! BATBD1 & BATBD2 !

BATRM1 & BATRM2

RCICO-HX-RX-B = RC

RCICO-PP-PMO-B = NWRB ! HSVT

RCICO-TORPP-B = TORUS ! NWRB

RCICO-CSTPP-B = CST ! TORUS ! NWRB

RCICO-TK-TOR-B = TORUS

RCICO-TK-CST-B = CST-1 & CST-2 & CST-3

RCIC-71-37-OC = NWRB ! CR ! 250RMOVBOC

RCIC-71-39-CC = HSVT ! 250RMOVBOC

RCIC-71-15-OC = TORUS

RCIC-71-17-CC = NWRB ! 250RMOVBOC

RCIC-71-18-CC = NWRB ! 250RMOVBOC

RCIC-71-19-OC = NWRB ! 250RMOVBOC ! CR

RCIC-2-170-OC = CST-1 ! CR ! 480-WO-STG-BLD

RCIC-2-166-OC = CST-2 ! CR ! 480-WO-STG-BLD

RCIC-2-162-OC = CST-3 ! CR ! 480-WO-STG-BLD

RCICO-PMR-B = NWRB

RCICO-PMR-PP = HSVT ! NWRB

RCICO-PMR-COOL = NWRB

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
RCICO-PMR-LUB = NWRB

RCIC-71-3-OC = NWRB ! 250RMOVBDC

RCIC-71-8-CC = NWRB

RCIC-71-2-OC = RC ! SDRMA ! SDRMB

RCIC-71-9-OC = NWRB ! 250RMOVBDC

RCIC-71-10-OC = NWRB ! 250RMOVBDC

LPCIA-HX-RX-B = RC

LPCIA-PP-PHO-B = SWRB ! RHRHXWRM ! TORUS ! PERACC

LPCIA-TORPP-B = TORUS ! SWRB

LPCIA-CSTPP-B = PPTUN ! NERB ! TORUS ! SWRB

LPCIA-TK-TOR-B = TORUS

LPCIA-TK-CST-B = CST-1 ! CST-2 ! CST-3

LPCIA-HCV11-CC = SWRB

LPCIA-HCV23-CC = SWRB

LPCIA-FCV52-OC = PERACC ! CR ! SDRMA

LPCIA-FCV53-CC = PERACC ! CR ! MOV1D ! SDRMA

LPCIA-HCV10-OC = RHRHXWRM

LPCIA-HCV22-OC = RHRHXWRM

LPCIA-HCV150-OC = TORUS
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
LPCIA-FCV46-CC = TORUS ! CR ! SDRHB ! 480SD001A

49CSOOOIB

LPCIA-FCV12-OC = SWRB ! CR ! SORHA

LPCIA-FCV1-OC = SWRB ! CR ! SORHA

LPCIA-FCV36-CC = CR ! SERB ! SDRHB ! SORHA

LPCIA-FCV25-CC = CR ! SERB ! SDRHB ! SDRHA

LPCIA-FCV13-CC = CR ! SWRB ! SORHA

LPCIA-FCV2=CC = CR ! SWRB ! SDRHA

LPCIA-PHA-B = SWRB

LPCIA-PHA-CSG = CR

LPCIA-PHA-COOL = SWRB

LPCIA-PHA-LUB = SWRB

LPCIA-PHC-B = SWRB

LPCIA-PHC-CSG = CR

LPCIA-PHC-COOL = SWRB

LPCIA-PHC-LUB = SWRB

LPCIB-HX-RX-B = RC

LPCIB-PP-PHD-B = SERB ! RHRHXERH ! TORUS ! PERACC

LPCIB-TORPP-B = TORUS ! SERB
```

```
LPCIB-CSTPP-B = TORUS ! NERB ! PPTUN ! SERB

LPCIB-TK-TOR-B = TORUS

LPCIB-TK-CST-B = CST-1 ! CST-2 ! CST-3

LPCI-HCV34-CC = SERB

LPCIB-HCV45-CC = SERB

LPCIB-FCV66-OC = PERACC ! SORMB ! CR

LPCIB-FCV67-CC = PERACC ! MOV1C ! CR ! SORMA

LPCIB-HCV33-OC = RHRHXERH

LPCIB-HCV44-OC = RHRHXERH

LPCIB-FCV35-OC = CR ! SERB ! SORMB

LPCIB-FCV24-OC = CR ! SERB ! SORMB

LPCIB-PMB-B = SERB

LPCIB-PMB-CSG = CR

LPCIB-PMB-COOL = SERB

LPCIB-PMB-LUB = SERB

LPCIB-PMD-B = SERB

LPCIB-PMD-CSG = CR

LPCIB-PMD-COOL = SERB

LPCIB-PMD-LUB = SERB
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

CSSA-HX-RX-B = RC

CSSA-PP-PAD-B = NWRB ! 565RB ! 593RB

CSSA-75-23-OC = 593RB ! CR ! SORHA

CSSA-75-25-CC = 593RB ! CR ! SORHA ! SORHB

CSSA-75-27-OC = RC

CSSA-75-18-OC = NWRB

CSSA-75-10-OC = NWRB

CSSA-75-11-OC = NWRB ! CR ! SORHA

CSSA-75-2-OC = NWRB ! CR ! SORHB

CSSA-75-3-CC = NWRB

CSSA-75-12-CC = NWRB

CSSA-TORPP-B = TORUS ! NWRB

CSSA-CSTPP-B = CST ! TORUS ! NWRB

CSSA-TK-TOR-B = TORUS

CSSA-TK-CST-B = CST-1 & CST-2 & CST-3

CSSA-PMA-B = NWRB

CSSA-PMA-CSG = CR

CSSA-PMA-COOL = NWRB

CSSA-PMA-LUB = NWRB

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

CSSA-PMC-B = NWRB

CSSA-PMC-CSG = CR

CSSA-PMC-COOL = NWRB

CSSA-PMC-LUB = NWRB

CSSB-HX-RX-B = RC

CSSB-PP-PMD-B = NERB ! 565RB ! 593RB

CSSB-75-51-OC = 593RB ! CR ! SDRMB

CSSB-75-53-CC = 593RB ! CR ! SDRMB ! SDRHA

CSSB-75-55-OC = RC

CSSB-75-46-OC = NWRB

CSSB-75-38-OC = NWRB

CSSB-75-39-OC = CR ! NERB ! SDRMB

CSSB-75-30-OC = CR ! NERB ! SDRMB

CSSB-75-40-CC = NERB

CSSB-75-31-CC = NERB

CSSB-TORPP-B = TORUS ! NERB

CSSB-CSIPP-B = CST ! TORUS ! NERB

CSSB-TK-TOR-B = TORUS

CSSB-TK-CST-B = CSI-1 & CSI-2 & CSI-3

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
CSSB-PMB-B = NERB
CSSB-PMB-CSG = CR
CSSB-PMB-COOL = NERB
CSSB-PMB-LUB = NERB
CSSB-PMD-B = NERB
CSSB-PMD-CSG = CR
CSSB-PMD-COOL = NERB
CSSB-PMD-LUB = NERB
EP-BS-SBA-D = SDRMA
CB-CSBA-O = SDRMA
EP-BS-SBB-D = SDRMB
CB-CSBB-O = SDRMB
EP-BS-SBC-D = SDRMC
CB-CSBC-O = SDRMC
EP-BS-SBD-D = SDRMD
CB-CSBD-O = SDRMD
DG-A-B = DGRMA
DG-A-COOL = DGRMA I CR I PUMPRMA & PUMPRMB & PUMPRMC &
PUMPRMD I 565RB & 593RB I DGHL I SDRMA & SDRMB & SBC &
```

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

```
SBD
DG-A-LUB = DGRMA
DG-A-FUEL = DGRMA
DG-A-STS = DGRMA
DG-A-STSG-D = DGRMA ! CR ! SDRMA & SDRMB
EP-BS-DGPNA-D = DGRMA
EP-BI-DG125A-B = DGRMA
DG-B-B = DGRMB
DG-B-COOL = DGRMB ! CR ! PUMPRMA & PUMPRMB & PUMPRMC &
PUMPRMD ! 565RB ! 593RB ! DGHL ! SDRMA & SDRMB & SBC &
SBD
DG-B-LUB = DGRMB
DG-B-FUEL = DGRMB
DG-B-STS = DGRMB
DG-B-STSG-D = DGRMB ! CR ! SDRMA & SDRMB
EP-BS-DGPNB-D = DGRMB
EP-BI-DG125B-B = DGRMB
DG-C-B = DGRMC
DG-C-COOL = DGRMC ! CR ! PUMPRMA & PUMPRMB & PUMPRMC &
```

```
PUMPRMD ! 565RB ! 593RB ! DGHL ! SDRMA & SDRMB & [illegible] &

SBD

DG-C-LUB = DGRMC

DG-C-FUEL = DGRMC

DG-C-STS = DGRMC

DG-C-STSG-D = DGRMC ! CR ! SBC & SBD

EP-BS-DGPNC-D = DGRMC

EP-BT-DG125C-B = DGRMC

DG-D-B = DGRMD

DG-D-COOL = DGRMD ! CR ! PUMPRMA & PUMPRMB & PUMPRMC &

PUMPRMD ! 565RB ! 593RB ! DGHL ! SDRMA & SDRMB & SBC &

SBD

DG-D-LUB = DGRMD

DG-D-FUEL = DGRMD

DG-D-STS = DGRMD

DG-D-STSG-D = DGRMD ! CR ! SBC & SBD

EP-BS-DGPND-D = DGRMD

EP-BT-DG125D-B = DGRMD

STATEMENT EXECUTION REQUIRED      .683 SECONDS FOR PRIBLK
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~~SECURITY-RELATED INFORMATION~~
10 CFR 2.790(d) INFORMATION

ENT, EXECUTION REQUIRED .007 SECONDS FOR LOBLK

THE MAXIMUM NUMBER OF TERMS THAT CAN BE GENERATED BY EXPANSION IS 92.
THE WORK MEASURE FOR EXPANSION IS 148.

TERMS GENERATED BY EXPANSION
5 TERMS CONTAIN 1 LITERALS.
10 TERMS CONTAIN 2 LITERALS.
37 TERMS CONTAIN 3 LITERALS.
20 TERMS CONTAIN 4 LITERALS.
13 TERMS CONTAIN 5 LITERALS.
7 TERMS CONTAIN 6 LITERALS.
TOTAL TERMS GENERATED 92.
EXPANSION TOOK .029 SECONDS.

* * * * LITERAL OCCURRENCE TABLE * * * *

LITERAL	NUMBER OF OCCURRENCES	OPPOSITION LITERAL	NUMBER OF OCCURRENCES
ULSF	1		
CR	1		
AUXIRH1	27		
RC	1		
BATBD1	4		
BATBD2	4		
BATRH1	4		
BATRH2	4		
SORHA	1		
MSVT	27		
TORUS	1		
HPCI	30		
SORHB	5		
NWRB	46		
250RMOVBDC	13		
SWRB	3		
RHRHXWRH	3		
PERACC	3		
NERB	3		
HOVLD	3		
SERB	3		
RHRHXERH	3		
HOVLC	3		
565RB	4		
593RB	4		
SORHC	12		
SORHD	12		
DGRHA	21		
PUMPRHA	4		

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

LITERAL	NUMBER OF OCCURRENCES	POSITION LITERAL	NUMBER OF OCCURRENCES
PUMPRMA	4		
PUMPRMC	4		
PUMPRMD	4		
DGHL	4		
SBC	6		
SBD	6		
DGRMB	21		
DGRMC	12		
DGRMD	12		

THERE ARE 38 DIFFERENT LITERALS IN THE SET EQUATION FOR BWR8B-LOC-JUNE

TERM NUMBER	NUMBER OF LITERALS	
		BWR8B-LOC-JUNE =
1	1	TORUS !
2	1	SDRMA !
3	1	RC !
4	1	CR·1
5	1	ULSF !
6	2	HPCI & SDRMB !
7	2	AUXIRM1 & DGHL !
8	2	AUXIRM1 & 593RB !
9	2	AUXIRM1 & 565RB !
10	2	AUXIRM1 & SDRMB !
11	2	MSVT & DGHL !
12	2	MSVT & 593RB !
13	2	MSVT & 565RB !
14	2	MSVT & SDRMB !
15	2	AUXIRM1 & MSVT !
16	3	MSVT & NWRB & MOV1C !

Type I (Single Anens)

Double Anens.

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

TERM NUMBER	NUMBER OF LITERALS	
17	3	MSVT & NWRB & RHRHXERH !
18	3	MSVT & NWRB & SERB !
19	3	MSVT & NWRB & MOV1D !
20	3	MSVT & NWRB & PERACC !
21	3	MSVT & NWRB & RHRHXWRH !
22	3	MSVT & NWRB & SWRB !
23	3	AUXIRM1 & NWRB & MOV1C !
24	3	AUXIRM1 & NWRB & RHRHXERH !
25	3	AUXIRM1 & NWRB & SERB !
26	3	AUXIRM1 & NWRB & MOV1D !
27	3	AUXIRM1 & NWRB & PERACC !
28	3	AUXIRM1 & NWRB & RHRHXWRH !
29	3	AUXIRM1 & NWRB & SWRB !
30	3	HPCI & NWRB & DGHL !
31	3	HPCI & NWRB & 593RB !
32	3	HPCI & NWRB & 565RB !
33	3	HPCI & NWRB & MOV1C !
34	3	HPCI & NWRB & RHRHXERH !
35	3	HPCI & NWRB & SERB !
36	3	HPCI & NWRB & MOV1D !
37	3	HPCI & NWRB & PERACC !
38	3	HPCI & NWRB & RHRHXWRH !
39	3	HPCI & NWRB & SWRB !
40	3	AUXIRM1 & HPCI & NWRB !
41	3	BAIRM1 & BAIRM2 & NWRB !
42	3	BAIB01 & BAIB02 & NWRB !
43	3	HPCI & 250RMOVBDC & DGHL !

Triple

TERM NUMBER	NUMBER OF LITERALS	
44	3	HPCI & 250RMOVBDC & 593RB !
45	3	HPCI & 250RMOVBDC & 565RB !
46	3	AUXIRM1 & HPCI & 250RMOVBDC !
47	3	BATRM1 & BATRM2 & 250RMOVBDC !
48	3	BATBD1 & BATBD2 & 250RMOVBDC !
49	3	BATRM1 & BATRM2 & SORMB !
50	3	BATBD1 & BATBD2 & SORMB !
51	3	BATRM1 & BATRM2 & MSVT !
52	3	BATBD1 & BATBD2 & MSVT !
53	4	MSVT & NWRB & DGRMC & DGRMD !
54	4	MSVT & NWRB & SORMD & DGRMC !
55	4	MSVT & NWRB & SORMC & DGRMD !
56	4	MSVT & NWRB & SORMC & SORMD !
57	4	MSVT & NWRB & DGRMA & DGRMB !
58	4	MSVT & NWRB & SBC & SBD !
59	4	AUXIRM1 & NWRB & DGRMC & DGRMD !
60	4	AUXIRM1 & NWRB & SORMD & DGRMC !
61	4	AUXIRM1 & NWRB & SORMC & DGRMD !
62	4	AUXIRM1 & NWRB & SORMC & SORMD !
63	4	AUXIRM1 & NWRB & DGRMA & DGRMB !
64	4	AUXIRM1 & NWRB & SBC & SBD !
65	4	HPCI & NWRB & DGRMC & DGRMD !
66	4	HPCI & NWRB & SORMD & DGRMC !
67	4	HPCI & NWRB & SORMC & DGRMD !
68	4	HPCI & NWRB & SORMC & SORMD !
69	4	HPCI & NWRB & DGRMA & DGRMB !
70	4	HPCI & NWRB & SBC & SBD !

Triple

Quad

TERM NUMBER	NUMBER OF LITERALS	
71	4	MSVT & NERB & DGRMA & DGRMB !
72	4	AUXIRM1 & NERB & DGRMA & DGRMB !
73	5	HPCI & 250RMOVBDC & NERB & DGRMA & DGRMB !
74	5	MSVT & DGRMA & DGRMB & DGRMC & DGRMD !
75	5	MSVT & SDRMD & DGRMA & DGRMB & DGRMC !
76	5	MSVT & SDRMC & DGRMA & DGRMB & DGRMD !
77	5	MSVT & SDRMC & SDRMD & DGRMA & DGRMB !
78	5	MSVT & DGRMA & SBC & SBD & DGRMB !
79	5	AUXIRM1 & DGRMA & DGRMB & DGRMC & DGRMD !
80	5	AUXIRM1 & SDRMD & DGRMA & DGRMB & DGRMC !
81	5	AUXIRM1 & SDRMC & DGRMA & DGRMB & DGRMD !
82	5	AUXIRM1 & SDRMC & SDRMD & DGRMA & DGRMB !
83	5	AUXIRM1 & DGRMA & SBC & SBD & DGRMB !
84	5	AUXIRM1 & PUMPRMA & PUMPRMB & PUMPRMC & PUMPRMD !
85	5	MSVT & PUMPRMA & PUMPRMB & PUMPRMC & PUMPRMD !
86	6	HPCI & NWRB & PUMPRMA & PUMPRMB & PUMPRMC & PUMPRMD !
87	6	HPCI & 250RMOVBDC & DGRMA & DGRMB & DGRMC & DGRMD !
88	6	HPCI & 250RMOVBDC & SDRMD & DGRMA & DGRMB & DGRMC !
89	6	HPCI & 250RMOVBDC & SDRMC & DGRMA & DGRMB & DGRMD !
90	6	HPCI & 250RMOVBDC & SDRMC & SDRMD & DGRMA & DGRMB !
91	6	HPCI & 250RMOVBDC & DGRMA & SBC & SBD & DGRMB !
92	6	HPCI & 250RMOVBDC & PUMPRMA & PUMPRMB & PUMPRMC & PUMPRMD

STATEMENT EXECUTION REQUIRED .103 SECONDS FOR PRIEQNONE

STATEMENT EXECUTION REQUIRED .138 SECONDS FOR LOGLK

THE MAXIMUM NUMBER OF TERMS THAT CAN BE GENERATED BY EXPANSION IS 3546.
THE WORK MEASURE FOR EXPANSION IS 7651.

TERMS GENERATED BY EXPANSION
2 TERMS CONTAIN 2 LITERALS.
2 TERMS CONTAIN 3 LITERALS.
12 TERMS CONTAIN 4 LITERALS.
64 TERMS CONTAIN 5 LITERALS.
466 TERMS CONTAIN 6 LITERALS.
TOTAL TERMS GENERATED 546.

THERE WERE TERMS DISCARDED BECAUSE OF THE COUNTED LITERALS MAXIMUM OF 6.

EXPANSION TOOK .364 SECONDS.

* * * * LITERAL OCCURRENCE TABLE * * * *

LITERAL	NUMBER OF OCCURRENCES	OPPOSITION LITERAL	NUMBER OF OCCURRENCES
ULSF	1		
CR	424		
RC	73		
SDRMA	48		
		^SF-PV-SEBU-BZ	1
		^SF-SA-FLPL-BZ	1
		^ADS-DZ	14
		^PCB-RV-01-BZ	1
		^PCB-PC-LP-BZ	1
		^PCB-PC-01-BZ	10
		^SV-ROP-DZ	1
		^RV-ROP-DZ	1
		^PCB-LARGE-PP-BZ	8
		^PCB-ADS-VV-DZ	238
		^RXCLUP-69-1-OCZ	8
		^RXCLUP-PP-BZ	8
		^HPCI0-HX-RX-BZ	19
		^HPCI-73-34-OCZ	39
		^HPCI-73-44-CCZ	39
		^HPCI-73-26-CCZ	1
		^HPCI-73-27-CCZ	1
		^HPCI-73-40-OCZ	2
		^HPCI0-PMH-CSGZ	33
		^HPCI-73-2-OCZ	58
		^HPCI-73-3-OCZ	39
		^HPCI-73-19-OCZ	6
		^HPCI-73-18-OCZ	6
		^HPCI-73-16-CCZ	39
		^RCIC0-HX-RX-BZ	18
		^RCIC-71-37-OCZ	200

LITERAL	NUMBER OF OCCURRENCES	OPPOSITION LITERAL	NUMBER OF OCCURRENCES
		^RCIC-71-2-OCZ	50
		^LPCIA-HX-RX-BZ	32
		^LPCIA-FCV52-OCZ	64
		^LPCIA-FCV53-CCZ	64
		^LPCIA-PMA-CSGZ	16
		^LPCIA-PMC-CSGZ	15
		^LPCIB-HX-RX-BZ	32
		^LPCIB-FCV66-OCZ	48
		^LPCIB-FCV67-CCZ	64
		^LPCIB-PMB-CSGZ	15
		^LPCIB-PMD-CSGZ	16
		^CSSA-HX-RX-BZ	32
		^CSSA-75-23-OCZ	152
		^CSSA-75-25-CCZ	152
		^CSSA-75-27-OCZ	32
		^CSSA-PMA-CSGZ	40
		^CSSA-PMC-CSGZ	40
		^CSSB-HX-RX-BZ	32
		^CSSB-75-51-OCZ	128
		^CSSB-75-53-CCZ	176
		^CSSB-75-55-OCZ	32
		^CSSB-PMB-CSGZ	40
		^CSSB-PMD-CSGZ	40
		^DG-A-COOLZ	64
		^DG-A-STSG-DZ	64
		^DG-B-COOLZ	64
		^DG-B-STSG-DZ	64
		^DG-C-COOLZ	64
		^DG-C-STSG-DZ	64
		^DG-D-COOLZ	64
		^DG-D-STSG-DZ	64

THERE ARE 61 DIFFERENT LITERALS IN THE TRUNCATED SET EQUATION FOR BWB-EL-TYPE1

TERM NUMBER	NUMBER OF LITERALS	
		BWB-EL-TYPE1/6 =
1	2	RC & ^PCB-PC-LP-BZ !
2	2	RC & ^PCB-RV-01-BZ !
3	3	ULSF & ^SF-PV-SEBU-BZ & ^SF-SA-FLPL-BZ !
4	3	RC & ^SV-ROP-DZ & ^RV-ROP-DZ !
5	4	CR & ^ADS-DZ & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ !

EVENTS or acts that must be completed in order to cause a RELEASE in the Spent Fuel Area.

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

TERM NUMBER	NUMBER OF LITERALS	
6	4	CR & ^ADS-DZ & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ !
7	4	CR & ^ADS-DZ & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ !
8	4	CR & ^ADS-DZ & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ !
9	4	CR & ^ADS-DZ & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ !
10	4	CR & ^ADS-DZ & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ !
11	4	RC & ^ADS-DZ & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ !
12	4	RC & ^ADS-DZ & ^HPCI-73-2-OCZ & ^RCIC0-HX-RX-BZ !
13	4	RC & ^ADS-DZ & ^PCB-PC-01-BZ & ^HPCI-73-2-OCZ !
14	4	RC & ^ADS-DZ & ^HPCI0-HX-RX-BZ & ^RCIC-71-2-OCZ !
15	4	RC & ^ADS-DZ & ^HPCI0-HX-RX-BZ & ^RCIC9-HX-RX-DZ !
16	4	RC & ^ADS-DZ & ^PCB-PC-01-BZ & ^HPCI0-HX-RX-BZ !
17	5	CR & ^ADS-DZ & ^HPCI-73-27-CCZ & ^HPCI-73-40-OCZ & ^RCIC-71-37-OCZ !
18	5	CR & ^ADS-DZ & ^HPCI-73-26-CCZ & ^HPCI-73-40-OCZ & ^RCIC-71-37-OCZ !
19	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-25-CCZ & ^DG-C-SISG-DZ & ^DG-D-SISG-DZ !
20	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-23-OCZ & ^DG-C-SISG-DZ & ^DG-D-SISG-DZ !
21	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-SISG-DZ !
22	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-SISG-DZ !
23	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-25-CCZ & ^DG-C-SISG-DZ & ^DG-D-COOLZ !
24	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-23-OCZ & ^DG-C-SISG-DZ & ^DG-D-COOLZ !
25	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
26	5	CR & ^PCB-ADS-VV-DZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
27	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-SISG-DZ !
28	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-SISG-DZ !
29	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
30	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
31	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-ECV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
32	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-ECV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !

TERM NUMBER	NUMBER OF LITERALS	
33	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
34	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
35	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
36	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
37	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
38	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
39	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
40	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
41	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
42	5	CR & ^PCB-ADS-VV-DZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
43	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
44	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
45	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
46	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
47	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
48	5	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
49	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
50	5	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
51	5	SDRMA & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
52	5	SDRMA & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
53	5	SDRMA & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
54	5	SDRMA & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
55	5	SDRMA & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
56	5	SDRMA & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
57	5	RC & ^PCB-ADS-VV-DZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
58	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
59	5	RC & ^PCB-PC-01-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !

TERM NUMBER	NUMBER OF LITERALS	
60	5	RC & ^PCB-ADS-VV-DZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
61	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
62	5	RC & ^PCB-PC-01-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
63	5	RC & ^PCB-ADS-VV-DZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
64	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
65	5	RC & ^PCB-PC-01-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
66	5	RC & ^PCB-ADS-VV-DZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
67	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
68	5	RC & ^PCB-PC-01-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
69	5	RC & ^PCB-ADS-VV-DZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
70	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
71	5	RC & ^PCB-PC-01-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
72	5	RC & ^PCB-ADS-VV-DZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
73	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
74	5	RC & ^PCB-PC-01-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
75	5	RC & ^PCB-ADS-VV-DZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
76	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
77	5	RC & ^PCB-PC-01-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
78	5	RC & ^PCB-ADS-VV-DZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
79	5	RC & ^PCB-LARGE-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
80	5	RC & ^PCB-PC-01-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
81	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
82	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
83	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
84	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
85	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
86	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !

TERM NUMBER	NUMBER OF LITERALS	
87	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
88	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
89	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
90	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
91	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
92	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
93	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
94	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
95	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
96	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
97	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
98	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
99	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
100	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
101	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
102	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
103	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
104	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-25-CCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
105	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
106	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
107	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
108	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
109	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
110	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
111	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
112	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
113	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !

TERM NUMBER	NUMBER OF LITERALS	
114	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
115	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
116	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
117	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
118	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
119	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
120	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
121	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
122	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
123	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
124	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
125	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
126	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
127	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
128	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSA-75-23-OCZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
129	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
130	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
131	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
132	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
133	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
134	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
135	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
136	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
137	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
138	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
139	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
140	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !

TERM NUMBER	NUMBER OF LITERALS	
141	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
142	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
143	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
144	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
145	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
146	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ !
147	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
148	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
149	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
150	6	GR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
151	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
152	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
153	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
154	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
155	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
156	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
157	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
158	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
159	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
160	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
161	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
162	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
163	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
164	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
165	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
166	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
167	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !

TERM NUMBER	NUMBER OF LITERALS	
168	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
169	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
170	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
171	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
172	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
173	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
174	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
175	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
176	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
177	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
178	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
179	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
180	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
181	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
182	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
183	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
184	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
185	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
186	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
187	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
188	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
189	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
190	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
191	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
192	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
193	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
194	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !

TERM NUMBER	NUMBER OF LITERALS	
195	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
196	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
197	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
198	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
199	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
200	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
201	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
202	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
203	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
204	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
205	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
206	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !
207	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
208	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
209	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
210	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
211	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
212	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !
213	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
214	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
215	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
216	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
217	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
218	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !
219	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
220	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
221	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !

TERM NUMBER	NUMBER OF LITERALS	
232	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
233	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
234	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ & ^DG-B-COOLZ !
235	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
236	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
237	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
238	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
239	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
240	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
241	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
242	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
243	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
244	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
245	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
246	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
247	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
248	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
249	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
250	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
251	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
252	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
253	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
254	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
255	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
256	6	CR & ^HPCI0-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
257	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
258	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !

TERM NUMBER	NUMBER OF LITERALS	
249	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
250	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
251	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
252	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
253	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
254	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
255	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
256	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
257	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
258	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
259	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
260	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
261	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
262	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
263	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
264	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
265	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
266	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
267	6	CR & ^HPCI-73-16-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
268	6	CR & ^HPCI-73-3-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
269	6	CR & ^HPCI-73-2-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
270	6	CR & ^HPCIO-PMH-CSGZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
271	6	CR & ^HPCI-73-44-CCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
272	6	CR & ^HPCI-73-34-OCZ & ^RCIC-71-37-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
273	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PHB-CSGZ & ^CSSB-PHD-CSGZ !
274	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PHB-CSGZ & ^CSSB-PHD-CSGZ !
275	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PHB-CSGZ & ^CSSB-PHD-CSGZ !

TERM NUMBER	NUMBER OF LITERALS		
276	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ !	
277	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ !	
278	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ !	
279	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ !	
280	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ !	
281	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ !	
282	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ !	
283	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ !	
284	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^CSSB-PMD-CSGZ & ^DG-A-COOLZ & ^DG-B-COOLZ !	
285	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
286	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
287	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
288	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
289	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
290	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
291	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
292	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
293	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
294	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-STSG-DZ !	
295	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ !	
296	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ !	
297	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ !	
298	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ !	
299	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSA-PMD-CSGZ & ^DG-C-COOLZ !	
300	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !	
301	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !	
302	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !	

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

ITEM NUMBER	NUMBER OF LITERALS	
303	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !
304	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !
305	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !
306	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !
307	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !
308	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMD-CSGZ & ^DG-C-COOLZ !
309	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-SISG-DZ & ^DG-B-SISG-DZ & ^DG-C-COOLZ !
310	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-COOLZ & ^DG-B-SISG-DZ & ^DG-C-COOLZ !
311	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ & ^DG-C-COOLZ !
312	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMD-CSGZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-C-COOLZ !
313	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
314	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
315	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
316	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
317	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
318	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
319	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
320	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
321	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
322	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-SISG-DZ !
323	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-SISG-DZ & ^DG-B-SISG-DZ & ^DG-D-SISG-DZ !
324	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-COOLZ & ^DG-B-SISG-DZ & ^DG-D-SISG-DZ !
325	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ & ^DG-D-SISG-DZ !
326	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-D-SISG-DZ !
327	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-SISG-DZ & ^DG-B-SISG-DZ & ^DG-C-SISG-DZ & ^DG-D-SISG-DZ !
328	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-SISG-DZ & ^DG-B-COOLZ & ^DG-C-SISG-DZ & ^DG-D-SISG-DZ !
329	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-SISG-DZ & ^DG-C-SISG-DZ & ^DG-D-SISG-DZ !

TERM NUMBER	NUMBER OF LITERALS	
330	6	CR & ^PCB-AOS-VV-DZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
331	6	CR & ^PCB-AOS-VV-DZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
332	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-COOLZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
333	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
334	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
335	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^DG-C-STSG-DZ & ^DG-D-STSG-DZ !
336	6	CR & ^PCB-AOS-VV-DZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
337	6	CR & ^PCB-AOS-VV-DZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
338	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-STSG-DZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
339	6	CR & ^PCB-AOS-VV-DZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
340	6	CR & ^PCB-AOS-VV-DZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
341	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-COOLZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
342	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-STSG-DZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
343	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-COOLZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
344	6	CR & ^PCB-AOS-VV-DZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^DG-C-COOLZ & ^DG-D-STSG-DZ !
345	6	CR & ^PCB-AOS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
346	6	CR & ^PCB-AOS-VV-DZ & ^LPCIB-ECV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
347	6	CR & ^PCB-AOS-VV-DZ & ^LPCIB-ECV66-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
348	6	CR & ^PCB-AOS-VV-DZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
349	6	CR & ^PCB-AOS-VV-DZ & ^LPCIA-ECV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
350	6	CR & ^PCB-AOS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
351	6	CR & ^PCB-AOS-VV-DZ & ^LPCIB-ECV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
352	6	CR & ^PCB-AOS-VV-DZ & ^LPCIB-ECV66-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
353	6	CR & ^PCB-AOS-VV-DZ & ^LPCIA-ECV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
354	6	CR & ^PCB-AOS-VV-DZ & ^LPCIA-ECV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-PMB-CSGZ & ^DG-D-COOLZ !
355	6	CR & ^PCB-AOS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ & ^DG-D-COOLZ !
356	6	CR & ^PCB-AOS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ & ^DG-D-COOLZ !

TERM NUMBER	NUMBER OF LITERALS	
357	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ & ^DG-D-COOLZ !
358	6	CR & ^PCB-ADS-VV-DZ & ^CSSB-PMB-CSGZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-D-COOLZ !
359	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
360	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
361	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-STSG-DZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
362	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
363	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
364	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-COOLZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
365	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-STSG-DZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
366	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-COOLZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
367	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^DG-C-STSG-DZ & ^DG-D-COOLZ !
368	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-STSG-DZ & ^DG-B-STSG-DZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
369	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-STSG-DZ & ^DG-B-COOLZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
370	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-STSG-DZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
371	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-COOLZ & ^DG-B-STSG-DZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
372	6	CR & ^PCB-ADS-VV-DZ & ^DG-A-COOLZ & ^DG-B-COOLZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
373	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMC-CSGZ & ^DG-A-COOLZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
374	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-STSG-DZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
375	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMA-CSGZ & ^DG-B-COOLZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
376	6	CR & ^PCB-ADS-VV-DZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^DG-C-COOLZ & ^DG-D-COOLZ !
377	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ !
378	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ !
379	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ !
380	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ !
381	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !
382	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !
383	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION

	TERM NUMBER	NUMBER OF LITERALS	
4	384	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !
5	385	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !
6	386	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
7	387	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
8	388	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
9	389	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
10	390	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
11	391	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
12	392	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
13	393	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
14	394	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
15	395	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
16	396	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
17	397	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
18	398	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
19	399	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
20	400	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
21	401	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-C-STSG-DZ !
22	402	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-C-COOLZ !
23	403	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
24	404	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-D-STSG-DZ !
25	405	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-D-COOLZ !
26	406	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !
27	407	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
28	408	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
29	409	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
30	410	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
31			
32			

ITEM NUMBER	NUMBER OF LITERALS	
411	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-C-STSG-DZ !
412	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-C-COOLZ !
413	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
414	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-D-STSG-DZ !
415	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-D-COOLZ !
416	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-A-STSG-DZ !
417	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-A-COOLZ !
418	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
419	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-B-STSG-DZ !
420	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ & ^DG-B-COOLZ !
421	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ !
422	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ !
423	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ !
424	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMA-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ !
425	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
426	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
427	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
428	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
429	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
430	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
431	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
432	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
433	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
434	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMC-CSGZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
435	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-SISG-DZ !
436	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-STSG-DZ !
437	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-STSG-DZ !

	TERM NUMBER	NUMBER OF LITERALS	
2			
3	438	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-STSG-DZ !
4	439	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-STSG-DZ !
5	440	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-FCV67-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
6	441	6	CR & ^PCB-ADS-VV-OZ & ^LPCIB-FCV66-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
7	442	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
8	443	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV53-CCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
9	444	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-FCV52-OCZ & ^CSSA-PMA-CSGZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
10	445	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-C-STSG-DZ !
11	446	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-C-COOLZ !
12	447	6	CR & ^PCB-ADS-VV-OZ & ^LPCIB-PMD-CSGZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
13	448	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-D-STSG-DZ !
14	449	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-D-COOLZ !
15	450	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
16	451	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
17	452	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ !
18	453	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-B-STSG-DZ !
19	454	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-25-CCZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
20	455	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-C-STSG-DZ !
21	456	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-C-COOLZ !
22	457	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^LPCIB-PMD-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
23	458	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-D-STSG-DZ !
24	459	6	CR & ^PCB-ADS-VV-DZ & ^LPCIB-PMB-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-D-COOLZ !
25	460	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-A-STSG-DZ !
26	461	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-A-COOLZ !
27	462	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^LPCIA-PMC-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ !
28	463	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-B-STSG-DZ !
29	464	6	CR & ^PCB-ADS-VV-DZ & ^LPCIA-PMA-CSGZ & ^CSSA-75-23-OCZ & ^CSSB-75-51-OCZ & ^DG-B-COOLZ !
30			
31			
32			

TERM NUMBER	NUMBER OF LITERALS	
465	6	SORMA & ^HPCI-73-16-CCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
466	6	SORMA & ^HPCI-73-18-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
467	6	SORMA & ^HPCI-73-19-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
468	6	SORMA & ^HPCI-73-3-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
469	6	SORMA & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
470	6	SORMA & ^HPCI-73-44-CCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
471	6	SORMA & ^HPCI-73-34-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
472	6	SORMA & ^HPCI-73-16-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
473	6	SORMA & ^HPCI-73-18-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
474	6	SORMA & ^HPCI-73-19-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
475	6	SORMA & ^HPCI-73-3-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
476	6	SORMA & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
477	6	SORMA & ^HPCI-73-44-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
478	6	SORMA & ^HPCI-73-34-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
479	6	SORMA & ^HPCI-73-16-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
480	6	SORMA & ^HPCI-73-18-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
481	6	SORMA & ^HPCI-73-19-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
482	6	SORMA & ^HPCI-73-3-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
483	6	SORMA & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
484	6	SORMA & ^HPCI-73-44-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
485	6	SORMA & ^HPCI-73-34-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-25-CCZ & ^CSSB-75-53-CCZ !
486	6	SORMA & ^HPCI-73-16-CCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
487	6	SORMA & ^HPCI-73-18-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
488	6	SORMA & ^HPCI-73-19-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
489	6	SORMA & ^HPCI-73-3-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
490	6	SORMA & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
491	6	SORMA & ^HPCI-73-44-CCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !

TERM NUMBER	NUMBER OF LITERALS	
492	6	SORMA & ^HPCI-73-34-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-FCV67-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
493	6	SORMA & ^HPCI-73-16-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
494	6	SORMA & ^HPCI-73-18-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
495	6	SORMA & ^HPCI-73-19-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
496	6	SORMA & ^HPCI-73-3-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
497	6	SORMA & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
498	6	SORMA & ^HPCI-73-44-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
499	6	SORMA & ^HPCI-73-34-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV53-CCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
500	6	SORMA & ^HPCI-73-16-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
501	6	SORMA & ^HPCI-73-18-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
502	6	SORMA & ^HPCI-73-19-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
503	6	SORMA & ^HPCI-73-3-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
504	6	SORMA & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
505	6	SORMA & ^HPCI-73-44-CCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
506	6	SORMA & ^HPCI-73-34-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-FCV52-OCZ & ^CSSA-75-23-OCZ & ^CSSB-75-53-CCZ !
507	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
508	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
509	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
510	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
511	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
512	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
513	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
514	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
515	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
516	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
517	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
518	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !

TERM NUMBER	NUMBER OF LITERALS	
519	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
520	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
521	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
522	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
523	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
524	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
525	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
526	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIB-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
527	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
528	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
529	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
530	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
531	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-75-55-OCZ !
532	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
533	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
534	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
535	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
536	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-75-27-OCZ & ^CSSB-HX-RX-BZ !
537	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
538	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
539	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
540	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
541	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-75-55-OCZ !
542	6	RC & ^HPCI-73-2-OCZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
543	6	RC & ^HPCIO-HX-RX-BZ & ^RCIC-71-2-OCZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
544	6	RC & ^HPCI-73-2-OCZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !
545	6	RC & ^HPCIO-HX-RX-BZ & ^RCICO-HX-RX-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ !

TERM NUMBER	NUMBER OF LITERALS	
546	6	RC & ^RXCLUP-69-1-OCZ & ^RXCLUP-PP-BZ & ^LPCIA-HX-RX-BZ & ^CSSA-HX-RX-BZ & ^CSSB-HX-RX-BZ

STATEMENT EXECUTION REQUIRED .888 SECONDS FOR PRTEQNONF

STATEMENT EXECUTION REQUIRED .041 SECONDS FOR LOBLK

THE MAXIMUM NUMBER OF TERMS THAT CAN BE GENERATED BY EXPANSION IS 144.
THE WORK MEASURE FOR EXPANSION IS 226.

TERMS GENERATED BY EXPANSION
48 TERMS CONTAIN 9 LITERALS.
96 TERMS CONTAIN 10 LITERALS.
TOTAL TERMS GENERATED 144.
EXPANSION TOOK .017 SECONDS.

* * * * LITERAL OCCURRENCE TABLE * * * *

LITERAL	NUMBER OF OCCURRENCES	OPPOSITION LITERAL	NUMBER OF OCCURRENCES
TORUS	144		
		^HPCI0-PHH-PPZ	72
		^HPCI-73-3-OCZ	72
		^RCIC0-TORPP-BZ	48
		^RCIC0-CSTPP-BZ	144
		^RCIC0-TK-TOR-BZ	48
		^RCIC-71-16-OCZ	48
		^LPCIA-PP-PH0-BZ	24
		^LPCIA-TORPP-BZ	24
		^LPCIA-CSTPP-BZ	48
		^LPCIA-TK-TOR-BZ	24
		^LPCI0-PP-PH0-BZ	24
		^LPCI0-TORPP-BZ	24
		^LPCI0-CSTPP-BZ	48
		^LPCI0-TK-TOR-BZ	24
		^CSSA-TORPP-BZ	72
		^CSSA-CSTPP-BZ	144
		^CSSA-TK-TOR-BZ	72
		^CSS0-TORPP-BZ	72
		^CSS0-CSTPP-BZ	144
		^CSS0-TK-TOR-BZ	72

TERM NUMBER	NUMBER OF LITERALS	
		^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
17	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
18	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
19	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
20	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
21	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
22	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
23	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
24	9	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-PP-PMD-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
25	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
26	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
27	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
28	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
29	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
30	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
31	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
32	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
33	9	TORUS & ^HPCIO-PMH-PPZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-PP-PMD-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !

TERM NUMBER	NUMBER OF LITERALS	
34	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-PP-PHO-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
35	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-PP-PHO-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
36	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-PP-PHO-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
37	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
38	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
39	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
40	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
41	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
42	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
43	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
44	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
45	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
46	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
47	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
48	9	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-PP-PHO-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
49	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
50	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
51	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !

TERM NUMBER	NUMBER OF LITERALS	
52	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
53	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSS3-TK-TOR-BZ !
54	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
55	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
56	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
57	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
58	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
59	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
60	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
61	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ [illegible]
62	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
53	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
64	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
65	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
66	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
67	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
68	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
69	10	TORUS & ^HPCI-73-3-OCZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !

TERM NUMBER	NUMBER OF LITERALS	
70	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
71	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
72	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
73	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
74	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
75	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
76	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
77	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
78	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
79	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
80	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
81	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
82	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
83	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
84	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
85	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
86	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
87	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !

TERM NUMBER	NUMBER OF LITERALS	
88	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
89	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
90	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
91	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
92	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
93	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
94	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
95	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
96	10	TORUS & ^HPCI-73-3-OCZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
97	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
98	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
99	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
100	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
101	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
102	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
103	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
104	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-CSTPP-BZ & ^RCIC0-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
105	10	TORUS & ^HPCI0-PMH-PPZ & ^RCIC0-TORPP-BZ & ^RCIC0-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !

	TERM NUMBER	NUMBER OF LITERALS	
1			
2			
3			
4	106	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
5	107	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
7	108	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
8	109	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
9			
10	110	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
11	111	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
12			
13	112	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
14	113	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
16	114	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
17	115	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
18			
19	116	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
20	117	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
21			
22	118	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
23	119	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
24			
25	120	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-CSTPP-BZ & ^CSSA-TK-TOR-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
26	121	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
27			
28	122	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
29	123	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
30			
31			
32			

TERM NUMBER	NUMBER OF LITERALS	
124	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
125	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
126	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
127	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
128	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
129	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
130	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
131	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
132	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-CSTPP-BZ & ^CSSB-TK-TOR-BZ !
133	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
134	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
135	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-CSTPP-BZ & ^LPCIB-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
136	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
137	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
138	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIB-TORPP-BZ & ^LPCIB-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
139	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
140	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
141	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-CSTPP-BZ & ^LPCIA-TK-TOR-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !

TERM NUMBER	NUMBER OF LITERALS	
142	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCIC-71-16-OCZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
143	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-CSTPP-BZ & ^RCICO-TK-TOR-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ !
144	10	TORUS & ^HPCIO-PMH-PPZ & ^RCICO-TORPP-BZ & ^RCICO-CSTPP-BZ & ^LPCIA-TORPP-BZ & ^LPCIA-CSTPP-BZ & ^CSSA-TORPP-BZ & ^CSSA-CSTPP-BZ & ^CSSB-TORPP-BZ & ^CSSB-CSTPP-BZ

STATEMENT EXECUTION REQUIRED .217 SECONDS FOR PRTEQNDNF

END EXECUTION OF SETS.

SECURITY-RELATED INFORMATION
10 CFR 2.790(d) INFORMATION