

**IMPACT OF TECHNICAL SPECIFICATIONS
ON OPERATING REACTORS
DURING 1984**

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IMPACT OF TECHNICAL SPECIFICATIONS ON OPERATING REACTORS DURING 1984

This report, prepared on behalf of the Technical Specification Improvement Project (TSIP) within the NRC Office of Nuclear Reactor Regulation, presents information describing the impact of technical specifications on operating reactors in 1984. The information presented is derived from analysis of 701 1984 Licensee Event Report (LER) summaries pertaining to shutdowns required by technical specifications and to violations of technical specifications. The LERs were reviewed to determine which technical specifications are being violated the most, which class of technical specifications are impacting plant availability, and the relative safety importance of the events. Relative safety importance in the context of this report pertains to potential impact on the likelihood or consequences of severe accidents involving core melt. The report is intended to be of use to the TSIP in its reconsideration of the philosophy, purpose and appropriate content of technical specifications.

The information presented includes:

- A structured compilation of the 1984 LERs arranged by system affected, ranked by their relative importance to safety and risk (high, medium, low), identified by technical specification category (Limiting Condition for Operation, Surveillance, Safety Limits and Limiting Safety System Settings, Administrative Controls) and type (standard versus unique).
- Tabulations of the numbers of LERs by safety significance and separately by plant and technical specification category, reactor vendor, plant age, system affected, and technical specification category.
- Estimates of plant unavailabilities attributable to technical specification categories.
- Identification of events involving extensions of outages because the technical specifications would not permit restart until certain requirements had been met, identification of shutdowns

required by technical specifications which may have been contrary to the best interests of safety, and shutdowns when there was little impact on system availability but a shutdown was required.

The safety and risk importance evaluations were based on the qualitative judgment of the analysts, all of whom have extensive experience in the performance and application of Probabilistic Risk Assessment (PRA). The PRA experience of the analysts includes participation in the Reactor Safety Study (RSS), the Integrated Reliability Evaluation Program (IREP), the Accident Sequence Evaluation Program (ASEP), Risk Based Ranking of Systematic Evaluation Program (SEP) Issues, and the Procedures for Evaluating Technical Specifications (PETS) Program.

In addition to tabulations of events and specific correlations, the report briefly highlights the most important insights noted in the course of the analysis. Recognizing the limitations of analyzing only one year of data, perhaps the most significant observations were: (1) shutdowns required by technical specifications appear to contribute approximately one and a half points to the total plant unavailability of 37%; (2) many LERs resulting from technical specifications concern events that, while intrinsically important to the maintenance of safety, are of minor significance in terms of their direct contribution to public risk from accident sequences as modeled in PRAs. Many events relating to radiation protection and radiation monitoring fall into this category.

The discussion of methodology and key assumptions is deferred until after the presentation of results and important insights, which follows.

RESULTS AND INSIGHTS

Summaries of 701 1984 LERs required by 10CFR50.73 were reviewed. The events described in these LERs fall into one of the following two categories: (1) the LER is generated due to a technical specification violation, or (2) the event is a plant shutdown required by plant technical specifications. The 77 shutdown related events were either shutdowns that resulted from technical specification violations or shutdowns initiated so that the technical specification requirements would not be violated. Each LER event was assigned a relative safety significance (high, medium, low)

derived from a subjective judgment of its importance to the likelihood or consequence of an accident affecting the public. (The details of this assessment process are described further below.) In addition, each LER was characterized by the following items of information:

- Plant Name
- Date of Commercial Operation
- Type of Technical Specification (Standard or Unique)
- NSSS Vendor
- LER Number
- Type of Event (Shutdown or Violation)
- Power Level (%) / Plant Status
- Outage Duration (Hours)
- Technical Specification Category
 - Limiting Condition for Operation,
 - Surveillance,
 - Administrative,
 - Safety Limits, and Limiting Safety System Settings
- System Affected
- Event Description

This information is all listed in Attachment B, Table B-1, with listings ordered by plant name and LER number, and constitutes the complete LER data base for the tabulations presented. The same information, re-ordered by system affected and by safety significance (high, low, medium) is repeated in Table B-2.

The LERs can be categorized in a number of ways:

- Of the 701 events, safety and risk significance rankings were 139 High (20%), 205 Medium (29%), and 357 Low (51%).
- 77 (11%) events required plant shutdowns. The safety significance rankings were 25 High (32%), resulting in 4,624 shutdown hours; 20 Medium (26%), resulting in 3,675 shutdown hours; and 32 Low (42%), resulting in 2,966 shutdown hours. The remaining 624 (89%) violations were ranked 114 High (18%), 185 Medium (30%), and 325 Low (52%).

- 128 events affected fire protection systems. These are omitted from some tabulations because of large uncertainty in assessing safety significance. Of the 573 events not involving the fire protection system, the safety significance rankings were 110 High (19%), 138 Medium (24%), and 325 Low (57%).
- The 77 events requiring plant shutdowns were all among the 573 events not involving the fire protection system. 496 events involved violations other than those associated with fire protection.
- Of 624 violations (i.e., shutdowns excluded), 103 involved radiation monitoring and protection systems, whose primary function is to provide monitoring of routine releases and worker protection, and whose operability would not be expected to impact the results of a PRA. With these 103 events excluded, the safety significance ranking is 114 High (22%), 185 Medium (36%), and 222 Low (42%).

These statistics are summarized in Table 1. One observation from these statistics is that about half the events are ranked of medium or high significance with respect to public safety, and half are ranked low.

The radiation monitoring and protection systems are primarily intended for worker protection and public safety during normal operations (as opposed to accidents). Their assignment of low safety significance is not meant to detract from their obvious importance to plant operation, but merely reflects the use of a PRA perspective, with its focus on major risks associated with core melt accidents, as the basis for ranking.

The observed impact of outages due to technical specifications on plant availability is derived from data contained in the Licensed Operating Reactors status summary reports. The total duration of 1984 outages that could be attributed to technical specification requirements was approximately 11,000 hours. (Problems associated with the determination of this number are outlined in the next section of this report.) These outage hours were accumulated by 39 (of 91) power plants; most operating reactors had no identifiable technical specification related outage times. Detailed unavailability data by plant is provided in Table A-1. The average

TABLE 1: BREAKDOWN OF TECHNICAL SPECIFICATION -
RELATED LERS DURING 1984 *

TYPE OF EVENT	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Shutdowns	25 (4%)	20 (3%)	32 (4%)	77 (11%)
Violations				
Fire Protection	29	67	32	128
Radiation Monitor and Protection	-	-	103	103
Other	85	118	190	393
Violations - Total	114 (16%)	185 (26%)	325 (47%)	624 (89%)
TOTAL	139 (20%)	205 (29%)	357 (51%)	701 (100%)

* Percentages refer to 701 total.

unavailability contribution from technical specification related shutdowns, counting only the 39 plants that had technical specification related outages, was 3%. If all plants are considered, the unavailability contribution from technical specification related events is approximately one and a half percent. The average unavailability for all plants during 1984 was 37%. This includes data for scheduled and forced shutdowns.

Among the shutdown related events, there were only three that clearly resulted in the extension of a plant shutdown initially caused by a separate unrelated event. The events were: a steam generator tube rupture (event 285008 at Fort Calhoun 1), failure of relief valves during startup tests (event 219028 at Oyster Creek), and a spurious feedwater regulator valve closure (event 272024 at Salem 1). At least two of these events would have required the additional outage time regardless of the existence of technical specifications.

Another important observation from this study is that there are technical specification required shutdowns that may place a greater challenge on the plant safety systems than if the plant were allowed to continue to operate for a limited time while repairs are being made. Such shutdowns may have been counterproductive to the assurance of safety. A more detailed plant-specific analysis would be required to reach specific conclusions about each event. These events generally involve degraded operation of systems that are necessary both to provide mitigating functions (maintaining reactor water level, heat removal, etc.) under accident conditions and to effect a safe shutdown under normal conditions. These systems include (but are not necessarily limited to) AC and DC power, auxiliary feedwater and residual heat removal systems. Five events were identified in which one of the above systems was in a degraded condition and the plant was shutdown or a shutdown procedure was initiated. These events include failure of a diesel generator during a test due to high crankcase pressure (event 331021 at Duane Arnold), failure of a turbine driven auxiliary feedwater pump throttle trip valve during a test (event 315004 at D.C. Cook, Unit 1), two diesel generators tripped during surveillance (event 339013 at North Anna, Unit 2), auxiliary feedwater pump overspeed problems (event 255019 at Palisades), and intermittent breaker problems with a residual heat removal pump (event 388019 at Susquehanna, Unit 2).

Three events were found that had a negligible impact on the availability of a system (and in some cases a system that is not seen as being particularly important to safety); however, the plant was required to shut-down to remain in compliance with the plant technical specifications. For these three events, continued operation of the plant would not appear to have constituted any significant decrease in the public safety. In events 249013 at Dresden 3 (maintenance on a butterfly valve resulted in the removal from service of the containment purge system), event 305015 at Kewaunee (the refueling water storage tank level was 1.5% below the technical specification limit, but still operable) and event 327005 at Sequoyah Unit 1 (the boron concentration in one accumulator was above the technical specification limit), the functionality of the systems as required in a post-accident environment does not appear have been significantly affected. In all three events the technical specifications required that the plants be shutdown.

The following paragraphs summarize some of the more detailed results of the study.

The 701 events have been classified by their relative safety significance and correlated with several event characteristics of interest. These include: (1) the systems primarily affected by the event (Table 2); (2) Technical Specification category (Tables 3A and 3B); (3) Type of Technical Specification (Tables 4A and 4B); (4) NSSS vendor (Tables 5A and 5B); and (5) age of the plant (Tables 6A and 6B).

In the last four cases, tabulations are shown for (a) all events and (b) with the fire protection events excluded. The fire protection system does not by itself provide any of the functions necessary to prevent a core melt. However, many of the systems required for mitigating functions are protected by the fire protection system. Fire related events have not been analyzed in many PRA studies; but for those that did include a fire analysis, fires in particular areas were important. The areas of importance can reasonably be expected to vary from plant to plant. For this reason a great deal of uncertainty is associated with the importance of fire protection-related events. To eliminate any bias in the data that this might introduce, the results are presented both with and without the fire protection system-related events.

TABLE 2: TABULATION OF ALL TECHNICAL SPECIFICATION
RELATED 1984 LERS BY SYSTEM AFFECTED
VERSUS RELATIVE SAFETY SIGNIFICANCE

SYSTEM AFFECTED	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Not Identified	0	0	11	11
AC Power	9	13	11	33
Accumulator	0	0	10	10
Auxiliary Feedwater	7	4	2	13
Chemical and Volume Control	2	2	5	9
Chlorine Detection	0	0	2	2
Component Cooling Water	5	0	1	6
Containment	15	25	34	74
Containment Spray	4	2	2	8
Containment: Combustible Gas	0	3	4	7
Control Room	0	0	3	3
Core Monitors	0	1	5	6
Core Spray	4	1	1	6
Criticality Monitors	0	0	1	1
DC Power	4	2	0	6
Depressurization	2	0	0	2
ECCS *	7	0	1	8
Engineered Safeguards (Actuation)	4	6	0	10
Fire Protection	29	67	32	128
Fuel Handling	0	0	5	5
Heating Ventilation and Air Conditioning	6	0	17	23
High Pressure Injection	10	3	4	17
Low Pressure Injection	5	1	0	6
Main Steam Isolation	0	0	3	3
Plant Computer	0	0	1	1
Post Accident Monitor	0	1	0	1
Power Conversion	1	3	1	5
Pressure Relief	6	9	3	18
Pressurizer	0	1	2	3

TABLE 2: TABULATION OF ALL TECHNICAL SPECIFICATION
RELATED 1984 LERS BY SYSTEM AFFECTED
VERSUS RELATIVE SAFETY SIGNIFICANCE - Continued

SYSTEM AFFECTED	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Primary Coolant	3	13	37	53
Radiation Monitor	0	0	83	83
Radiation Protection	0	0	20	20
Radwaste	0	0	5	5
Reactor Control	0	2	5	7
Reactor Water Cleanup	0	0	2	2
Reactor Protection	7	33	9	49
Recirculation	0	0	6	6
Residual Heat Removal	5	3	6	14
Seismic	0	3	2	5
Service Water	2	2	1	5
Spent Fuel Pool	0	0	1	1
Standby Gas Treatment	0	5	5	10
Standby Liquid Control	1	0	3	4
Sump	1	0	5	6
Upper Head Injection	0	0	1	1
Waste Gas Treatment	0	0	5	5
TOTAL	139	205	357	701

* Subsystem not identified.

TABLE 3A: TABULATION OF LERS BY TECHNICAL
SPECIFICATION CATEGORY VERSUS RELATIVE SAFETY SIGNIFICANCE

TECHNICAL SPECIFICATION CATEGORY	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
LCO	114	148	230	492
Surveillance	21	37	95	153
Administrative	1	15	32	48
SL & LSSS	3	5	0	8
TOTAL	139	205	357	701

TABLE 3B: TABULATION OF LERS BY TECHNICAL
SPECIFICATION CATEGORY VERSUS RELATIVE SAFETY SIGNIFICANCE,
EXCLUDING FIRE PROTECTION EVENTS

TECHNICAL SPECIFICATION CATEGORY	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
LCO	87	91	207	385
Surveillance	19	30	87	136
Administrative	1	12	31	44
SL & LSSS	3	5	0	8
TOTAL	110	138	325	573

TABLE 4A: TABULATION OF LERS BY TYPE OF TECHNICAL SPECIFICATION VERSUS RELATIVE SAFETY SIGNIFICANCE

TYPE OF TECHNICAL SPECIFICATION *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Standard (41)	83	116	231	430
Unique (50)	56	89	126	271
TOTAL	139	205	357	701

TABLE 4B: TABULATION OF LERS BY TYPE OF TECHNICAL SPECIFICATION VERSUS RELATIVE SAFETY SIGNIFICANCE, EXCLUDING FIRE PROTECTION EVENTS

TYPE OF TECHNICAL SPECIFICATION *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Standard (41)	63	80	205	348
Unique (50)	47	58	120	225
TOTAL	110	138	325	573

* Number of plants in each category is indicated in parenthesis.

TABLE 5A: TABULATION OF LERS BY NSSS
VENDOR VERSUS RELATIVE SAFETY SIGNIFICANCE

NSSS VENDOR *		RELATIVE SAFETY SIGNIFICANCE			TOTAL
		HIGH	MEDIUM	LOW	
General Electric	(32)	43	60	144	247
Westinghouse	(37)	60	104	137	301
Combustion Engineering	(12)	28	24	40	92
Babcock & Wilcox	(8)	4	14	34	52
Allis-Chalmers	(1)	4	3	2	9
General Atomic	(1)	0	0	0	0
TOTAL		139	205	357	701

TABLE 5B: TABULATION OF LERS BY NSSS
VENDOR VERSUS RELATIVE SAFETY SIGNIFICANCE,
EXCLUDING FIRE PROTECTION EVENTS

NSSS VENDOR *		RELATIVE SAFETY SIGNIFICANCE			TOTAL
		HIGH	MEDIUM	LOW	
General Electric	(32)	37	36	133	206
Westinghouse	(37)	43	70	124	237
Combustion Engineering	(12)	23	20	35	78
Babcock & Wilcox	(8)	4	10	31	45
Allis-Chalmers	(1)	3	2	2	7
General Atomic	(1)	0	0	0	0
TOTAL		110	138	325	573

* Number of plants in each category is indicated in parenthesis.

TABLE 6A: TABULATION OF LERS BY DATE OF COMMERCIAL
OPERATION VERSUS SAFETY SIGNIFICANCE

DATE OF OPERATION *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
1983 - 1985 (16)	39	49	126	214
1981 - 1982 (6)	10	21	34	65
1976 - 1980 (18)	27	40	61	128
1974 - 1975 (21)	21	32	52	105
1971 - 1973 (18)	18	36	54	108
1960 - 1970 (12)	24	27	30	81
TOTAL	139	205	357	701

TABLE 6B: TABULATION OF LERS BY DATE OF
COMMERCIAL OPERATION VERSUS RELATIVE SAFETY SIGNIFICANCE,
EXCLUDING FIRE PROTECTION EVENTS

DATE OF OPERATION *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
1983 - 1985 (16)	27	31	114	172
1981 - 1982 (6)	9	15	29	53
1976 - 1980 (18)	23	31	52	106
1974 - 1975 (21)	18	18	50	86
1971 - 1973 (18)	16	30	50	96
1960 - 1970 (12)	17	13	30	60
TOTAL	110	138	325	573

* Number of plants in each category is indicated in parenthesis.

The technical specification category that is most often violated is the limiting condition for operation category, with surveillance requirements being the second most violated. There is not a significant difference in the data for the different vendors; the total number of events per plant is approximately the same for all the major vendors. The frequency per plant of technical specification-related LERs for plants with standard technical specifications (430 events at 41 plants) is nearly double that for plants with unique ones (271 events at 50 plants). Plants that have begun commercial operation in the last two years have generated a larger number of LERs than the older plants, especially in the low relative safety significance category.

Plants with post-1975 commercial operation dates generally have standard technical specifications while the older plants have unique specifications. If the data for new plants with standard technical specifications is removed from the standard technical specification data, the remaining plants with standard technical specifications generate approximately 50% more LERs per plant than the plants with unique technical specifications. The low relative safety significant events occur at new plants (licensed after 1982) at three times the rate of low events at plants with unique technical specifications and twice the rate of low events at all other plants with standard technical specifications. Apparently, the larger number of events in newer plants can be attributed to both a learning curve associated with early plant operation and to the use of standard rather than unique technical specifications.

The subset of data that deals only with the events that resulted in plant shutdowns was analyzed separately from all events. The results of this analysis are presented in Tables 7-11, which are similar to the ones developed for all events. (Listings of the events classified as they are in the tables are provided in Attachment A, Tables A-2 through A-6.)

As in the complete set of 701 LERs most shutdown related events are the result of LCO requirements. The system most often involved in shutdown related events (18 events) is the primary coolant system. Most of these events are shutdowns due to primary coolant leakage ranging in size from approximately 1 gpm, to 110 gpm, and include steam generator tube ruptures in PWRs. (In the set of all events, the systems most often affected were

TABLE 7: TABULATION OF SHUTDOWN RELATED 1984
TECHNICAL SPECIFICATION LERS BY SYSTEM
AFFECTED VERSUS RELATIVE SAFETY SIGNIFICANCE

SYSTEM AFFECTED	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Not Identified	0	0	1	1
AC Power	3	1	0	4
Accumulator	0	0	4	4
Auxiliary Feedwater	2	0	1	3
Chemical and Volume Control	0	0	2	2
Component Cooling Water	1	0	1	2
Containment	1	2	3	6
Containment Spray	1	1	0	2
Depressurization	2	0	0	2
ECCS *	3	0	0	3
Engineered Safeguards (Actuation)	0	1	0	1
Heating Ventilation and Air Conditioning	2	0	1	3
High Pressure Injection	1	0	1	2
Main Steam Isolation	0	0	1	1
Power Conversion	1	0	0	1
Pressure Relief	5	1	0	6
Primary Coolant	2	5	11	18
Reactor Control	0	1	1	2
Reactor Protection	0	6	1	7
Recirculation	0	0	2	2
Residual Heat Removal	1	0	0	1
Standby Gas Treatment	0	2	1	3
Upper Head Injection	0	0	1	1
TOTAL	25	20	32	77

* Subsystem not identified.

TABLE 8: TABULATION OF SHUTDOWN-RELATED LERS
BY TECHNICAL SPECIFICATION CATEGORY
VERSUS RELATIVE SAFETY SIGNIFICANCE

TECHNICAL SPECIFICATION CATEGORY	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
LCO	24	16	30	70
Surveillance	1	2	2	5
Administrative	0	1	0	1
SL & LSSS	0	1	0	1
TOTAL	25	20	32	77

TABLE 9: TABULATION OF SHUTDOWN-RELATED 1984
TECHNICAL SPECIFICATION LERS BY TYPE OF TECHNICAL
SPECIFICATION VERSUS RELATIVE SAFETY SIGNIFICANCE

TECHNICAL SPECIFICATION TYPE *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
Standard (41)	13	11	17	41
Unique (50)	12	9	15	36
TOTAL	25	20	32	77

* Number of plants in each category is indicated in parenthesis.

TABLE 10: TABULATION OF SHUTDOWN-RELATED 1984
TECHNICAL SPECIFICATION RELATED LERS BY NSSS
VENDOR VERSUS RELATIVE SAFETY SIGNIFICANCE

NSSS VENDOR *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
General Electric (32)	13	6	9	28
Westinghouse (37)	9	12	12	33
Combustion Engineering (12)	3	0	9	12
Babcock & Wilcox (8)	0	1	2	3
Allis-Chalmers (1)	0	1	0	1
General Atomic (1)	0	0	0	0
TOTAL	25	20	32	77

TABLE 11: TABULATION OF SHUTDOWN-RELATED LERS BY DATE OF
COMMERCIAL OPERATION VERSUS RELATIVE SAFETY SIGNIFICANCE

DATE OF OPERATION *	RELATIVE SAFETY SIGNIFICANCE			TOTAL
	HIGH	MEDIUM	LOW	
1983 - 1985 (16)	5	4	3	12
1981 - 1982 (6)	3	4	4	11
1976 - 1980 (18)	4	2	6	12
1974 - 1975 (21)	4	5	8	17
1971 - 1973 (18)	4	4	8	16
1960 - 1970 (12)	5	1	3	9
TOTAL	25	20	32	77

* Number of plants in each category is indicated in parenthesis.

the fire protection, containment, radiation monitoring, primary coolant and reactor protection systems).

The shutdown related events occur more frequently at plants with standard technical specifications than at plants with unique, plant-specific, technical specifications. Plants with standard technical specifications are shutdown nearly 40% more frequently than those with unique ones. No other significant trends in the shutdown data were identified.

Of the 77 LERs that concerned technical specification required shutdowns, only 53 impacted plant availability, i.e., had outage hours associated with the event. The remaining 24 events were either of such short duration as to not affect plant availability, as reported in the Licensed Operating Reactors status summary reports, or a separate entry was not made in the summary reports and it was not possible to separate the technical specification-related outage hours from the total outage time. The 53 events occurred at 39 power plants. The most events at any one plant were three at two different plants (Salem 2 and Palisades). Ten plants experienced two technical specification-related shutdowns and 27 plants had one shutdown event each.

The single event with the greatest impact on plant availability was a steam generator tube rupture at Fort Calhoun (event 285008) which resulted in an outage of 1390 hours and an unavailability of 16% for the plant. This was also the largest impact on a single plant for the entire year. Four other plants had total outage times, from technical specification required shutdowns, of greater than one month. These are: Zion Unit 1 (1254 hours, due to two events, for an unavailability contribution of 14%), Salem Unit 2 (996 hours, due to three events, 11% unavailability), Calvert Cliffs Unit 1 (927 hours, due to two events, 11% unavailability), and North Anna Unit 1 (748 hours, due to one event, 9% unavailability).

The average unavailability factor for all nuclear power plants in operation in the United States in 1984 was 37%. This is the result of approximately 256,200 outage hours for the year. Plant unavailability can be divided into forced and scheduled outages. In 1984 there were approximately 66,800 forced outage hours (a 10% average unavailability

factor) and 189,400 scheduled outage hours (a 27% average unavailability factor). Technical specification-related shutdowns contributed 17% of the forced outage hours. The 11,265 technical specification-related outage hours result in an average unavailability factor of slightly more than one and a half percent.

The relative safety significance of the technical specification required shutdown events has been presented in Tables 7 through 11. The twenty-five events rated as being of high relative safety significance account for 4624 shutdown hours, 20 medium events account for 3675 shutdown hours, and 32 low events account for 2966 shutdown hours. Therefore, the contribution of technical specification required shutdown events in each relative safety significance category to plant unavailability is: high, 0.7%; medium, 0.5%; and low, 0.4%.

For the shutdown-related events that have outage times associated with them, a listing of the events categorized by plant and type of technical specification (limiting condition of operation, surveillance) is provided in Table A-1. This table contains the outage times for the technical specification-related events and for all forced and scheduled non-technical specification-related events. The associated unavailabilities for all of these events are provided.

METHODOLOGY

The results of this study are based on information from the following three sources:

- The Licensed Operating Reactors status summary reports for 1984. (NUREG-0020 Vol. 8 Nos. 1-12 and Vol. 9 No. 1)
- A listing of all shutdowns and power reductions for 1984 (provided by the NRC), and
- The 1984 License Event Reports (LERs) for events that related to plant shutdowns due to technical specification requirements or violations of technical specifications (provided by the NRC).

The information required to determine the category of technical specification which resulted in the event and the system affected, and to make an assessment of the safety significance of the event, was extracted from the LER abstracts. The determination of plant outage times associated with technical specification related events was made by correlating the LER data with data in the other two data sources referenced above.

The technical specification categories employed for this study were: Design Requirements, Safety Limits and Limiting Safety System Settings, Limiting Conditions of Operation, Surveillance Requirements, and Administrative Controls. These are the major divisions found in plant technical specifications. Each event was assigned to a category based not necessarily on the ultimate category of technical specification violated but rather on the technical specification category which could be deemed to have caused the violation or shutdown. For example, an event that consisted of a missed surveillance would normally be assigned to the technical specification "Surveillance" category. However, if the required surveillance was missed or performed improperly because of an administrative problem that appeared to be relevant to the plant technical specifications (such as a failure to properly review test procedures and changes to test procedures) then the event would be assigned to the "Administrative" category. Similarly, if a limiting condition of operation was entered because of a missed surveillance, the event would be assigned to the "Surveillance" category.

The relative safety significance of each event was determined by using a two part ranking scheme. First, the relative safety significance of the system affected by the event was determined. Then the impact of the event on the operability of the system was assessed. Both of these assessments were qualitative and based on the judgment of the analysts, who have extensive PRA experience. Following the initial ranking of all events by the principal contributors to this project, a peer review group consisting of staff with experience in several PRA related studies, including the Accident Sequence Precursor Study, the Accident Sequence Evaluation Program and the Program to Evaluate Technical Specifications, were involved in a review of the relative safety significance assessments. Both parts of the relative safety significance ranking scheme were given approximately equal importance. Simply because an event affected a system considered to be important to safety did not necessarily mean that the event was of a high relative safety significance.

The evaluation of a system's importance was primarily based on its perceived relationship to the probability of core melt. However, this measure is not relevant for systems, such as containment systems, which are designed to mitigate consequences given a core melt. In most cases the operability of these systems does not impact the core melt frequency, but does impact the release paths to the environment and ultimately the risk to the public. For containment systems, the basis for the determination of the significance of the system was not their relationship to core melt probability but their perceived importance to risk, specifically the impact on the ability of the containment to perform the radionuclide containment function in the event of a core melt accident.

Since both inputs to the ranking of safety significance are qualitative assessments, a sophisticated ranking scheme would not be appropriate. Therefore, relative safety significance rankings of high, medium or low were assigned to each of the events. A low safety significance ranking is indicative of an event that would not be expected to impact the quantitative results of a PRA. Such an event could be associated with a system that has not contributed to the dominant sequences of past PRAs or could have so negligible an effect on any system as to be of little or no significance. An event given a high relative safety significance would have to affect one of the systems considered important to safety and would have to have a

significant impact on that system's availability. The events ranked medium in relative risk significance encompass a wide range of events that induce large impacts on the availability of systems of some importance to safety or that have some impact on the system availabilities of high importance systems. The assessment of relative safety significance was lowered for events which occurred during a shutdown and which could occur only during a shutdown. For all other cases, the power level at the time of the event did not influence the relative safety significance rankings.

The importance attributed to several systems needs to be explained in some detail. From information in most PRAs it is apparent that systems such as AC and DC power, High Pressure Injection and Recirculation, Auxiliary Feedwater, Reactor Protection and Residual Heat Removal are important for most plants. However, differences in plant design result in some systems being more important at some plants than others. The chemical and volume control system, if used for high pressure injection, provides an important safety function; but, if a separate high pressure system is available, the chemical and volume control system may not be as important. Redundant long-term cooling systems at particular plants would tend to reduce the importance of these systems in a PRA. Since PRAs do not exist for most plants, it was not always possible to identify those plants where the safety significance of a particular plant system was less than for the same system in a different plant. It was assumed that if a system had been identified as safety significant in a PRA it had the potential to be safety significant at other plants. Although this is a conservative approach it was deemed acceptable since most of the events analyzed did not appear to be so plant-specific that their occurrence at another plant of a different design would not be possible.

The safety significance of three systems was not determined by their direct impact on core melt or risk due to core melt accidents. These three systems (fire protection, heating ventilation and air conditioning, and seismic protection) were ranked according to the importance of the system they support if the event description provided enough information to determine which system was supported. For example, a failure of the fire detection and protection system in a vital switchgear room would be rated as of high relative safety significance while the same failure in a machine shop or other nonvital area would be ranked low in relative safety significance.

In many cases the LER abstract did not include any information about the system or area being supported by one of these three systems. For these events a medium safety significance was assigned because all three systems provide a necessary support function for at least some systems important to safety.

Finally, from the descriptions in the LER abstracts it was not always possible to identify exactly which system was affected by the event. In cases where the ECCS subsystem could not be identified but it was apparent that emergency systems were affected, the event was assigned to the "system" ECCS. (These events should not be confused with the Engineered Safeguards events which are related to safeguards actuation events.)

One other purpose of this project was to determine the impact of current technical specifications on plant availability. The LERs were reviewed to identify the events that resulted in a shutdown with an identifiable outage duration. Other than the relative safety significance of the event no attempt was made to determine the appropriateness of the required shutdown. We recognize that the selection of a technical specification limit (for example the allowable containment leakage rate or primary coolant system leakage limits) can impact the time and manpower requirements that a utility must use to meet the requirements. However, this aspect of the evaluation of technical specifications was not within the scope of this study.

The unavailability calculations used in this analysis were simple and straightforward once the hours attributable to the technical specification related LER's were found. These outage hours are based on information in the Licensed Operating Reactors status reports and the 1984 availability (outage) data. There are at least two factors which affect the accuracy of the unavailability calculations. The first involves the accuracy of the data. It was not always possible to establish a one-to-one correspondence between an event and the resulting outage time. A technical specification related LER may have been generated during a shutdown, with only part of the shutdown attributable to the technical specification-related event. In these cases, an attempt was made to estimate the maximum outage time that could be attributed to the event. (These events are denoted by an asterisk (*) after the outage duration in all of the attached LER listings.) For

events where a maximum time was allocated, the impact on the unavailability may be overestimated. (However, for the events where no time could be allocated, that is, it was not possible to separate a distinct technical specification-related outage time, the unavailability impact may be underestimated. These shutdown events are some, but not all, of the events assigned zero outage hours.) The second problem is similar in nature and tends to result in an overestimation of the hours attributable to the technical specification-related events. The outage time assigned to some events appears to be excessive for the type of event described in the LER abstract. It is possible that additional work might have been performed during the outage but was not identified in any of the material available for this study.

As a final note, we reiterate that the relative safety significance-ranking of events in this report was based on judgments derived from PRA experience wherein the point of view leads to a focus on events which bear immediately on the likelihood or consequences of accidents. However, there are many events triggered by present technical specifications which are related to important operational issues, e.g. radiation monitoring of routine releases and radiation protection of workers, that do not have an immediate bearing on the likelihood or consequences of core melt accidents and therefore are assigned a low measure of relative significance according to the approach taken in this report. The point we wish to emphasize is that a low ranking here does not necessarily imply low importance from an overall plant operation perspective; it merely delineates a separate class of events.

ATTACHMENT A

<u>Table No.</u>		<u>Page</u>
A-1	TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY	A-4
A-2	CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED	A-15
A-3	CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE	A-21
A-4	CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY	A-27
A-5	CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR	A-33
A-6	CLASSIFICATION OF SHUTDOWN EVENTS BY DATE OF COMMERCIAL OPERATION OF PLANT	A-39

Table A-1 contains the information needed to assess the impact of technical specifications on plant unavailability. The LERs that describe the technical specification-related shutdowns for each plant have been listed for each plant. The information provided for each event includes: plant information (plant name, date of commercial operation, vendor, and type of technical specifications) and event information (LER number, the outage hours and resulting unavailability contribution from the event, the safety significance ranking and the technical specification category most applicable to the event).

The sub-subtotal entries on the table list the total outage hours and total unavailability for a plant for each technical specification category. For example: on the first page of Table A-1 there are two events listed for Browns Ferry Unit 1. Both events relate to the LCO category. The sub-subtotal entry lists the total outage hours and unavailability contributions from these two events.

The subtotal entries contain the outage and unavailability data for each plant. In addition to the technical specification-related data, outage and unavailability data is provided for: (1) forced outages (not related to technical specification issues), (2) scheduled outages (such as refueling outages), and (3) all outages (forced, scheduled, and technical specification related). Again using the Brown's Ferry Unit 1 data as an example, the technical specification-related outage data, 194 hours for 2 events contributing a 0.02 unavailability factor, is listed first. The remaining data shows 626 hours of forced outages (a 0.07 unavailability factor), 32 hours of scheduled outages (a 0.00 unavailability factor), and total outage time of 852 hours for a 0.10 unavailability factor.

The last entry in Table A-1 sums the outage hours and lists the average unavailability for the 39 power plants listed in the table.

Tables A-2 through A-6 provide listings of the technical specification-related shutdown events sorted by the system affected (Table A-2), type of plant technical specifications (Table A-3), technical specification category (Table A-4), vendor (Table A-5), and date of plant commercial operation

(Table A-6). Within each category of the primary sort the events are sorted by the relative safety significance ranking. For example in Table A-2 all six of the events that affected the "containment" are listed together. The high relative safety significance event is listed first, followed by the three low events and then the two medium events. All five tables contain the same 77 events and the same information pertaining to each event. The following information is provided.

- Plant name
- Date of commercial operation
- Type of technical specifications (standard vs unique)
- Vendor
- LER number
- Event classification (violation, shutdown)
- Power level (and in some cases plant mode)
- Outage duration
- Technical specification category
- System affected
- Relative safety significance ranking
- Event description

Table A-1. TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Table A-1
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LEA NO. VENDOR	OUTSIDE UNAVAILABILITY DURATION (HRS)	SAFETY SIGNIFICATION	TECHNICAL SPECIFICATION CATEGORY	NEW T.S. - RELATED UNAVAILABILITY FORCED OUTAGE (HRS)	FORCED NEW T.S. - RELATED UNAVAILABILITY SCHEDULED OUTAGE (HRS)	SCHEDULED UNAVAILABILITY TIME - ALL CRUISES (HRS)	TOTAL UNAVAILABILITY OUTAGE - ALL CRUISES
** Plant Name BERNER VALLEY 1										
* TOTAL FOR LCD										
BERNER VALLEY 1	04/77	STANDARD	ME 334007	76	0.01 LD	LCD				
* Subtotal *				76	0.01					
** Subtotal **				76	0.01		119	0.01	0.25	2480 0.25
** Plant Name B16 ROCK POINT										
* TOTAL FOR LCD										
B16 ROCK POINT	12/62	UNIQUE	BE 130001	371	0.04 HI	LCD				
* Subtotal *				371	0.04					
** Subtotal **				371	0.04		622	0.07	0.08	1715 0.20
** Plant Name BROWNS FERRY 1										
* TOTAL FOR LCD										
BROWNS FERRY 1	08/74	UNIQUE	BE 279005	173	0.02 HI	LCD				
BROWNS FERRY 1	08/74	UNIQUE	BE 279004	21	0.00 LD	LCD				
* Subtotal *				194	0.02					
** Subtotal **				194	0.02		625	0.07	0.00	852 0.10
** Plant Name BROWNS FERRY 3										
* TOTAL FOR SURVEILLANCE										
BROWNS FERRY 3	03/77	UNIQUE	BE 296012	58	0.01 HI	SURVEILLANCE				
* Subtotal *				58	0.01					
** Subtotal **				58	0.01		747	0.09	0.85	8022 0.94

Table A-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	DATE OF COMMERICAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MSD VENDOR	LEN ML	OUTAGE DURATION (HRS)	UNAVAILABILITY SIGNIFICANCE	TECHNICAL SPECIFICATION CATEGORY	NEW T.S. - RELATED UNAVAILABILITY FORCED OUTAGE (HRS)	FORCED NEW T.S. - RELATED UNAVAILABILITY SCHEDULED OUTAGE (HRS)	SCHEDULED UNAVAILABILITY OUTAGE (HRS)	TOTAL UNAVAILABILITY TIME - ALL CHARGES (HRS)
** Plant Name CALVERT CLIFFS 1											
* TOTAL FOR LCD											
CALVERT CLIFFS 1 05/75	STANDARD		CE	317005	607	0.07 LD	LCD				
CALVERT CLIFFS 1 05/75	STANDARD		CE	317018	320	0.04 LD	LCD				
* Subtotal *					927	0.11					
** Subtotal **					927	0.11		711	0.08	41	1679 0.19
** Plant Name CALVERT CLIFFS 2											
* TOTAL FOR LCD											
CALVERT CLIFFS 2 01/77	STANDARD		CE	318006	214	0.02 LD	LCD				
* Subtotal *					214	0.02					
** Subtotal **					214	0.02		338	0.04	1719	2271 0.26
** Plant Name CORK 1											
* TOTAL FOR LCD											
CORK 1 08/75	STANDARD		ME	315004	79	0.01 HI	LCD				
* Subtotal *					79	0.01					
** Subtotal **					79	0.01		340	0.04	348	767 0.09
** Plant Name CORK 2											
* TOTAL FOR LCD											
CORK 2 07/76	STANDARD		ME	316018	49	0.01 MED	LCD				
* Subtotal *					49	0.01					
** Subtotal **					49	0.01		161	0.02	3376	3586 0.41

Table A-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NOBS VENDOR	LER NO.	OUTAGE DURATION (HRS)	SAFETY SIGNIFICANCE	TECHNICAL SPECIFICATION CATEGORY	NEW T.S.- RELATED FORCED OUTAGE (HRS)	FORCED NEW T.S.- RELATED UNAVAILABILITY SCHEDULED OUTAGE (HRS)	SCHEDULED UNAVAILABILITY TIME - ALL CHANGES (HRS)	TOTAL UNAVAILABILITY OUTAGE - ALL CHANGES (HRS)
** Plant Name COOPER											
* TOTAL FOR LCD COOPER	07/74	UNIQUE	BE	290007	42	0.00 MED	LCD				
* Subtotal *					42	0.00					
** Subtotal **					42	0.00		92	0.01	2748	2862
** Plant Name DAVIS-BESSE 1											
* TOTAL FOR LCD DAVIS-BESSE 1	11/77	STANDARD	BN	346006	50	0.01 LO	LCD				
* Subtotal *					50	0.01					
** Subtotal **					50	0.01		627	0.07	2517	3294
** Plant Name DUNE ARKOLD											
* TOTAL FOR LCD DUNE ARKOLD	05/74	UNIQUE	BE	331013	412	0.05 LO	LCD				
* Subtotal *	05/74	UNIQUE	BE	331021	134	0.02 HI	LCD				
** Subtotal **					546	0.06					
** Subtotal **					546	0.06		505	0.06	1329	2360
** Plant Name FOWLEY 2											
* TOTAL FOR LCD FOWLEY 2	07/82	STANDARD	ME	364008	352	0.04 MED	LCD				
* Subtotal *					352	0.04					
** Subtotal **					352	0.04		153	0.02	0	505

Table A-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO. VENDOR	OUTAGE DURATION (HRS)	UNAVAILABILITY SIGNIFICANCE CATEGORY	TECHNICAL SPECIFICATION CATEGORY	NEW T.S.- RELATED UNAVAILABILITY FORCED OUTAGE (HRS)	FORCED NEW T.S.- RELATED UNAVAILABILITY SCHEDULED OUTAGE (HRS)	SCHEDULED UNAVAILABILITY RELATED UNAVAILABILITY SCHEDULED OUTAGE (HRS)	TOTAL UNAVAILABILITY OUTAGE - TIME - ALL CRUISES (HRS)
** Plant Name FT. COLUMB 1										
* TOTAL FOR LCD FT. COLUMB 1	09/73	UNIQUE	CE 285008	1390	0.16 HI	LCD				
* Subtotal *				1390	0.16					
** Subtotal **				1390	0.16		352	0.04	1777	3519 0.40
** Plant Name HATCH 2										
* TOTAL FOR LCD HATCH 2	08/79	STANDARD	BE 364038	77	0.01 LB	LCD				
* Subtotal *				77	0.01					
** Subtotal **				77	0.01		0	0.00	0	77 0.01
** Plant Name INDIAN POINT 2										
* TOTAL FOR LCD INDIAN POINT 2	07/74	UNIQUE	ME 247001	64	0.01 HI	LCD				
* Subtotal *				64	0.01					
* TOTAL FOR SLALSES INDIAN POINT 2	07/74	UNIQUE	ME 247003	28	0.00 MED	SLALSES				
* Subtotal *				28	0.00					
** Subtotal **				92	0.01		701	0.08	3437	4230 0.48
** Plant Name LAKESIDE										
* TOTAL FOR SURVEILLANCE LAKESIDE	11/69	UNIQUE	AC 409018	99	0.01 MED	SURVEILLANCE				
* Subtotal *				99	0.01					
** Subtotal **				99	0.01		1452	0.17	206	1717 0.20

Table A-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	Date of Commercial Operation	Type of Technical Specification	Assess Vendor	Assess Vendor No.	Outage Duration (hrs)	Safety Significance	Technical Specification Category	New T.S. - Forced Unavailability	New T.S. - Related Unavailability	Scheduled Unavailability	Total Unavailability
								Outage (hrs)	Outage (hrs)		Outage (hrs)
** Plant Name LABELLE 2											
* TOTAL FOR LCD LABELLE 2	06/84	STANDARD	BE	374015	216	0.02 LD	LCD				
* Subtotal *					216	0.02					
** Subtotal **					216	0.02		279	0.03	0	495
** Plant Name MILLSTONE 1											
* TOTAL FOR LCD MILLSTONE 1	12/70	UNIQUE	BE	243017	42	0.00 LD	LCD				
* Subtotal *					42	0.00					
** Subtotal **					42	0.00		0	0.00	1823	1863
** Plant Name MILLSTONE 2											
* TOTAL FOR LCD MILLSTONE 2	12/75	STANDARD	CE	336006	118	0.01 LD	LCD				
* Subtotal *					118	0.01					
** Subtotal **					118	0.01		202	0.02	253	573
** Plant Name MCSURE 1											
* TOTAL FOR LCD MCSURE 1	12/81	STANDARD	ME	363029	30	0.00 LD	LCD				
* Subtotal *					30	0.00					
** Subtotal **					30	0.00		345	0.04	2796	2771
											0.32

Table B-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	Date of Commercial Operation	Type of Technical Specification	MSSS LER NO.	Vendor	Outage Unavailability Duration (hrs)	Safety Significance	Technical Specification Category	Forced Outage (hrs)	Forced Non T.S. - Related Unavailability (hrs)	Scheduled Outage (hrs)	Total Unavailability (hrs)
** Plant Name NINE MILE POINT											
* TOTAL FOR LCD											
NINE MILE POINT 12/63	UNIQUE		220013	GE	23	0.00 HI	LCD				
NINE MILE POINT 12/63	UNIQUE		220014	GE	116	0.01 HI	LCD				
* Subtotal *					139	0.02					
** Subtotal **					139	0.02		119	0.01	2210	2468 0.28
** Plant Name NORTH SHAW 1											
* TOTAL FOR LCD											
NORTH SHAW 1 06/78	STANDARD		133001	ME	746	0.09 MED	LCD				
* Subtotal *					746	0.09					
** Subtotal **					746	0.09		299	0.03	3310	4357 0.50
** Plant Name NORTH SHAW 2											
* TOTAL FOR LCD											
NORTH SHAW 2 12/80	STANDARD		133013	ME	179	0.02 HI	LCD				
* Subtotal *					179	0.02					
** Subtotal **					179	0.02		0	0.00	0	179 0.02
** Plant Name OCONEE 1											
* TOTAL FOR LCD											
OCONEE 1 07/73	UNIQUE		265001	BN	23	0.00 LO	LCD				
* Subtotal *					23	0.00					
** Subtotal **					23	0.00		135	0.02	1312	1470 0.17

Table B-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNRELIABILITY

Plant Name	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE LEN NO. VERSION	OUTAGE DURATION (HRS)	UNRELIABILITY SIGNIFICANCE CATEGORY	SAFETY	TECHNICAL SPECIFICATION CATEGORY	NON I.S. - FORCED OUTAGE (HRS)	NON I.S. - RELATED UNRELIABILITY SAFETY CATEGORY	FORCED NON I.S. - RELATED UNRELIABILITY SAFETY CATEGORY	SCHEDULED OUTAGE ALL CAUSES (HRS)	TOTAL UNRELIABILITY OUTAGE ALL CAUSES (HRS)	
ee Plant Name OCEANEE 3													
* TOTAL FOR L22	12/74	UNIQUE	BN 287006	321	0.04 HI	L22							
* Subtotal *				321	0.04								
ee Subtotal ee				321	0.04			04	0.01	1903	0.22	2308	0.26
ee Plant Name OYSTER CREEK													
* TOTAL FOR L22	12/69	UNIQUE	BE 219008	480	0.05 HI	L22							
* Subtotal *				480	0.05								
ee Subtotal ee				480	0.05			0	0.00	0	0.00	480	0.05
ee Plant Name PULASKIES													
* TOTAL FOR L22	12/71	UNIQUE	CE 200019	133	0.00 HI	L22							
* Subtotal *	12/71	UNIQUE	CE 200024	96	0.01 LO	L22							
* Subtotal *	12/71	UNIQUE	CE 200025	48	0.01 LO	L22							
ee Subtotal ee				277	0.03								
ee Subtotal ee				277	0.03			2241	0.26	5574	0.38	7992	0.87
ee Plant Name QUAD CITIES 2													
* TOTAL FOR L22	10/72	UNIQUE	BE 263005	22	0.00 HI	L22							
* Subtotal *				22	0.00								
ee Subtotal ee				22	0.00			437	0.05	1506	0.17	1967	0.22

Table B-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	Date of Commercial Operation	Type of Technical Specification	Assess Lead No.	Assess Vendor	Outside Duration (hrs)	Unavailability	Safety	Technical Specification Category	Technical New T.S. - Forced Unavailability	Technical New T.S. - Related Unavailability	Scheduled Unavailability	Total Unavailability
** Plant Name SUPPLY 1												
* TOTAL FOR LCD SUPPLY 1	12/72	UNISLE	ME	280020	48	0.01	RED	LCD				
* Subtotal *					48	0.01						
** Subtotal **					48	0.01			222	0.03	3420	0.42
** Plant Name SUBSURVEILLANCE 1												
* TOTAL FOR SURVEILLANCE SUBSURVEILLANCE 1	06/83	STANDARD	GE	387045	85	0.01	RED	SURVEILLANCE				
* Subtotal *					85	0.01						
** Subtotal **					85	0.01			1063	0.12	1256	0.27
** Plant Name TURKEY POINT 3												
* TOTAL FOR LCD TURKEY POINT 3	12/72	UNISLE	ME	250019	22	0.00	LO	LCD				
* Subtotal *					112	0.01	LO	LCD				
** Subtotal **					134	0.02						
** Subtotal **					134	0.02			824	0.09	568	0.17
** Plant Name WAP-2												
* TOTAL FOR LCD WAP-2	12/84	STANDARD	GE	397123	240	0.03	HI	LCD				
* Subtotal *					240	0.03						
** Subtotal **					240	0.03			42	0.00	0	0.03

Table A-1 (continued)
TECHNICAL SPECIFICATIONS - IMPACT ON PLANT UNAVAILABILITY

Plant Name	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUES VENDOR	LEAK NO.	OUTAGE DURATION (HRS)	UNAVAILABILITY SIGNIFICANCE	SAFETY	TECHNICAL SPECIFICATION CATEGORY	NEW T.S. - RELATED UNAVAILABILITY FORCED OUTAGE (HRS)	FORCED NEW T.S. - RELATED UNAVAILABILITY SCHEDULED OUTAGE (HRS)	SCHEDULED UNAVAILABILITY OUTAGE TIME - ALL CAUSES (HRS)	TOTAL UNAVAILABILITY OUTAGE TIME - ALL CAUSES (HRS)
** Plant Name YANKEE REUE												
* TOTAL FOR LCD												
YANKEE REUE	06/61	STANDARD	ME	029001	196		0.02 LD	LCD				
YANKEE REUE	06/61	STANDARD	ME	029013	307		0.04 HI	LCD				
* Subtotal *					503		0.06					
** Subtotal **					503		0.06		337	0.04	1673	2513
** Plant Name ZION 1												
* TOTAL FOR LCD												
ZION 1	12/73	UNIQUE	ME	295005	272		0.03 MED	LCD				
ZION 1	12/73	UNIQUE	ME	295021	982		0.11 MED	LCD				
* Subtotal *					1254		0.14					
** Subtotal **					1254		0.14		1028	0.12	473	2755
** Plant Name ZION 2												
* TOTAL FOR LCD												
ZION 2	09/74	UNIQUE	ME	304020	21		0.00 LD	LCD				
* Subtotal *					21		0.00					
** Subtotal **					21		0.00		714	0.08	1869	2604
Total												
					11285		.033		26043	.076	63133	100441
												.294

Table A-2. CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED

Table A-2
CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS LER NO. SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ZION 2	09/74	UNIQUE	ME 304020	SHUTDOWN 100/N	21	LCD	—	LD	The containment temperature was calculated to be 120.48 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.
DURKE ARNOLD	05/74	UNIQUE	BE 331021	SHUTDOWN 05B/RUN	134	LCD	AC POWER	HI	Diesel Generator "B" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
NORTH ANNA 2	12/80	STANDARD	ME 339013	SHUTDOWN 100/N	179	LCD	AC POWER	HI	Plant was shutdown when 2 diesel generators tripped during surveillance testing.
YANKEE ROWE	06/61	STANDARD	ME 029013	SHUTDOWN 100/N	307	LCD	AC POWER	HI	A fault in the 480V supply line to Bus 4-1 resulted in Bus 4-1 isolation and initiation of fire.
SURRY 1	12/72	UNIQUE	ME 280020	SHUTDOWN 080/N	48	LCD	AC POWER	MED	Reactor Coolant Pump C tripped due to fracture of A Phase Main Load Bus Bar, resulting in instantaneous ground fault. (Hrs. due to early entry into refueling.)
PAULSBROS	12/71	UNIQUE	CE 255026	SHUTDOWN 097/N	0	LCD	ACCUMULATOR	HI	2 safety injection tanks were drained below the Tech Spec minimum level (only 1 may be out of service), 1 during calibration, the other due to a leaky valve.
BINHA	03/70	UNIQUE	ME 244001	SHUTDOWN 098/N	0	LCD	ACCUMULATOR	LD	One accumulator pressure was found to be low due to a valve in closed position leaking nitrogen.
OCONEE 1	07/73	UNIQUE	BM 269001	SHUTDOWN 100/N	23	LCD	ACCUMULATOR	LD	Utility error: One of the core flood tanks had lower than Tech Spec required boron concentration for the pressure at which the reactor was operating.
SEQUEYAH 1	07/81	STANDARD	ME 327005	SHUTDOWN 045/	18	LCD	ACCUMULATOR	LD	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be restored to the allowable range in the required time the plant was shutdown.
COOK 1	08/75	STANDARD	ME 315004	SHUTDOWN 100/N	79	LCD	AUX FEEDWATER	HI	The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
PAULSBROS	12/71	UNIQUE	CE 255019	SHUTDOWN 080/N	133	LCD	AUX FEEDWATER	HI	During testing of auxiliary feedwater pump, the pump showed overspeed problems and was declared inoperable. The repair could not be performed in 72 hours allowed by the Tech Specs.
PAULSBROS	12/71	UNIQUE	CE 255018	SHUTDOWN 064/MU	0	SURVEILLANCE	AUX FEEDWATER	LD	Utility Error: Surveillance Test on Aux. Feedwater Pump Steam Supply Line Shutoff not performed prior to start-up.
ARKANSAS 2	03/80	STANDARD	CE 368003	SHUTDOWN 004/	0	LCD	CHEM. & VOL. CONTROL	LD	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain temp & pressure failed (overcooling event) in part due to a boric acid leak.
DAVIS-BESSE 1	11/77	STANDARD	BM 346006	SHUTDOWN 094/N	50	LCD	CHEM. & VOL. CONTROL	LD	Makeup tank level was dropping at a rate of 3 BPM violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and so was not a pressure boundary leakage.
SAN ONOFRE 2	08/83	STANDARD	CE 361046	SHUTDOWN 100/N	0	LCD	COMP COOLING WATER	HI	Local readout of saltwater cooling to train B of component cooling water system (CCWS) heat exchanger indicated a fault condition. Since train A of CCWS was out of service an LCD Tech Spec was violated.

Table A-2 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUED BY VENDOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (X1) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CALVERT CLIFFS 1	05/75	STANDARD	CE	317005	SHUTDOWN	100/N	607	LCD	COMP COOLING WATER	LO	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
INDIAN POINT 2	07/74	UNIQUE	ME	247001	VIOL/SHUT	100/N	64	LCD	CONTAINMENT	HI	Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.
BEAVER VALLEY 1	04/77	STANDARD	ME	334007	SHUTDOWN	100/N	76	LCD	CONTAINMENT	LO	Containment recirculation cooling coils Chilled Water System outlet isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
SALEN 1	06/77	STANDARD	ME	272025	VIOL/SHUT	000/3	12 +	LCD	CONTAINMENT	LO	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valve. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.
SEQUEYAH 2	06/82	STANDARD	ME	328013	SHUTDOWN	100/N	235	LCD	CONTAINMENT	LO	During normal operation pressurizer relief tank rupture disc was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressure. Pressure reached 0.35 PSID exceeding LCD limit of 0.3 PSID.
SALEN 2	10/81	STANDARD	ME	311006	SHUTDOWN	100/N	0	LCD	CONTAINMENT	MED	Utility errors: During routine surveillance three containment isolation valves became inoperable due to loss of a 4KV vital bus as a result of paralleling of generators out of phase.
ZION 1	12/73	UNIQUE	ME	295021	SHUTDOWN	100/N	982	LCD	CONTAINMENT	MED	NRC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.
GRAND GULF 1	03/85	STANDARD	GE	416024	SHUTDOWN	004/SD	0	LCD	CONTAINMENT SPRAY	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. (0 hrs. because plant is not operating.)
COOK 1	08/75	STANDARD	ME	315035	SHUTDOWN	100/N	0	ADMINISTRATIVE	CONTAINMENT SPRAY	MED	Utility errors: Acceptance criteria of an ice condenser intermediate deck door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
BIG ROCK POINT	12/62	UNIQUE	GE	155001	VIOL/SHUT	000/SD	371 +	LCD	DEPRESSURIZATION	HI	Three out of 4 Reactor Depressurization System isolation valves failed to open during test.
OYSTER CREEK	12/69	UNIQUE	GE	219028	SHUTDOWN	012/SU	480	LCD	DEPRESSURIZATION	HI	During start-up surveillance testing, 2 of 5 relief valves associated with the automatic depressurization system failed to operate.
GLAD CITIES 1	08/72	UNIQUE	GE	254001	SHUTDOWN	088/N	0	LCD	ECCS	HI	During test on High Pressure Coolant Injection System pump operability, lubricating oil found contaminated with water and pump declared inoperable.
SALEN 1	06/77	STANDARD	ME	272012	SHUTDOWN	000/SD	0	LCD	ECCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 50-311)
SALEN 2	10/81	STANDARD	ME	311111	SHUTDOWN	095/N	347	LCD	ECCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Docket 50-311).

Table A-2 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MODES LEN REL OR T.S. VIOLATION	POWER LEVEL (S) PLANT	OUTSIDE BURSTION (MPS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SHLEN 2	10/81	STANDARD	ME	311011	94/700AM 006/50	185	LCD	NEB	Steam generator feedwater flow indication channels were inoperable during a test.
WAP-2	12/84	STANDARD	BE	387103	94/700AM 045/	0	LCD	HEAT, VENT & RC HI	Due to equipment motor failures, cooling was lost to the BPS room RI, Div 1 battery and battery charger rooms and emergency bus. This resulted in the assumption of many safety related systems being inoperable. 10 hrs. because plant is not operating.)
WAP-2	12/84	STANDARD	BE	387123	94/700AM 096/	240	LCD	HEAT, VENT & RC HI	Critical Switchgear room HARC unit found to be vibrating excessively unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (Hrs based on Bery Book info availability chart.)
LABELLE 2	06/84	STANDARD	BE	374015	94/700AM 005/50	216	LCD	HEAT, VENT & RC LO	Utility errors: Operational mode was changed (to run from start-up) while an LCD was in effect (control room ventilation emergency alarm train 3 out of service).
SHLEN 2	10/81	STANDARD	ME	311016	94/700AM 100/9	460	LCD	HIGH PRESSURE HI	A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.
REDAWEE	06/74	UNFILE	ME	305015	94/700AM 100/9	0	LCD	HIGH PRESSURE LO	Utility errors: Refueling Water Storage Tank level was discovered to be 1.25 below Tech Spec limit due to an earlier human error in valve misalignment.
CHLHEAT CLIPPS 1	05/75	STANDARD	CE	317018	94/700AM 100/9	320	LCD	NOISE STEAM LO	Due to actuator oil leakage RELV unit could be damaged during fast closure resulting in inability of valve to isolate completely.
SHLEN 1	06/77	STANDARD	ME	272004	V10L/94/07 005/50	48	LCD	POWER HI	During startup S.B. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
BRADMS FERRY 3	03/77	UNFILE	BE	296012	94/700AM 005/50	58	SURVEILLANCE	PRESSURE RELIEF HI	Utility errors: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual action followed. Test procedure inadequate.
KINE KILL ROBOT	12/69	UNFILE	BE	220013	94/700AM 025/50	23	LCD	PRESSURE RELIEF HI	Three out of six main steam line solenoid actuated relief valves failed during test. Two valves stuck open and the third blew fuses and failed to open.
KINE KILL ROBOT	12/69	UNFILE	BE	220014	94/700AM 012/50	116	LCD	PRESSURE RELIEF HI	During main steam pressure relief valve testing, one valve failed to close and three showed seat leakage.
GLAD CITIES 2	10/72	UNFILE	BE	263005	94/700AM 001/50	22	LCD	PRESSURE RELIEF HI	Two relief valves were found to have high leakage rates.
SEALVIEW 1	07/81	STANDARD	ME	327021	94/700AM 000/50	0	LCD	PRESSURE RELIEF HI	Inoperable pressurizer relief valve.
SLASHAWARD 2	01/85	STANDARD	BE	388009	94/700AM 000/50	0	LCD	PRESSURE RELIEF HI	Malfunction of the suppression chamber drywell vacuum breakers. 10 hrs. because plant is not operating.)
BRADMS FERRY 1	06/74	UNFILE	BE	229005	94/700AM 059/	173	LCD	PRIMARY COOLANT HI	Drywell leakage from unidentified source exceeded the 3 GPM Tech Spec limit.
FT. CALHOUN 1	05/73	UNFILE	CE	285008	94/700AM 000/50	1290	LCD	PRIMARY COOLANT HI	It was found that the leakage was due to one recirculation pump seal failures.
CHLHEAT CLIPPS 2	04/77	STANDARD	CE	318006	94/700AM 057/9	214	LCD	PRIMARY COOLANT LO	During startup a large leakage of 110 GPM at 1800 PSIG was noticed. This was due to steam generator tube rupture. (Hours due to extension of outage.)
									Reactor coolant leakage from unidentified source of greater than 1 GPM. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.

Table A-2 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL VIOLATION	REASON FOR T.S. VIOLATION	POWER LEVEL (%)	DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BLAINE AMBOLD	05/74	UNUSABLE	BE	331013	SHUTDOWN	100/74	412 L20	PRIMARY COOLANT LD	Reactor coolant system leakage of greater than 5 GPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve. Plant was shutdown due to high reactor water conductivity of 14 micromhos/cm vs Tech Spec limit of 10.
BLAINE AMBOLD	05/74	UNUSABLE	BE	331041	SHUTDOWN	036/74	0 L20	PRIMARY COOLANT LD	Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits due to hinge pin leakage on containment feedwater check valve.
WITCH 2	06/79	STANDBY	BE	366030	SHUTDOWN	099/79	77 L20	PRIMARY COOLANT LD	A leakage of greater than 2.5 GPM from an unidentified source into primary containment was detected. Cause: 1" instrument stop valve leaking.
MILLSTONE 1	12/70	UNUSABLE	BE	243017	SHUTDOWN	100/70	42 L20	PRIMARY COOLANT LD	Utility error: It was discovered that the 18 months functional testing of the reactor coolant pump time delay overcurrent protective devices was not done properly.
WALSHINE 1	12/81	STANDBY	BE	363007	SHUTDOWN	000/80	0 SURVEILLANCE	PRIMARY COOLANT LD	Control rod drive seal housing failed resulting in a temporarily unidentified primary leakage in excess of Tech Spec limits.
MALIBON 3	12/71	UNUSABLE	CE	250024	SHUTDOWN	000/40	96 + L20	PRIMARY COOLANT LD	Chemical and Volume Control relief valve leakage resulted in a temporarily unidentified leakage in excess of Tech Spec leak rate limit.
MALIBON 3	12/71	UNUSABLE	CE	250025	SHUTDOWN	000/40	48 + L20	PRIMARY COOLANT LD	Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNUSABLE	BE	250019	SHUTDOWN	100/70	22 L20	PRIMARY COOLANT LD	Reactor coolant system leakage of approximately 12.5 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNUSABLE	BE	250020	SHUTDOWN	100/70	112 L20	PRIMARY COOLANT LD	Primary coolant system boundary degradation due to the loop 1 steam generator water box vent line leakage.
WALSHINE 1	06/81	STANDBY	BE	029001	SHUTDOWN	100/70	196 L20	PRIMARY COOLANT LD	Two steam generator tubes were found to be defective based on tests.
FABLEY 2	07/82	STANDBY	BE	364008	SHUTDOWN	100/70	252 L20	PRIMARY COOLANT MED	High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube rupture.
NORTH AMBOLD 1	06/78	STANDBY	BE	330001	SHUTDOWN	001/77	748 L20	PRIMARY COOLANT MED	Primary to secondary leakage in Steam Generator 3 exceeded Technical Specification limits (12 leaking tubes identified).
GEORGE 3	12/74	UNUSABLE	BE	287006	SHUTDOWN	100/70	321 L20	PRIMARY COOLANT MED	Reactor coolant system leakage of 25-35 GPM due to an incore detector thimble tube failure.
SEABOARD 1	07/81	STANDBY	BE	327030	SHUTDOWN	030/71	500 L20	PRIMARY COOLANT MED	During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled unisolable leakage of approximately 10 GPM of primary coolant.
ZION 1	12/73	UNUSABLE	BE	290005	SHUTDOWN	000/70	272 + L20	PRIMARY COOLANT MED	During annual shutdown, the reactor side switch was moved from "run" to "starting" resulting in a half alarm. To rapidly shutdown the reactor the red notch override switch was used, violating the Tech Specs.
BRIDGE FERRY 1	06/74	UNUSABLE	BE	279004	SHUTDOWN	014/74	21 L20	REACTOR CONTROL LD	During the initial startup two control rods were found to be misaligned violating Tech Spec limits.
CHOK 2	07/78	STANDBY	BE	316018	SHUTDOWN	003/78	49 L20	REACTOR CONTROL MED	Response time of several primary coolant loop RTDs was longer than the Tech Spec limits.
MILLSTONE 2	12/75	STANDBY	CE	336006	SHUTDOWN	100/70	118 L20	REACTOR PROTECTION	

Table A-2 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE LEI NO.	SHUTDOWN ON T.S. LEVEL (N): VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
INDIAN POINT 2	07/74	UNITILE	ME	247003	SHUTDOWN	100/Y	REACTOR PROTECTION	NEE	RP1 channel drift.
LACRORE	11/69	UNITILE	AC	407016	SHUTDOWN	096/Y	REACTOR SURVEILLANCE	NEE	During test of Nuclear Instrumentation Channel a separate spurious high flux spike resulted in reactor scram.
SLURRY 1	12/72	UNITILE	ME	280008	SHUTDOWN	000/Y0	REACTOR PROTECTION	NEE	Intermediate source range monitor failures.
SLURRY 2	06/83	STANDDOWN	BE	387045	SHUTDOWN	005/Y	REACTOR SURVEILLANCE	NEE	Utility Error: Failure to perform 18 month test of across discharge volume vent and drain valves. Valves subsequently failed response time test.
WAP-2	12/84	STANDDOWN	BE	397003	SHUTDOWN	000/Y0	REACTOR PROTECTION	NEE	Three intermediate range neutron flux monitoring detectors were found to be inoperable. 10 outage hours because plant is not operating.)
WAP-2	12/84	STANDDOWN	BE	397004	SHUTDOWN	001/Y0	REACTOR PROTECTION	NEE	Three intermediate range neutron flux monitoring detectors were found to be inoperable. 10 outage hrs. because plant is not operating.)
WAP-2	03/85	STANDDOWN	BE	416008	SHUTDOWN	004/Y0	REACTOR PROTECTION	LD	Due to recirculation pump could not be started following a store and loss of a 300 KW antichamber. 10 hrs. because plant is not operating.)
WAP-2	03/85	STANDDOWN	BE	416041	SHUTDOWN	001/Y0	REACTOR PROTECTION	LD	Difficulties with more than one jet pump during surveillance. 10 hrs. because plant is not operating.)
SLURRY 2	01/85	STANDDOWN	BE	388019	SHUTDOWN	071/Y	REACTOR PROTECTION	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown began.
WAP-2	10/71	UNITILE	BE	249013	SHUTDOWN	091/Y	STANDBY TREATMENT	LD	A butterfly valve between the drywell and Standby Gas Treatment System was taken out to repair a leak, violating the Tech Spec requirements relating to the primary containment purge system operability.
COOPER	07/74	UNITILE	BE	298007	SHUTDOWN	070/Y	STANDBY TREATMENT	NEE	Standby Gas Treatment System inoperable due to a construction crew mistake in knocking a fire hydrant and subsequent water hammer creation.
REACH BOTTOM 3	12/74	UNITILE	BE	278012	SHUTDOWN	100/Y	STANDBY TREATMENT	NEE	Standby Gas Treatment System ductwork in the reactor building sump room was found to be collapsed resulting in lack of secondary containment integrity.
McQUEEN 1	12/81	STANDDOWN	ME	389025	SHUTDOWN	100/Y	UPPER HEAD INJECTION	LD	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Cause: repetitive mixing from system surge tank due to valve leakage.

*** Total ***

11203

Table A-3. CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE

Table A-3
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE VENDOR	LER NO. OR T.S. VIOLATION	SHUTDOWN OR T.S. STATUS	POWER LEVEL (K)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COOK 1	08/75	STANDARD	ME	315004	SHUTDOWN	100/N	79	LCD	AUX FEEDWATER	HI	The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
GRAND GULF 1	03/85	STANDARD	GE	416024	SHUTDOWN	004/SD	0	LCD	CONTAINMENT SPRAY	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. (0 hrs. because plant is not operating.)
NORTH ANNA 2	12/80	STANDARD	ME	339013	SHUTDOWN	100/N	179	LCD	AC POWER	HI	Plant was shutdown when 2 diesel generators tripped during surveillance testing.
SALEN 1	06/77	STANDARD	ME	272012	SHUTDOWN	000/SD	0	LCD	EECS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 50-311)
SALEN 1	06/77	STANDARD	ME	272024	VIOL/SHUT	005/BU	48	LCD	POWER CONVERSION	HI	During startup S.G. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
SALEN 2	10/81	STANDARD	ME	311016	SHUTDOWN	100/N	460	LCD	HIGH PRESSURE INJ.	HI	A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.
SALEN 2	10/81	STANDARD	ME	311111	SHUTDOWN	095/N	347	LCD	EECS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Docket 50-311).
SAN ONOFRE 2	08/83	STANDARD	CE	361046	SHUTDOWN	100/N	0	LCD	COMP COOLING WATER	HI	Local readout of saltwater cooling to train B of component cooling water system (CCMS) heat exchanger indicated a fault condition. Since train A of CCMS was out of service an LCD Tech Spec was violated.
SEQUOYA 1	07/81	STANDARD	ME	327031	SHUTDOWN	000/SD	0	LCD	PRESSURE RELIEF	HI	Inoperable pressurizer relief valve.
SUSQUEHANNA 2	01/85	STANDARD	GE	388019	SHUTDOWN	071/	0	LCD	RESIDUAL HT. REMOVAL	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown began.
WNP-2	12/84	STANDARD	GE	397103	SHUTDOWN	045/	0	LCD	HEAT, VENT & AC	HI	Due to equipment motor failure, cooling was lost to the RPS room #1, Div 1 battery and battery charger rooms and emergency bus. This resulted in the assumption of many safety related systems being inoperable. (0 hrs. because plant is not operating.)
WNP-2	12/84	STANDARD	GE	397123	SHUTDOWN	096/	240	LCD	HEAT, VENT & AC	HI	Critical Switchgear room HVAC unit found to be vibrating excessively; unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (0hrs based on Grey Book info availability chart.)
YANKEE ROWE	06/81	STANDARD	ME	029013	SHUTDOWN	100/N	307	LCD	AC POWER	HI	A fault in the 480V supply line to Bus 4-1 resulted in Bus 4-1 isolation and initiation of fire.
YANKEES 2	03/80	STANDARD	CE	368003	SHUTDOWN	004/	0	LCD	CHEM. & VOL. CONTROL	LD	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain temp & pressure failed (overcooling event) in part due to a boric acid leak.

Table A-3 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO. SHUTDOWN ON T.S. LEVEL (S) / VIOLATION PLANT STATUS	OUTSIDE BURSTION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BEAVER VALLEY 1	04/77	STANDARD	ME 334007 SHUTDOWN 100/N	76	LCD	CONTAINMENT	LD	Containment recirculation cooling coils Chilled Water System relief isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
CLARK COUNTY 1	05/75	STANDARD	CE 317005 SHUTDOWN 100/N	607	LCD	COND COOLING WATER	LD	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
CLARK COUNTY 1	05/75	STANDARD	CE 317018 SHUTDOWN 100/N	320	LCD	MAIN STEAM ISOLATION	LD	Due to actuator oil leakage MSIV seat could be damaged during fast closure resulting in inability of valve to isolate completely.
CLARK COUNTY 2	04/77	STANDARD	CE 318005 SHUTDOWN 097/N	214	LCD	PRIMARY COOLANT	LD	Reactor coolant leakage from unidentified source of greater than 1 GPM. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.
BRITIS-MESSE 1	11/77	STANDARD	BA 346006 SHUTDOWN 094/N	30	LCD	CHEM & VOL. CONTROL	LD	Mainsteam tank level was dropping at a rate of 3 GPM violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and so was not a pressure boundary leakage.
BRAND BLF 1	03/85	STANDARD	BE 416026 SHUTDOWN 004/SO	0	LCD	RECIRCULATION	LD	Due recirculation pump could not be started following a store and loss of a 300 KV switchyard bus. (0 hrs. because plant is not operating.)
BRAND BLF 1	03/85	STANDARD	BE 416041 SHUTDOWN 001/SO	0	LCD	RECIRCULATION	LD	Difficulties with more than one jet pump during surveillance. (0 hrs. because plant is not operating.)
HATCH 2	06/79	STANDARD	BE 366038 SHUTDOWN 099/N	77	LCD	PRIMARY COOLANT	LD	Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits (due to hinge pin leakage on containment feedwater check valve).
LOUISVILLE 2	06/84	STANDARD	BE 374015 SHUTDOWN 005/SU	216	LCD	HEAT, VENT & AC	LD	Utility error: Operational mode was changed (to run from start-up) while an LCD was in effect (control room ventilation emergency ashup train B out of service).
WILLSTONE 2	12/75	STANDARD	CE 336006 SHUTDOWN 100/N	118	LCD	REACTOR PROTECTION	LD	Response time of several primary coolant loop RTDs was longer than the Tech Spec limits.
McGUIRE 1	12/81	STANDARD	ME 363007 SHUTDOWN 020/SO	0	SURVEILLANCE	PRIMARY COOLANT	LD	Utility error: It was discovered that the 18 month functional testing of the reactor coolant pump time delay overcurrent protective devices was not done properly.
McGUIRE 1	12/81	STANDARD	ME 363029 SHUTDOWN 100/L	30	LCD	UPPER HEAD INJECTION	LD	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Cause: repetitive ashup from system surge tank due to valve leakage.
SULEN 1	06/77	STANDARD	ME 272005 VITL/SHUT 000/J	12	LCD	CONTAINMENT	LD	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valve. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.
SEABOARD 1	07/81	STANDARD	ME 327003 SHUTDOWN 045/L	16	LCD	ACCUMULATOR	LD	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be restored to the allowable range in the required time the plant was shutdown.
SEABOARD 2	06/82	STANDARD	ME 328013 SHUTDOWN 100/N	235	LCD	CONTAINMENT	LD	During normal operation pressurizer relief tank rupture disk was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressure. Pressure reached 0.35 PSID exceeding LCD limit of 0.3 PSID.

Table A-3 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
YANKEE ROBE	06/61	STANDARD	WE	029001	SHUTDOWN	100/N	196	LCD	PRIMARY COOLANT	LO	Primary coolant system boundary degradation due to the loop 1 steam generator water box vent line leakage.
COOK 1	08/75	STANDARD	WE	315035	SHUTDOWN	100/N	0	ADMINISTRATIVE	CONTAINMENT	MED	Utility error: Acceptance criteria of an ice condenser intermediate deck door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
COOK 2	07/78	STANDARD	WE	316018	SHUTDOWN	003/SU	49	LCD	REACTOR CONTROL	MED	During the initial startup two control rods were found to be misaligned violating Tech Spec limits.
FAIRLEY 2	07/82	STANDARD	WE	364006	SHUTDOWN	100/N	352	LCD	PRIMARY COOLANT	MED	Two steam generator tubes were found to be defective based on tests.
NORTH ANNA 1	06/78	STANDARD	WE	338001	SHUTDOWN	001/	748	LCD	PRIMARY COOLANT	MED	High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube rupture.
SALEN 2	10/81	STANDARD	WE	311006	SHUTDOWN	100/N	0	LCD	CONTAINMENT	MED	Utility error: During routine surveillance three containment isolation valves became inoperable due to loss of a 4KV vital bus as a result of paralleling of generators out of phase.
SALEN 2	10/81	STANDARD	WE	311011	SHUTDOWN	006/SD	189	LCD	ENGR.	MED	Steam generator feedwater flow indication channels were inoperable during a test.
SEQUEYAH 1	07/81	STANDARD	WE	327030	SHUTDOWN	030/	500	LCD	PRIMARY COOLANT	MED	Reactor coolant system leakage of 25-35 BPM due to an incore detector thimble tube failure.
SUSQUEHANNA 1	06/83	STANDARD	GE	387045	SHUTDOWN	055/	85	SURVEILLANCE	REACTOR	MED	Utility Error: Failure to perform 18 month test of screen discharge volume vent and drain valves. Valves subsequently failed response time test.
SUSQUEHANNA 2	01/85	STANDARD	GE	388009	SHUTDOWN	000/SD	0	LCD	PRESSURE RELIEF	MED	Malfunction of the suppression chamber drywell vacuum breakers. (0 hrs. because plant is not operating.)
WAP-2	12/84	STANDARD	GE	397003	SHUTDOWN	000/SD	0	LCD	REACTOR	MED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hours because plant is not operating.)
WAP-2	12/84	STANDARD	GE	397004	SHUTDOWN	001/SD	0	LCD	REACTOR	MED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hrs. because plant is not operating.)
BIG ROCK POINT	12/62	UNIQUE	GE	150001	VTOL/SHUT	000/SD	371	LCD	DEPRESSURIZA	HI	Three out of 4 Reactor Depressurization System isolation valves failed to open during test.
BROWNS FERRY 1	08/74	UNIQUE	GE	259026	SHUTDOWN	059/	173	LCD	PRIMARY COOLANT	HI	Drywell leakage from unidentified source exceeded the 5 BPM Tech Spec limit. It was found that the leakage was due to one recirculation pump seal failure.
BROWNS FERRY 3	03/77	UNIQUE	GE	296012	SHUTDOWN	005/SU	58	SURVEILLANCE	PRESSURE RELIEF	HI	Utility error: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual screen followed. Test procedure inadequacy cited.
DURAN ARNOLD	05/74	UNIQUE	GE	331021	SHUTDOWN	058/RUN	134	LCD	AC POWER	HI	Diesel Generator "B" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
FT. CALHOUN 1	09/73	UNIQUE	CE	285008	SHUTDOWN	000/SU	1390	LCD	PRIMARY COOLANT	HI	During startup a large leakage of 110 BPM at 1800 PSIA was noticed. This was due to steam generator tube rupture. (Hours due to extension of outage.)
INDIAN POINT 2	07/74	UNIQUE	WE	247001	VIOL/SHUT	100/N	64	LCD	CONTAINMENT	HI	Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.

Table A-3 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NOSS VENDOR	LEI NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	PLANT STATUS	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
NINE MILE POINT	12/69	UNIQUE	BE	220013	SHUTDOWN	025/90		23	LCD	PRESSURE RELIEF	HI	Three out of six main steam line solenoid actuated relief valves failed during test. Two valves stuck open and the third blew from and failed to open. During main steam pressure relief valve testing, one valve failed to close and three showed seat leakage.
NINE MILE POINT	12/69	UNIQUE	BE	220014	SHUTDOWN	012/90		116	LCD	PRESSURE RELIEF	HI	During start-up surveillance testing, 2 of 3 relief valves associated with the automatic depressurization system failed to operate.
OSTER CREEK	12/69	UNIQUE	BE	219028	SHUTDOWN	012/90		400	LCD	DEPRESSURIZA TION	HI	During testing of auxiliary feedwater pump, the pump showed overvoltage problems and was declared inoperable. The repair could not be performed in 72 hours allowed by the Tech Specs.
PALISADES	12/71	UNIQUE	CE	255019	SHUTDOWN	000/90		133	LCD	ALUX FEEDWATER	HI	2 safety injection tanks were drained below the Tech Spec minimum level (only 1 may be out of service), 1 during calibration, the other due to a leaky valve. During test on High Pressure Coolant Injection System pump operability, lubricating oil found contaminated with water and pump declared inoperable.
PALISADES	12/71	UNIQUE	CE	255005	SHUTDOWN	097/90		0	LCD	ACCUMULATOR	HI	Two relief valves were found to have high leakage rates. During annual shutdown, the reactor mode switch was moved from "run" to "startup" resulting in a half alarm. To rapidly shutdown the reactor the rod notch override switch was used, violating the Tech Specs.
GLAD CITIES 1	08/72	UNIQUE	BE	254001	SHUTDOWN	006/90		0	LCD	EECS	HI	A butterfly valve between the drywell and Standby Gas Treatment System was taken out to repair a leak, violating the Tech Spec requirements relating to the primary containment purge system operability.
GLAD CITIES 2	10/72	UNIQUE	BE	253005	SHUTDOWN	001/90		22	LCD	PRESSURE RELIEF	HI	Reactor coolant system leakage of greater than 3 GPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve.
BROWNS FERRY 1	08/74	UNIQUE	BE	259004	SHUTDOWN	014/		21	LCD	REACTOR CONTROL	LO	Plant was shutdown due to high reactor water conductivity of 14 microhm/cm vs Tech Spec limit of 10.
INVERGEN 3	10/71	UNIQUE	BE	249013	SHUTDOWN	091/		0	LCD	STANDBY GAS TREATMENT	LO	One accumulator pressure was found to be low due to a valve in closed position leaking nitrogen.
DUNE ARKOLD	05/74	UNIQUE	BE	331013	SHUTDOWN	100/90		412	LCD	PRIMARY COOLANT	LO	Utility error: Refueling Water Storage Tank level was discovered to be 1.3% below Tech Spec limit due to an earlier human error in valve misalignment.
DUNE ARKOLD	05/74	UNIQUE	BE	331041	SHUTDOWN	036/90		0	LCD	PRIMARY COOLANT	LO	A leakage of greater than 2.5 GPM from an unidentified source into primary containment was detected. Cause: 1" instrument stop valve leaking.
STARR	03/70	UNIQUE	ME	244001	SHUTDOWN	098/90		0	LCD	ACCUMULATOR	LO	Utility error: One of the core flood tanks had lower than Tech Spec required boron concentration for the pressure at which the reactor was operating.
HEAURLEE	06/74	UNIQUE	ME	300015	SHUTDOWN	100/90		0	LCD	HIGH PRESSURE INJ.	LO	Utility Error: Surveillance Test on Aux. Feedwater Pump Steam Supply Line Shutoff not performed prior to start-up.
MILLSTONE 1	12/70	UNIQUE	BE	243017	SHUTDOWN	100/90		42	LCD	PRIMARY COOLANT	LO	Control rod drive seal housing failed resulting in a temporarily unidentified primary leakage in excess of Tech Spec limits.
ODONEE 1	07/73	UNIQUE	BM	253001	SHUTDOWN	100/90		23	LCD	ACCUMULATOR	LO	Chemical and Volume Control relief valve leakage resulted in a temporarily unidentified leakage in excess of Tech Spec leak rate limit.
PALISADES	12/71	UNIQUE	CE	255018	SHUTDOWN	064/90		0	SRVETILLANCE	ALUX FEEDWATER	LO	
PALISADES	12/71	UNIQUE	CE	255024	VITOL/SHUT	000/95D		96	LCD	PRIMARY COOLANT	LO	
PALISADES	12/71	UNIQUE	CE	255025	VITOL/SHUT	000/95D		48	LCD	PRIMARY COOLANT	LO	

Table A-3 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION TYPE

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NOSS VENOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	DURATION PLANT	OUTAGE (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TURKEY POINT 3	12/72	UNITILE	ME	250019	SHUTDOWN	100/W		22	LCD	PRIMARY COOLANT	LO	Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNITILE	ME	250020	SHUTDOWN	100/W		112	LCD	PRIMARY COOLANT	LO	Reactor coolant system leakage of approximately 13.5 GPM exceeding the Tech Spec limits.
ZION 2	06/74	UNITILE	ME	304020	SHUTDOWN	100/W		21	LCD	—	LO	The containment temperature was calculated to be 120.48 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.
COOPER	07/74	UNITILE	BE	298007	SHUTDOWN	070/W		42	LCD	STANDBY GAS TREATMENT REACTION	NEP	Standby Gas Treatment System inoperable due to a construction crew mistake in hooking a fire hydrant and subsequent water hammer creation.
INDIAN POINT 2	07/74	UNITILE	ME	247003	SHUTDOWN	100/W		26	BL/SBS	PROTECTION	NEP	BP1 channel drift.
LACROSSE	11/69	UNITILE	RC	409018	SHUTDOWN	098/W		39	SURVEILLANCE	REACTION PROTECTION	NEP	During test of Nuclear Instrumentation Channel a separate spurious high flux spike resulted in reactor scram.
DOONEE 3	12/74	UNITILE	BU	287006	SHUTDOWN	100/W		321	LCD	PRIMARY COOLANT	NEP	Primary to secondary leakage in Bypass Isolator 3 exceeded Technical Specification limits (2 leaking tubes identified).
PENON BOTTOM 3	12/74	UNITILE	BE	278012	SHUTDOWN	100/W		0	LCD	STANDBY GAS TREATMENT REACTION	NEP	Standby Gas Treatment System ductwork in the reactor building was found to be collapsed resulting in lack of secondary containment integrity.
SLURRY 1	12/72	UNITILE	ME	280008	SHUTDOWN	000/SB		0	LCD	PROTECTION	NEP	Intermediate source range monitor failure.
SLURRY 1	12/72	UNITILE	ME	280020	SHUTDOWN	000/W		46	LCD	AC POWER	NEP	Reactor Coolant Pump C tripped due to fracture of A Phase Main Load Bus Bar, resulting in instantaneous ground fault. Divs. due to early entry into refueling.)
ZION 1	12/73	UNITILE	ME	250005	SHUTDOWN	000/SB		272	LCD	PRIMARY COOLANT	NEP	During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled unisolable leakage of approximately 18 GPM of primary coolant.
ZION 1	12/73	UNITILE	ME	250021	SHUTDOWN	100/W		982	LCD	CONTAINMENT	NEP	WCC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.

*** Total ***

11283

Table A-4. CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY

Table A-4
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS LER NO. SHUTDOWN OR T.S. LEVEL (N) VIOLATION PLANT STATUS	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COOK 1	08/75	STANDARD	ME 315025 SHUTDOWN 100/N	0	ADMINISTRATIVE	CONFINEMENT SHADY	RED	Utility errors: Acceptance criteria of an ice condenser intermediate deck door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
816 NICK POINT	12/62	UNIQUE	BE 152001 VIOL/SHUT 000/50	371	LCD	DEPRESSURIZATION TION	HI	Three out of 4 Reactor Depressurization System Isolation valves failed to open during test.
BROWNS FERRY 1	06/74	UNIQUE	BE 259025 SHUTDOWN 005/	173	LCD	PRIMARY COOLANT HI	HI	Drywell leakage from unidentified source exceeded the 5 GPM Tech Spec limit. It was found that the leakage was due to one recirculation pump seal failure.
COOK 1	08/75	STANDARD	ME 315004 SHUTDOWN 100/N	79	LCD	AUX FEEDWATER HI	HI	The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
DUNE ARKLE	05/74	UNIQUE	BE 331021 SHUTDOWN 026/NUN	134	LCD	AC POWER	HI	Diesel Generator "B" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
FT. CALHOUN 1	09/73	UNIQUE	CE 283008 SHUTDOWN 000/50	1390	LCD	PRIMARY COOLANT HI	HI	During startup a large leakage of 110 GPM at 1800 PSIA was noticed. This was due to steam generator tube raptures. (Hours due to extension of outage.)
GRAND BULL 1	03/85	STANDARD	BE 416024 SHUTDOWN 004/50	0	LCD	CONFINEMENT SHADY	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. (0 hrs. because plant is not operating.)
INDIAN POINT 2	07/74	UNIQUE	ME 247001 VIOL/SHUT 100/N	64	LCD	CONFINEMENT	HI	Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.
NINE MILE POINT	12/69	UNIQUE	BE 220013 SHUTDOWN 025/50	23	LCD	PRESSURE RELIEF HI	HI	Three out of six main steam line solenoid actuated relief valves failed during test. Two valves stuck open and the third blew fuses and failed to open.
NINE MILE POINT	12/69	UNIQUE	BE 220014 SHUTDOWN 012/50	116	LCD	PRESSURE RELIEF HI	HI	During main steam pressure relief valve testing, one valve failed to close and three showed seat leakage.
NORTH RAMP 2	12/80	STANDARD	ME 335013 SHUTDOWN 100/N	179	LCD	AC POWER	HI	Plant was shutdown when 2 diesel generators tripped during surveillance testing.
OYSTER CREEK	12/69	UNIQUE	BE 219028 SHUTDOWN 012/50	480	LCD	DEPRESSURIZATION TION	HI	During start-up surveillance testing, 2 of 3 relief valves associated with the automatic depressurization system failed to operate.
PAULSBOES	12/71	UNIQUE	CE 250019 SHUTDOWN 080/N	133	LCD	AUX FEEDWATER HI	HI	During testing of auxiliary feedwater pump, the pump showed overvoltage problems and was declared inoperable. The repair could not be performed in 72 hours allowed by the Tech Specs.
PAULSBOES	12/71	UNIQUE	CE 250026 SHUTDOWN 097/N	0	LCD	ACCUMULATION	HI	2 safety injection tanks were drained below the Tech Spec minimum level (only 1 may be out of service), 1 during calibration, the other due to a leaky valve.
QUAD CITIES 1	06/72	UNIQUE	BE 254001 SHUTDOWN 066/N	0	LCD	EDCS	HI	During test on High Pressure Coolant Injection System pump operability, lubricating oil found contaminated with water and pump declared inoperable.
QUAD CITIES 2	10/72	UNIQUE	BE 265005 SHUTDOWN 001/50	22	LCD	PRESSURE RELIEF HI	HI	Two relief valves were found to have high leakage rates.
SALEN 1	06/77	STANDARD	ME 272012 SHUTDOWN 000/50	0	LCD	EDCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 50-311)

Table A-4 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	HBBS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SALLEN 1	06/77	STANDARD	ME	272024	VIOL/SHUT	005/SU	48	LCD	POWER CONVERSION	HI	During startup S.B. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
SALLEN 2	10/81	STANDARD	ME	311016	SHUTDOWN	100/N	460	LCD	HIGH PRESSURE INJ.	HI	A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.
SALLEN 2	10/81	STANDARD	ME	311111	SHUTDOWN	095/N	347	LCD	ECCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Docket 50-311).
SPIN (SHEPHE 2)	08/83	STANDARD	CE	361046	SHUTDOWN	100/N	0	LCD	COMP COOLING WATER	HI	Local readout of saltwater cooling to train B of component cooling water system (CCWS) heat exchanger indicated a fault condition. Since train A of CCWS was out of service an LCD Tech Spec was violated.
DESLERMAN 1	07/81	STANDARD	ME	327031	SHUTDOWN	100/SO	0	LCD	PRESSURE RELIEF	HI	Inoperable pressurizer relief valve.
DESLERMAN 2	01/85	STANDARD	BE	388019	SHUTDOWN	071/	0	LCD	RESIDUAL HT. REMOVAL	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown began.
WMP-2	12/84	STANDARD	BE	397163	SHUTDOWN	045/	0	LCD	HEAT, VENT & AC	HI	Due to equipment motor failure, cooling was lost to the RPS room #1, Div I battery and battery charger rooms and emergency bus. This resulted in the assumption of many safety related systems being inoperable. (0 hrs. because plant is not operating.)
WMP-2	12/84	STANDARD	BE	397123	SHUTDOWN	096/	240	LCD	HEAT, VENT & AC	HI	Critical Switchgear room HVAC unit found to be vibrating excessively; unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (Hrs based on Grey Book info availability chart.)
YANKEE ROWE	06/81	STANDARD	ME	029013	SHUTDOWN	100/N	307	LCD	AC POWER	HI	A fault in the 480V supply line to Bus 4-1 resulted in Bus 4-1 isolation and initiation of fire.
ARMWICKS 2	03/80	STANDARD	CE	368003	SHUTDOWN	004/	0	LCD	CHEM. & VOL. CONTROL	LO	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain temp & pressure failed (overcooling event) in part due to a boric acid leak.
BEAVER VALLEY 1	04/77	STANDARD	ME	334007	SHUTDOWN	100/N	76	LCD	CONTAINMENT	LO	Containment recirculation cooling coils Chilled Water System outlet isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
BROWNS FERRY 1	08/74	UNIQUE	BE	299004	SHUTDOWN	014/	21	LCD	REACTOR CONTROL	LO	During manual shutdown, the reactor mode switch was moved from "run" to "startup" resulting in a half scram. To rapidly shutdown the reactor the rod notch override switch was used, violating the Tech Specs.
CALVERT CLIFFS 1	05/75	STANDARD	CE	317005	SHUTDOWN	100/N	607	LCD	COMP COOLING WATER	LO	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
CALVERT CLIFFS 1	05/75	STANDARD	CE	317018	SHUTDOWN	100/N	320	LCD	MAIN STEAM ISOLATION	LO	Due to actuator oil leakage MSIV seat could be damaged during fast closure resulting in inability of valve to isolate completely.
CALVERT CLIFFS 2	04/77	STANDARD	CE	318006	SHUTDOWN	097/N	214	LCD	PRIMARY COOLANT	LO	Reactor coolant leakage from unidentified source of greater than 1 BPM. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.

Table A-4 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE NUMBER	LET NO.	SHUTDOWN VIOLATION PLANT	POWER ON T.S. LEVEL (N) / DURATION (HRS)	OUTSIDE SPECIFICATION CATEGORY	TECHNICAL CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
DARTS-BESSE 1	11/77	STANDARD	IN	346005	SHUTDOWN 094/N	50	LD	LD	CHEM. & VOL. CONTROL	LD	Makeup tank level was dropping at a rate of 3 BPM violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and so was not a pressure boundary leakage.
DREXLEN 3	10/71	UNITLE	BE	249013	SHUTDOWN 091/	0	LD	LD	STANDARD GAS TREATMENT	LD	A butterfly valve between the drywell and Standby Gas Treatment System was taken out to repair a leak, violating the Tech Spec requirements relating to the primary containment purge system operability.
DUNE WHEEL	05/74	UNITLE	BE	331013	SHUTDOWN 100/N	412	LD	LD	PRIMARY COOLANT	LD	Reactor coolant system leakage of greater than 5 BPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve.
DUNE WHEEL	05/74	UNITLE	BE	331041	SHUTDOWN 036/N	0	LD	LD	PRIMARY COOLANT	LD	Plant was shutdown due to high reactor water conductivity of 14 microhm/cm vs Tech Spec limit of 10.
STARS	03/70	UNITLE	ME	244001	SHUTDOWN 098/N	0	LD	LD	ACCUMULATOR	LD	One accumulator pressure was found to be low due to a valve in closed position leaking nitrogen.
SHAW BELL 1	03/85	STANDARD	BE	416025	SHUTDOWN 004/S	0	LD	LD	RECIRCULATION	LD	One recirculation pump could not be started following a stop and loss of a 300 KV switchyard bus. (0 hrs. because plant is not operating.)
SHAW BELL 1	03/85	STANDARD	BE	416041	SHUTDOWN 001/S	0	LD	LD	RECIRCULATION	LD	Difficulties with more than one jet pump during surveillance. (0 hrs. because plant is not operating.)
HATCH 2	08/79	STANDARD	BE	366038	SHUTDOWN 099/N	77	LD	LD	PRIMARY COOLANT	LD	Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits (due to hinge pin leakage on containment feedwater check valve).
REARUNE	06/74	UNITLE	ME	305015	SHUTDOWN 100/N	0	LD	LD	HIGH PRESSURE INJ.	LD	Utility error: Refueling Water Storage Tank level was discovered to be 1.35 below Tech Spec limit due to an earlier human error in valve misalignment.
LAGELLE 2	06/84	STANDARD	BE	374015	SHUTDOWN 005/S	216	LD	LD	HEAT, VENT & AC	LD	Utility error: Operational mode was changed (to run from start-up) while an LCD was in effect (control room ventilation emergency makeup train B out of service).
KILLSTONE 1	12/70	UNITLE	BE	245017	SHUTDOWN 100/N	42	LD	LD	PRIMARY COOLANT	LD	A leakage of greater than 2.5 BPM from an unidentified source into primary containment was detected. Cause: 1" instrument stop valve leaking.
KILLSTONE 2	12/75	STANDARD	CE	336006	SHUTDOWN 100/N	118	LD	LD	REACTION PROTECTION	LD	Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
McBURIE 1	12/81	STANDARD	ME	363029	SHUTDOWN 100/N	30	LD	LD	UPPER HEAD INJECTION	LD	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Causes repetitive makeup from system surge tank due to valve leakage.
ODDREE 1	07/73	UNITLE	IN	263001	SHUTDOWN 100/N	23	LD	LD	ACCUMULATOR	LD	Utility error: One of the core flood tanks had lower than Tech Spec required boron concentration for the pressure at which the reactor was operating.
PAULSONS	12/71	UNITLE	CE	250024	VITL/SHUT 000/MS	96	LD	LD	PRIMARY COOLANT	LD	Control rod drive seal housing failed resulting in a temporarily unidentified primary leakage in excess of Tech Spec limits.
PAULSONS	12/71	UNITLE	CE	250025	VITL/SHUT 000/MS	48	LD	LD	PRIMARY COOLANT	LD	Chemical and Volume Control relief valve leakage resulted in a temporarily unidentified leakage in excess of Tech Spec leak rate limit.
SHLEIN 1	06/77	STANDARD	ME	272005	VITL/SHUT 000/3	12	LD	LD	CONTAINMENT	LD	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valve. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.

Table A-4 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NEEDS LER REL SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (S) / SHUTDOWN PLANT STATUS	OUTSIDE SPECIFICATION (HWS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SELENYSH 1	07/81	STANDARD	ME	327005 SHUTDOWN 045/	18	LCD	ACCUMULATOR	LO	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be restored to the allowable range in the required time the plant was shutdown.
SELENYSH 2	06/82	STANDARD	ME	328013 SHUTDOWN 100/N	235	LCD	CONTAINMENT	LO	During normal operation pressurizer relief tank rupture disc was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressure. Pressure reached 0.35 PSID exceeding LCD limit of 0.3 PSID.
TURKEY POINT 3	12/72	UNITLE	ME	250019 SHUTDOWN 100/N	22	LCD	PRIMARY COOLANT	LO	Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNITLE	ME	250020 SHUTDOWN 100/N	112	LCD	PRIMARY COOLANT	LO	Reactor coolant system leakage of approximately 13.5 GPM exceeding the Tech Spec limits.
WYCKEE ROME	06/81	STANDARD	ME	027001 SHUTDOWN 100/N	196	LCD	PRIMARY COOLANT	LO	Primary coolant system boundary degradation due to the loop 1 steam generator water box vent line leakage.
ZION 2	09/74	UNITLE	ME	304020 SHUTDOWN 100/N	21	LCD	--	LO	The containment temperature was calculated to be 120.48 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.
COOK 2	07/78	STANDARD	ME	316018 SHUTDOWN 003/SD	49	LCD	REACTOR CONTROL	RED	During the initial startup two control rods were found to be misaligned violating Tech Spec limits.
COOPER	07/74	UNITLE	BE	258007 SHUTDOWN 070/N	42	LCD	STANDBY GRS TREATMENT	RED	Standby Gas Treatment System inoperable due to a construction crew mistake in knocking a fire hydrant and subsequent water hammer creation.
FINLEY 2	07/82	STANDARD	ME	364008 SHUTDOWN 100/N	332	LCD	PRIMARY COOLANT	RED	Two steam generator tubes were found to be defective based on tests.
NORTH RANG 1	06/78	STANDARD	ME	338001 SHUTDOWN 001/	748	LCD	PRIMARY COOLANT	RED	High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube rupture.
CEANE 3	12/74	UNITLE	BM	287006 SHUTDOWN 100/N	321	LCD	PRIMARY COOLANT	RED	Primary to secondary leakage in Steam Generator 3 exceeded Technical Specification limits (2 leaking tubes identified).
RECH BUTION 3	12/74	UNITLE	BE	279012 SHUTDOWN 100/N	0	LCD	STANDBY GRS TREATMENT	RED	Standby Gas Treatment System ductwork in the reactor building sump room was found to be collapsed resulting in lack of secondary containment integrity.
SOLER 2	10/81	STANDARD	ME	311006 SHUTDOWN 100/N	0	LCD	CONTAINMENT	RED	Utility error: During routine surveillance three containment isolation valves became inoperable due to loss of a MV vital bus as a result of paralleling of generators out of phase.
SOLER 2	10/81	STANDARD	ME	311011 SHUTDOWN 006/SD	189	LCD	ENGR. SAFEGUARDS	RED	Steam generator feedwater flow indication channels were inoperable during a test.
SELENYSH 1	07/81	STANDARD	ME	327030 SHUTDOWN 030/	300	LCD	PRIMARY COOLANT	RED	Reactor coolant system leakage of 25-35 GPM due to an incore detector thimble tube failure.
SUMRY 1	12/72	UNITLE	ME	280008 SHUTDOWN 000/SD	0	LCD	REACTOR PROTECTION	RED	Intermediate source range monitor failure.
SUMRY 1	12/72	UNITLE	ME	280020 SHUTDOWN 080/N	48	LCD	AC POWER	RED	Reactor Coolant Pump C tripped due to fracture of a Phase Main Load Bus Bar, resulting in instantaneous ground fault. (Hrs. due to early entry into refueling.)

Table A-4 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY TECHNICAL SPECIFICATION CATEGORY

PLANT NAME	DATE OF COMPLETION	TYPE OF TECHNICAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS LEAK NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (K)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SHORELAND 2	01/85	STANDARD	STANDARD	BE	386009	SHUTDOWN 000/SD	0	LOD	PRESSURE RELIEF	MED	Malfunction of the suppression chamber drywell vacuum breakers. (0 hrs. because plant is not operating.)
WAP-2	12/84	STANDARD	STANDARD	BE	357003	SHUTDOWN 000/SD	0	LOD	REACTION PROTECTION	MED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hours because plant is not operating.)
WAP-2	12/84	STANDARD	STANDARD	BE	357004	SHUTDOWN 001/SD	0	LOD	REACTION PROTECTION	MED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hrs. because plant is not operating.)
ZION 1	12/73	UNUSABLE	UNUSABLE	ME	250005	SHUTDOWN 000/SD	272 + LOD	LOD	PRIMARY COOLANT	MED	During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled unrelievable leakage of approximately 18 GPM of primary coolant.
ZION 1	12/73	UNUSABLE	UNUSABLE	ME	250021	SHUTDOWN 100/SH	982	LOD	CONTAINMENT	MED	MEC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.
INDEPENDENT 2	07/74	UNUSABLE	UNUSABLE	ME	247003	SHUTDOWN 100/SH	29	BLURBS	REACTION PROTECTION	MED	NP1 channel drift.
BROWNS FERRY 3	03/77	UNUSABLE	UNUSABLE	BE	256012	SHUTDOWN 005/SD	58	SURVEILLANCE	PRESSURE RELIEF	M	Utility error: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual action followed. Test procedure inadequacy cited.
McGUIRE 1	12/81	STANDARD	STANDARD	ME	359007	SHUTDOWN 000/SD	0	SURVEILLANCE	PRIMARY COOLANT	LO	Utility error: It was discovered that the 18 months functional testing of the reactor coolant pump time delay overcurrent protective devices was not done properly.
PALESTINE 3	12/71	UNUSABLE	UNUSABLE	CE	250018	SHUTDOWN 064/SH	0	SURVEILLANCE	RED FEEDMASTER	LO	Utility Error: Surveillance Test on Red Feedwater Pump Steam Supply Line Submer not performed prior to start-up.
LAKESIDE	11/69	UNUSABLE	UNUSABLE	AC	409018	SHUTDOWN 096/	59	SURVEILLANCE	REACTION PROTECTION	MED	During test of Nuclear Instrumentation Channel a separate spurious high flux spike resulted in reactor scram.
SHORELAND 1	05/83	STANDARD	STANDARD	BE	387045	SHUTDOWN 005/	85	SURVEILLANCE	REACTION PROTECTION	MED	Utility Error: Failure to perform 18 month test of steam discharge valves vent and drain valves. Valves subsequently failed response time test.

*** Total ***

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Table A-5. CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR

Table A-5
CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUES	LER REL. SHUTDOWN OR T.S. LEVEL (N)/ VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LACROSBIE	11/69	UNIQUE	RE	409018 SHUTDOWN 096/	29	SURVEILLANCE	REACTION PROTECTION	NEB	During test of Nuclear Instrumentation Channel a separate spurious high flux spike resulted in reactor scram.
DAY'S-BESSE 1	11/77	STANDARD	BA	346005 SHUTDOWN 094/N	30	LCD	CHEK & VOL. CONTROL	LO	Reactor tank level was dropping at a rate of 3 GPM violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and so was not a pressure boundary leakage.
OCONEE 1	07/73	UNIQUE	BA	253001 SHUTDOWN 100/N	23	LCD	ACCUMULATION	LO	Utility error: One of the core flood tanks had lower than Tech Spec required boron concentration for the pressure at which the reactor was operating.
OCONEE 3	12/74	UNIQUE	BA	287005 SHUTDOWN 100/N	321	LCD	PRIMARY COOLANT NEB	NEB	Primary to secondary leakage in Steam Generator 3 exceeded Technical Specification limits (2 leaking tubes identified).
FT. CALHOUN 1	09/73	UNIQUE	CE	285008 SHUTDOWN 000/9U	1390	LCD	PRIMARY COOLANT HI	HI	During startup a large leakage of 110 GPM at 1800 PSIA was noticed. This was due to steam generator tube ruptures. (Hours due to extension of outages.)
PAULSBORO 3	12/71	UNIQUE	CE	252019 SHUTDOWN 080/N	133	LCD	AUX FEEDWATER HI	HI	During testing of auxiliary feedwater pump, the pump showed over-speed problems and was declared inoperable. The repair could not be performed in 72 hours allowed by the Tech Specs.
PAULSBORO 3	12/71	UNIQUE	CE	252025 SHUTDOWN 097/N	0	LCD	ACCUMULATION	HI	2 safety injection tanks were drained below the Tech Spec minimum level (only 1 may be out of service), 1 during calibration, the other due to a leaky valve.
BBN DUFFY 2	08/83	STANDARD	CE	361046 SHUTDOWN 100/N	0	LCD	COMP COOLING WATER	HI	Local resident of saltwater cooling to train 3 of component cooling water system (CCWS) heat exchanger indicated a fault condition. Since train 3 of CCWS was out of service an LCD Tech Spec was violated.
AMARGES 2	03/80	STANDARD	CE	350003 SHUTDOWN 004/	0	LCD	CHEK & VOL. CONTROL	LO	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain temp & pressure failed (overcooling event) in part due to a boric acid leak.
CALVERT CLIFFS 1 05/75		STANDARD	CE	317005 SHUTDOWN 100/N	607	LCD	COMP COOLING WATER	LO	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
CALVERT CLIFFS 1 05/75		STANDARD	CE	317018 SHUTDOWN 100/N	320	LCD	MAIN STEAM ISOLATION	LO	Due to actuator oil leakage MSIV seat could be damaged during fast closure resulting in inability of valve to isolate completely.
CALVERT CLIFFS 2 04/77		STANDARD	CE	318006 SHUTDOWN 097/N	214	LCD	PRIMARY COOLANT LO	LO	Reactor coolant leakage from unidentified source of greater than 1 GPM. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.
WILLISTONE 2	12/75	STANDARD	CE	335005 SHUTDOWN 100/N	118	LCD	REACTION PROTECTION	LO	Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
PAULSBORO 3	12/71	UNIQUE	CE	252018 SHUTDOWN 054/NU	0	SURVEILLANCE	AUX FEEDWATER	LO	Utility Errors Surveillance Test on Res. Feedwater Pump Steam Supply Line Snubber not performed prior to start-up.
PAULSBORO 3	12/71	UNIQUE	CE	252004 VIB/994UT 000/NEB	96	LCD	PRIMARY COOLANT LO	LO	Control rod drive seal housing failed resulting in a temporarily unidentified primary leakage in excess of Tech Spec limits.
PAULSBORO 3	12/71	UNIQUE	CE	252005 VIB/994UT 000/NEB	48	LCD	PRIMARY COOLANT LO	LO	Chemical and Volume Control relief valve leakage resulted in a temporarily unidentified leakage in excess of Tech Spec leak rate limit.
BIG ROCK POINT	12/62	UNIQUE	BE	135001 VIB/994UT 000/5D	371	LCD	DEPRESSURIZATION TION	HI	Three out of 4 Reactor Depressurization System isolation valves failed to open during test.

Table A-5 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	REQD VENDOR	LER NO. OR T.S. VIOLATION	SHUTDOWN OR T.S. PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BROWNS FERRY 1	06/74	UNITILE	BE	259025	SHUTDOWN 059/	173	LCD	PRIMARY COOLANT HI	HI	Drywell leakage from unidentified source exceeded the 5 GPM Tech Spec limit. It was found that the leakage was due to one recirculation pump seal failure. Utility errors: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual action followed. Test procedure inadequacy cited.
BROWNS FERRY 3	03/77	UNITILE	BE	256012	SHUTDOWN 005/9U	50	RELIABILITY	PRESSURE RELIEF HI	HI	Diesel Generator "g" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
CLARK HARKLE	05/74	UNITILE	BE	331021	SHUTDOWN 056/9U/N	134	LCD	AC POWER	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. (0 hrs. because plant is not operating.)
GRAND BULL 1	03/85	STANDARD	BE	416024	SHUTDOWN 004/50	0	LCD	CONTAINMENT SPARG	HI	Three out of six main steam line solenoid actuated relief valves failed during test. Two valves stuck open and the third blew fuses and failed to open.
HTME HILE POINT	12/69	UNITILE	BE	200013	SHUTDOWN 025/9U	23	LCD	PRESSURE RELIEF HI	HI	During main steam pressure relief valve testing, one valve failed to close and three showed seat leakage.
HTME HILE POINT	12/69	UNITILE	BE	200014	SHUTDOWN 012/9U	116	LCD	PRESSURE RELIEF HI	HI	During start-up surveillance testing, 2 of 5 relief valves associated with the automatic depressurization system failed to operate.
OSTER CREEK	12/69	UNITILE	BE	219028	SHUTDOWN 012/9U	440	LCD	DEPRESSURIZA TION	HI	During test on High Pressure Coolant Injection System pump operability, lubricating oil found contaminated with water and pump declared inoperable.
GLAD CITIES 1	06/72	UNITILE	BE	254001	SHUTDOWN 086/7N	0	LCD	EDCS	HI	Two relief valves were found to have high leakage rates.
GLAD CITIES 2	10/72	UNITILE	BE	263005	SHUTDOWN 001/9U	22	LCD	PRESSURE RELIEF HI	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown began.
SLACKLAND 2	01/85	STANDARD	BE	306019	SHUTDOWN 071/	0	LCD	RESIDUAL HT. REMOVAL	HI	Due to equipment motor failure, cooling was lost to the RRB room #1, Biv 1 battery and battery charger room and emergency bus. This resulted in the assumption of many safety related systems being inoperable. (0 hrs. because plant is not operating.)
WMP-2	12/84	STANDARD	BE	397103	SHUTDOWN 045/	0	LCD	HEAT, VENT & AC HI	HI	Critical Switchgear room HARC unit found to be vibrating excessively; unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (Hrs based on Grey Book info availability chart.)
WMP-2	12/84	STANDARD	BE	397123	SHUTDOWN 096/	240	LCD	HEAT, VENT & AC HI	HI	During manual shutdown, the reactor mode switch was moved from "run" to "start-up" resulting in a half alarm. To rapidly shutdown the reactor the red notch override switch was used, violating the Tech Specs.
BROWNS FERRY 1	06/74	UNITILE	BE	259004	SHUTDOWN 014/	21	LCD	REACTOR CONTROL LD	LD	A butterfly valve between the drywell and Standby Gas Treatment System was taken out to repair a leak, violating the Tech Spec requirements relating to the primary containment purge system operability.
DRESDEN 3	10/71	UNITILE	BE	249013	SHUTDOWN 091/	0	LCD	STANDBY GAS TREATMENT	LD	Reactor coolant system leakage of greater than 5 GPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve.
CLARK HARKLE	05/74	UNITILE	BE	331013	SHUTDOWN 100/7N	412	LCD	PRIMARY COOLANT LD	LD	

Table A-5 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NOBS LER NO. VENDOR	SHUTDOWN OR T.S. VIOLATION	REMER LEVEL (N)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
DURKE ANKLE 9	05/74	UNITLE	BE 331041	SHUTDOWN	0.6/N	0	LCD	PRIMARY COOLANT LO		Plant was shutdown due to high reactor water conductivity of 14 microhm/cm vs Tech Spec limit of 10.
GRAND GULF 1	03/85	STANDORD	BE 415028	SHUTDOWN	004/SD	0	LCD	RECIRCULATION LO		One recirculation pump could not be started following a storm and loss of a 300 KV switchyard bus. (0 hrs. because plant is not operating.)
GRAND GULF 1	03/85	STANDORD	BE 415041	SHUTDOWN	001/SD	0	LCD	RECIRCULATION LO		Difficulties with more than one jet pump during surveillance. (0 hrs. because plant is not operating.)
HATCH 2	06/79	STANDORD	BE 366038	SHUTDOWN	079/N	77	LCD	PRIMARY COOLANT LO		Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits (due to hinge pin leakage on containment feedwater check valve).
LABILLE 2	06/74	STANDORD	BE 374015	SHUTDOWN	005/SD	216	LCD	HEAT, VENT & RC LO		Utility errors: Operational mode was changed (to run from start-up) while an LCD was in effect (control room ventilation emergency alarm train B out of service).
MILLSTONE 1	12/79	UNITLE	BE 245017	SHUTDOWN	100/N	42	LCD	PRIMARY COOLANT LO		A leakage of greater than 2.5 GPM from an unidentified source into primary containment was detected. Causes 3 rd instrument stop valve leaking.
COOPER	07/74	UNITLE	BE 298007	SHUTDOWN	070/N	42	LCD	STANDBY SRS RED TREATMENT		Standby Gas Treatment System inoperable due to a construction crew mistake in hooking a fire hydrant and subsequent water hammer creation.
RECH BOTTOM 3	12/74	UNITLE	BE 278012	SHUTDOWN	100/N	0	LCD	STANDBY SRS RED TREATMENT		Standby Gas Treatment System detectors in the reactor building pump room was found to be collapsed resulting in lack of secondary containment integrity.
SLUGLEHARRIS 1	06/83	STANDORD	BE 387045	SHUTDOWN	005/	85	SURVEILLANCE	REACTOR PROTECTION		Utility Error: Failure to perform 18 month test of across discharge volume vent and drain valves. Valves subsequently failed response time test.
SLUGLEHARRIS 2	01/85	STANDORD	BE 388009	SHUTDOWN	000/SD	0	LCD	PRESSURE RELIEF RED		Malfunction of the suppression chamber drywell vacuum breakers. (0 hrs. because plant is not operating.)
WMP-2	12/84	STANDORD	BE 357003	SHUTDOWN	000/SD	0	LCD	REACTOR PROTECTION		Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hours because plant is not operating.)
WMP-2	12/84	STANDORD	BE 357004	SHUTDOWN	001/SD	0	LCD	REACTOR PROTECTION		Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hrs. because plant is not operating.)
COOK 1	06/75	STANDORD	ME 315004	SHUTDOWN	100/N	79	LCD	RUI FEEDWATER HI		The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
INDIAN POINT 2	07/74	UNITLE	ME 247001	VITOL/SHUT	100/N	64	LCD	CONTAINMENT HI		Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.
NORTH ANNS 2	12/80	STANDORD	ME 339013	SHUTDOWN	100/N	179	LCD	RC POWER HI		Plant was shutdown when 2 diesel generators tripped during surveillance testing.
SALEN 1	06/77	STANDORD	ME 272012	SHUTDOWN	000/SD	0	LCD	EDCS HI		Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 30-311)
SALEN 1	06/77	STANDORD	ME 272024	VITOL/SHUT	005/SD	48	LCD	POWER CONVERSION HI		During start-up S.B. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
SALEN 2	10/81	STANDORD	ME 311016	SHUTDOWN	100/N	460	LCD	HIGH PRESSURE HI		A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.

Table A-5 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENDOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (%)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SOLEN 2	10/81	STANDARD	ME	311111	SHUTDOWN	095/N	347	LCD	ECDS	HI	Steam/disk separation problems with RTB loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Doctet 50-3111).
SEALOVIN 1	07/81	STANDARD	ME	327031	SHUTDOWN	000/SD	0	LCD	PRESSURE RELIEF	HI	Inoperable pressurizer relief valve.
YANKEE HOME	06/81	STANDARD	ME	023013	SHUTDOWN	100/N	307	LCD	AC POWER	HI	A fault in the 480V supply line to Bus 4-1 resulted in Bus 4-1 isolation and initiation of fire.
BEAVER VALLEY 1	04/77	STANDARD	ME	334007	SHUTDOWN	100/N	75	LCD	CONTAINMENT	LO	Containment recirculation cooling coils Chilled Water System outlet isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
STING	03/70	UNITLE	ME	244001	SHUTDOWN	096/N	0	LCD	ACCUMULATOR	LO	One accumulator pressure was found to be low due to a valve in closed position leaking nitrogen.
KEAULOE	06/74	UNITLE	ME	305015	SHUTDOWN	100/N	0	LCD	HIGH PRESSURE INJ.	LO	Utility error: Refueling Meter Storage Tank level was discovered to be 1.35 below Tech Spec limit due to an earlier human error in valve misalignment.
NE-SUTRE 1	12/81	STANDARD	ME	353007	SHUTDOWN	000/SD	0	SURVEILLANCE	PRIMARY COOLANT	LO	Utility error: It was discovered that the 18 months functional testing of the reactor coolant pump time delay overcurrent protective device was not done properly.
NE-SUTRE 1	12/81	STANDARD	ME	353029	SHUTDOWN	100/N	30	LCD	UPPER HEAD INJECTION	LO	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Causes repetitive makeup from system surge tank due to valve leakage.
SOLEN 1	06/77	STANDARD	ME	272005	VIOL./SHUT	000/3	12	LCD	CONTAINMENT	LO	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valves. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.
SEALOVIN 1	07/81	STANDARD	ME	327005	SHUTDOWN	045/	18	LCD	ACCUMULATOR	LO	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be restored to the allowable range in the required time the plant was shutdown.
SEALOVIN 2	06/82	STANDARD	ME	328013	SHUTDOWN	100/N	235	LCD	CONTAINMENT	LO	During normal operation pressurizer relief tank rupture disk was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressure. Pressure reached 0.35 PSID exceeding LCD limit of 0.3 PSID.
TURKEY POINT 3	12/72	UNITLE	ME	250019	SHUTDOWN	100/N	22	LCD	PRIMARY COOLANT	LO	Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNITLE	ME	250020	SHUTDOWN	100/N	112	LCD	PRIMARY COOLANT	LO	Reactor coolant system leakage of approximately 13.5 GPM exceeding the Tech Spec limits.
YANKEE HOME	06/81	STANDARD	ME	029001	SHUTDOWN	100/N	136	LCD	PRIMARY COOLANT	LO	Primary coolant system boundary degradation due to the loop 1 steam generator water box vent line leakage.
ZION 2	05/74	UNITLE	ME	304020	SHUTDOWN	100/N	21	LCD	—	LO	The containment temperature was calculated to be 120.46 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.

Table A-5 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY VENDOR

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NEES VENDOR	LEN NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COOK 1	06/75	STANDARD	WE	315035	SHUTDOWN	100/N	0	ADMINISTRATIVE	CONTAINMENT SPRAY	MED	Utility errors: Acceptance criteria of an ice condenser intermediate deck door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
COOK 2	07/78	STANDARD	WE	316018	SHUTDOWN	003/SU	49	LCD	REACTOR CONTROL	MED	During the initial startup two control rods were found to be misaligned violating Tech Spec limits.
FAWLEY 2	07/82	STANDARD	WE	364008	SHUTDOWN	100/N	352	LCD	PRIMARY COOLANT	MED	Two steam generator tubes were found to be defective based on tests.
INDIAN POINT 2	07/74	UNIQUE	WE	247063	SHUTDOWN	100/N	28	SLALSSS	REACTOR PROTECTION	MED	RPI channel drift.
NORTH ANNA 1	06/78	STANDARD	WE	338001	SHUTDOWN	001/	748	LCD	PRIMARY COOLANT	MED	High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube ruptures.
SALEN 2	10/81	STANDARD	WE	311006	SHUTDOWN	100/N	0	LCD	CONTAINMENT	MED	Utility error: During routine surveillance three containment isolation valves became inoperable due to loss of a 48V vital bus as a result of paralleling of generators out of phase.
SALEN 2	10/81	STANDARD	WE	311011	SHUTDOWN	006/SD	189	LCD	ENGR. SAFEGUARDS	MED	Steam generator feedwater flow indication channels were inoperable during a test.
SEBASTIAN 1	07/81	STANDARD	WE	327030	SHUTDOWN	030/	500	LCD	PRIMARY COOLANT	MED	Reactor coolant system leakage of 25-35 GPM due to an incore detector thimble tube failure.
SURRY 1	12/72	UNIQUE	WE	280008	SHUTDOWN	000/SD	0	LCD	REACTOR PROTECTION	MED	Intermediate source range monitor failure.
SURRY 1	12/72	UNIQUE	WE	280020	SHUTDOWN	080/N	48	LCD	AC POWER	MED	Reactor Coolant Pump C tripped due to fracture of A Phase Main Load Bus Bar, resulting in instantaneous ground fault. (Hrs. due to early entry into refueling.)
ZION 1	12/73	UNIQUE	WE	295005	SHUTDOWN	000/SD	272 +	LCD	PRIMARY COOLANT	MED	During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled unisolable leakage of approximately 18 GPM of primary coolant.
ZION 1	12/73	UNIQUE	WE	295021	SHUTDOWN	100/N	982	LCD	CONTAINMENT	MED	NRC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.

*** Total ***

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Table A-6. CLASSIFICATION OF SHUTDOWN EVENTS BY DATE OF COMMERCIAL OPERATION OF PLANT

Table A-6

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Table A-6 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY DATE OF COMMERCIAL OPERATION OF PLANT

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESSAGE LER NO. SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (N)/ PLANT STATUS	OUTSIDE SPECIFICATION AFFECTED (HMS)	TECHNICAL SYSTEM	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TURKEY POINT 3	12/72	UNIQUE	ME 250013	SHUTDOWN 100/N	22 LCD	PRIMARY COOLANT LD		Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNIQUE	ME 250020	SHUTDOWN 100/N	112 LCD	PRIMARY COOLANT LD		Reactor coolant system leakage of approximately 13.5 GPM exceeding the Tech Spec limits.
SURRY 1	12/72	UNIQUE	ME 250008	SHUTDOWN 000/SD	0 LCD	REACTOR PROTECTION	RED	Intermediate source range monitor failure.
SURRY 1	12/72	UNIQUE	ME 250020	SHUTDOWN 000/N	48 LCD	AC POWER	RED	Reactor Coolant Pump C tripped due to fracture of A Phase Main Load Bus Bar, resulting in instantaneous ground fault. (Obs. due to early entry into refueling.)
ZION 1	12/73	UNIQUE	ME 250505	SHUTDOWN 000/SD	272 + LCD	PRIMARY COOLANT	RED	During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled unisolable leakage of approximately 18 GPM of primary coolant.
ZION 1	12/73	UNIQUE	ME 250521	SHUTDOWN 100/N	502 LCD	CONTAINMENT	RED	REC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.
BROWNE FERRY 1	08/74	UNIQUE	BE 259005	SHUTDOWN 025/	173 LCD	PRIMARY COOLANT	HI	Drywell leakage from unidentified source exceeded the 5 GPM Tech Spec limit. It was found that the leakage was due to one recirculation pump seal failure.
COOK 1	08/75	STANDARD	ME 313004	SHUTDOWN 100/N	79 LCD	ALDI FEEDWATER	HI	The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
DUNE ARKOLD	05/74	UNIQUE	BE 331021	SHUTDOWN 025/RLN	134 LCD	AC POWER	HI	Diesel Generator "D" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
INJUNCTION POINT 2	07/74	UNIQUE	ME 247001	VIOL./SHUT 100/N	64 LCD	CONTAINMENT	HI	Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.
BROWNE FERRY 1	08/74	UNIQUE	BE 259004	SHUTDOWN 014/	21 LCD	REACTOR CONTROL	LD	During annual shutdown, the reactor mode switch was moved from "run" to "startup" resulting in a half scram. To rapidly shutdown the reactor the rod notch override switch was used, violating the Tech Specs.
CLAVERT CLIFFS 1	05/75	STANDARD	CE 317005	SHUTDOWN 100/N	607 LCD	COMP COOLING	LD	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
CLAVERT CLIFFS 1	05/75	STANDARD	CE 317018	SHUTDOWN 100/N	320 LCD	MAIN STEAM ISOLATION	LD	Due to actuator oil leakage HEIV seal could be damaged during fast closure resulting in inability of valve to isolate completely.
DUNE ARKOLD	05/74	UNIQUE	BE 331013	SHUTDOWN 100/N	412 LCD	PRIMARY COOLANT	LD	Reactor coolant system leakage of greater than 5 GPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve.
DUNE ARKOLD	05/74	UNIQUE	BE 331041	SHUTDOWN 036/N	0 LCD	PRIMARY COOLANT	LD	Plant was shutdown due to high reactor water conductivity of 14 microhm/cm vs Tech Spec limit of 10.
KEARLAGE	06/74	UNIQUE	ME 305015	SHUTDOWN 100/N	0 LCD	HIGH PRESSURE	LD	Utility error: Refueling Water Storage Tank level was discovered to be 1.25 below Tech Spec limit due to an earlier human error in valve misalignment.

Table A-6 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY DATE OF COMMERCIAL OPERATION OF PLANT

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUED BY	LEX NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (K)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
MILLSTONE 2	12/75	STANDARD	CE	336006	SHUTDOWN	100/N	118	LCD	REACTOR PROTECTION	LO	Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
ZION 2	09/74	UNIQUE	WE	304020	SHUTDOWN	100/N	21	LCD	—	LO	The containment temperature was calculated to be 120.48 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.
COOK 1	08/75	STANDARD	WE	315035	SHUTDOWN	100/N	0	ADMINISTRATIVE	CONTAINMENT SPRAY	MED	Utility error: Acceptance criteria of an ice condenser intermediate deck door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
COOPER	07/74	UNIQUE	BE	298007	SHUTDOWN	070/N	42	LCD	STANDBY GAS TREATMENT	MED	Standby Gas Treatment System inoperable due to a construction crew mistake in knocking a fire hydrant and subsequent water hammer creation.
INDIAN POINT 2	07/74	UNIQUE	WE	247003	SHUTDOWN	100/N	28	BL/SSS	REACTOR PROTECTION	MED	BPI channel drift.
OSAGE 3	12/74	UNIQUE	BU	287006	SHUTDOWN	100/N	321	LCD	PRIMARY COOLANT	MED	Primary to secondary leakage in Steam Generator 3 exceeded Technical Specification limits (2 leaking tubes identified).
PERCH BOTTOM 3	12/74	UNIQUE	BE	278012	SHUTDOWN	100/N	0	LCD	STANDBY GAS TREATMENT	MED	Standby Gas Treatment System ductwork in the reactor building sump room was found to be collapsed resulting in lack of secondary containment integrity.
BROWNS FERRY 3	03/77	UNIQUE	BE	296012	SHUTDOWN	005/SU	58	SURVEILLANCE	PRESSURE RELIEF	HI	Utility error: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual action followed. Test procedure inadequacy cited.
NORTH ANNA 2	12/80	STANDARD	WE	335013	SHUTDOWN	100/N	179	LCD	AC POWER	HI	Plant was shutdown when 2 diesel generators tripped during surveillance testing.
SALEN 1	06/77	STANDARD	WE	272012	SHUTDOWN	000/SO	0	LCD	ECCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 50-311)
SALEN 1	06/77	STANDARD	WE	272024	VIOL/SHUT	005/SU	48 +	LCD	POWER CONVERSION	HI	During startup S.G. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
ARKANSAS 2	03/80	STANDARD	CE	368003	SHUTDOWN	004/	0	LCD	CHEM. & VOL. CONTROL	LO	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain temp & pressure failed (overcooling event) in part due to a boric acid leak.
BEAVER VALLEY 1	04/77	STANDARD	WE	334007	SHUTDOWN	100/N	76	LCD	CONTAINMENT	LO	Containment recirculation cooling coils Chilled Water System outlet isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
CALVERT CLIFFS 2	04/77	STANDARD	CE	318006	SHUTDOWN	097/N	214	LCD	PRIMARY COOLANT	LO	Reactor coolant leakage from unidentified source of greater than 1 BPM. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.
DAVIS-BESSE 1	11/77	STANDARD	BU	346006	SHUTDOWN	094/N	50	LCD	CHEM. & VOL. CONTROL	LO	Makeup tank level was dropping at a rate of 3 BPM violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and so was not a pressure boundary leakage.

Table A-6 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY DATE OF COMMERCIAL OPERATION OF PLANT

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SHUTDOWN OR T.S. LEVEL (S) VIOLATION PLANT	NUMBER OR T.S. LEVEL (S) VIOLATION PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
HATCH 2	06/79	STANDARD	GE	366038	SHUTDOWN 099/N	77	LCD	PRIMARY COOLANT	LO	Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits (due to hinge pin leakage on containment feedwater check valve).
SILEN 1	06/77	STANDARD	ME	272025	VIB/SHUT 000/3	12	* LCD	CONTAINMENT	LO	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valve. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.
CDON 2	07/78	STANDARD	ME	316018	SHUTDOWN 003/SU	49	LCD	REACTION CONTROL	RED	During the initial startup two control rods were found to be misaligned violating Tech Spec limits.
HEATH RAMP 1	06/78	STANDARD	ME	328001	SHUTDOWN 001/	748	LCD	PRIMARY COOLANT	RED	High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube ruptures.
GRAND BELF 1	03/85	STANDARD	GE	416024	SHUTDOWN 004/SO	0	LCD	CONTAINMENT SPRAY	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. 10 hrs. because plant is not operating.)
SILEN 2	10/81	STANDARD	ME	311016	SHUTDOWN 100/N	460	LCD	HIGH PRESSURE INJ.	HI	A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.
SILEN 2	10/81	STANDARD	ME	311122	SHUTDOWN 095/N	347	LCD	EDCS	HI	Steam/Disk separation problems with RPD loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Docket 30-311).
SUN ONE/NE 2	08/83	STANDARD	CE	361046	SHUTDOWN 100/N	0	LCD	COMP COOLING WATER	HI	Local residual of saltwater cooling to train 8 of component cooling water system (CDWS) heat exchanger indicated a fault condition. Since train 8 of CDWS was out of service an LCD Tech Spec was violated.
SESLUON 1	07/81	STANDARD	ME	327031	SHUTDOWN 000/SO	0	LCD	PRESSURE RELIEF	HI	Inoperable pressurizer relief valve.
SESLUON 2	01/85	STANDARD	GE	388019	SHUTDOWN 071/	0	LCD	RESIDUAL HT. REMOVAL	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown began.
WMP-2	12/84	STANDARD	GE	397103	SHUTDOWN 043/	0	LCD	HEAT, VENT & RE	HI	Due to equipment motor failures, cooling was lost to the RPD room 81, Biv 1 battery and battery charger room and emergency bus. This resulted in the assumption of many safety related systems being inoperable. 10 hrs. because plant is not operating.)
WMP-2	12/84	STANDARD	GE	397123	SHUTDOWN 096/	240	LCD	HEAT, VENT & RE	HI	Critical Switchgear room MAC unit found to be vibrating excessively unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (Hrs based on Grey Book info availability chart.)
GRAND BELF 1	03/85	STANDARD	GE	416028	SHUTDOWN 004/SO	0	LCD	RECIRCULATION	LO	One recirculation pump could not be started following a store and loss of a 300 KV switchyard bus. 10 hrs. because plant is not operating.)
GRAND BELF 1	03/85	STANDARD	GE	416041	SHUTDOWN 001/SO	0	LCD	RECIRCULATION	LO	Difficulties with more than one jet pump during surveillance. 10 hrs. because plant is not operating.)
LABELLE 2	06/84	STANDARD	GE	374015	SHUTDOWN 005/SU	216	LCD	HEAT, VENT & RE	LO	Utility error: Operational mode was changed (to run from start-up) while an LCD was in effect (control room ventilation emergency shutdown train 8 out of service).

Table A-6 (continued)
CLASSIFICATION OF SHUTDOWN EVENTS BY DATE OF COMMERCIAL OPERATION OF PLANT

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MOSS LEN NO. SHUTDOWN OR T.S. LEVEL (S)/ VIOLATION PLANT	POWER	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
RESOLINE 1	12/81	STANDARD	ME 359007	SHUTDOWN 000/50	0	SURVEILLANCE	PRIMARY COOLANT LO		Utility error: It was discovered that the 18 month functional testing of the reactor coolant pump time delay overcurrent protective devices was not done properly.
RESOLINE 1	12/81	STANDARD	ME 359029	SHUTDOWN 100/70	30	LCD	UPPER MEMO INJECTION	LO	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Causes repetitive makeup from system surge tank due to valve leakage.
RESOLINE 1	07/81	STANDARD	ME 327005	SHUTDOWN 045/	18	LCD	ACCUMULATOR	LO	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be re-ur-ved to the allowable range in the required time the plant was shutdown.
RESOLINE 2	06/82	STANDARD	ME 328013	SHUTDOWN 100/70	235	LCD	CONTAINMENT	LO	During normal operation pressurizer relief tank rupture disc was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressures. Pressure reached 0.35 PSID exceeding LCD limit of 0.3 PSID.
FORLEY 2	07/82	STANDARD	ME 364008	SHUTDOWN 100/70	352	LCD	PRIMARY COOLANT	RED	Two steam generator tubes were found to be defective based on tests.
SALIN 2	10/81	STANDARD	ME 311006	SHUTDOWN 100/70	0	LCD	CONTAINMENT	RED	Utility error: During routine surveillance three containment isolation valves became inoperable due to loss of a 4KV vital bus as a result of paralleling of generators out of phase.
SALIN 2	10/81	STANDARD	ME 311011	SHUTDOWN 006/50	189	LCD	ENRCL	RED	Steam generator feedwater flow indication channels were inoperable during a test.
RESOLINE 1	07/81	STANDARD	ME 327030	SHUTDOWN 030/	500	LCD	PRIMARY COOLANT	RED	Reactor coolant system leakage of 25-35 BPH due to an incore detector blizable tube failure.
RESOLINE 1	06/83	STANDARD	BE 387045	SHUTDOWN 025/	85	SURVEILLANCE	REACTOR PROTECTION	RED	Utility Error: Failure to perform 18 month test of screen discharge valves vent and drain valves. Valves subsequently failed response time test.
RESOLINE 2	01/85	STANDARD	BE 388009	SHUTDOWN 000/50	0	LCD	PRESSURE RELIEF	RED	Malfunction of the suppression chamber drywell vacuum breakers. 10 hrs. because plant is not operating.)
UMP-2	12/84	STANDARD	BE 397003	SHUTDOWN 000/50	0	LCD	REACTOR PROTECTION	RED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. 10 outage hours because plant is not operating.)
UMP-2	12/84	STANDARD	BE 397004	SHUTDOWN 001/50	0	LCD	REACTOR PROTECTION	RED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. 10 outage hrs. because plant is not operating.)

see Total vss

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ATTACHMENT B

<u>Table No.</u>		<u>Page</u>
B-1	CLASSIFICATION OF LERS ACCORDING TO PLANT NAME AND LER NO.	B-3
B-2	CLASSIFICATION OF LERS ACCORDING TO SYSTEM AFFECTED	B-49

Tables B-1 and B-2 provide listings of all of the technical specification-related LERs for 1984. Table A-1 is a listing of the events by plant. Table B-2 is a listing of the events sorted by the system affected and the relative safety significance. For example: on the second page of Table B-2 the list of the 33 events that affected the AC power system begins. Within this section of the table, the nine events (affecting AC power) ranked high in relative safety significance are listed first, followed by the eleven low events and then the thirteen medium events. These two tables contain listings of the same 701 events. The following information is provided, in both tables, for each event.

- Plant name
- Date of commercial operation
- Type of technical specifications (standard vs unique)
- Vendor
- LER number
- Event classification (shutdown, violation)
- Power level (and in some cases plant mode)
- Outage duration
- Technical specification category
- System affected
- Relative safety significance
- Event description

Table B-1. CLASSIFICATION OF LERS ACCORDING TO PLANT NAME AND LER NO.

Table 9-1
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMPLETION	TYPE OF TECHNICAL SPECIFICATION	WHERE LER NO. SPECIFIED	POWER ON T.S. LEVEL	VIOLATION PLANT STATUS	OUTLINE DESCRIPTION (HMS)	SYSTEM SPECIFICATION CATEGORY	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
AMERICAN 2	03/90	STANDARD	CE 364003	SHUTDOWN 004/N		0 LTO	CHER. 4 VOL. CONTROL	LO	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain low pressure failed (overcoming event) in part due to a boron acid leak. Channel 8 of the reactor flux monitor subchannel was out of service due to detector saturation for a period exceeding the allowed Tech Spec limit of 48 hours.
AMERICAN 2	03/90	STANDARD	CE 364005	VIOLATION 050/N		0 LTO	REACTOR PROTECTION	ME3	Utility error: For 2 silicon one channel (of 4) of the core production calculations was bypassed while a second channel was out of service for modifications to software.
AMERICAN 2	03/90	STANDARD	CE 364006	VIOLATION 060/N		0 LTO	REACTOR PROTECTION	ME3	The response time of one resistance temp. detector (RTD) was bypassed Tech Spec limits for greater than 1 hr after discovery. RTD is used for 80% channel cold leg temp. input.
AMERICAN 2	03/90	STANDARD	CE 364009	VIOLATION 100/N		0 LTO	REACTOR PROTECTION	ME3	Reconnaissance parameters had been input into the computer code that calculates peak pin power and radial peaking factors.
AMERICAN 2	03/90	STANDARD	CE 364010	VIOLATION 100/N		0 S.B.S.SS	REACTOR PROTECTION	ME	A primary containment overcurrent protection device was bypassed, repaired, since installation. Engineering analysis was performed to allow removal of the jumper.
AMERICAN 2	03/90	STANDARD	CE 364012	VIOLATION 100/N		0 LTO	CONTAINMENT	ME3	Utility error: 8 breached fire protection barrier was not identified as such during a walkdown or as part of the verification of controlled documentation. A penetration fire barrier damper failed to completely close during a test. Damper is located in the exhaust duct for the B electrical equipment room. 8 fire switch had previously been posted.
AMERICAN 2	03/90	STANDARD	CE 364013	VIOLATION 100/N		0 ADMIN/STRICTIVE	FIRE PROTECTION	ME3	
AMERICAN 2	03/90	STANDARD	CE 364016	VIOLATION 100/N		0 LTO	FIRE PROTECTION	LO	

Table B-1 (continued)
CLASSIFICATION OF LENS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUED LER NO. VENUE	STATUS VIOLATION PLANT	POWER ON T.S. LEVEL (M) VIOLATION	OUTSIDE SPECIFICATION (HMS)	TECHNICAL CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ARROWHEADS 2	03/80	STANDARD	CE	368017	VIOLATION 100/M	0	LCD	FINE PROTECTION	LO	A fire barrier penetration, containing telephone cabling, in a 3 hr barrier was found in a degraded state. A fire watch was established.
ARROWHEADS 2	03/80	STANDARD	CE	368018	VIOLATION 100/M	0	LCD	CONTAINMENT SPRAY	LO	Utility error: Operator discovered 'g' train sodium hydroxide pump manual discharge isolation valve in locked closed position, not required locked open position. Probable cause of misalignment was failure to reposition after previous monthly survey.
ARROWHEADS 2	03/80	STANDARD	CE	368022	VIOLATION 100/M	0	LCD	PRIMARY COOLANT	LO	Both containment atmospheric monitoring system units were not operable. Therefore reactor coolant leakage systems were below Tech Spec operability limits.
ARROWHEADS 2	03/80	STANDARD	CE	368023	VIOLATION 000/SD	0	LCD	PRIMARY COOLANT	MED	Hydrogen purge activities led to inaccuracies in coolant level indication (temp. indicator being used). RCS partially drained caviting RCP pump. In correcting problem, coolant temp. increased to 205 degrees F changing operational mode from 5 to 4
ARROWHEADS 2	03/80	STANDARD	CE	368025	VIOLATION 100/M	0	SLIDES	REACTOR PROTECTION	HI	Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel B core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs.
ARROWHEADS 2 BERNER VALLEY 1	03/80 04/77	STANDARD STANDARD	CE ME	368029 334005	VIOLATION 100/M VIOLATION 000/SD	0	LCD SURVEILLANCE	FINE PROTECTION CONTAINMENT	LO HI	Fire door between DND-1 and 2 would not fully close. Fire watch established. Utility error: During a quality assurance audit it was found that two surveillance procedures were inadequate. These procedures are for containment integrity penetration verification and switchover from safety injection to recirculation mode.
BERNER VALLEY 1	04/77	STANDARD	ME	334006	VIOLATION 000/SD	0	SURVEILLANCE	DC POWER	HI	Utility error: 18 month load tests on batteries did not test at actual emergency load levels.
BERNER VALLEY 1	04/77	STANDARD	ME	334007	SHUTDOWN 100/M	75	LCD	CONTAINMENT	LO	Containment recirculation cooling coils Chilled Water System outlet isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
BERNER VALLEY 1	04/77	STANDARD	ME	334009	VIOLATION 000/	0	ADMINISTRATIVE	FINE PROTECTION	LO	Utility error: Procedures for test of containment smoke detectors required test only when unit was shut down. Tech Specs require detectors to be tested every 6 months.
BERNER VALLEY 1	04/77	STANDARD	ME	334010	VIOLATION 100/M	0	LCD	CONTAINMENT; CG	MED	During the performance of six month hydrogen recombiner test, one of the recombiner's thermal blower tripped and could not be fired so was declared inoperable. Since it took over 30 days allowed to repair the recombiner, a T.S. was violated.
BERNER VALLEY 1	04/77	STANDARD	ME	334013	VIOLATION 100/M	0	SURVEILLANCE	COMP COOLING WATER	HI	Inconsistencies were found in pump test requirements resulting in pump being declared inoperable. Test procedures modified to meet ASME standards.
BERNER VALLEY 1	04/77	STANDARD	ME	334018	VIOLATION 000/SD	0	ADMINISTRATIVE	REACTOR PROTECTION	MED	Pressurizer pressure trip channel test procedure used an improper reference pressure. Trip value was 35 higher than it should have been.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE LER NO. SHUTDOWN	POWER ON T.S. LEVEL (%) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BEAVER VALLEY 1	04/77	STANDARD	ME	334019 SHUTDOWN 000/SD	0	LCD	PRESSURE RELIEF	RED	Safety relief valve pilot cartridge set pressure was not within limits of 2400 plus or minus 15.
BIG ROCK POINT	12/62	UNIQUE	BE	130001 VIOL/SHUT 000/SD	371	LCD	DEPRESSURIZATION	HI	Three out of 4 Reactor Depressurization System Isolation valves failed to open during test.
BIG ROCK POINT	12/62	UNIQUE	BE	130014 VIOLATION 091/N	0	SURVEILLANCE	REACTOR CONTROL	LO	The daily exercise of each control rod that is not fully inserted was not performed one day.
BROWNS FERRY 1	08/74	UNIQUE	BE	259004 SHUTDOWN 014/	21	LCD	REACTOR CONTROL	LO	During annual shutdown, the reactor mode switch was moved from "run" to "startup" resulting in a half scram. To rapidly shutdown the reactor the rod notch override switch was used, violating the Tech Specs.
BROWNS FERRY 1	08/74	UNIQUE	BE	259017 VIOLATION 097/N	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Routine check of a radiation monitor that monitors control room air supply duct was not performed within the required time by Tech Specs.
BROWNS FERRY 1	08/74	UNIQUE	BE	259019 VIOLATION 100/N	0	SURVEILLANCE	DC POWER	RED	Test required measurement of battery pilot cell temperatures as opposed to adjacent cell required by Tech Specs. A revision to Tech Specs (to read pilot cell) is planned.
BROWNS FERRY 1	08/74	UNIQUE	BE	259026 SHUTDOWN 009/	173	LCD	PRIMARY COOLANT	HI	Drywell leakage from unidentified source exceeded the 5 BPP Tech Spec limit. It was found that the leakage was due to one recirculation pump seal failure.
BROWNS FERRY 1	08/74	UNIQUE	LC	259029 VIOLATION 100/N	0	LCD	SERVICE WATER	LO	ASRE section XI pump pressure criteria were not met by 4 residual heat removal service pumps (RWSPs) although the Tech Spec flow criteria were met.
BROWNS FERRY 1	08/74	UNIQUE	BE	259031 VIOLATION 100/N	0	SURVEILLANCE	SERVICE WATER	RED	During power operation one residual heat removal service water pump became inoperable. Tech Specs allow 30 day operation if the other pump is proved operable immediately and every 15 days. Immediate operability of second loop was not demonstrated.
BROWNS FERRY 1	08/74	UNIQUE	BE	259032 VIOLATION 100/N	0	LCD	CORE SPRAY	HI	Utility error: As a result of a personnel error during a core spray logic test, an inboard injection valve was left open allowing backflow of primary coolant. Loop 1 of the spray injection system was isolated and a 7 day LCD was started.
BROWNS FERRY 3	03/77	UNIQUE	BE	256012 SHUTDOWN 005/SD	56	SURVEILLANCE	PRESSURE RELIEF	HI	Utility error: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual action followed. Test procedure inadequacy cited.
BRAUNSTICK 1	03/77	STANDARD	BE	325015 VIOLATION 076/N	0	ADMINISTRATIVE	RADIATION MONITOR	LO	Utility error: It was discovered that the test procedure for channel functional test of main service water system effluent rad. monitor did not provide T.S. required testing of monitor dome scale & high voltage supply low acceptable alarm functions.
BRAUNSTICK 1	03/77	STANDARD	BE	325019 VIOLATION 100/N	0	LCD	RADIATION MONITOR	LO	Utility error: Reactor building ventilation radiation monitor was inoperable for 2 months due to the removal of an annunciation point card.
BRAUNSTICK 1	03/77	STANDARD	BE	325024 VIOLATION 000/SD	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: The required grab sampling of gaseous radioactive waste effluents from off-gas stack was not performed until approx. two hours beyond the sampling frequency requirement.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SAFETY OR T.S. VIOLATION	POWER LEVEL (S) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BRIDGEVIEW 2	11/75	STANDARD	BE	324005	VIOLATION 000/50	0	LOD	PRIMARY COOLANT	LO	Utility error: During review of plant documentation it was found that when valve packing of the reactor water cleanup sys. inlet outboard isolation valve was adjusted the personnel failed to follow plant instructions with respect to entering a LOD.
BYRON 1	02/85	STANDARD	ME	454001	VIOLATION 000/50	0	LOD	FIRE PROTECTION	ME	Utility error: For 11 hours hourly fire switches were not performed due to a security sensor shortage.
BYRON 1	02/85	STANDARD	ME	454002	VIOLATION 000/50	0	SURVEILLANCE	RESIDUAL HT. REMOVAL MONITOR	ME	Utility error: Required fire and operability surveillance requirements were not performed for an 8 hr period during shutdown.
BYRON 1	02/85	STANDARD	ME	454004	VIOLATION 000/50	0	LOD	MONITOR	LO	Utility error: Process radiation monitor for train A control room HRC failed and train B isolated. A cleanup filter unit not yet declared operable was initially used to replace isolated train.
BYRON 1	02/85	STANDARD	ME	454006	VIOLATION 000/50	0	LOD	HEAT, VENT & RC	LO	Prior to plant operation, construction activity resulted in the inability of the control room heating, ventilation and air conditioning system to maintain a positive pressure.
BYRON 1	02/85	STANDARD	ME	454007	VIOLATION 000/50	0	LOD	RADIATION MONITOR	LO	Utility error: With vent stack radiation monitors inoperable, scans required 12 hr grab samples were not taken.
BYRON 1	02/85	STANDARD	ME	454008	VIOLATION 000/50	0	LOD	FIRE PROTECTION	HI	Utility error: Fire protection foam system for diesel oil storage tank was removed from service. Fire watch was established but removed prior to restoring foam system.
BYRON 1	02/85	STANDARD	ME	454009	VIOLATION 000/50	0	LOD	RADIATION MONITOR	LO	Utility error: Samples taken from ass bldg. vent stack particulate & iodine monitors while the stack monitor was inoperable were not analyzed within 48 hours as required.
BYRON 1	02/85	STANDARD	ME	454014	VIOLATION 000/50	0	LOD	RADIATION MONITOR	LO	Utility error: 12 hr grab samples from process monitors for the reactor containment fan coolers and essential service water outlets were not obtained within the specified time limit.
BYRON 1	02/85	STANDARD	ME	454015	VIOLATION 000/50	0	LOD	RADIATION MONITOR	LO	Utility error: Bus bldg vent stack monitor was declared inoperable. A gas grab sample required by the Tech Spec action statement was missed due to personnel error.
BYRON 1	02/85	STANDARD	ME	454026	VIOLATION 000/50	0	LOD	CHEM. & VOL. CONTROL	LO	Allowed 1 hr time for blockage of a channel of the boron dilution prevention system was exceeded by 3 minutes.
BYRON 1	02/85	STANDARD	ME	454032	VIOLATION 000/50	0	LOD	FIRE PROTECTION	LO	Penetration in fuel handling building was not properly sealed. Hourly fire watch was established.
BYRON 1	02/85	STANDARD	ME	454036	VIOLATION 000/50	0	LOD	CHEM. & VOL. CONTROL	ME	With 1 diesel generator inoperable the charging pump powered from the 2nd diesel generator was out of service. Charging pumps' operabilities were switched at shift turnover.
BYRON 1	02/85	STANDARD	ME	454041	VIOLATION 000/50	0	LOD	FIRE PROTECTION	LO	A fire detector (not proven operable) was used in the fuel handling building for 2 months with no fire watch.
BYRON 1	02/85	STANDARD	ME	454042	VIOLATION 000/50	0	SURVEILLANCE	FIRE PROTECTION	HI	Utility error: A control valve for the CDR system in the river screen house was not properly included in the surveillance procedures.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENDOR	LER NO.	SHUTDOWN OR T.S. LEVEL (S) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CALLAWAY 1	01/85	STANDARD	ME	483001	VIOLATION 000/SD	0	LOD	FIRE PROTECTION	LO	Utility error: Hourly fire watch patrols for four rooms in the control building were missed. The missed rooms resulted in fire barriers with unacceptable penetration seals not being patrolled during 1 fire patrol.
CALLAWAY 1	01/85	STANDARD	ME	483005	VIOLATION 000/SD	0	LOD	RADIATION MONITOR	LO	Utility error: Continuous sampling of iodine and particulate while the unit vent wide range gas monitor was turned off was not performed.
CALLAWAY 1	01/85	STANDARD	ME	483007	VIOLATION 000/SD	0	LOD	RADIATION MONITOR	LO	Utility error: Continuous sampling of iodine and particulate while the unit vent wide range gas monitor was turned off was not performed.
CALLAWAY 1	01/85	STANDARD	ME	483021	VIOLATION 000/SD	0	LOD	REACTOR PROTECTION	RED	Utility error: Train A (inhibited) and train B (test) of SPS were inoperable, rendering source range flux doubling inoperable.
CALLAWAY 1	01/85	STANDARD	ME	483025	VIOLATION 000/SD	0	LOD	AC POWER	LO	Utility error: With 1 D.B. out of service the required verification of the availability of 2 offsite sources was not performed within 1 hour.
CALLAWAY 1	01/85	STANDARD	ME	483029	VIOLATION 000/SD	0	LOD	CONTAINMENT SPARGY	HI	Manual isolation valves were in the locked closed position while in mode 4.
CALLAWAY 1	01/85	STANDARD	ME	483030	VIOLATION 000/SD	0	LOD	CONTAINMENT	LO	Containment temperatures was to be calculated from average of 4 air cooler inlet temps. With one temp. element failed only 3 temps were used to calculate average temp.
CALLAWAY 1	01/85	STANDARD	ME	483033	VIOLATION 000/SD	0	SURVEILLANCE	CONTAINMENT	HI	Utility error: After maintenance, required cycling test and response tests were not performed on some containment isolation valves.
CALLAWAY 1	01/85	STANDARD	ME	483038	VIOLATION 000/SD	0	LOD	INDEMNITY	LO	Excess oxygen in systems resulted in oxygen monitors being turned off. Required samples were taken from the wrong gas decay tank for a period of 5 days.
CALLAWAY 1	01/85	STANDARD	ME	483039	VIOLATION 000/SD	0	LOD	DC POWER	HI	System returned to service without proper testing. Due to loss of 48V DC power, a load sequencer undervoltage relay failed operational test and could not be placed in tripped condition. Plant cooldown was initiated.
CALLAWAY 1	01/85	STANDARD	ME	483043	VIOLATION 000/SD	0	LOD	REACTOR PROTECTION	RED	Utility error: Steamline pressure indication had been improperly calibrated. Steamline low pressure safety injection trips declared inoperable.
CALLAWAY 1	01/85	STANDARD	ME	483049	VIOLATION 000/SD	0	LOD	AUX FEEDWATER	HI	Pump suction pressure indicator was out of specification and not placed in tripped condition within 1 hr (isoler event for SB main steam outlet pressure indicator).
CALLAWAY 1	01/85	STANDARD	ME	483053	VIOLATION 000/SD	0	LOD	WASTE BRS	LO	With an inoperable oxygen outlet monitor, 24 hr grab samples are required for the waste gas holdup system. One such sample was missed.
CALLAWAY 1	01/85	STANDARD	ME	483066	VIOLATION 100/N	0	SURVEILLANCE	RADIATION MONITOR	LO	Required leak tests of sealed sources were not performed within the 6 month test frequency specified by Tech Specs.
CALLAWAY 1	05/75	STANDARD	CE	317001	VIOLATION 100/N	0	LOD	CONTAINMENT	RED	Utility error: It was discovered that the post accident sampling system return to the reactor coolant drain tank isolation valve was open without being administratively controlled as required by Tech Specs.
CALLAWAY 1	05/75	STANDARD	CE	317003	VIOLATION 100/N	0	LOD	CONTAINMENT	HI	During performance of an operational maintenance check on the post accident sampling system, two containment isolation valves were opened. This violates the Tech Spec requirements of not opening containment isolation valves while at power.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF VIOLATION	LESSOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CLVERT CLIFFS 1	05/75	STANDARD	CE	317005	SHUTDOWN	100/W	607	LCD	COMP COOLING WATER	LO	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
CLVERT CLIFFS 1	05/75	STANDARD	CE	317006	VIOLATION	003/	0	LCD	SLUMP	LO	With power less than 5%, S.B. chemistry conditions were being improved. The operator discovered that channel A narrow range power that he had relied on was malfunctioning-the power actually was close to 7% with contain. slump level alarms inoperable.
CLVERT CLIFFS 1	05/75	STANDARD	CE	317012	VIOLATION	000/	0	LCD	RADIATION MONITOR	LO	Utility error: During waste gas tank purging the vent particulate monitor was out of service. Env. Tech Specs require this monitor to be operable.
CLVERT CLIFFS 1	05/75	STANDARD	CE	317018	SHUTDOWN	100/W	320	LCD	MAIN STEAM ISOLATION	LO	Due to actuator oil leakage MSIV seat could be damaged during fast closure resulting in inability of valve to isolate completely.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318001	VIOLATION	100/W	0	LCD	HEAT, VENT & AC HI	HI	It was discovered that an ECCS pump room ventilation system exhaust fan discharge damper had been isolated.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318002	VIOLATION	098/W	0	LCD	RADIATION MONITOR	LO	It was discovered that a condenser off-gas radiation monitor was not operating correctly.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318005	VIOLATION	000/SD	0	LCD	AC POWER	HI	Utility error: During plant shutdown with one diesel generator inoperable, the second diesel generator was inadvertently taken out of service.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318006	SHUTDOWN	097/W	214	LCD	PRIMARY COOLANT	LO	Reactor coolant leakage from unidentified source of greater than 1 BPA. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318007	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LO	Utility error: Three liquid waste releases were made without an accurate analysis of the sample activity. Inaccurate sample results were caused by software problems.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318008	VIOLATION	000/SD	0	LCD	FUEL HANDLING	LO	Utility error: Two control rod drive assemblies were removed with the reactor building 25 ton crane rather than the manipulator crane and ass. hoist as required.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318009	VIOLATION	000/SD	0	LCD	CONTAINMENT	LO	Utility error: Daily surveillance of unit vent flow rate monitor was not performed.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318010	VIOLATION	000/SD	0	LCD	CONTAINMENT	LO	Utility error: Containment integrity was not completely verified 72 hrs before fuel loading, 1 valve check was missed (containment hydrogen purge inlet test vent) due to procedural error.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318011	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LO	Utility error: Composite sampler on the conventional waste water treatment system declared inoperable and required grab sample prior to a water release was not made.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318012	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LO	Utility error: During test, more than one control rod bank was removed from fully inserted. Administrative/procedural error cited.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318013	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LO	Utility error: Discharge from liquid radwaste system was made after liquid radwaste monitor had been inoperable for 14 days. Tech Spec LCD is 14 days.
CLVERT CLIFFS 2	04/77	STANDARD	CE	318014	VIOLATION	000/SD	0	LCD	CONTAINMENT	LO	Utility error: Required test of refueling water containment isolation valve after maintenance was not performed prior to power ascension.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSRS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CATAMBA 1	06/85	STANDARD	WE	413016	VIOLATION 000/SD		0	LCO	RADIATION MONITOR	LO	Multiple radiation monitors were out of service at the same time (particulate, gas & vent plus vent sampling pump failed due to electric breaker fault).
CATAMBA 1	06/85	STANDARD	WE	413019	VIOLATION 000/SD		0	LCO	RADIATION MONITOR	LO	Utility error: Multiple monitors were out of service at the same time (particulate, gas and vent plus vent sampling pump failed due to personnel error).
CATAMBA 1	06/85	STANDARD	WE	413020	VIOLATION 000/SD		0	ADMINISTRATIVE	CONTAINMENT	MED	Utility error: Unsatisfactory test results on multiple containment electrical penetration fuses were not noted at the time of test (fuses not within required resistance range).
CATAMBA 1	06/85	STANDARD	WE	413022	VIOLATION 000/SD		0	LCO	SUMP	HI	Utility error: Containment sump inlet screen doors were opened during power operation violating LCO.
CATAMBA 1	06/85	STANDARD	WE	413026	VIOLATION 000/HSB		0	LCO	FIRE PROTECTION	MED	Utility error: Required fire watches were not always performed in certain areas with inoperable fire detectors.
CATAMBA 1	06/85	STANDARD	WE	413030	VIOLATION 000/HSB		0	ADMINISTRATIVE	CONTAINMENT	MED	Utility error: Inadequate procedures may have led to erroneous valve leak rate test results.
CATAMBA 1	06/85	STANDARD	WE	413032	VIOLATION 000/SD		0	LCO	FIRE PROTECTION	MED	Utility error: Seven inoperable fire barrier penetrations were discovered. The date the penetrations were initially left inoperable could not be determined.
COOK 1	08/75	STANDARD	WE	315001	VIOLATION 005/N		0	LCO	FIRE PROTECTION	MED	Utility error: A single hourly fire watch was missed for the fire barrier penetration seals in the charging pump rooms.
COOK 1	08/75	STANDARD	WE	315003	VIOLATION 077/N		0	LCO	FIRE PROTECTION	MED	Utility error: A fire door to the turbine driven aux feed pump room was not operable due to electrical cords being placed through the penetration. A continuous fire watch was not put into effect immediately.
COOK 1	08/75	STANDARD	WE	315004	SHUTDOWN 100/N		79	LCO	AUX FEEDWATER	HI	The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
COOK 1	08/75	STANDARD	WE	315005	VIOLATION 100/N		0	LCO	WASTE GAS	LO	Utility error: Waste gas system sample line was removed from service and the system was not properly realigned, i.e., both compressors were not shut off.
COOK 1	08/75	STANDARD	WE	315006	VIOLATION 100/N		0	LCO	FIRE PROTECTION	HI	Utility error: It was discovered that a fire door to the hallway to the aux feed pump rooms was inoperable without a fire watch.
COOK 1	08/75	STANDARD	WE	315013	VIOLATION 100/N		0	LCO	FIRE PROTECTION	MED	Utility error: It was discovered that a fire watch had not been maintained in an area where fire retardant materials had been removed from a previously protected conduit containing safety related cables.
COOK 1	08/75	STANDARD	WE	315014	VIOLATION 100/N		0	LCO	LOW PRESS IMJ.	HI	Utility error: During scheduled surveillance nonlicensed operator inadvertently isolated north low head safety inj pump by closing a valve. The licensed CR operator had previously isolated south pump making whole system inoperable for 3 to 5 mins.
COOK 1	08/75	STANDARD	WE	315015	VIOLATION 000/SD		0	LCO	RADIATION MONITOR	LO	Utility error: Due to failure of a radiation monitor, once-a-day monitoring of the area with portable monitoring instrumentation was in effect. Requirement was violated when the technician failed to make daily surveys of spent fuel storage area.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	LESSOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (%)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COOK 1	06/75	STANDARD	ME	315016	VIOLATION 000/50		0	LCD	RUX FEEDWATER HI	HI	Utility error: While in Mode 3 (during startup) sea feedwater pump switch was placed in neutral (vs run or auto) position. In this mode sea feedwater switch is not to be in neutral position.
COOK 1	06/75	STANDARD	ME	315020	VIOLATION 100/70		0	LCD	FINE PROTECTION MED	MED	It was discovered that the control room cable vault supply fan damper was blocked with a piece of conduit.
COOK 1	06/75	STANDARD	ME	315022	VIOLATION 100/70		0	LCD	RADIATION MONITOR	LO	Utility error: It was found that incorrect dose rate factors were being calculated for the gaseous releases.
COOK 1	06/75	STANDARD	ME	315023	VIOLATION 100/70		0	LCD	RADIATION MONITOR	LO	Utility error: The steam generator blowdown sample collection was not taken on daily basis as required by Tech Specs.
COOK 1	06/75	STANDARD	ME	315024	VIOLATION 100/70		0	LCD	HEAT, VENT & RE LO	LO	During test spent fuel vent system dampers did not change position on spent fuel pit high radiation alarm. Tech Specs require at least 1 operable during fuel movement.
COOK 1	06/75	STANDARD	ME	315025	VIOLATION 100/70		0	SURVEILLANCE	FINE PROTECTION MED	MED	Due to draining error and valve mislabeling, 2 fire protective valves went untested for an extended period.
COOK 1	06/75	STANDARD	ME	315026	VIOLATION 100/70		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: With sea building radiation monitor inoperable, required 8 hr grab sample not taken for approximately 13 hours.
COOK 1	06/75	STANDARD	ME	315027	VIOLATION 100/70		0	LCD	FINE PROTECTION LO	LO	Utility error: Fire watch was 25 minutes late in performing hourly inspection of barrier protecting reactor cable tunnel.
COOK 1	06/75	STANDARD	ME	315030	VIOLATION 055/70		0	LCD	CONTAINMENT; CS	LO	With normal monitoring system inoperable, a grab sample was taken 8 minutes late (due to repair sampling system being temporarily inoperable).
COOK 1	06/75	STANDARD	ME	315031	VIOLATION 100/70		0	SURVEILLANCE	CODE MONITOR	LO	The axial flux difference (AFD) monitor alarm was restored to operable status without monitoring the indicated AFD at least once per hr for the first 24 hrs after alarm restoration. The AFD was monitored 13 hrs later.
COOK 1	06/75	STANDARD	ME	315033	VIOLATION 100/70		0	LCD	FINE PROTECTION HI	HI	Utility error: Fire doors to pressurizer heater transformer and 4PV switchgear room failed surveillance test but were not declared inoperable due to personnel error.
COOK 1	06/75	STANDARD	ME	315035	SHUTDOWN 100/70		0	ADMINISTRATIVE	CONTAINMENT SPRAY	MED	Utility error: Acceptance criteria of an ice condenser intermediate duct door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
COOK 2	07/78	STANDARD	ME	316004	VIOLATION 000/50		0	LCD	CONTAINMENT SPRAY	LO	While shutdown for refueling, some ice condenser ice baskets were determined to be below the Tech Spec value of 1220 lbs.
COOK 2	07/78	STANDARD	ME	316005	VIOLATION 000/50		0	LCD	CONTAINMENT	HI	While performing containment leakage tests, it was found that the accumulated leakage rate exceeds the Tech Spec limits.
COOK 2	07/78	STANDARD	ME	316009	VIOLATION 000/50		0	LCD	FINE PROTECTION HI	HI	Utility error: During refueling it was discovered that the condenser fire protection system on the cable tunnel was isolated with no fire watch.
COOK 2	07/78	STANDARD	ME	316015	VIOLATION 000/50		0	SURVEILLANCE	REACTOR PROTECTION	LO	Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VENUE	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (S) PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COOK 2	07/78	STANDARD	ME	316016	VIOLATION 000/SD		0	LCD	FIRE PROTECTION MED		Two fire seals were found inoperable without a fire watch being present.
COOK 2	07/78	STANDARD	ME	316017	VIOLATION 000/HSD		0	SURVEILLANCE	REACTION PROTECTION	MED	Utility error: It was found that the shift change checks for the intermediate range smoke detectors were not performed.
COOK 2	07/78	STANDARD	ME	316018	SHUTDOWN 003/SU		49	LCD	REACTION CONTROL MED		During the initial startup two control rods were found to be misaligned violating Tech Spec limits.
COOK 2	07/78	STANDARD	ME	316019	VIOLATION 000/HSD		0	LCD	REACTION PROTECTION	MED	Utility error: 1 (of 4) reactor coolant pumps was removed from service. The associated (two channels) was not placed in the tripped position as required.
COOK 2	07/78	STANDARD	ME	316021	VIOLATION 000/HSD		0	ADMINISTRATIVE	MONITOR	LO	Utility error: Revision to procedures did not adequately consider Tech Specs, resulting in operation of valves to take upper containment air samples in violation of LCDs.
COOK 2	07/78	STANDARD	ME	316022	VIOLATION 000/SD		0	LCD	FIRE PROTECTION HI		Utility error: During refueling outage it was discovered that the carbon fire protection system on the reactor cable tunnel was isolated with no fire watch present.
COOK 2	07/78	STANDARD	ME	316023	VIOLATION 100/N		0	LCD	FIRE PROTECTION MED		A fire damper in the low pressure D2 fire suppression system was found to be inoperable.
COOK 2	07/78	STANDARD	ME	316025	VIOLATION 100/N		0	LCD	FIRE PROTECTION MED		Utility error: Fire damper in control room cable vault closed but did not latch. Personnel performing test failed to declare damper inoperable.
COOK 2	07/78	STANDARD	ME	316027	VIOLATION 100/N		0	LCD	FIRE PROTECTION MED		Utility error: Due to personnel error, two cable vault fire protection system was isolated with no fire watch present for a period of over 8 hours.
COOK 2	07/78	STANDARD	ME	316033	VIOLATION 100/N		0	LCD	HEAT, VENT & RC HI		An obstruction was discovered in the safeguards ventilation ductwork above the south safety injection pump motor. Inability of the ventilation equipment to perform its cooling function may have rendered the pump inoperable during blackout conditions.
COOPER	07/74	UNIQUE	BE	298006	VIOLATION 070/N		0	LCD	RADIATION MONITOR	LO	Utility error: The off-gas stack sampler was taking a sample from the off-gas filter building rather than the off-gas stack.
COOPER	07/74	UNIQUE	BE	298007	SHUTDOWN 070/N		42	LCD	STANDBY GAS TREATMENT	MED	Standby Gas Treatment System inoperable due to a construction crew mistake in knocking a fire hydrant and subsequent water hammer creation.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302006	VIOLATION 096/N		0	LCD	AC POWER	LO	Utility error: Following taking an emergency diesel generator out for maintenance the surveillance requirement that must be performed within one hour was not performed.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302007	VIOLATION 046/		0	SURVEILLANCE	RADIATION MONITOR	LO	During a routine secondary plant liquid release, it was discovered that the flow recorder was not functioning properly.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302009	VIOLATION 097/N		0	SURVEILLANCE	ENGR.	HI	Utility error: During normal operation it was discovered that the engineered safeguards monthly functional tests had not been performed.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302011	VIOLATION 094/N		0	LCD	SAFEGUARDS SERVICE WATER	MED	A discharge check valve on one of the required nuclear service's monitor pumps was found stuck open due to corrosion resulting in lack of redundancy.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302012	VIOLATION 099/N		0	LCD	HEAT, VENT & RC LO		An instrument air supply line to the dampers in the auxiliary building exhaust fans was broken, resulting in both exhaust fans being inoperable.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMPLETION OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS LER NO. VENDOR	SAFETY OR T.S. VIOLATION	POWER LEVEL (K) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CRYSTAL RIVER 3	03/77	STANDARD	BM	302016	VIOLATION 098/N	0	LCD	RADIATION MONITOR	LO	During an audit it was found that the alarm/trip setpoint for the fuel storage pool area gaseous activity process was set at higher level than Tech Spec requirement. The requirement that no spent fuel movement be allowed was violated.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302017	VIOLATION 097/N	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: An auxiliary bldg and fuel handling area exhaust duct monitor grab sample analysis was not performed within 2 to 5 hours following a change in power level exceeding 15%.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302018	VIOLATION 075/N	0	ADMINISTRATIVE	DC POWER	RED	Utility error: Battery specific gravity was not within test limits. LER was generated because event was not initially reported.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302019	VIOLATION 093/N	0	LCD	AC POWER	LO	Utility error: With one Diesel Generator inoperable a required operability test was not performed within required time limits (9 hrs+ versus 8 hrs required).
CRYSTAL RIVER 3	03/77	STANDARD	BM	302020	VIOLATION 042/N	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: After power level change, required ans. building fuel handling area exhaust duct sample not taken on schedule.
DAVIS-BESSE 1	11/77	STANDARD	BM	346005	VIOLATION 094/N	0	LCD	CONTROL ROOM	LO	Utility error: During surveillance, both control room emergency ventilation chiller control power switches found in the off position. This rendered both control room emergency ventilation trains inoperable.
DAVIS-BESSE 1	11/77	STANDARD	BM	346006	SAFETY 094/N	50	LCD	CHEM & VOL. CONTROL	LO	Makeup tank level was dropping at a rate of 3 BPM violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and so was not a pressure boundary leakage.
DAVIS-BESSE 1	11/77	STANDARD	BM	346008	VIOLATION 094/N	0	LCD	AC POWER	RED	Vendor DO problems resulted in 2 newly installed transformers not having required seismic qualification documentation. Transformers power BG & low voltage switchgear room ventilation. New transformers were replaced with originals.
DAVIS-BESSE 1	11/77	STANDARD	BM	346016	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC	LO	Spent fuel pool ventilation system technically was not operable during fuel movement. 1 train was out of service, second was operating but not tested as required.
DAVIS-BESSE 1	11/77	STANDARD	BM	346017	VIOLATION 090/N	0	SURVEILLANCE	FIRE PROTECTION	LO	Monthly visual inspection of fire hose stations was completed 3.5 hrs late.
DAVIS-BESSE 1	11/77	STANDARD	BM	346018	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC	LO	Makeup flow of outside air for the control room emergency ventilation system exceeded test limits for several years.
DAVIS-BESSE 1	11/77	STANDARD	BM	346022	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC	LO	It was discovered that both trains of control room ventilation systems were powered from the same 480V Bus.
D14BLD CANYON 1	05/85	STANDARD	ME	275002	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC	LO	Utility error: The liquid reductant effluent line isolation valve failed to close during a surveillance test.
D14BLD CANYON 1	05/85	STANDARD	ME	275010	VIOLATION 000/MSB	0	LCD	RODMASTER	LO	While in hot standby it was discovered that both subsystems to emergency core cooling system were inoperable.
D14BLD CANYON 1	05/85	STANDARD	ME	275013	VIOLATION 000/MSB	0	LCD	EDCS	HI	Utility error: With the plant vent iodine sampler flow rate monitor inoperable, plant personnel did not comply with the Tech Spec sampling requirements for about 9 days.
D14BLD CANYON 1	05/85	STANDARD	ME	275017	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LO	

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENOR	LER NO. SHUTDOWN ON T.S. LEVEL (S) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
DUALD CANYON 1	05/85	STANDARD	NE	275024 VIOLATION 000/NSB	0	SURVEILLANCE	FIRE PROTECTION HI		Utility errors: It was discovered that a test of fire detection system supervisory circuitry was not performed within Tech Spec required time. Dryden content of gaseous radiaste system exceeded 45 for more than 1 hour due to operational error (support system was depressurized drawing air into gaseous radiaste system).
DUALD CANYON 1	05/85	STANDARD	NE	275027 VIOLATION 000/SD	0	LCD	RODURASTE	LO	Utility errors: During unit shutdown an unplanned radioactive release to discharge canal was discovered which exceeded the Tech Spec limits.
DRESEEN 1	06/60	UNIQUE	BE	010001 VIOLATION 000/SD	0	LCD	RODURASTE	LO	Utility errors: The primary containment integrity was broken by a foreman by leaving the inner and outer personnel access doors open.
DRESEEN 1	06/60	UNIQUE	BE	010002 VIOLATION 000/SD	0	LCD	CONTAINMENT	HI	One core spray valve failed to operate from control room. The other one was operable.
DRESEEN 2	06/70	UNIQUE	BE	237003 VIOLATION 096/N	0	LCD	CORE SPRAY	HI	During a test, core spray action valve failed to close from the control room. Following taking a security computer out of service, the fire manual was not notified until the following day for detection of operability of control room fire detection alarm and sprinkler alarm printer.
DRESEEN 2	06/70	UNIQUE	BE	237004 VIOLATION 000/	0	LCD	CORE SPRAY	NEB	Utility errors: LPCI corner room submerse door to the lower basement was found open and unattended.
DRESEEN 2	06/70	UNIQUE	BE	237005 VIOLATION 099/N	0	LCD	FIRE PROTECTION	NEB	Utility errors: Carbon system master valve (part of fire protection system) had not been tested in the automatic mode.
DRESEEN 2	06/70	UNIQUE	BE	237006 VIOLATION 000/	0	ADMINISTRATIVE	VIOLATION	LO	Lack of breaker indication for bus 29 in control room resulted in a breaker check leading to inadvertent breaker trip and leaving LPCI system inoperable for about 28 minutes.
DRESEEN 2	06/70	UNIQUE	BE	237008 VIOLATION 100/N	0	SURVEILLANCE	FIRE PROTECTION	NEB	Several unsealed penetrations were discovered in the fire walls of 3B rooms.
DRESEEN 2	06/70	UNIQUE	BE	237010 VIOLATION 005/SD	0	LCD	LOW PRESSURE	HI	Utility errors: Surveillance of HPCI (initiation?) due to turbine trip on low reactor pressure was performed two days past the due date.
DRESEEN 2	06/70	UNIQUE	BE	237011 VIOLATION 096/N	0	LCD	FIRE PROTECTION	HI	During startup the padlock of the drywell equipment and floor drain sumps was not done within Tech Spec specified time.
DRESEEN 2	06/70	UNIQUE	BE	237014 VIOLATION 000/	0	SURVEILLANCE	HIGH PRESSURE	LO	Utility errors: Due to security computer being unavailable the fire protection and sprinkler control room alarms' indications were inoperable. This requires hourly fire inspection which was violated.
DRESEEN 2	06/70	UNIQUE	BE	237015 VIOLATION 001/SD	0	SURVEILLANCE	CONTAINMENT	LO	Utility errors: Reactor building monthly fire inspection was incomplete for Units 2&3.
DRESEEN 2	06/70	UNIQUE	BE	237017 VIOLATION 080/N	0	LCD	FIRE PROTECTION	NEB	Utility errors: Two of seven recently installed hose station roof valves were valued shut.
DRESEEN 2	06/70	UNIQUE	BE	237018 VIOLATION 076/N	0	SURVEILLANCE	FIRE PROTECTION	NEB	Utility errors: Fall in limit switch on a control rod drive was diagnosed during refueling without removing rod from service.
DRESEEN 2	06/70	UNIQUE	BE	237020 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	NEB	Utility errors: Both the reactor building and turbine building interlocking doors were open simultaneously, violating secondary containment.
DRESEEN 2	06/70	UNIQUE	BE	237021 VIOLATION 000/SD	0	LCD	REACTION	LO	
DRESEEN 2	06/70	UNIQUE	BE	237024 VIOLATION 000/	0	LCD	PROTECTION	LO	
DRESEEN 2	06/70	UNIQUE	BE	237024 VIOLATION 000/	0	LCD	CONTAINMENT	LO	

Table B-1 (continued)
CLASSIFICATION OF LEAKS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SAUTODIAN ON T.S. LEVEL (%) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
DRESDEN 3	10/71	UNIQUE	BE 249003	VIOLATION 001/90	0	LCD	CONTAINMENT	LD	Utility error: Primary containment integrity was broken for 5 minutes to search for a missing individual.
DRESDEN 3	10/71	UNIQUE	BE 249005	VIOLATION 000/50	0	ADMINISTRATIVE	ISOLATION PROTECTION	LD	Utility error: Submarine door between torus and low pressure coolant injection pump room was open and unattended.
DRESDEN 3	10/71	UNIQUE	BE 249006	VIOLATION 000/90	0	LCD	PRIMARY COOLANT	LD	Utility error: Reactor vessel was not vented at less than 149 degrees F.
DRESDEN 3	10/71	UNIQUE	BE 249008	VIOLATION 004/N	0	LCD	CONTAINMENT	LD	Utility error: The differential pressure between drywell and torus was below 1 PSID required by Tech Specs. Cause: a closed pressure control valve, due to isocoper completion of an earlier procedure.
DRESDEN 3	10/71	UNIQUE	BE 249009	VIOLATION 091/N	0	LCD	PRESSURE RELIEF	NEP	High concentration of oxygen was found in the torus. Cause: failure of the torus to reactor building vacuum breaker.
DRESDEN 3	10/71	UNIQUE	BE 249013	SAUTODIAN 091/	0	LCD	STANDBY GAS TREATMENT	LD	A butterfly valve between the drywell and Standby Gas Treatment System was taken out to repair a leak, violating the Tech Spec requirements relating to the primary containment purge system operability.
DRESDEN 3	10/71	UNIQUE	BE 249014	VIOLATION 006/N	0	SURVEILLANCE	LOW PRESSURE INJ.	HI	Utility error: Required surveillance not performed on "g" loop prior to removing "g" loop from service for maintenance.
DRESDEN 3	10/71	UNIQUE	BE 249019	VIOLATION 000/	0	SURVEILLANCE	CONTAINMENT	LD	Improper calibration of test equipment to measure leakage rates resulted in a measured leakage greater than that allowed.
DURME ANNEX D	05/74	UNIQUE	BE 331005	VIOLATION 100/RLN	0	LCD	RESIDUAL HT. REMOVAL	HI	During plant operation the residual heat removal/core spray fill pump motor was tripped by the circuit breaker thermal overload relay lowering the system pressure and violating T.S. requirements.
DURME ANNEX D	05/74	UNIQUE	BE 331009	VIOLATION 100/N	0	LCD	LOW PRESSURE INJ.	HI	During the performance of a low pressure coolant injection surveillance test, the residual heat removal system discharge pressure dropped to zero PSID violating an LCD Tech Spec.
DURME ANNEX D	05/74	UNIQUE	BE 331013	SAUTODIAN 100/N	412	LCD	PRIMARY COOLANT	LD	Reactor coolant system leakage of greater than 5 BPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve.
DURME ANNEX D	05/74	UNIQUE	BE 331021	SAUTODIAN 058/RLN	134	LCD	AC POWER	HI	Diesel Generator "g" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
DURME ANNEX D	05/74	UNIQUE	BE 331030	VIOLATION 096/N	0	LCD	CONTAINMENT	NEP	Utility error: Due to personnel error, two secondary containment airlock doors were simultaneously open violating the T.S. reqts.
DURME ANNEX D	05/74	UNIQUE	BE 331034	VIOLATION 096/N	0	LCD	CONTAINMENT	LD	Utility error: During 1 month, four unintentional secondary violations of secondary containment occurred when 2 airlocks were simultaneously left open. These occurred as a result of defective door interlock and latching mechanism.
DURME ANNEX D	05/74	UNIQUE	BE 331035	VIOLATION 063/N	0	LCD	CONTAINMENT	LD	4 secondary violations of secondary containment 12 airlock doors open simultaneously) during power.
DURME ANNEX D	05/74	UNIQUE	BE 331038	VIOLATION 033/N	0	LCD	CONTAINMENT	LD	3 secondary violations of secondary containment 12 airlock doors open simultaneously) during power.

Table B-1 (continued)
CLASSIFICATION OF LEAKS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO. SHUTDOWN OR T.S. LEVEL (S) VIOLATION	POWER ON T.S. LEVEL (S) VIOLATION	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
DURNE ANNEX	05/74	UNITILE	BE 331041	SHUTDOWN 0.36/N	0	LCD	PRIMARY COOLANT	LO	Plant was shutdown due to high reactor water conductivity of 14 microhm/cm vs Tech Spec limit of 10.
DURNE ANNEX	05/74	UNITILE	BE 331044	VIOLATION 082/N	0	LCD	FIRE PROTECTION	RED	Utility error: 1 of 11 fire hose stations rendered inoperable during maintenance for approximately 10 hours (exceeding 1 hour limit). Causes facility communication.
FORLEY 1	12/77	STANDARD	ME 348003	VIOLATION 000/SD	0	LCD	REACTOR PROTECTION	LO	Utility error: Detuning of the reactor vessel stands was begun with a reactor coolant system boron concentration of 1879 ppm which is lower than the minimum 2000 ppm required by Tech Specs.
FORLEY 1	12/77	STANDARD	ME 348007	VIOLATION 000/SD	0	LCD	FIRE PROTECTION	HI	Utility error: A 416V bus fire suppression system was found inoperable. No hourly fire watch was established.
FORLEY 1	12/77	STANDARD	ME 348010	VIOLATION 000/SD	0	SURVEILLANCE	CONTAINMENT	RED	Adequate leak rate tests of 2 fuel transfer tubes had not been performed due to procedural inadequacies.
FORLEY 1	12/77	STANDARD	ME 348013	VIOLATION 100/N	0	LCD	FIRE PROTECTION	HI	Utility error: A continuous fire watch had not been posted in the component cooling water heat exchanger and pump room as required.
FORLEY 1	12/77	STANDARD	ME 348014	VIOLATION 100/N	0	SURVEILLANCE	REACTOR PROTECTION	RED	Potentialities for the input from power range channel RT-43 to the overtemperature-delta-T circuit had not been adjusted following recalling.
FORLEY 1	12/77	STANDARD	ME 348015	VIOLATION 100/N	0	LCD	FIRE PROTECTION	LO	Utility error: In 2 cases, with sprinklers out of service, hourly, instead of the required continuous, fire watches were established.
FORLEY 1	12/77	STANDARD	ME 348016	VIOLATION 100/N	0	SURVEILLANCE	CONTAINMENT	RED	Procedures to test stroke time of the reactor coolant drain tank discharge containment isolation valve was found to be inadequate.
FORLEY 1	12/77	STANDARD	ME 348017	VIOLATION 100/N	0	LCD	POWER CONVERSION	RED	Both channels of feedwater isolation were rendered inoperable to a regulating valve when that valve was removed from service for repair.
FORLEY 1	12/77	STANDARD	ME 348018	VIOLATION 000/CD	0	LCD	RESIDUAL HT. REMOVAL	RED	Utility error: During cooldown both system trains were placed in recirc mode. According to Tech Specs the system was then inoperable. Procedures did not prohibit this action.
FORLEY 1	12/77	STANDARD	ME 348019	VIOLATION 100/N	0	LCD	FIRE PROTECTION	LO	A control room fire penetration barrier was found not to be properly sealed.
FORLEY 1	12/77	STANDARD	ME 348021	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Fire watch was established.
FORLEY 1	12/77	STANDARD	ME 348022	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: 3 hourly fire watches in the service water intake structure were not performed.
FORLEY 2	07/82	STANDARD	ME 354002	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: A part of the fire protection system had been isolated for approximately 1.5 days. No fire watch was established.
FORLEY 2	07/82	STANDARD	ME 354007	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: An hourly firewatch patrol in the B train was building battery charger room, as required by Tech Specs, had not been performed during the 1300-1400 and 1400-1500 hours.
FORLEY 2	07/82	STANDARD	ME 354007	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: It was determined that a continuous fire watch had not been maintained as required by Tech Specs when fire protection sprinkler system 2B-25 was removed from service. A continuous fire watch was posted but not maintained as required.

Table B-1 (continued)
CLASSIFICATION OF LENS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VENDOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (%) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
FARLEY 2	07/82	STANDARD	ME	364008	SHUTDOWN 100/N		352	LCD	PRIMARY COOLANT EMER. SAFEBARDS	RED	Two steam generator tubes were found to be defective based on tests. S.B. steam flow channel exceeded allowable tolerance for difference in redundant channels. Channel not tripped within 1 hour as required (required in 4 hours).
FARLEY 2	07/82	STANDARD	ME	364010	VIOLATION 022/		0	LCD		HI	Potentialometer settings for power range channel N43 to overtemperature-delta-T circuit had not been within Tech Spec requirements.
FARLEY 2	07/82	STANDARD	ME	364011	VIOLATION 100/N		0	LCD	REACTION PROTECTION	RED	Utility error: Open valve between inner and outer isolation valves on the containment purge line defeating outer isolation valves.
FARLEY 2	07/82	STANDARD	ME	364014	VIOLATION 100/N		0	LCD	CONTAINMENT	RED	Utility error: With aux. building fire protection sprinklers inoperable, a continuous fire watch was not maintained.
FARLEY 2	07/82	STANDARD	ME	364015	VIOLATION 100/N		0	LCD	FIRE PROTECTION	RED	A local leak rate test on two main steam isolation valves showed local leak rates exceeding the Tech Spec limits.
FITZPATRICK	07/75	UNIQUE	BE	333007	VIOLATION 000/SD		0	LCD	PRIMARY COOLANT	RED	Utility error: During routine startup operations the 100 degrees F per hour heatup rate limit of Tech Specs was exceeded by 4 degrees F during a one hour period.
FITZPATRICK	07/75	UNIQUE	BE	333008	VIOLATION 001/SD		0	LCD	PRIMARY COOLANT	RED	Utility error: Violation of primary containment occurred when on 3 occasions both the inner and outer drywell entry hatch doors were left open for personnel entry and exit. The total duration of the violation was about 3 min.
FITZPATRICK	07/75	UNIQUE	BE	333014	VIOLATION 000/SD		0	LCD	CONTAINMENT	LD	Utility error: The remote alarm function for the east cable tunnel smoke detection system was declared inoperable due to a faulty transmitter and an hourly fire watch was put in effect. This fire watch was not conducted for a 2 hr period.
FITZPATRICK	07/75	UNIQUE	BE	333017	VIOLATION 100/N		0	LCD	FIRE PROTECTION	RED	
FORT ST. WILSON FT. COLLINS 1	01/79	UNIQUE	BA				0				
FORT ST. WILSON FT. COLLINS 1	09/73	UNIQUE	CE	285001	VIOLATION 100/N		0	LCD	FUEL HANDLING	LD	Utility error: Tech Specs require that if a crane with the interlocks inoperable or bypassed is moving above the spent fuel pool, a supervisor be present. This requirement was violated for 20 minutes because a supervisor was not present.
FT. COLLINS 1	09/73	UNIQUE	CE	285002	VIOLATION 000/SD		0	LCD	PRESSURE RELIEF	RED	During a test it was found that five of the ten main steam safety valves failed to lift within the plus or minus 15 of their nameplate setpoint values.
FT. COLLINS 1	09/73	UNIQUE	CE	285004	VIOLATION 000/		0	LCD	PRIMARY COOLANT	LD	During shutdown reactor coolant radioactivity was found to be in excess of 1.0 microcurie/gm dose equivalent. 8 hr sample interval was initiated.
FT. COLLINS 1	09/73	UNIQUE	CE	285008	SHUTDOWN 000/SD		1390	LCD	PRIMARY COOLANT	HI	During startup a large leakage of 110 GPM at 1800 PSIA was noticed. This was due to steam generator tube rupture. (Hours due to extension of outage.)
FT. COLLINS 1	09/73	UNIQUE	CE	285020	VIOLATION 100/		0	LCD	CONTAINMENT: CS	RED	Utility error: One hydrogen analyzer was improperly restored to service after maintenance resulting in improper hydrogen concentration readings.
GINN 6	03/70	UNIQUE	ME	244001	SHUTDOWN 096/N		0	LCD	ACCUMULATOR	LD	The accumulator pressure was found to be low due to a valve in closed position leaking nitrogen.
GINN 6	03/70	UNIQUE	ME	244004	VIOLATION 000/SD		0	LCD	WASTE GAS	LD	Mista Gas System oxygen analyzer was inoperable requiring samples to be taken every 4 hours. This requirement was violated.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF OPERATION	TYPE OF TECHNICAL SPECIFICATION	MSSS VENDOR	LER NO. SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (M) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
STAND	03/70	UNIQUE	ME	244008	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI		Utility error: Fire Protection to Turbine Bldg/Control Room will spray system was unavailable due to an error leaving two isolation valves in closed position.
STAND	03/70	UNIQUE	ME	244010	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI		Utility error: It was discovered that for 15 hours a switch controlling the alarm bell and several auto actuation of the alarm systems for a portion of fire protection system was left in the "off" position.
STAND	03/70	UNIQUE	ME	244011	VIOLATION 100/N	0	LCD	REACTOR PROTECTION	LD	Utility error: DC power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit.
STAND	03/70	UNIQUE	ME	244012	VIOLATION 100/N	0	LCD	HEAT, VENT & AC LD		Utility error: Bus Bldg exhaust fan was inoperable for an unspecified period during which fuel was moved in the spent fuel pit. Tech Specs require this fan to be operable during fuel movement.
STAND	03/70	UNIQUE	ME	244013	VIOLATION 100/N	0	ADMINISTRATIVE	REACTOR PROTECTION	NEB	Utility error: Procedural change to surveillance test allowed omission of a particular rod bank test that should not have been omitted.
GRAND BILF 1	03/85	STANDARD	BE	415007	VIOLATION 000/SD	0	LCD	FIRE PROTECTION NEB		Utility error: Missing fuses would have prevented fire dampers from operating in the computer and control panel room.
GRAND BILF 1	03/85	STANDARD	BE	415012	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION LD		Utility error: Elevator doors in control and sea buildings act as fire doors and are required to be verified closed once a day (since they are not locked). Surveillance did not include these doors.
GRAND BILF 1	03/85	STANDARD	CE	415014	VIOLATION 000/SD	0	LCD	FIRE PROTECTION HI		Utility error: Ten fire penetrations found with breached seals. Fire switches established.
GRAND BILF 1	03/85	STANDARD	BE	415019	VIOLATION 000/SD	0	LCD	CONTAINMENT HI		Due to a design error the manual isolation signal needed concurrent HI drywell press or reactor low level. Consequence should not have been required.
GRAND BILF 1	03/85	STANDARD	BE	415021	VIOLATION 003/	0	LCD	RADIATION MONITOR	LD	Utility error: With the condenser offgas hydrogen monitor inoperable, required 4 hr grab samples were taken from 3 to 20 minutes late.
GRAND BILF 1	03/85	STANDARD	BE	415023	VIOLATION 004/	0	LCD	PRIMARY COOLANT LD		Utility error: All continuous conductivity monitors were inoperable and on line assessments were not taken every 4 hours (for 10.5 hrs.).
GRAND BILF 1	03/85	STANDARD	BE	415024	SHUTDOWN 004/SD	0	LCD	CONTAINMENT SPRAY	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. (0 hrs. because plant is not operating.)
GRAND BILF 1	03/85	STANDARD	BE	415025	VIOLATION 003/	0	ADMINISTRATIVE	CONTAINMENT	LD	Utility error: A superseded procedure was used to test drywell purge system flow prior to startup on 2 occasions.
GRAND BILF 1	03/85	STANDARD	BE	415026	VIOLATION 003/	0	LCD	AC POWER	NEB	Fuel oil day tank for the 3 gas turbines held 270 gallons. Tech Spec minimum allowed was 300 gallons, tank capacity was increased to 700 gallons.
GRAND BILF 1	03/85	STANDARD	BE	415028	SHUTDOWN 004/SD	0	LCD	RECIRCULATION	LD	Des recirculation pump could not be started following a store and loss of a 300 KV switchyard bus. (0 hrs. because plant is not operating.)
GRAND BILF 1	03/85	STANDARD	BE	415029	VIOLATION 000/SD	0	SURVEILLANCE	CONTAINMENT	LD	Utility error: Proper test of the drywell purge compressor after maintenance and before startup was not performed.
GRAND BILF 1	03/85	STANDARD	BE	415035	VIOLATION 004/	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: Test results were voided due to analyst error resulting in exceeding surveillance interval.

Table B-1 (continued)
CLASSIFICATION OF LENS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUED BY	LER NO.	SAFETY OR T.S. VIOLATION	POWER LEVEL (W)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
GRAND BULL I	03/85	STANDARD	BE	416037	VIOLATION 000/		0	LCD	RADIATION MONITOR	LO	Utility error: On 3 occasions with the redwaste building noble gas monitor inoperable, the required 8 hr grab samples were taken late (by up to 24 minutes).
GRAND BULL I	03/85	STANDARD	BE	416038	VIOLATION 000/		0	SURVEILLANCE	AC POWER	NEB	Utility error: Fuel viscosity surveillance requirements for the diesel generator and the gas turbine were not met.
GRAND BULL I	03/85	STANDARD	BE	416041	SAFETY 001/50		0	LCD	RECIRCULATION	LO	Difficulties with more than one jet pump during surveillance. (0 hrs. because plant is not operating.)
GRAND BULL I	03/85	STANDARD	BE	416047	VIOLATION 020/		0	LCD	PRIMARY COOLANT	LO	Bypass switches were in bypass (for longer than 1 hr limit) on the leakage detection systems of the reactor water cleanup, residual heat removal and reactor core isolation cooling systems.
GRAND BULL I	03/85	STANDARD	BE	416048	VIOLATION 019/		0	LCD	RADIATION MONITOR	LO	Utility error: With electric power off to fuel handling area vent system flow rate monitor and sample flow rate monitor, required 8 hr estimates of flow rates were not taken.
GRAND BULL I	03/85	STANDARD	BE	416049	VIOLATION 000/50		0	LCD	FIRE PROTECTION	LO	Utility error: Hourly fire switch established per 1 LCD instead of continuous switch required since fire detector and door were inoperable.
GRAND BULL I	03/85	STANDARD	BE	416050	VIOLATION 004/		0	LCD	FIRE PROTECTION	HI	Utility error: Safe shutdown related cable raceways (located in Unit 2 side of control bldg) found without required fire rated barriers (barriers were not included in construction document). Fire switches were not established in a timely manner.
GRAND BULL I	03/85	STANDARD	BE	416054	VIOLATION 000/50		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Effluent cumulative dose calculations were not calculated within the Tech Spec time limits (1 day later).
GRAND BULL I	03/85	STANDARD	BE	416060	VIOLATION 000/50		0	SURVEILLANCE	POWER CONVERSION	NEB	Utility error: Turbine stop and control valves had not been cycled for 34 days following startup, valves are to be cycled every 14 days.
GRAND BULL I	03/85	STANDARD	BE	416061	VIOLATION 000/50		0	LCD	FIRE PROTECTION	LO	One hourly fire switch of two levels of the aux building was not performed (inspector became locked in RAB piping room).
HADDON NECK	01/88	UNIQUE	ME	213001	VIOLATION 100/N		0	LCD	FIRE PROTECTION	HI	A number of fire doors were found to be inoperable during power operation. During a routine surveillance it was found that the fire detection system protecting the screenwall building was inoperable due to inoperability of both normal and backup power supplies.
HADDON NECK	01/88	UNIQUE	ME	213002	VIOLATION 100/N		0	LCD	FIRE PROTECTION	HI	During power operation it was found that a fire door was inoperable.
HADDON NECK	01/88	UNIQUE	ME	213003	VIOLATION 100/N		0	LCD	FIRE PROTECTION	NEB	A penetration fire barrier was found inoperable during power operation.
HADDON NECK	01/88	UNIQUE	ME	213004	VIOLATION 092/N		0	LCD	FIRE PROTECTION	NEB	A fire door separating a safety related room from a non-safety area was discovered inoperable during power operation.
HADDON NECK	01/88	UNIQUE	ME	213005	VIOLATION 092/N		0	LCD	FIRE PROTECTION	NEB	A number of fire penetration seals were discovered inoperable during a routine inspection.
HADDON NECK	01/88	UNIQUE	ME	213006	VIOLATION 079/N		0	LCD	FIRE PROTECTION	NEB	A fire door separating a safety-related room from a non-safety related area was discovered inoperable during power operation.
HADDON NECK	01/88	UNIQUE	ME	213007	VIOLATION 000/50		0	LCD	CONTAINMENT	HI	While performing a containment integrated leak rate test, it was found that this rate exceeds the Tech Spec requirements.

Table B-1 (continued)
CLASSIFICATION OF LEAKS BY PLANT MORE AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO. SHUTDOWN OR T.S. LEVEL (S) VIOLATION	POWER OR T.S. LEVEL (S) VIOLATION	STATUS	OUTSIDE BURST (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
HADDON HEDX	01/68	UNITILE	ME 213012	VIOLATION 000/SD		0	LCD	CONTAINMENT	HI	While performing containment penetration local leak rate test, it was found that the leak rate exceeds the Tech Spec requirements.
HADDON HEDX	01/68	UNITILE	ME 213018	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	RED	Utility error: Fire door propped open for unknown period, probably in excess of allowed time of 1 hour.
HADDON HEDX	01/68	UNITILE	ME 213019	VIOLATION 100/N		0	LCD	CONTAINMENT	LO	MUREB-0737 required post accident sampling system must be operated by each chemistry technician during plant operation. Such action violates containment integrity.
HADDON HEDX	01/68	UNITILE	ME 213020	VIOLATION 000/SD		0	ADMINISTRATIVE	CONTAINMENT	LO	Utility error: Unqualified health physics technician given the responsibility to record employee dose readings in a high exposure area.
HADDON HEDX	01/68	UNITILE	ME 213022	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	HI	No fire barrier seal in barrier penetration between safety related areas Area Feedwater Bldg and Cable Vault.
HADDON HEDX	01/68	UNITILE	ME 213027	VIOLATION 000/HSEB		0	GLASS	REACTOR PROTECTION	RED	Setpoint drift caused 2 overpower trip setpoints to be above Tech Spec limits.
HATCH 1	12/75	UNITILE	BE 321004	VIOLATION 100/N		0	SURVEILLANCE	REACTOR PROTECTION	HI	It was discovered that the steam discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency.
HATCH 1	12/75	UNITILE	BE 321008	VIOLATION 100/N		0	SURVEILLANCE	STANDBY GAS TREATMENT	LO	Utility error: It was discovered that due to a surveillance tracking computer miscalculation the surveillance dose rates for the standby gas treatment system ventilation and valve operability had been missed.
HATCH 1	12/75	UNITILE	BE 321009	VIOLATION 000/SU		0	SURVEILLANCE	REACTOR PROTECTION	RED	Utility error: During startup it was discovered that the BSM 125 fire alarm test had not been performed within 24 hours of startup as required.
HATCH 1	12/75	UNITILE	BE 321018	VIOLATION 090/N		0	LCD	FIRE PROTECTION	RED	Utility error: During a fire barrier penetration meltdown it was discovered that numerous fire barrier penetration seals were not functional as required.
HATCH 1	12/75	UNITILE	BE 321024	VIOLATION 000/SD		0	LCD	PRESSURE RELIEF	RED	Six main steam relief valves failed to lift within plus or minus 15 tolerance required by Tech Specs.
HATCH 1	12/75	UNITILE	BE 321027	VIOLATION 000/SD		0	LCD	AC POWER	HI	All 3 BG were out of service (1 failed) at the same time for approximately 12 hours (core was unloaded at the time). Only 1 is required to be operable in this mode.
HATCH 2	08/79	STANDARD	BE 366002	VIOLATION 000/SD		0	LCD	PRESSURE RELIEF	RED	During performance of Wyle Laboratories testing of main steam safety relief valves (SRVs), five SRVs failed to lift in the 15 tolerance range required by Tech Specs.
HATCH 2	08/79	STANDARD	BE 366008	VIOLATION 000/SD		0	SURVEILLANCE	CONTAINMENT	HI	Utility error: Group 1 isolation logic channel checks and calibrations were not adequately incorporated into monthly procedures.
HATCH 2	08/79	STANDARD	BE 366011	VIOLATION 000/SD		0	SURVEILLANCE	FIRE PROTECTION	LO	Utility error: On 6/2/84 it was found that required weekly surveillance not done on fire hose station HC-30. Tech Specs require each fire hose station be demonstrated operable at least once per 31 days. Last allowed date for this station 5/18/84.
HATCH 2	08/79	STANDARD	BE 366013	VIOLATION 000/SD		0	SURVEILLANCE	PRIMARY COOLANT	LO	Utility error: With the reactor water conductivity recorder out of service for maintenance, reactor water samples from alternate sources were not taken every 24 hrs as required.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
HATCH 2	08/79	STANDARD	GE	366014	VIOLATION	000/SD	0	LCD	REACTOR PROTECTION	HI	Utility error: Reactor recirculation pump auto trip relays had been removed from their sockets. Installation and operation of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84.
HATCH 2	08/79	STANDARD	GE	366015	VIOLATION	000/SD	0	SURVEILLANCE	SEISMIC	LO	Utility error: Monitoring of settlement of seismic category I structures had been performed 9 days after end of 45 day grace period.
HATCH 2	08/79	STANDARD	GE	366017	VIOLATION	000/SD	0	SURVEILLANCE	AC POWER	HI	Utility error: Diesel generator test frequency was not modified as required after 3 failures in 100 tests (new frequency should have been 7 days, tests were performed every 14 days).
HATCH 2	08/79	STANDARD	GE	366027	VIOLATION	000/SD	0	LCD	REACTOR PROTECTION	MED	Utility error: Isolation valves and test valves for 4 pressure transmitters were mispositioned. The mispositioning was the result of personnel error. The plant was operated in a condition prohibited by Tech Specs.
HATCH 2	08/79	STANDARD	GE	366028	VIOLATION	001/	0	LCD	RADIATION MONITOR	LO	Utility error: With the drywell iodine monitor out of service the frequency at which containment atmosphere grab samples surveillance was being performed was incorrect. Samples had been taken every 24 hrs, should have been taken every 4 hours.
HATCH 2	08/79	STANDARD	GE	366029	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	Utility error: In a switchgear room an open cabinet door prevented closure of a sliding fire barrier.
HATCH 2	08/79	STANDARD	GE	366030	VIOLATION	099/N	0	ADMINISTRATIVE	PRIMARY COOLANT	LO	Utility error: A Tech Spec change in frequency of test (18 months to 30 days) was not incorporated into procedures, resulting in 2 missed main steam line temperature channel tests.
HATCH 2	08/79	STANDARD	GE	366037	VIOLATION	100/N	0	LCD	CONTAINMENT	HI	During surveillance airlock door leakage in excess of Tech Specs was found.
HATCH 2	08/79	STANDARD	GE	366038	SHUTDOWN	099/N	77	LCD	PRIMARY COOLANT	LO	Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits (due to hinge pin leakage on containment feedwater check valve).
INDIAN POINT 2	07/74	UNIQUE	WE	247001	VIOL/SHUT	100/N	64	LCD	CONTAINMENT	HI	Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.
INDIAN POINT 2	07/74	UNIQUE	WE	247003	SHUTDOWN	100/N	28	SL&LSSS	REACTOR PROTECTION	MED	RPI channel drift.
INDIAN POINT 2	07/74	UNIQUE	WE	247005	VIOLATION	000/SD	0	LCD	MAIN STEAM ISOLATION	LO	During shutdown the main steam isolation valves failed to close within 5 second period required by Tech Specs.
INDIAN POINT 2	07/74	UNIQUE	WE	247007	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	Utility error: For approximately 4 hours the continuous fire watch which was in effect due to failure of halon fire protection system was interrupted.
INDIAN POINT 2	07/74	UNIQUE	WE	247020	VIOLATION	050/N	0	SURVEILLANCE	HEAT, VENT & AC	LO	No air flow detected in cable tunnel during surveillance test of fans. Cause - closed louvers.
INDIAN POINT 2	07/74	UNIQUE	WE	247023	VIOLATION	100/N	0	LCD	AUX FEEDWATER	HI	Regulating valve may not have permitted minimum flow required in FSAR Accident Analysis when throttled (initial flow rate limited to prevent water hammer event).
INDIAN POINT 3	08/76	UNIQUE	WE	246007	VIOLATION	100/N	0	SL&LSSS	REACTOR PROTECTION	MED	One of the nuclear power range channels was found to be faulty due to instrument drift.

Table B-1 (continued)
CLASSIFICATION OF LENS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF OPERATION	TYPE OF TECHNICAL SPECIFICATION	MOSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
KEARLE	06/74	UNIQUE	ME	305015	SHUTDOWN	100/N	0	LCD	HIGH PRESSURE INJ.	LO	Utility errors: Refueling Water Storage Tank level was discovered to be 1.35 below Tech Spec limit due to an earlier human error in valve assignment.
KEARLE	06/74	UNIQUE	ME	305021	VIOLATION	100/N	0	LCD	HIGH PRESSURE INJ.	HI	Utility errors: Boric acid tank selection switch was assigned and would have prevented switchover to safety injection section from refueling water storage tank.
LACROSSE	11/69	UNIQUE	RC	409004	VIOLATION	099/N	0	LCD	CONTAINMENT	RED	Inner airtight handheld leakage was identified during repairs. Outer airtight door was open violating containment integrity.
LACROSSE	11/69	UNIQUE	RC	409005	VIOLATION	099/N	0	LCD	FIRE PROTECTION	RED	A cable runaway fire barrier penetration had not been identified as such and therefore had not been sealed.
LACROSSE	11/69	UNIQUE	RC	409009	VIOLATION	065/N	0	LCD	FIRE PROTECTION	HI	Utility errors: Fire barrier in electrical penetration room blocked open (for ventilation) and no fire watch was established.
LACROSSE	11/69	UNIQUE	RC	409011	VIOLATION	000/H/SB	0	LCD	AC POWER	HI	During a loss of offsite power both diesel generators started, one failed to load (breaker fault). Testing of operable diesel was performed in 6.5 hrs instead of 4 hrs as required.
LACROSSE	11/69	UNIQUE	RC	409012	VIOLATION	095/N	0	LCD	COKE SPRAY	HI	System diesel driven pump started but failed to run during test (both system pumps went be operable). (Failure repaired in less than 12 hrs as required by 3.0.3.)
LACROSSE	11/69	UNIQUE	RC	409013	VIOLATION	098/N	0	SURVEILLANCE MONITOR	RADIATION	LO	Sampling of offgas was not performed within the Tech Spec frequency requirements.
LACROSSE	11/69	UNIQUE	RC	409018	SHUTDOWN	098/	99	SURVEILLANCE	REACTOR PROTECTION	RED	During test of Nuclear Instrumentation Channel a separate spurious high flux spike resulted in reactor scram.
LACROSSE	11/69	UNIQUE	RC	409022	VIOLATION	054/N	0	LCD	RESIDUAL HT. REMOVAL	HI	Utility errors: 1 of 2 inlet control valves on the shutdown condenser was removed from service for maint. (for 1 hr). LCD requires both valves be operable.
LACROSSE	11/69	UNIQUE	RC	409023	VIOLATION	094/N	0	LCD	CONTAINMENT	LO	Inner door seals of containment airtight leaked in excess of acceptance criteria. When outer door opened, containment integrity was violated.
LANSALLE I	10/82	STANDARD	BE	373021	VIOLATION	050/N	0	LCD	HEAT, VENT & AC	LO	Utility errors: Improper performance of maintenance resulted in control room heating, ventilation and AC ammonia detector inoperability.
LANSALLE I	10/82	STANDARD	BE	373024	VIOLATION	098/N	0	LCD	FIRE PROTECTION	LO	During a reinspection of electrical cable firestop, electrical cable penetrations in the computer room & in the control room were identified as having breakthroughs. An hourly fire watch was placed in effect & fire detection verified operable.
LANSALLE I	10/82	STANDARD	BE	373025	VIOLATION	095/N	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: A trapdoor on the auxiliary building roof, which allows entry into a high radiation area (trabesate pipe tunnel), was neither posted as a high radiation area nor secured in any manner.
LANSALLE I	10/82	STANDARD	BE	373026	VIOLATION	098/N	0	LCD	FIRE PROTECTION	LO	A total of 18 cabinets/panels in auxiliary electrical equipment rooms were identified as having unsealed conduit penetrating the field of the firestop. An hourly fire watch was in effect. 6 other cabinets in CR with unsealed conduit were identified.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMPLETION OPERATION	TYPE OF TECHNICAL SPECIFICATION	NOSS VENDOR	LER NO. SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) VIOLATION	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LASALLE 1	10/82	STANDARD	BE	373027	VIOLATION 062/N	0	LCD	RADIATION MONITOR	LO	Utility error: A reactor reduction of power created a need for 4 hr grab samples (rather than 8 hr) due to off gas analyzers being inoperable. The first sample was obtained 5.5 hrs after power drop.
LASALLE 1	10/82	STANDARD	BE	373034	VIOLATION 100/N	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: A high radiation area door, which leads to the UIC tank room of the turbine building was found open with no positive access control.
LASALLE 1	10/82	STANDARD	BE	373036	VIOLATION 043/	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Entrance to the Unit 2 reactor water cleanup hold pump room was found to be closed but not latched. The electrical strike mechanism on the locking device was sticking in the open position.
LASALLE 1	10/82	STANDARD	BE	373038	VIOLATION 096/N	0	LCD	FIRE PROTECTION	LO	An unsealed penetration was found and initially improperly sealed. Later determined to be a required fire stop and a fire watch was established.
LASALLE 1	10/82	STANDARD	BE	373041	VIOLATION 090/N	0	LCD	FIRE PROTECTION	LO	3 mechanical penetrations on fire rated walls/floors were not sealed properly. The penetrations were located in the east/turbine bldg wall. Hourly fire watches are in effect in these areas at all times.
LASALLE 1	10/82	STANDARD	BE	373042	VIOLATION 100/N	0	SURVEILLANCE	RADIATION PROTECTION	LO	Utility error: A radiation area, reactor water cleanup isolation valve room, was not surveyed for 5 months during which it became a high radiation area.
LASALLE 1	10/82	STANDARD	BE	373046	VIOLATION 062/	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: A grab sample for noble gases was not taken during a 10 hr run or the standby gas treatment system.
LASALLE 1	10/82	STANDARD	BE	373067	VIOLATION 000/SD	0	LCD	FIRE PROTECTION	LO	3 fire penetrations were not properly sealed. Fire watches were established and seals repaired.
LASALLE 1	10/82	STANDARD	BE	373070	VIOLATION 000/SD	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Area including RWR pump room initially not classified as a high radiation area for maintenance. Later classified as a high radiation area.
LASALLE 1	10/82	STANDARD	BE	373072	VIOLATION 000/SD	0	LCD	STANDARD TREATMENT	LO	Dellet air flow was 250 acfs less than the required 4000 acfs plus or minus 10%. Reason: 3 of 7 doors to system were not properly closed.
LASALLE 1	10/82	STANDARD	BE	373079	VIOLATION 000/SD	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Door to a high radiation area (HSIV room) was not posted due to management confusion over which door actually needed posting.
LASALLE 1	10/82	STANDARD	BE	373083	VIOLATION 000/SD	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: There was no barrier on an alternate (although unlikely) entrance to a high radiation area in the reactor building.
LASALLE 1	10/82	STANDARD	BE	373086	VIOLATION 057/N	0	LCD	RADIATION MONITOR	LO	A nonconsecutive (by a factor of 2 over Tech Spec limit) trip setpoint on radiation monitor during liquid radiaste discharge.
LASALLE 1	10/82	STANDARD	BE	373092	VIOLATION 100/N	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Positive control not maintained on an entrance to a temporary high radiation area.
LASALLE 1	10/82	STANDARD	BE	373093	VIOLATION 070/N	0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Technician found radioactive debris bag in an area not marked as a high radiation area. Bags were extended and unsecured.
LASALLE 2	06/84	STANDARD	BE	374015	SHUTDOWN 005/SU	216	LCD	HEAT, VENT & RE	LO	Utility error: Operational mode was changed (to run from start-up) while an LCD was in effect (control) room ventilation emergency cleanup train B out of service).
LASALLE 2	06/84	STANDARD	BE	374019	VIOLATION 020/	0	SURVEILLANCE	CONFINEMENT	LO	Utility error: 3 hydrogen samples from the off-gas analyzers were taken from a valved out line rendering samples useless.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LASALLE 2	06/84	STANDARD	GE	374022	VIOLATION 037/		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Door to a high radiation area was left open and unattended.
LASALLE 2	06/84	STANDARD	GE	374030	VIOLATION 051/		0	LCD	CORE SPRAY	HI	High pressure core spray system was declared inoperable as the result of a relief valve's internal bellows seal failure.
LASALLE 2	06/84	STANDARD	GE	374034	VIOLATION 070/N		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Area known to be a high radiation area when reactor power is above 50% was not posted as such until reactor power reached 70%.
LASALLE 2	06/84	STANDARD	GE	374038	VIOLATION 053/N		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Door to reactor water cleanup heat exchanger room (hi radiation area) was ajar for 16 hrs. One attempt to close door failed because technician checked wrong door.
LASALLE 2	06/84	STANDARD	GE	374040	VIOLATION 093/N		0	SURVEILLANCE	CONTAINMENT	LO	3 drywell crane circuits (normally deenergized) were not included in the daily surveillance procedures as required.
LASALLE 2	06/84	STANDARD	GE	374043	VIOLATION 000/HSD		0	LCD	CONTAINMENT	LO	Utility error: During hot shutdown primary containment vent and purge activities were conducted for 26.5 hrs, limit is 24 hrs.
LASALLE 2	06/84	STANDARD	GE	374049	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: 3 areas with controlled access were rated as high radiation areas. However, computer controlled access status was not updated allowing normal access.
LASALLE 2	06/84	STANDARD	GE	374053	VIOLATION 015/SU		0	SURVEILLANCE	CONTAINMENT; CG	LO	Utility error: A hydrogen sample on the off-gas sample was missed during a unit startup. The oversight was noted approx 7 hrs after the off-gas system was started.
LASALLE 2	06/84	STANDARD	GE	374055	VIOLATION 000/SD		0	LCD	RESIDUAL HT. REMOVAL	HI	System train B full flow test valve failed to close during surveillance after maintenance on pump 2B.
LASALLE 2	06/84	STANDARD	GE	374059	VIOLATION 000/		0	SURVEILLANCE	REACTOR PROTECTION	HI	Utility error: Part of the control rod drive screw discharge level functional test was not being performed due to confusing procedures.
LASALLE 2	06/84	STANDARD	GE	374070	VIOLATION 100/N		0	ADMINISTRATIVE	RADIATION MONITOR	LO	Utility error: Contractor employee left main steam tunnel door (high radiation area barrier) unlatched and open.
LASALLE 2	06/84	STANDARD	GE	374082	VIOLATION 080/N		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	A rectangular hole was discovered in the top of the entrance way to the Unit 2 condenser water box which is posted as a high rad area.
LIMERICK 1	09/85	UNIQUE	GE	352001	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: Prior to criticality control rod withdrawn. Required screw discharge volume and refueling area vent radiation monitor surveillance not performed.
LIMERICK 1	09/85	UNIQUE	GE	352003	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	LO	For 3 days the CO2 system, required to be operable when systems it protects are operable, for control room was inoperable. (However, hand held fire extinguishers backup was available.)
LIMERICK 1	09/85	UNIQUE	GE	352004	VIOLATION 000/SD		0	ADMINISTRATIVE	FIRE PROTECTION	MED	4 fire hose stations were left off a surveillance procedure and therefore not tested.
LIMERICK 1	09/85	UNIQUE	GE	352009	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	With a service water radiation monitor valved out, a radioactivity sample was not taken within an 8 hour period.
LIMERICK 1	09/85	UNIQUE	GE	352016	VIOLATION 16/SD		0	SURVEILLANCE	RECIRCULATION	LO	"B" recirculation pump was started without preoperational test of delta T between loop coolant and vessel coolant.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE LEADER	STATUS OR T.S. VIOLATION	POWER LEVEL (K)/ PLANT	DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LIMERICK 1	09/85	UNIQUE	BE	352017 VIOLATION	000/SD	0	LCD	CHLORINE DETECTION	LO	Control Room chlorine analyzer trip switch setpoint was incorrect, resulting in noncompliance.
LIMERICK 1	09/85	UNIQUE	BE	352022 VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	2 reactor enclosures fire seals were discovered not sealed, fire switches immediately set up.
LIMERICK 1	09/85	UNIQUE	BE	352027 VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LO	Utility error: With a service water radiation monitor valved out, a radioactivity sample was not taken within an 8 hour period.
LIMERICK 1	09/85	UNIQUE	BE	352043 VIOLATION	000/SD	0	SURVEILLANCE	SLUDG	LO	Stroke time testing procedure for suppression pool level instrumentation
LIMERICK 1	09/85	UNIQUE	BE	352044 VIOLATION	000/SD	0	LCD	RESIDUAL HT, REMOVAL	LO	solenoid valve did not adequately test stroke time of valve.
MAINE Yankee	12/72	UNIQUE	CE	309003 VIOLATION	005/7	0	LCD	HIGH PRESSURE IND.	HI	"g" train of system was removed from service during cold shutdown. Alternate cooling method was not demonstrated operable within 1 hr.
MAINE Yankee	12/72	UNIQUE	CE	309012 VIOLATION	100/N	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: It was found that the power supply breaker for a motor operated valve which is on the path of one high pressure safety injection pump for long term recirculation was open.
MAINE Yankee	12/72	UNIQUE	CE	309013 VIOLATION	100/N	0	LCD	FIRE PROTECTION	LO	Utility error: Containment air particulate detector and gas monitor were removed from service with no backup capability supplied for greater than 48 hours.
MAINE Yankee	12/72	UNIQUE	CE	309014 VIOLATION	100/N	0	LCD	FIRE PROTECTION	MED	An unsealed (five) cable penetration between control and computer rooms found during inspection. Fire watch established within required 1 hour. (I don't see the violation.)
MAINE Yankee	12/72	UNIQUE	CE	309018 VIOLATION	097/N	0	LCD	CONTAINMENT	HI	Deficiencies found in fire barriers: D.B. fire boundary and fire areas adjacent to containment plus motor control center suppression system.
MILLSTONE 1	12/70	UNIQUE	BE	245017 SHUTDOWN	100/N	42	LCD	PRIMARY COOLANT	LO	Utility error: A main steam line non-return valve bypass isolation valve required to be closed for containment integrity was found partially open.
MILLSTONE 2	12/75	STANDARD	CE	336003 VIOLATION	000/SU	0	LCD	ACCUMULATOR	LO	Mechanical binding had been mistaken by an operator for full closure.
MILLSTONE 2	12/75	STANDARD	CE	336006 SHUTDOWN	100/N	118	LCD	REACTOR PROTECTION	LO	A leakage of greater than 2.5 BPM from an unidentified source into primary containment was detected. Cause: 3 rd instrument stop valve leaking.
MILLSTONE 2	12/75	STANDARD	CE	336007 VIOLATION	100/N	0	SURVEILLANCE	REACTOR PROTECTION	MED	Following some abnormalities with two safety injection tanks, it was discovered that the level was below the Tech Spec limits.
MILLSTONE 2	12/75	STANDARD	CE	336008 VIOLATION	100/N	0	LCD	FIRE PROTECTION	HI	Response time of several primary coolant loop RTDs was longer than the Tech Spec limits.
NEWBOLD	07/71	UNIQUE	BE			0				Utility error: The monthly surveillance for thermal margin/low pressure operability check was missed due to human error.
NEWBOLD	12/81	STANDARD	ME	369003 VIOLATION	095/N	0	LCD	CHEM. & VOL. CONTROL	HI	It was discovered that a breach in the fire barrier in the DC switchgear room exists.
										Utility error: Unsuccessful attempt made to start centrifugal charging pump 1A. Pump's breaker was not in the fully "connect" position. Attributed to personnel error as breaker was improperly connected & independent verification not properly done.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NERMS VENDOR	LER NO. SHUTDOWN OR T.S. LEVEL (N)/ VIOLATION (N)	STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
McGUIRE 1	12/81	STANDARD	ME	369004 VIOLATION 006/N		0	LCD	PRIMARY COOLANT LO		Utility error: Required leak test was not performed after installation of two in-core detectors.
McGUIRE 1	12/81	STANDARD	ME	369007 SHUTDOWN 000/SU		0	SURVEILLANCE	PRIMARY COOLANT LO		Utility error: It was discovered that the 18 months functional testing of the reactor coolant pump time delay overcurrent protective devices was not done properly.
McGUIRE 1	12/81	STANDARD	ME	369018 VIOLATION 100/N		0	LCD	HEAT, VENT & RC LO		Both trains of control room vent system were inoperable, power reduction started, both system trains required and power excursion started (power reduction was to 97%).
McGUIRE 1	12/81	STANDARD	ME	369029 SHUTDOWN 100/N		30	LCD	UPPER HEAD INJECTION	LO	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Cause: repetitive makeup from system surge tank due to valve leakage.
McGUIRE 2	03/84	STANDARD	ME	370007 VIOLATION 000/		0	LCD	PRIMARY COOLANT LO		Utility error: Required leak test was not performed after installation of two in-core detectors.
NINE MILE POINT	12/69	UNIQUE	BE	220013 SHUTDOWN 025/SU		23	LCD	PRESSURE RELIEF HI		Three out of six main steam line solenoid actuated relief valves failed during test. Two valves stuck open and the third blew fuses and failed to close.
NINE MILE POINT	12/69	UNIQUE	BE	220014 SHUTDOWN 012/SU		116	LCD	PRESSURE RELIEF HI		During main steam pressure relief valve testing, one valve failed to close and three showed seat leakage.
NORTH ANNA 1	06/78	STANDARD	ME	338001 SHUTDOWN 001/		740	LCD	PRIMARY COOLANT RED		High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube ruptures.
NORTH ANNA 1	06/78	STANDARD	ME	338017 VIOLATION 030/SU		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Technician assigned to provide continuous health physics coverage to workers was found asleep, therefore continuous coverage not provided.
NORTH ANNA 1	06/78	STANDARD	ME	338024 VIOLATION 100/N		0	ADMINISTRATIVE	RC POWER	RED	Utility error: 3 periodic tests were not performed within the required surveillance. The procedures are: heat detector functional test, smoke detectors, degraded voltage/loss of voltage - 1H bus, 3-4 permissive verification & heat tracing.
NORTH ANNA 2	12/80	STANDARD	ME	339004 VIOLATION 100/N		0	SURVEILLANCE	EDCS	LO	Utility error: It was discovered that the thermal overload devices on safety related motor operated valves had not been calibrated within the specified surveillance interval and had to be declared inoperable.
NORTH ANNA 2	12/80	STANDARD	ME	339010 VIOLATION 000/SU		0	LCD	ACCUMULATION	LO	Utility error: Accumulator isolation valves inadvertently opened and injected some coolant during startup. Operators closed and demagnetized valves (not allowed by LCD).
NORTH ANNA 2	12/80	STANDARD	ME	339013 SHUTDOWN 100/N		179	LCD	RC POWER	HI	Plant was shutdown when 2 diesel generators tripped during surveillance testing.
OLDREE 1	07/73	UNIQUE	BA	269001 SHUTDOWN 100/N		23	LCD	ACCUMULATION	LO	Utility error: One of the core flood tanks had lower than Tech Spec required boron concentration for the pressure at which the reactor was operating.
OLDREE 1	07/73	UNIQUE	BA	269003 VIOLATION 100/N		0	LCD	FUEL HANDLING	LO	Utility error: A piece of equipment (a gamma ray scanner) was temporarily suspended over fuel in the spent fuel pit.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	LESS LER NO. VIOLATION	STATUS	OR T.S. LEVEL (S) VIOLATION	POWER	CL/RE RUN/TION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ODDNEE 1	07/73	UNIQUE	BM 267005	VIOLATION 000/SD	0	0	0	0	LO	ADMINISTRATIVE error resulted in exceeding (by 2 days) surveillance interval of fire protection system for the AC power supply system.
ODDNEE 2	09/74	UNIQUE	BE	VIOLATION 100/N	0	0	0	0	LO	UTILITY error: It was discovered that a fuse in a switchgear load shed source was missing. This would negate the ability to load shed eight nonessential components during a load shed action.
ODDNEE 3	12/74	UNIQUE	BM 267006	SHUTDOWN 100/N	321	LO	LO	AC POWER	HI	Primary to secondary leakage in Steam Generator 3 exceeded Technical Specification limits (2 leaking tubes identified).
ONSTER CREEK	12/69	UNIQUE	BE 219001	VIOLATION 000/SD	0	LO	LO	AC POWER	RED	During post-maintenance testing of diesel generator 2, the fuel oil tank level was found to be below the Tech Spec limits.
ONSTER CREEK	12/69	UNIQUE	BE 219004	VIOLATION 000/SD	0	LO	LO	CONTAINMENT	LO	The secondary containment integrity was violated when it was discovered that both the inner and outer doors of the airlock were open at the same time.
ONSTER CREEK	12/69	UNIQUE	BE 219007	VIOLATION 000/SD	0	LO	LO	STANDBY GAS TREATMENT	LO	Due to failure of diesel generator 1 to fast start during a test it was declared inoperable and thus the standby gas treatment system 1 was considered inoperable violating the Tech Spec requirement of operability of redundant BGTS trains.
ONSTER CREEK	12/69	UNIQUE	BE 219010	VIOLATION 000/SD	0	LO	LO	FUEL HANDLING	LO	UTILITY error: For an undetermined number of times the fuel pool gates have been moved over the spent fuel pool violating the Tech Spec requirement of the weight of objects to be moved above irradiated fuel.
ONSTER CREEK	12/69	UNIQUE	BE 219011	VIOLATION 000/SD	0	LO	LO	STANDBY GAS TREATMENT	RED	Both trains of the standby gas treatment system were rendered inoperable for 3 minutes during performance of preventive maintenance on a circuit breaker.
ONSTER CREEK	12/69	UNIQUE	BE 219013	VIOLATION 000/SD	0	LO	LO	FIRE PROTECTION	RED	UTILITY error: The fire suppression water system became inoperable due to damage by a maintenance vehicle.
ONSTER CREEK	12/69	UNIQUE	BE 219014	VIOLATION 000/SD	0	SURVEILLANCE	LO	REACTION PROTECTION	LO	The reactor low level instrumentation test was not performed within the Tech Spec required period.
ONSTER CREEK	12/69	UNIQUE	BE 219016	VIOLATION 000/SD	0	SURVEILLANCE	LO	NOT IDENTIFIED	LO	UTILITY error: All the excess flow check valves (primarily on low flow instrument lines) had not been functionally tested.
ONSTER CREEK	12/69	UNIQUE	BE 219018	VIOLATION 000/SD	0	SURVEILLANCE	LO	STANDBY GAS TREATMENT	LO	The flow rate through Standby Gas Treatment System B2 was found to be below the Tech Spec design requirements.
ONSTER CREEK	12/69	UNIQUE	BE 219022	VIOLATION 000/SD	0	LO	LO	REACTION PROTECTION	RED	UTILITY error: Due to improperly installed diaphragms in solenoid operated valves, 3 across discharge volume vent and drain valves exceeded maximum allowable closing time.
ONSTER CREEK	12/69	UNIQUE	BE 219024	VIOLATION 000/SD	0	SURVEILLANCE	RED	REACTION PROTECTION	RED	One of two switches failed to operate during test of low-low reactor water level sensor. Failure was due to test procedure inadequacy.
ONSTER CREEK	12/69	UNIQUE	BE 219027	VIOLATION 024/	0	LO	LO	STANDBY LIQUID TITIM	HI	UTILITY error: Lack of administrative controls resulted in dilution of boron in liquid poison tank to below acceptable level of 10.3%.
ONSTER CREEK	12/69	UNIQUE	BE 219028	SHUTDOWN 012/SU	440	LO	LO	DEPRESSURIZATION	HI	During start-up surveillance testing, 2 of 5 relief valves associated with the automatic depressurization system failed to operate.

Table B-1 (continued)
CLASSIFICATION OF LENS BY PLANT NAME AND LEN NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MSDS LEN NO. SHUTDOWN	POWER ON T.S. LEVEL (S) VIOLATION	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
OSTER CREEK	12/69	UNIQUE	BE 219029	VIOLATION 000/SD	0	LCD	FUEL HANDLING	LO	Switches that limit crane hook and load height were not properly adjusted during lifting and transporting of empty Spent Fuel Shipping Cask.
OSTER CREEK	12/69	UNIQUE	BE 219032	VIOLATION 049/N	0	SURVEILLANCE	PRESSURE RELIEF	LO	Utility error: Channel Test of the Main Steam Line Safety and Relief Valve Acoustic Monitors was not performed within specified (required Tech Spec.) time frame.
RAI 1500ES	12/71	UNIQUE	CE 255001	VIOLATION 000/SD	0	LCD	AC POWER	NEP	Utility error: The offsite power was removed for repairs with only one diesel generator being available.
RAI 1500ES	12/71	UNIQUE	CE 255003	VIOLATION 000/SD	0	LCD	AUX FEEDWATER	HI	Seismic support for aux feedwater train B was found in a degraded condition. Apparently vibration had caused support to become disconnected.
RAI 1500ES	12/71	UNIQUE	CE 255008	VIOLATION 000/SD	0	LCD	CONTAINMENT	HI	Leakage rate of the containment air was above the Tech Spec. limits.
RAI 1500ES	12/71	UNIQUE	CE 255012	VIOLATION 000/MSB	0	LCD	PRIMARY COOLANT	NEP	Primary coolant leak rate from unidentified source greater than 1 GPM. Causes check valves to safety injection lines.
RAI 1500ES	12/71	UNIQUE	CE 255013	VIOLATION 000/SD	0	LCD	PRIMARY COOLANT	NEP	Primary coolant leakage rate from unidentified source found to be greater than 1 GPM. Causes: charging pump seal leak.
RAI 1500ES	12/71	UNIQUE	CE 255014	VIOLATION 000/MSB	0	LCD	PRIMARY COOLANT	LO	Utility error: The RCS temperatures fell below 325 degrees F due to excessive atmospheric steam dump opening.
RAI 1500ES	12/71	UNIQUE	CE 255017	VIOLATION 000/MSB	0	LCD	LOW PRESSURE INJ.	HI	A LPS flow valve was not fully open as required by plant Tech Specs for reactor criticality.
RAI 1500ES	12/71	UNIQUE	CE 255018	SHUTDOWN 064/NU	0	SURVEILLANCE	AUX FEEDWATER	LO	Utility Error: Surveillance Test on Aux. Feedwater Pump Steam Supply Line Snubber not performed prior to start-up.
RAI 1500ES	12/71	UNIQUE	CE 255019	SHUTDOWN 080/N	133	LCD	AUX FEEDWATER	HI	During testing of auxiliary feedwater pump, the pump showed over-speed problems and was declared inoperable. The repair could not be performed in 72 hours allowed by the Tech Specs.
RAI 1500ES	12/71	UNIQUE	CE 255020	VIOLATION 075/N	0	SURVEILLANCE	HIGH PRESSURE INJ.	HI	Utility error: Seven valves in the hot leg injection system had not been tested since their installation (approx. 3 years). Valves not included in surveillance program due to personnel error.
RAI 1500ES	12/71	UNIQUE	CE 255023	VIOLATION 000/SD	0	SLISS	REACTOR PROTECTION	HI	Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SLISS violation.
RAI 1500ES	12/71	UNIQUE	CE 255024	VIOL/SHUT 000/MSB	96 + LCD		PRIMARY COOLANT	LO	Control rod drive seal housing failed resulting in a temporarily unidentified primary leakage in excess of Tech Spec. limits.
RAI 1500ES	12/71	UNIQUE	CE 255025	VIOL/SHUT 000/MSB	48 + LCD		PRIMARY COOLANT	LO	Chemical and Volume Control relief valve leakage resulted in a temporarily unidentified leakage in excess of Tech Spec. leak rate limit.
RAI 1500ES	12/71	UNIQUE	CE 255026	SHUTDOWN 057/N	0	LCD	ACCUMULATOR	HI	2 safety injection tanks were drained below the Tech Spec. minimum level (only 1 may be out of service), 1 during calibration, the other due to a leaky valve.
PECO BOTTOM 2	07/74	UNIQUE	BE 277003	VIOLATION 000/SD	0	LCD	PRIMARY COOLANT	LO	Utility error: During startup it was discovered that in a one hour period the rate of heatup exceeded 100 degrees F by 10 degrees F, violating the Tech Spec. limit.

Table B-1 (continued)
CLASSIFICATION OF LEAKS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS LEAK NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	OUTSIDE DURATION	TECHNICAL SPECIFICATION	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
						(HRS)	CATEGORY			
RESON BOTTOM 2	07/74	UNIQUE	BE 277006	VIOLATION 000/50		0	LCD	RESIDUAL HT. REMOVAL	LO	It was discovered that due to a Residual Heat Removal System heat exchanger fault, approximately 1170 to 2150 microcuries of radiation was released to the discharge pond.
RESON BOTTOM 2	07/74	UNIQUE	BE 277008	VIOLATION 000/50		0	LCD	STANDARD GAS TREATMENT	MEG	The standby gas treatment system was not functioning after a manual start due to an inoperable solenoid valve.
RESON BOTTOM 2	07/74	UNIQUE	BE 277010	VIOLATION 000/50		0	LCD	RECIRCULATION	LO	A crack was discovered in the jet pump instrumentation penetration.
RESON BOTTOM 2	07/74	UNIQUE	BE 277012	VIOLATION 000/50		0	LCD	FINE PROTECTION	MEG	During a surveillance an inoperable horizontal fire damper was discovered in the cable spreading room.
RESON BOTTOM 2	07/74	UNIQUE	BE 277014	VIOLATION 100/50		0	LCD	FINE PROTECTION	MEG	Utility error: A continuous fire which was put in effect due to an out-of-service carbon system was inadvertently removed violating the Tech Spec requirements.
RESON BOTTOM 2	07/74	UNIQUE	BE 277015	VIOLATION 000/50		0	LCD	FINE PROTECTION	LO	Battery and switchgear rooms smoke detectors removed from service while penetration barriers were being installed. Previously established hourly fire watches were not sufficient to meet revised Tech Spec requirements.
RESON BOTTOM 2	07/74	UNIQUE	BE 277016	VIOLATION 000/50		0	LCD	RECIRCULATION	LO	Cracks were discovered in the Jet Pump inlet riser safe ends.
RESON BOTTOM 3	12/74	UNIQUE	BE 278002	VIOLATION 000/50		0	LCD	PRIMARY COOLANT	LO	Utility error: During reactor startup the heatup rate was 111 degrees F/hour violating the Tech Spec limit of 100 degrees F/hour.
RESON BOTTOM 3	12/74	UNIQUE	BE 278003	VIOLATION 100/50		0	LCD	EXHAUST SPILLAGE	HI	During an instrument surveillance testing the core spray logic fuse was blown, disabling part of core spray logic circuits and part of initiating logic circuits of diesel generator, H&G, H&G, and core spray system.
RESON BOTTOM 3	12/74	UNIQUE	BE 278004	VIOLATION 000/50		0	LCD	PRIMARY COOLANT	LO	Utility error: Due to inadvertent initiation of feedwater system during cold shutdown the vessel was slightly pressurized and the reactor coolant temperature dropped below 120F violating the Tech Spec limits. Causes operator error.
RESON BOTTOM 3	12/74	UNIQUE	BE 278006	VIOLATION 000/50		0	LCD	RECIRCULATION	LO	During routine maintenance three through-wall cracks were discovered in a jet pump instrumentation penetration.
RESON BOTTOM 3	12/74	UNIQUE	BE 278012	SHUTDOWN 100/50		0	LCD	STANDARD GAS TREATMENT	MEG	Standby Gas Treatment System ductwork in the reactor building was found to be collapsed resulting in lack of secondary containment integrity.
PILGRIM 1	12/72	UNIQUE	BE 293003	VIOLATION 000/50		0	SURVEILLANCE	FINE PROTECTION	MEG	Utility error: It was discovered that the diesel generator fire pump surveillance test had not been performed within the Tech Spec required time.
PILGRIM 1	12/72	UNIQUE	BE 293004	VIOLATION 000/50		0	LCD	PRESSURE RELIEF	MEG	During refueling the plant was notified by Wyle Laboratories that both of the main steam safety valves set pressures were more than 15 below the nameplate setpoint.
PILGRIM 1	12/72	UNIQUE	BE 293005	VIOLATION 000/50		0	LCD	PRESSURE RELIEF	MEG	The utility was notified by Wyle Laboratories that the safety relief valves during tests did not lift within specifications.
PILGRIM 1	12/72	UNIQUE	BE 293006	VIOLATION 000/50		0	LCD	FINE PROTECTION	HI	During an inspection some 37 fire doors were found to be potentially nonfunctional.
PILGRIM 1	12/72	UNIQUE	BE 293007	VIOLATION 000/50		0	LCD	FINE PROTECTION	HI	During an inspection, a breach of three hour fire barrier was identified. Upon further inspection, a total of 38 penetration seals were found that did not meet the surveillance test acceptance criteria.

Table B-1 (continued)
CLASSIFICATION OF LENS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MOSS LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (kW)	OUTSIDE BURSTION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
POINT BEACH 1	12/70	UNITILE	ME			0				
POINT BEACH 2	10/72	UNITILE	ME	301001 VIOLATION	100/M	0	LCD	PRESSURE RELIEF	LD	Utility error: A snubber on the pressurizer relief valve piping supports was removed prior to modification of Tech Specs to allow removal.
POINT BEACH 2	10/72	UNITILE	ME	301002 VIOLATION	100/M	0	LCD	REACTION CONTROL	LD	Utility error: Operation at 100% power with control rods inserted further than allowed by Tech Specs (225 vs 228 steps). Change in specification proposed after the event.
POINT BEACH 2	10/72	UNITILE	ME	301006 VIOLATION	000/	0	LCD	CONTAINMENT	LD	H ₂ leakage through 1/2" reactor coolant pump component cooling water supply line check valve.
PRINCE ISLAND 1	12/73	UNITILE	ME	262010 VIOLATION	063/	0	LCD	PRIMARY COOLANT	RED	Early current tests showed 3 tubes with greater than 30% thru-wall penetrations. Test results not properly diagnosed until after restart and subsequent leakage.
PRINCE ISLAND 2	12/74	UNITILE	ME	306003 VIOLATION	100/M	0	LCD	CHEM. & VOL. CONTROL	LD	For approximately 2.5 hours level in caustic makeup tank was below Tech Spec limit of 95.25 (actual level 94%).
CLAB CITIES 1	08/72	UNITILE	RE	254001 SHUTDOWN	000/M	0	LCD	EDCS	HI	During test on High Pressure Coolant Injection System pump operability, lubricating oil found contaminated with water and pump declared inoperable.
CLAB CITIES 2	10/72	UNITILE	RE	263005 SHUTDOWN	001/SU	22	LCD	PRESSURE RELIEF	HI	Two relief valves were found to have high leakage rates.
CLAB CITIES 2	10/72	UNITILE	RE	263006 VIOLATION	100/M	0	SURVEILLANCE		LD	Utility error: It was discovered that the weekly power operation surveillance had not been performed within the Tech Spec time requirement.
CLAB CITIES 2	10/72	UNITILE	RE	263013 VIOLATION	000/SO	0	SURVEILLANCE	ROBUSTION MONITOR	LD	A service water effluent sample could not be collected due to reduced flow in the service water system.
RANCHO SEED	04/75	UNITILE	RM	312002 VIOLATION	000/SO	0	ADMINISTRATIVE		LD	Utility error: The results of the insurance inspection were not submitted to the MEC within 3 months of completion of inspection as required by Tech Specs.
RANCHO SEED	04/75	UNITILE	RM	312006 VIOLATION	000/SO	0	ADMINISTRATIVE	FIRE PROTECTION	RED	It was discovered that 23 operators and 16 security personnel dedicated to the on-site fire brigade did not attend a quarterly classroom training as required by Tech Specs.
RANCHO SEED	04/75	UNITILE	RM	312010 VIOLATION	000/SO	0	SURVEILLANCE	CONTAINMENT	HI	Utility error: During a review of surveillance procedures it was discovered that the isolation valve surveillance tests were only partially performed prior to the end of last refueling outage.
RANCHO SEED	04/75	UNITILE	RM	312011 VIOLATION	000/SO	0	ADMINISTRATIVE	HIGH PRESSURE INJ.	HI	It was discovered that the configuration tables for cross-isolation valves in surveillance procedures for high pressure injection loops A and B were misleading and incorrect.
RANCHO SEED	04/75	UNITILE	RM	312012 VIOLATION	000/PE	0	LCD	ROBUSTION MONITOR	LD	Utility error: During power excitation, sampling of the auxiliary building stack was missed even though the gas concentration at the site boundary exceeded 10% of the maximum permissible concentration for BeH ₂ .
RANCHO SEED	04/75	UNITILE	RM	312013 VIOLATION	091/M	0	LCD	ROBUSTION PROTECTION	LD	Utility error: It was found that the doors to the reheater and filter room and decay heat cooler rooms were left open. Both of these doors are secured high radiation areas.
RANCHO SEED	04/75	UNITILE	RM	312014 VIOLATION	000/SO	0	ADMINISTRATIVE	CONTAINMENT	RED	Utility error: During a refueling outage 5 electrical penetrations and 1 mechanical modification to an existing penetration were performed. Surveillance procedure for the local component leak rate was not revised to include these penetrations.

Table S-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS VENDOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
RANDHO SECO	04/75	UNIQUE	BN	312016	VIOLATION 092/N		0	LCD	PRIMARY COOLANT LO		While reviewing records it was found that the reactor coolant pump seal return line isolation valve had exceeded its Tech Spec stroke time limit of 8 seconds by 0.12 second in a surveillance test.
RANDHO SECO	04/75	UNIQUE	BN	312017	VIOLATION 006/SU		0	LCD	ACCUMULATOR	LO	During startup the breaker for an electrically operated vent valve on core flood tank A had not been cleared contrary to T.S. reqt that these valves should be closed and breakers tagged open except during normal venting operations.
RANDHO SECO	04/75	UNIQUE	BN	312024	VIOLATION 000/SD		0	LCD	PRIMARY COOLANT LO		Utility error: Reactor startup was commenced during reactor coolant system deboration (no safety limit was exceeded).
ROBINSON 2	03/71	UNIQUE	WE	261002	VIOLATION 000/SD		0	SURVEILLANCE	FIRE PROTECTION	MED	Utility error: Three curtains in a fire damper were not tested in the refueling outage as required by Tech Specs. The cause of the error was improper identification of the dampers.
ROBINSON 2	03/71	UNIQUE	WE	261005	VIOLATION 000/SD		0	SURVEILLANCE	ENGR. SAFEGUARDS	HI	It was found that circuit for safety injection due to high steam line flow in coincident with low steam line pressure was not tested completely.
SALEN 1	06/77	STANDARD	WE	272012	SHUTDOWN 000/SD		0	LCD	ECS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 50-311)
SALEN 1	06/77	STANDARD	WE	272016	VIOLATION 000/SD		0	ADMINISTRATIVE		LO	Utility error: A temporary change in a procedure was not reviewed by the station Operations Review Committee and approved by the station manager within the 14 days of implementation as required by Tech Specs.
SALEN 1	06/77	STANDARD	WE	272021	VIOLATION 000/SU		0	LCD	COMP COOLING WATER	HI	Return Isolation Valve for Reactor Coolant Pump Thermal Barrier inadvertently failed closed.
SALEN 1	06/77	STANDARD	WE	272024	VIOL/SHUT 005/SU		48 *	LCD	POWER CONVERSION	HI	During startup S.G. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
SALEN 1	06/77	STANDARD	WE	272026	VIOL/SHUT 000/3		12 *	LCD	CONTAINMENT	LO	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valve. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.
SALEN 2	10/81	STANDARD	WE	311006	SHUTDOWN 100/N		0	LCD	CONTAINMENT	MED	Utility error: During routine surveillance three containment isolation valves became inoperable due to loss of a MKV vital bus as a result of paralleling of generators out of phase.
SALEN 2	10/81	STANDARD	WE	311007	VIOLATION 093/N		0	SURVEILLANCE	REACTOR PROTECTION	HI	Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs.
SALEN 2	10/81	STANDARD	WE	311011	SHUTDOWN 006/SD		189	LCD	ENGR. SAFEGUARDS	MED	Steam generator feedwater flow indication channels were inoperable during a test.
SALEN 2	10/81	STANDARD	WE	311014	VIOLATION 100/N		0	LCD	ADDITIONAL MONITOR	LO	Tech Specs allow use of a plant vent radioactivity monitor in place of a contain. monitor for purge & pressure relief if the plant vent monitor setpoints are reduced to contain. monitor values. This reqt was violated in a containment press. relief.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL DESCRIPTION	ROSS LER NO.	SAFETY VIOLATION	ON T.S. LEVEL (S) / VIOLATION	NUMBER	OUTLINE	TECHNICAL SPECIFICATION	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
								(HRS)			
SULEN 2	10/81	STANDARD	ME	311016	SAFETY VIOLATION 100/N	460	LCD	0	HIGH PRESSURE INJ.	HI	A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.
SULEN 2	10/81	STANDARD	ME	311020	VIOLATION 100/N	0	SURVEILLANCE	0	SPENT FUEL POOL LO	LO	Utility error: Surveillance not of checking the current position of all valves not locked or secured and servicing safety-related equipment was violated for a spent fuel pit heat exchanger flow control valve. Valve not locked due to human error.
SULEN 2	10/81	STANDARD	ME	311023	VIOLATION 000/SD	0	SURVEILLANCE	0	MONITOR	LO	Utility error: Plant vent sample pump (needed for iodine sampling) turned off for up to 19 hours - reason unknown.
SULEN 2	10/81	STANDARD	ME	311025	VIOLATION 100/N	0	SURVEILLANCE	0	MONITOR	LO	Utility error: Plant vent particulate sample was taken but not analyzed for 2 months due to priority for other samples.
SULEN 2	10/81	STANDARD	ME	311026	VIOLATION 000/SD	0	SURVEILLANCE	0	MONITOR	LO	3 releases from the chemical and volume control system monitor tank were monitored but not recorded as required.
SULEN 2	10/81	STANDARD	ME	311111	SAFETY VIOLATION 095/N	347	LCD	0	EDCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Docket 50-311).
SUN ONEPNE 1	01/68	UNIQUE	ME	206001	VIOLATION 000/SD	0	LCD	0	CONTROL ROOM	LO	Due to drifting of tear gas onto the plant site, control room emergency air treatment system and toxic gas isolation systems were initiated annually.
SUN ONEPNE 1	01/68	UNIQUE	ME	206002	VIOLATION 000/SD	0	LCD	0	AC POWER	HI	During routine test of electrical circuits Diesel Generator 2 started sporadically, tripped on overspeed and was declared inoperable. Since DG 1 was also inoperable an LCD was declared.
SUN ONEPNE 1	01/68	UNIQUE	ME	206005	VIOLATION 100/N	0	LCD	0	CHEM. & VOL. CONTROL	RED	Utility error: Two boric acid flow paths from boric acid storage tank to charging pumps were blocked due to boric acid solidification.
SUN ONEPNE 1	01/68	UNIQUE	ME	206006	VIOLATION 000/SD	0	LCD	0	FIRE PROTECTION	RED	Utility error: During an integrated leak rate test a fire suppression system isolation valve inside the containment was left closed. This left part of the fire suppression system inoperable.
SUN ONEPNE 1	01/68	UNIQUE	ME	206007	VIOLATION 000/SD	0	ADMINISTRATIVE	0		LO	It was found that a procedural change for in-service valve testing during cold shutdown was not approved by station manager or his designee within 14 days of implementation.
SUN ONEPNE 1	01/68	UNIQUE	ME	206010	VIOLATION 000/SD	0	LCD	0	HIGH PRESSURE INJ.	RED	Two of three boric acid flow paths required to be operable. Twice, one path was out of service for maintenance and one declared inoperable.
SUN ONEPNE 1	01/68	UNIQUE	ME	206011	VIOLATION 000/SD	0	ADMINISTRATIVE	0		LO	Utility error: Four Temporary Change Notices were not approved within 14 days as required.
SUN ONEPNE 1	01/68	UNIQUE	ME	206012	VIOLATION 000/SD	0	LCD	0	COND COOLING WATER	HI	Utility error: System aligned to heat exchanger with no flow on saltwater side resulting in loss of both component cooling water trains.
SUN ONEPNE 1	01/68	UNIQUE	ME	206013	VIOLATION 000/SD	0	SURVEILLANCE	0	NEUTRON MONITOR	LO	Utility error: Improper test administration resulted in failure to obtain required mid-point sample during routine liquid radwaste discharge.
SUN ONEPNE 1	01/68	UNIQUE	ME	206014	VIOLATION 000/SD	0	LCD	0	HIGH PRESSURE INJ.	HI	Low level in RWSI, below Tech Spec limit of 240,000 gals, resulting from combination of safety injection system test and level gauge uncertainties.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSG VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SAN ONDFRE 1	01/68	UNIQUE	WE	206016	VIOLATION 087/N		0	LCD	HIGH PRESSURE INJ.	MED	Two boric acid transfer pumps failed to deliver flow (2 or 3 required). Event similar to LER 206-010.
SAN ONDFRE 2	08/83	STANDARD	CE	361001	VIOLATION 100/N		0	LCD	FIRE PROTECTION	HI	Discrepancies between the fire protection program and NRC requirements on a wide range of fire protection equipment were found.
SAN ONDFRE 2	08/83	STANDARD	CE	361005	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: With stack monitors out of service but operable and containment purges in progress, flow rate estimates were required every 4 hrs but not performed.
SAN ONDFRE 2	08/83	STANDARD	CE	361008	VIOLATION 000/SD		0	LCD	PRIMARY COOLANT	LO	Due to instrument error during mode 4 operation, reactor coolant temp. was allowed to exceed (by 1 degree) 350 degree limit for 2 minutes. Containment isolation, aux. feedwater and safety inj. tanks were not fully operable.
SAN ONDFRE 2	08/83	STANDARD	CE	361013	VIOLATION 100/N		0	LCD	CONFINEMENT	LO	Utility error: Containment vented due to pressurization. Venting reduced pressure to below Tech Spec limit of -0.3 psig.
SAN ONDFRE 2	08/83	STANDARD	CE	361014	VIOLATION 100/N		0	SURVEILLANCE	PRIMARY COOLANT	LO	Total core flow calculated by core protection calculators was not compared to value based on calorimetric calc. every 31 days as required because plant computer did not use this method as thought.
SAN ONDFRE 2	08/83	STANDARD	CE	361015	VIOLATION 100/N		0	LCD	FIRE PROTECTION	HI	Discrepancies between the fire protection program and NRC requirements on a wide range of fire protection equipment were found.
SAN ONDFRE 2	08/83	STANDARD	CE	361017	VIOLATION 100/N		0	SURVEILLANCE	RESIDUAL HT. REMOVAL	MED	Shutdown cooling heat exchanger throttle valve was found in full open position instead of throttle position required to prevent low pump section press. under some accident conditions.
SAN ONDFRE 2	08/83	STANDARD	CE	361029	VIOLATION 100/N		0	LCD	HEAT, VENT & AC	HI	Utility error: Inadvertently tripped breaker resulted in trip of emergency chillers, thus affecting plant inverters (cooled by chillers), LCD 3.0.3 entered, breaker immediately reset.
SAN ONDFRE 2	08/83	STANDARD	CE	361031	VIOLATION 100/N		0	LCD	HEAT, VENT & AC	HI	Emergency chiller inadvertently started, tripped, and subsequent starts failed. Failure affected both plant inverters, LCD 3.0.3 entered, repairs made in approx. 0.5 hours.
SAN ONDFRE 2	08/83	STANDARD	CE	361033	VIOLATION 100/N		0	LCD	FIRE PROTECTION	HI	During hydrostatic test of new system a pipe rupture disabled entire fire protection system. Fire watches were established. All backup fire suppression requirements could not be met.
SAN ONDFRE 2	08/83	STANDARD	CE	361034	VIOLATION 100/N		0	LCD	FIRE PROTECTION	MED	Utility error: A section of the sprinkler system was valved off & fire watches were not established within 1 hr. Areas affected: aux. feedwater pump room, cable room & part of safety equipment bldg.
SAN ONDFRE 2	08/83	STANDARD	CE	361039	VIOLATION 000/SD		0	SURVEILLANCE	COMP COOLING WATER	HI	Utility error: The in-service inspection test of the component cooling water outlet valves from the shutdown cooling heat exchangers was missed. Valves are to be tested during cold shutdown.
SAN ONDFRE 2	08/83	STANDARD	CE	361041	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	MED	2 cases of inadequate cable separation and fire wraps were discovered. Fire watches were established.
SAN ONDFRE 2	08/83	STANDARD	CE	361046	SHUTDOWN 100/N		0	LCD	COMP COOLING WATER	HI	Local readout of saltwater cooling to train B of component cooling water system (CCMS) heat exchanger indicated a fault condition. Since train A of CCMS was out of service an LCD Tech Spec was violated.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMPLETION	TYPE OF TECHNICAL OPERATION	MISS VENDOR	LER NO.	SAFETY OR T.S. LEVEL (S)/ VIOLATION	PLANT STATUS	OUTAGE (HRS)	TECHNICAL SPECIFICATION	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SAN ONCFRE 2	08/83	STANDARD	CE	361048	VIOLATION 100/N		0	SURVEILLANCE	AC POWER	RED	Utility error: 18 month surveillance to verify proper (less than 4700 mi) diesel generator load was performed 2.5 months late.
SAN ONCFRE 2	08/83	STANDARD	CE	361051	VIOLATION 100/N		0	LCD	ACCUMULATOR	LO	Leakage into one safety injection tank raised pressure above LCD limits while another tank was inoperable. Repair operations resulted in low levels in both accumulators.
SAN ONCFRE 2	08/83	STANDARD	CE	361059	VIOLATION 000/N		0	LCD	RADIATION MONITOR	LO	Both control room airborne radiation monitors were in alarm defeat mode, disabling control room isolation system (1 of 3 signals that activates control room emergency air clean-up system).
SAN ONCFRE 2	08/83	STANDARD	CE	361067	VIOLATION 000/SD		0	LCD	DC POWER	HI	Utility error: After maintenance, 1 battery was not properly tested. Subsequently, 2 other batteries were removed from service leaving only 1 of 4 batteries tested operable and in service (2 of 4 required).
SAN ONCFRE 2	08/83	STANDARD	CE	361072	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: Monitor required for operation of control room isolation system was in alarm defeat mode for approximately 9 hrs.
SAN ONCFRE 2	08/83	STANDARD	CE	361075	VIOLATION 000/SD		0	ADMINISTRATIVE	FIRE PROTECTION	RED	Utility error: One of 2 fire pumps was removed from service. Procedure to supply alternate pump did not properly align system.
SAN ONCFRE 2	08/83	STANDARD	CE	361079	VIOLATION 000/SD		0	LCD	NOT IDENTIFIED	RED	80 deficient snubbers were found during surveillance (about 85 of plant snubbers).
SAN ONCFRE 3	04/84	STANDARD	CE	362009	VIOLATION 100/N		0	LCD	CONTAINMENT SPRAY	HI	Utility error: Both trains of system inoperable due to closed manual isolation valves.
SAN ONCFRE 3	04/84	STANDARD	CE	362015	VIOLATION 000/N		0	LCD	PRIMARY COOLANT	LO	On 3 occasions primary coolant activity exceeded 1 microcurie/gram dose equivalent iodine. System purified within 48 hrs each time. During this time all required 4 hr samples had not been taken.
SAN ONCFRE 3	04/84	STANDARD	CE	362019	VIOLATION 050/N		0	SURVEILLANCE	CONTAINMENT	RED	Utility error: Post maintenance inspection was not performed on 2 containment isolation valves.
SAN ONCFRE 3	04/84	STANDARD	CE	362020	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	With condenser evacuation sys radiation monitors out of service, 8 hr grab samples were being taken in accordance with LCD. However, the grab sample due at 0800 was not taken until 0945 because sample lines were temporarily out of service.
SAN ONCFRE 3	04/84	STANDARD	CE	362025	VIOLATION 000/SD		0	LCD	EMER. SAFEBOARDS	RED	Utility error: The isolation valve between the containment and the wide range containment pressure transmitter was closed disabling 1 channel hi-hi cont. press. signal for an unknown period.
SAN ONCFRE 3	04/84	STANDARD	CE	362027	VIOLATION 000/SD		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: A daily containment airborne particulate and iodine sample was not taken.
SAN ONCFRE 3	04/84	STANDARD	CE	362028	VIOLATION 000/SD		0	ADMINISTRATIVE		LO	Utility error: Procedures to process overtime request forms were not properly evaluated against Tech Specs prior to approval.
SAN ONCFRE 3	04/84	STANDARD	CE	362034	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	HI	Conduit fire wrapping for the turbine-driven feedwater pump power and control cables was missing contrary to the fire hazards analysis. An hourly fire watch patrol was established upon discovery.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	SSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (S)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SAN ONOFRE 3	04/84	STANDARD	CE	362035	VIOLATION 100/N		0	LCD	HIGH PRESSURE INJ.	HI	Train A removed from service for testing while Train B cooling was inoperable (component cooling water ht. exchanger B being cleaned).
SAN ONOFRE 3	04/84	STANDARD	CE	362036	VIOLATION 000/SD		0	LCD	ENGR. SAFEGUARDS	MED	A steam generator level indicator failed. Maintenance was not initiated until the end of 7 day allowed outage time. Plant began cooldown but terminated it when repairs completed.
SAN ONOFRE 3	04/84	STANDARD	CE	362042	VIOLATION 001/2		0	SURVEILLANCE	ACCUMULATOR	LO	Utility error: Required chemistry surveillance after refueling of accumulator performed 6 hours late.
SAN ONOFRE 3	04/84	STANDARD	CE	362043	VIOLATION 000/SD		0	SURVEILLANCE	AUX FEEDWATER	LO	Utility error: Monthly high point system venting had not been performed twice. All other system tests were performed with acceptable results.
SEQUOYAH 1	07/81	STANDARD	ME	327005	SHUTDOWN 045/		18	LCD	ACCUMULATOR	LO	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be restored to the allowable range in the required time the plant was shutdown.
SEQUOYAH 1	07/81	STANDARD	ME	327018	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	MED	Utility error: A fire protection deluge valve was found isolated with no continuous fire watch in place, violating T.S. reqts.
SEQUOYAH 1	07/81	STANDARD	ME	327019	VIOLATION 000/SD		0	LCD	CONTAINMENT SPRAY	MED	Following the ice condenser ice weighting surveillance, it was found that the average basket weight was below the design limit, violating the T.S. reqts.
SEQUOYAH 1	07/81	STANDARD	ME	327024	VIOLATION 000/SD		0	LCD	ENGR. SAFEGUARDS	MED	A level transmitter for steam generator number one was found inoperable and a mode change from mode 4 (less than 350 degrees F) to mode 3 (greater than 350 degrees F) was made violating the T.S.
SEQUOYAH 1	07/81	STANDARD	ME	327025	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	MED	Utility error: Sampling of the reactor coolant system for boron concentration caused the pressurizer level transmitter to become inoperable. A mode change was performed with the instrument inoperable violating the Tech Spec reqts.
SEQUOYAH 1	07/81	STANDARD	ME	327030	SHUTDOWN 030/		500	LCD	PRIMARY COOLANT	MED	Reactor coolant system leakage of 25-35 GPM due to an incore detector thimble tube failure.
SEQUOYAH 1	07/81	STANDARD	ME	327031	SHUTDOWN 000/SD		0	LCD	PRESSURE RELIEF	HI	Inoperable pressurizer relief valve.
SEQUOYAH 1	07/81	STANDARD	ME	327034	VIOLATION 000/SD		0	LCD	CONTAINMENT SPRAY	HI	Throttle valve to containment spray ht exchanger closed for 15 days during which 3 mode changes were made (LCD requires both system trains operable for mode changes).
SEQUOYAH 1	07/81	STANDARD	ME	327040	VIOLATION 000/SD		0	SURVEILLANCE	AC POWER	MED	Utility error: A Tech Spec surveillance requirement for a standby diesel generator was not performed within the required time.
SEQUOYAH 1	07/81	STANDARD	ME	327041	VIOLATION 100/N		0	LCD	PRESSURIZER	MED	The pressurizer pressure indicator in the auxiliary control room was found to be inoperable.
SEQUOYAH 1	07/81	STANDARD	ME	327042	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	Due to an incomplete modification, a radiation monitor would not provide automatic isolation of direct releases from the neutralization tank.
SEQUOYAH 1	07/81	STANDARD	ME	327043	VIOLATION 100/N		0	LCD	FIRE PROTECTION	MED	Utility error: A thermal detector was discovered inoperable during the performance of a surveillance instruction. Since a one hour fire watch was not established the T.S. reqts were violated.

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Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSS L-NDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION STATUS	POWER LEVEL (%) / PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SEQUOYAH 1	07/81	STANDARD	WE	327048	VIOLATION 100/N		0	LCD	POSTACCIDENT MONITOR	MED	During a review of instrumentation drawings it was discovered that only one post accident monitoring reactor coolant system pressure channel exists in the field. Tech Specs require two independent channels.
SEQUOYAH 1	07/81	STANDARD	WE	327052	VIOLATION 100/N		0	LCD	CONTROL ROOM	LO	Utility error: It was discovered that due to an incorrect calculation of duct area, both trains of control room emergency ventilation system were left with lower than acceptable flow rates for about 3 hours.
SEQUOYAH 1	07/81	STANDARD	WE	327061	VIOLATION 000/SD		0	SURVEILLANCE	PRESSURIZER	LO	Pressurizer relief tank pressure indicators in the aux control room had range of 0-10 psig instead of 0-100 psig.
SEQUOYAH 1	07/81	STANDARD	WE	327069	VIOLATION 100/N		0	SURVEILLANCE	SERVICE WATER	HI	During test, valve supplying cooling to DB 2A was found inoperable.
SEQUOYAH 1	07/81	STANDARD	WE	327070	VIOLATION 100/N		0	LCD	CONTAINMENT	LO	The inboard and outboard isolation valves for the ice condenser glycol system failed to close on demand.
SEQUOYAH 1	07/81	STANDARD	WE	327071	VIOLATION 100/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Containment Vent. Isolation radiation monitors were not being verified as operable (particulate channels) as required for fuel handling operations.
SEQUOYAH 1	07/81	STANDARD	WE	327073	VIOLATION 100/N		0	LCD	FIRE PROTECTION	HI	110 fire doors failed to meet Underwriters Laboratory standards. Fire watch established as required by LCD.
SEQUOYAH 1	07/81	STANDARD	WE	327075	VIOLATION 100/N		0	LCD	FIRE PROTECTION	MED	Utility error: A total of 7 hourly fire watches were missed.
SEQUOYAH 2	06/82	STANDARD	WE	328005	VIOLATION 100/N		0	SURVEILLANCE	ENGR. SAFEGUARDS	MED	Utility error: Channel function test of emergency safety function instrumentation for automatic switchover to containment sump was not completed within the specified T.S. required time.
SEQUOYAH 2	06/82	STANDARD	WE	328007	VIOLATION 070/N		0	LCD	PRIMARY COOLANT	LO	Utility error: The bus undervoltage timing relay for one of the reactor coolant pumps was discovered failed. Tech Specs require that undervoltage bistables be tripped within 1 hour. This reqt was violated.
SEQUOYAH 2	06/82	STANDARD	WE	328010	VIOLATION 100/N		0	SURVEILLANCE	CONTAINMENT	LO	Utility error: Tech Specs require that each containment purge isolation valve be demonstrated operable within 24 hours after each closing of the valve. This requirement was not followed for four containment isolation valves.
SEQUOYAH 2	06/82	STANDARD	WE	328012	VIOLATION 100/N		0	LCD	RESIDUAL HT. REMOVAL	HI	Utility error: During surv. testing for external containment piping leakage both trains of BWR system were inoperable for 2 hrs, 47 min. due to a valve opening as part of procedure. Later determined procedure could be performed w/o valve opening.
SEQUOYAH 2	06/82	STANDARD	WE	328013	SHUTDOWN 100/N		2.35	LCD	CONTAINMENT	LO	During normal operation pressurizer relief tank rupture disc was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressure. Pressure reached 0.35 PSID exceeding LCD limit of 0.3 PSID.
ST. LUCIE 1	12/76	STANDARD	CE	335002	VIOLATION 000/SD		0	SURVEILLANCE	PRIMARY COOLANT	MED	Steam generator testing was expanded to 100% testing (category 3) of one steam generator and category 2 testing of the second, i.e., a number of degraded/defective tubes were found.
ST. LUCIE 1	12/76	STANDARD	CE	335004	VIOLATION 099/N		0	LCD	HEAT, VENT & AC	LO	During a surveillance both shield building exhaust fan dampers were found to be out of adjustment leading to flow rates that are less than the required 5000 CFM on each train.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	SSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ST. LUCIE 1	12/76	STANDARD	CE	335010	VIOLATION 099/N		0	LCD	CHEM. & VOL. CONTROL	HI	Utility error: 1 charging pump out for maintenance, other 2 aligned to DG 2 which was declared inoperable due to low fuel level, disabling all 3 pumps. 6 days after test of diesel generator, fuel oil level was found to be 0.5% below Tech Spec limit.
ST. LUCIE 1	12/76	STANDARD	CE	335011	VIOLATION 099/N		0	LCD	AC POWER	LO	Utility error: 3 code changes were made with Tech Spec required equipment out of service.
ST. LUCIE 2	08/83	STANDARD	CE	389002	VIOLATION 100/N		0	LCD	ECCS	HI	Utility error: Fuel movement performed while both trains of control room emergency ventilation system inoperable (one due to excessive flow, second due to AC power maint.).
ST. LUCIE 2	08/83	STANDARD	CE	389008	VIOLATION 000/SD		0	LCD	HEAT, VENT & AC LO		Utility error: On 2 occasions daily grab samples of the service water effluent were not taken.
SUNNER 1	01/84	STANDARD	ME	395001	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	Utility error: An hourly roving fire watch in the aux. bldg. penetration room had not been performed.
SUNNER 1	01/84	STANDARD	ME	395002	VIOLATION 100/N		0	LCD	FIRE PROTECTION	LO	Multiple quarterly composite samples from main plant exhaust vent and reactor bldg. purge were lost after analysis.
SUNNER 1	01/84	STANDARD	ME	395003	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	In the penetration access area 3 fire barrier deficiencies were noted (primarily damaged kaowool wrapping).
SUNNER 1	01/84	STANDARD	ME	395004	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	MED	Overcurrent protection devices for circuit for plant paging system not initially included in Tech Specs.
SUNNER 1	01/84	STANDARD	ME	395006	VIOLATION 100/N		0	LCD	CONTAINMENT	LO	Utility error: Air lock surveillance required 72 hrs after air lock use was not performed until 100 hrs after use.
SUNNER 1	01/84	STANDARD	ME	395012	VIOLATION 100/N		0	SURVEILLANCE	CONTAINMENT	LO	Utility error: Fire detector alarms disabled for 2 areas in intermediate bldg due to software modifications in the system. Low fire probability areas affected, fire watches established.
SUNNER 1	01/84	STANDARD	ME	395013	VIOLATION 100/N		0	LCD	FIRE PROTECTION	LO	Utility error: 4 air supply valves were open to the 36 inch reactor purge valves. Valves were not properly verified closed during last surveillance.
SUNNER 1	01/84	STANDARD	ME	395015	VIOLATION 000/SD		0	LCD	CONTAINMENT	MED	Inadequate calibration procedure for "low fluid oil pressure" switches resulted in switches being out of Tech Spec limits (in Chap. 15 FSQR no credit is taken for this trip).
SUNNER 1	01/84	STANDARD	ME	395020	VIOLATION 000/SD		0	SURVEILLANCE	REACTOR PROTECTION	LO	3 cable trays and 4 conduits in chase area of control building had degraded fire barriers. Fire watch established.
SUNNER 1	01/84	STANDARD	ME	395021	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	HI	7 electrical penetrations of the containment were not included in Tech Specs. 3 have overcurrent protection, 4 (related to lighting systems) do not. All seven to be added to Tech Specs.
SUNNER 1	01/84	STANDARD	ME	395031	VIOLATION 000/SD		0	SURVEILLANCE	CONTAINMENT	MED	A normally bolted closed fire barrier assembly in the aux bldg was closed but not bolted. Due to personnel errors, procedures were not properly adhered to. Procedure deficiencies resulted in improper time delay responses for 3 emergency bus undervoltage relays and loading sequencer was not tested on time (0.6. declared inoperable until sequencer tested satisfactory).
SUNNER 1	01/84	STANDARD	ME	395033	VIOLATION 098/N		0	LCD	FIRE PROTECTION	LO	
SUNNER 1	01/84	STANDARD	ME	395034	VIOLATION 000/SD		0	SURVEILLANCE	AC POWER	MED	

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SUNNER 1	01/84	STANDARD	ME	395035	VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	Utility error: Spurious hi radiation alarms resulted in reactor building purge monitor. Monitor declared inoperable, utility exceeded 72 hrs limit without performing alternate monitoring.
SUNNER 1	01/84	STANDARD	ME	395036	VIOLATION 100/N		0	LCD	FIRE PROTECTION MED		Degraded fire barriers found in 2 battery ventilation rooms.
SUNNER 1	01/84	STANDARD	ME	395038	VIOLATION 080/N		0	SURVEILLANCE	PRESSURE RELIEF LO		Procedural inadequacies resulted in only 1 of 2 PORV position indication channels being tested during surveillance. Second channel declared inoperable until tested.
SUNNER 1	01/84	STANDARD	ME	395039	VIOLATION 081/N		0	LCD	FIRE PROTECTION HI		Fire barrier between service water booster pump A and overhead cable trays was found to have a hole. Fire watch established.
SUNNER 1	01/84	STANDARD	ME	395040	VIOLATION 072/N		0	LCD	FIRE PROTECTION LO		Control room relay room fire barrier seal was found removed. Fire watch established.
SUNNER 1	01/84	STANDARD	ME	395042	VIOLATION 080/N		0	LCD	RADIATION MONITOR	LO	In certain plant configurations, only 1 of 2 required reactor building exhaust monitors is operable.
SUNNER 1	01/84	STANDARD	ME	395047	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: During release of liquid from waste monitor tank, both liquid effluent radiation monitors were inoperable (1 of 2 required).
SUNNER 1	01/84	STANDARD	ME	395052	VIOLATION 075/N		0	LCD	REACTOR PROTECTION	MED	Lifted leads disabled turbine trip on "B" trains: 98 HI HI level or safety injection signal. Condition possibly existed for 40 days.
SUNNY 1	12/72	UNIQUE	ME	280007	VIOLATION 100/N		0	LCD	POWER CONVERSION	MED	Utility error: It was discovered that the main feed regulator valves would not have tripped closed upon receiving a feedwater isolation signal. The pumps would have been tripped. This was due to a wrong connection from instrument air to reg. valve
SUNNY 1	12/72	UNIQUE	ME	280008	SHUTDOWN 000/SD		0	LCD	REACTOR PROTECTION	MED	Intermediate source range monitor failure.
SUNNY 1	12/72	UNIQUE	ME	280018	VIOLATION 080/N		0	LCD	FIRE PROTECTION MED		Utility error: It was discovered that an air hose had blocked a fire door from being closed. Since no fire watch was in effect, Tech Specs were violated.
SUNNY 1	12/72	UNIQUE	ME	280020	SHUTDOWN 080/N		48	LCD	AC POWER	MED	Reactor Coolant Pump C tripped due to fracture of A Phase Main Load Bus Bar, resulting in instantaneous ground fault. (Hrs. due to early entry into refueling.)
SUNNY 1	12/72	UNIQUE	ME	280021	VIOLATION 000/SD		0	LCD	FIRE PROTECTION MED		Utility error: Fire suppression system unavailable and no fire watch posted in cable tunnel area for a period of almost three hours.
SUNNY 2	05/73	UNIQUE	ME	281006	VIOLATION 000/SD		0	LCD	PRIMARY COOLANT LO		Utility error: With the primary system temperature below 440 degrees F, the rate of reactor cooldown was found to be 65 degrees F/hour, exceeding the 50 degrees F/hour Tech Spec limits.
SUNNY 2	05/73	UNIQUE	ME	281007	VIOLATION 000/SD		0	LCD	PRIMARY COOLANT LO		With the unit at cold shutdown, the breakers for the accumulator discharge valves were not locked open with the valves closed. This is a Tech Spec requirement when PORVs are inoperable.
SUNNY 2	05/73	UNIQUE	ME	281017	VIOLATION 100/N		0	ADMINISTRATIVE	AUX FEEDWATER	MED	Due to a drawing error, aux feedwater cross tie capability between the 2 units was not available during power operation.

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Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (K)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SUSQUEHANNA 1	06/83	STANDARD	GE	387005	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: With service water effluent line radiation monitor inoperable a once-per-shift grab sample was missed.
SUSQUEHANNA 1	06/83	STANDARD	GE	387006	VIOLATION 000/SD		0	SURVEILLANCE	REACTOR PROTECTION	LO	Weekly SRM & IRM surveillance requires sensor movement (which is a core alteration). Such alterations are prohibited by Tech Specs.
SUSQUEHANNA 1	06/83	STANDARD	GE	387009	VIOLATION 001/SU		0	LCD	HIGH PRESSURE INJ.	LO	During restart the system steam supply pressure indicator was not operating properly. Reactor pressure exceeded 150 psig (Tech Spec limit) but not 320 psig before system declared operable.
SUSQUEHANNA 1	06/83	STANDARD	GE	387012	VIOLATION 005/N		0	SURVEILLANCE	CONTAINMENT: CG	LO	Utility error: Due to administrative error quarterly surveillance of the off gas hydrogen analyzer train "B" was performed 4 days beyond violation date.
SUSQUEHANNA 1	06/83	STANDARD	GE	387015	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Background radiation in the area of the service water radiation monitor reached levels such that the monitor's high alarm setpoint could not ensure that the monitor would detect and alarm at 1 MPC CS-137 equivalent.
SUSQUEHANNA 1	06/83	STANDARD	GE	387016	VIOLATION 000/SD		0	SURVEILLANCE	CRITICALITY MONITORS	LO	Utility error: The shiftly channel check of the new fuel criticality monitors was not completed during its scheduled time period.
SUSQUEHANNA 1	06/83	STANDARD	GE	387021	VIOLATION 020/		0	LCD	FIRE PROTECTION HI	LO	Utility error: During the installation of a modification to the emergency service water system, the fire barrier wrapping of several cable raceways was overlooked. A fire watch was established.
SUSQUEHANNA 1	06/83	STANDARD	GE	387022	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	Spurious turbine bldg sping purge command resulted in a purge flow: purge reset and normal sample flow resumed.
SUSQUEHANNA 1	06/83	STANDARD	GE	387023	VIOLATION 100/N		0	LCD	STANDBY LIQUID	LO	The 31-day chemistry surveillance of the standby liquid control system indicated that the sodium pentaborate concentration in the SBLC tank was 14.33%. This value is above the Tech Spec limit for the tank.
SUSQUEHANNA 1	06/83	STANDARD	GE	387024	VIOLATION 100/N		0	LCD	HEAT, VENT & AC	LO	Utility error: The station's reactor bldg ventilation zones were inadvertently cross-connected. The condition was rectified within 25 mins of discovery.
SUSQUEHANNA 1	06/83	STANDARD	GE	387025	VIOLATION 100/N		0	SURVEILLANCE	POWER CONVERSION	LO	Utility error: Weekly surveillance operability tests of the main turbine bypass valves and the main turbine overspeed protection system valves were completed approx. 5 hrs late.
SUSQUEHANNA 1	06/83	STANDARD	GE	387026	VIOLATION 100/N		0	SURVEILLANCE	CORE SPRAY	LO	The as built full flow test isolation signal is not in agreement with that specified in the Tech Specs.
SUSQUEHANNA 1	06/83	STANDARD	GE	387027	VIOLATION 100/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: 2 grab samples were not taken within the required time limits.
SUSQUEHANNA 1	06/83	STANDARD	GE	387030	VIOLATION 100/N		0	LCD	STANDBY LIQUID	LO	System level and boron concentration were 378 gallons and .45 respectively below the Tech Spec limits.
SUSQUEHANNA 1	06/83	STANDARD	GE	387032	VIOLATION 000/SD		0	SURVEILLANCE	FIRE PROTECTION MED	LO	Due to differences in Unit 1 and 2 Tech Specs some fire detectors common to both units were not inspected for 57 days beyond the allowable test dates.
SUSQUEHANNA 1	06/83	STANDARD	GE	387038	VIOLATION 100/N		0	SURVEILLANCE	RESIDUAL HT. REMOVAL	LO	Utility error: No surveillance test had been performed on the high differential temperature isolation relays of the residual heat removal system.
SUSQUEHANNA 1	06/83	STANDARD	GE	387039	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	Temporary iodine and particulate monitors in the turbine bldg failed while the permanent monitor was out of service.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	SSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SUSQUEHANNA 1	06/83	STANDARD	GE	387041	VIOLATION	100/N	0	SURVEILLANCE	PRIMARY COOLANT LO		Utility error: After thermal power changes the appropriate chemistry tests were not run within the required time frame.
SUSQUEHANNA 1	06/83	STANDARD	GE	387044	VIOLATION	100/N	0	LCD	REACTOR PROTECTION	MED	3 fastest control rods to position 45 in a 2x2 array did not meet test requirements.
SUSQUEHANNA 1	06/83	STANDARD	GE	387045	SHUTDOWN	055/	85	SURVEILLANCE	REACTOR PROTECTION	MED	Utility Error: Failure to perform 18 month test of across discharge volume vent and drain valves. Valves subsequently failed response time test.
SUSQUEHANNA 1	06/83	STANDARD	GE	387046	VIOLATION	100/N	0	LCD	FIRE PROTECTION	MED	Open fire penetration was discovered in the ceiling of the lower cable spreading room. Initially no fire watch was established. Also Admin. Tech Spec error as revisions failed to include this barrier in surveillance.
SUSQUEHANNA 1	06/83	STANDARD	GE	387049	VIOLATION	087/N	0	LCD	SUMP	LO	A suppression chamber purge was initiated without the required sampling and analyses. The suppression chamber oxygen concentration exceeded the limit in Tech Specs.
SUSQUEHANNA 2	01/85	STANDARD	GE	388002	VIOLATION	000/SD	0	LCD	REACTOR PROTECTION	MED	One source range monitor was bypassed during fuel loading operations.
SUSQUEHANNA 2	01/85	STANDARD	GE	388006	VIOLATION	002/SD	0	LCD	LIN PRESSURE INJ.	MED	Low pressure coolant injection system "B" loop was declared inoperable.
SUSQUEHANNA 2	01/85	STANDARD	GE	388007	VIOLATION	002/	0	LCD	REACTOR H2O CLEANUP	LO	A differential pressure switch was jammed 1 hr longer than the allowable time.
SUSQUEHANNA 2	01/85	STANDARD	GE	388009	SHUTDOWN	000/SD	0	LCD	PRESSURE RELIEF	MED	Malfunction of the suppression chamber drywell vacuum breakers. (0 hrs. because plant is not operating.)
SUSQUEHANNA 2	01/85	STANDARD	GE	388012	VIOLATION	020/	0	LCD	EDCS	HI	Utility error: During maintenance 2 fuses removed that removed safety related signals to: A core spray system, A diesel generator, A residual heat removal system, AEC hi press inj and AEC 480V buses.
SUSQUEHANNA 2	01/85	STANDARD	GE	388016	VIOLATION	020/	0	SURVEILLANCE	RESIDUAL HT. REMOVAL	LO	Utility error: Due to miscommunication a pump instrumentation surveillance was performed 3 hrs beyond 31 day limit and allowable extension.
SUSQUEHANNA 2	01/85	STANDARD	GE	388019	SHUTDOWN	071/	0	LCD	RESIDUAL HT. REMOVAL	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown begun.
SUSQUEHANNA 2	01/85	STANDARD	GE	388020	VIOLATION	100/N	0	LCD	REACTOR H2O CLEANUP	LO	Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation).
SUSQUEHANNA 2	01/85	STANDARD	GE	388022	VIOLATION	098/N	0	LCD	HIGH PRESSURE INJ.	HI	System declared inoperable due to vibration during test. Also, for 40 minutes the auto depressurization system was inoperable for routine surveillance.
SUSQUEHANNA 2	01/85	STANDARD	GE	388023	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	Utility error: Fire watch (req. for 2 maint. activities) in one area was removed when one activity ended. Fire watch missed for 11 days.
SUSQUEHANNA 2	01/85	STANDARD	GE	388026	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	LO	Open fire penetration found in a rated fire barrier. A fire watch was established.
SUSQUEHANNA 2	01/85	STANDARD	GE	388027	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	LO	3 conduits found that had not been coated with fire barrier coating. Fire watch assigned to area.

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Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TWI-1	09/74	UNIQUE	BW	289001	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	Relay room floor fire barrier penetration seal was found to be in deficient condition. Since no hourly fire watch was in effect, Tech Spec requirements were violated.
TWI-1	09/74	UNIQUE	BW	289003	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	Utility error: Several penetrations were found that were missing fire-rated seals. Due to lack of fire watch, a Tech Spec requirement was violated.
TWI-1	09/74	UNIQUE	BW	289004	VIOLATION	000/SD	0	LCD	PRIMARY COOLANT	MED	Utility error: Following a test, it was discovered that a tube in one of the steam generators that was required to have been plugged was not plugged. The tube next to it was mistakenly plugged instead.
TWI-2	12/78	STANDARD	BW	320001	VIOLATION	000/SD	0	LCD	HEAT, VENT & AC	LO	While submerged demineralized system and reactor building purging were taking place, aux bldg. exhaust and supply fans tripped. Purging without fans violates an LCD, condition existed for approximately .5 hours.
TWI-2	12/78	STANDARD	BW	320003	VIOLATION	000/SD	0	LCD	CONTAINMENT	MED	During a containment isolation verification test, one valve was found to be open violating the Tech Spec requirements.
TWI-2	12/78	STANDARD	BW	320004	VIOLATION	000/SD	0	LCD	RESIDUAL HT. REMOVAL	LO	Dec., heat removal pumps were declared inoperable due to missing the T.S. required surveillance. No surveillance will be performed until preventive maintenance on the decay heat removal system components is completed.
TWI-2	12/78	STANDARD	BW	320006	VIOLATION	000/SD	0	LCD	SUMP	LO	The reactor building water level indication was found inoperable. Since the duration of repair was greater than 8 hrs, a Tech Spec limit was violated.
TWI-2	12/78	STANDARD	BW	320007	VIOLATION	000/SD	0	LCD	CONTAINMENT	MED	Utility error: Reactor bldg purge/ventilation system isolation valve failed to close during test. System was used for the next 10 days, violating containment isolation capability LCD.
TWI-2	12/78	STANDARD	BW	320009	VIOLATION	000/SD	0	LCD	INCORE MONITOR	LO	An incore thermocouple was declared inoperable.
TWI-2	12/78	STANDARD	BW	320010	VIOLATION	000/SD	0	LCD	CONTAINMENT	MED	Utility error: As a part of a reactor bldg. chilled water pump pre-op test, several containment isolation valves were opened without the unit approval as required by T.S.
TWI-2	12/78	STANDARD	BW	320011	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LO	During atmospheric rad. monitor calibration, the CR air inlet rad. monitor interlock was placed in defeat. When neither the CR emergency air cleanup system was put in recirc. mode in 4 hrs nor the monitor returned to service in 4 hrs, TS violated.
TWI-2	12/78	STANDARD	BW	320012	VIOLATION	000/SD	0	SURVEILLANCE	FIRE PROTECTION	LO	Utility error: It was discovered that an ionization type fire system detector was not tested within the required Tech Spec limit of time.
TWI-2	12/78	STANDARD	BW	320013	VIOLATION	000/SD	0	ADMINISTRATIVE	CONTAINMENT	LO	Utility error: A temporary change notice for the operation of the react. bldg airlock doors which was approved by the site operations director was not submitted to NRC within 72 hours as required.
TWI-2	12/78	STANDARD	BW	320015	VIOLATION	000/SD	0	LCD	FIRE PROTECTION	MED	It was discovered that a fire barrier penetration door between aux. and fuel handling buildings was breached. Since no hourly fire watch was established the Tech Spec requirements were violated.
TWI-2	12/78	STANDARD	BW	320016	VIOLATION	000/SD	0	LCD	INCORE MONITOR	LO	Three additional incore thermocouples declared inoperable (total of 22 of 52 now inoperable).

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Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NGSS VENDOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TWI-2	12/78	STANDARD	BW	320018	VIOLATION 000/SD		0	LCD	AC POWER	MED	While shutdown, BG A was out of service for maintenance for more than 7 days.
TWI-2	12/78	STANDARD	BW	320019	VIOLATION 000/SD		0	LCD	HEAT, VENT & AC LO		Fuel handling building vent system exhaust flow rate was 3000 cfm below Tech Spec limit of 35000 cfm while processing of liquid radwaste was being performed.
TWI-2	12/78	STANDARD	BW	320020	VIOLATION 000/SD		0	SURVEILLANCE	PRIMARY COOLANT LO		System samples drawn through temporary sampling tube may not have been representative of vessel volume. Condition existed since 1980.
TWI-2	12/78	STANDARD	BW	320021	VIOLATION 000/SD		0	LCD	INCORE MONITOR	LO	Three additional incore thermocouples declared inoperable (total of 26 of 52 thermocouples are now inoperable).
TWI-2	12/78	STANDARD	BW	320022	VIOLATION 000/SD		0	LCD	CHLORINE DETECTION	LO	System was out of service for more than 1 hr without control room vent system placed in recirculation mode.
TROJAN	05/76	STANDARD	WE	344001	VIOLATION 100/N		0	SURVEILLANCE	ENGR. SAFEGUARDS	MED	It was discovered that for several years the surveillance testing for a portion of the safety injection activation logic was not performed as frequently as called for in the plant Tech Specs.
TROJAN	05/76	STANDARD	WE	344002	VIOLATION 100/N		0	LCD	HIGH PRESSURE INJ.	HI	One of safety injection pump's lube oil cooler was found to be packed with sediment preventing service water from passing through cooler. Since this condition has built up over several months it was assumed pump inoperable over 72 hrs.
TROJAN	05/76	STANDARD	WE	344005	VIOLATION 100/N		0	LCD	AUX FEEDWATER	HI	With 1 train of aux. feedwater removed from service for maintenance, a periodic test was performed on the other train. For approx. 80 mins. the safety injection & steam generator low-low level automatic start signals to 2nd train disabled.
TROJAN	05/76	STANDARD	WE	344008	VIOLATION 100/N		0	SURVEILLANCE	RADIATION PROTECTION	LO	Utility error: It was discovered that the Tech Spec periodic surveillance requirement for leakage testing of 8 sealed sources containing mixed isotope radioactive material was not met.
TROJAN	05/76	STANDARD	WE	344009	VIOLATION 000/SD		0	LCD	CONTAINMENT	MED	A containment radiation monitor that measures the containment air noble gas and provides automatic isolation of containment purge and ventilation on high radiation levels was found to be inoperable.
TROJAN	05/76	STANDARD	WE	344012	VIOLATION 000/SD		0	LCD	HEAT, VENT & AC LO		Utility error: During refueling outage, new nuclear fuel assemblies were transferred from new fuel storage room to spent fuel pool without an operable train of spent fuel pool ventilation in service. A small fire occurred during this time.
TROJAN	05/76	STANDARD	WE	344013	VIOLATION 000/SD		0	ADMINISTRATIVE	PRESSURIZER	LO	Use of incorrect scaling factors lead to lower than actual (by up to 10%) pressurizer level indications.
TROJAN	05/76	STANDARD	WE	344014	VIOLATION 000/SD		0	LCD	PRIMARY COOLANT	LO	Identified leak of greater than 10 gpm (violating LCD) found.
TROJAN	05/76	STANDARD	WE	344015	VIOLATION 000/SD		0	LCD	HIGH PRESSURE INJ.	HI	During change of mode from 5 to 4 it was found that one of the centrifugal charging pumps was tagged out for service. This violates the Tech Spec requirement of both pumps being available when in mode 4.
TURNKEY POINT 3	12/72	UNIQUE	WE	250004	VIOLATION 000/SD		0	LCD	AUX FEEDWATER	MED	Utility error: AFMS pumps did not produce the required flow due to misposition of the manual governor speed control knob.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENDOR	LER NO. OR T.S. LEVEL (S) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TURKEY POINT 3	12/72	UNIQUE	ME	250008 VIOLATION 000/50	0	LCD	ALDI FEEDWATER	MED	One of the RIMS pumps was declared out of service due to flow oscillations during a monthly test.
TURKEY POINT 3	12/72	UNIQUE	ME	250016 VIOLATION 100/N	0	SURVEILLANCE	PRIMARY COOLANT	LD	The isotopic analysis for iodine in the RCS was not performed within the time interval required by Tech Specs.
TURKEY POINT 3	12/72	UNIQUE	ME	250017 VIOLATION 100/N	0	LCD	HIGH PRESSURE INJ.	LD	To repair a leaky valve the primary water storage tank was isolated for less than the allowed outage time.
TURKEY POINT 3	12/72	UNIQUE	ME	250019 SHUTDOWN 100/N	22	LCD	PRIMARY COOLANT	LD	Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNIQUE	ME	250020 SHUTDOWN 100/N	112	LCD	PRIMARY COOLANT	LD	Reactor coolant system leakage of approximately 13.5 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNIQUE	ME	250022 VIOLATION 100/N	0	SURVEILLANCE	REACTION PROTECTION	MED	Utility error: Daily calibration of the reactor power range was not performed as required by Tech Specs.
TURKEY POINT 3	12/72	UNIQUE	ME	250024 VIOLATION 100/N	0	SURVEILLANCE		LD	Utility error: Biweekly test for TDRS and Delta-T was not performed as required by Tech Specs.
TURKEY POINT 3	12/72	UNIQUE	ME	250026 VIOLATION 100/N	0	SLBSSS	REACTION PROTECTION	MED	One of three Nuclear Instrumentation channels had diminished operability due to incorrect variable setpoints caused by swapped leads. Channel declared inoperable resulting in violation of LCD.
TURKEY POINT 3	12/72	UNIQUE	ME	250030 VIOLATION 100/N	0	SURVEILLANCE	FIRE PROTECTION	MED	Utility unable to complete required surveillance of motor and diesel driven fire pumps within required 18 month period.
TURKEY POINT 3	12/72	UNIQUE	ME	250032 VIOLATION 100/N	0	LCD	ALDI FEEDWATER	MED	One Aldi Feedwater pump was found to be inoperable and the required cooldown of either Unit 3 or 4 to below 350 degrees F was not performed.
TURKEY POINT 3	12/72	UNIQUE	ME	250034 VIOLATION 000/50	0		PRESSURE RELIEF HI		RMV block valve would not close completely.
TURKEY POINT 3	12/72	UNIQUE	ME	250035 VIOLATION 000/50	0	LCD	CONTAINMENT	LD	In an attempt to drain the reactor coolant drain tanks, containment integrity was technically breached because valves between tank and environment were not qualified as containment isolation valves. No direct flow path existed.
TURKEY POINT 4	09/73	UNIQUE	ME	251012 VIOLATION 051/N	0	LCD	REACTION PROTECTION	LD	Nuclear temperature coefficient exceeded the Tech Spec limits.
TURKEY POINT 4	09/73	UNIQUE	ME	251018 VIOLATION 100/N	0	LCD	SERVICE WATER	HI	Utility error: The intake cooling water strainer was taken out for cleaning longer than 24 hours permitted by Tech Specs.
TURKEY POINT 4	09/73	UNIQUE	ME	251019 VIOLATION 100/N	0	SURVEILLANCE	REACTION PROTECTION	MED	Daily calibration of the reactor power range was not performed as required.
TURKEY POINT 4	09/73	UNIQUE	ME	251020 VIOLATION 100/N	0	LCD	CONTAINMENT	LD	1 of 2 redundant containment isolation valves (on the service air header to the containment) was found open during maintenance. Redundant isolation valve was closed.
VERMONT Yankee	11/72	UNIQUE	BE	271003 VIOLATION 100/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: Weekly air particulate and charcoal samples were discarded as rubbish by mistake instead of sending them to the analytical laboratory.
VERMONT Yankee	11/72	UNIQUE	BE	271006 VIOLATION 092/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: A weekly air particulate and charcoal cartridge sampling was not performed as required by Tech Specs.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMPLETION	TYPE OF COMPLETION	TECHNICAL SPECIFICATION	MESS LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (S) VIOLATION	DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271010	VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	It was discovered that stack gas radiation monitors were not responding properly due to one monitor having the wrong detector installed and the other one having a faulty circuit card.
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271011	VIOLATION 000/50	0	LCD	CONTAINMENT	MED	During a containment leak rate testing, it was found that several isolation valves had seat leakage above Tech Spec limits.
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271012	VIOLATION 000/50	0	LCD	STANDBY GAS TREATMENT	MED	System was "potentially" bypassed during fuel movement when reactor biding air conditioning was not tagged out of service and properly aligned during maintenance.
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271013	VIOLATION 000/50	0	SURVEILLANCE	LITIDIS POSITION	LO	Two relief valves in the SLC system were found to have setpoints below Tech Spec requirements.
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271014	VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	During a weekly environment air sample collection it was discovered that the sample is not being drawn continuously as required by Tech Specs.
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271017	VIOLATION 000/50	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: While the service water system radiation monitor was out of service two daily samplings of the service water system were not taken as required by Tech Specs.
VERMONT YANKEE	11/72	UNIQUE	UNIQUE	GE	271024	VIOLATION 100/N	0	SURVEILLANCE	HIGH PRESSURE INT.	LO	Utility error: Functional testing of the HECI-Towers water level system was not performed during the week of 10-1-84. Tech Specs require monthly functional testing.
WATERBURY 3	06/85	STANDARD	STANDARD	CE	352002	VIOLATION 000/50	0	SURVEILLANCE	FIRE PROTECTION	LO	Utility error: 15 fire doors were not inspected for an 8 day period after issuance of low power license and no fire switches had been established.
WAB-2	12/84	STANDARD	STANDARD	GE	357003	SHUTDOWN 000/50	0	LCD	REACTOR PROTECTION	MED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hours because plant is not operating.)
WAB-2	12/84	STANDARD	STANDARD	GE	357004	SHUTDOWN 001/50	0	LCD	REACTOR PROTECTION	MED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (0 outage hrs. because plant is not operating.)
WAB-2	12/84	STANDARD	STANDARD	GE	357006	VIOLATION 000/50	0	LCD	SUMP	LO	Due to incorrect valve lineup, suppression pool level dropped approx. 5 inches below required level of 30 ft. 9.75 inches. Event occurred during shutdown.
WAB-2	12/84	STANDARD	STANDARD	GE	357009	VIOLATION 000/50	0	SURVEILLANCE	AC POWER	LO	Test performed on diesel generators without required preclude/warnup (current design does not permit warnup).
WAB-2	12/84	STANDARD	STANDARD	GE	357012	VIOLATION 000/50	0	SURVEILLANCE	AC POWER	MED	Utility error: Fuel oil samples for the diesel generators fuel oil tanks not received within required time frame (occurred 3 times).
WAB-2	12/84	STANDARD	STANDARD	GE	357023	VIOLATION 000/50	0	SURVEILLANCE	AC POWER	LO	Performed test on diesel generators without required preclude/warnup (current design does not permit warnup).
WAB-2	12/84	STANDARD	STANDARD	GE	357029	VIOLATION 001/	0	SURVEILLANCE	AC POWER	LO	2 tests on diesel generators performed without required preclude/warnup (current design does not permit warnup).
WAB-2	12/84	STANDARD	STANDARD	GE	357032	VIOLATION 001/NU	0	LCD	CONTAINMENT	MED	Due to a disconnected interlock, inner door of aircraft opened prior to outer door closure.
WAB-2	12/84	STANDARD	STANDARD	GE	357041	VIOLATION 018/	0	SURVEILLANCE	AC POWER	LO	Performed test on diesel generator without required preclude/warnup (warnup not possible with current BS design).

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (X)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
WNP-2	12/84	STANDARD	GE	397059	VIOLATION 027/		0	SURVEILLANCE	AC POWER	LO	Twice test on diesel generator was performed without required pretests/warmup (warmup not possible with current DG design).
WNP-2	12/84	STANDARD	GE	397062	VIOLATION 020/		0	SURVEILLANCE	REACTOR CONTROL	LO	Reactor power was reduced in preparation for main turbine trip testing. Surveillance requirements on rod sequence control system were not performed in the required time frame.
WNP-2	12/84	STANDARD	GE	397070	VIOLATION 000/SD		0	SURVEILLANCE	AC POWER	LO	12 tests on diesel generators were performed without required pretests/warmup (due to design warmup by running at idle speed was not possible.)
WNP-2	12/84	STANDARD	GE	397085	VIOLATION 037/		0	SURVEILLANCE	AC POWER	LO	Twice test on diesel generator was performed without required pretests/warmup (warmup not possible with current DG design).
WNP-2	12/84	STANDARD	GE	397086	VIOLATION 000/SD		0	LCD	FIRE PROTECTION	MED	Utility errors: Approximately 1/2 of an hourly fire watch was not performed by assigned operator.
WNP-2	12/84	STANDARD	GE	397087	VIOLATION 035/		0	LCD	REACTOR CONTROL	LO	When an out of sequence rod was selected, the rod worth minimizer did not initiate select error light. Therefore no operator was stationed to verify control rod movement.
WNP-2	12/84	STANDARD	GE	397088	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Standby service water monitor declared inoperable. Required sampling not performed.
WNP-2	12/84	STANDARD	GE	397100	VIOLATION 055/N		0	SURVEILLANCE	CONTAINMENT	MED	Utility errors: Closing time criteria of 2 isolation valves was apparently not met. Other surveillance procedures had not been performed according to Tech Specs.
WNP-2	12/84	STANDARD	GE	397103	SHUTDOWN 045/		0	LCD	HEAT, VENT & AC HI		Due to equipment motor failure, cooling was lost to the RPS room #1, Div I battery and battery charger rooms and emergency bus. This resulted in the assumption of many safety related systems being inoperable. (0 hrs. because plant is not operating.)
WNP-2	12/84	STANDARD	GE	397106	VIOLATION 004/		0	LCD	PRIMARY COOLANT HI		1 of 2 fuel zone level transmitters improperly installed, resulting in incorrect vessel level indication.
WNP-2	12/84	STANDARD	GE	397111	VIOLATION 072/N		0	SURVEILLANCE	DC POWER	HI	Utility errors: Quarterly battery maintenance was not performed as required due to incorrect setup of schedule.
WNP-2	12/84	STANDARD	GE	397115	VIOLATION 000/SU		0	SHUTSSS	REACTOR PROTECTION	MED	Neutron flux high shutdown trip was set beyond Tech Spec limits.
WNP-2	12/84	STANDARD	GE	397121	VIOLATION 000/SD		0	SURVEILLANCE	AC POWER	MED	Utility errors: Diesel Generator fuel oil tank chemistry test results not verified within the required time.
WNP-2	12/84	STANDARD	GE	397122	VIOLATION 072/N		0	LCD	FIRE PROTECTION	MED	Utility errors: Fire door alarm circuit was removed due to a drawing error in a design change package.
WNP-2	12/84	STANDARD	GE	397123	SHUTDOWN 096/		240	LCD	HEAT, VENT & AC HI		Critical Switchgear room HVAC unit found to be vibrating excessively; unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (Hrs based on Grey Book info availability chart.)
WNP-2	12/84	STANDARD	GE	397126	VIOLATION 098/N		0	SURVEILLANCE	RESIDUAL HT. REMOVAL	LO	Area temp monitoring required in the residual ht. removal pump room whenever equipment is in use. Surveillance procedure required it in modes 1, 2 or 3 only.

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Table B-1 (continued)
CLASSIFICATION OF LEPS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMPLETION	TYPE OF TECHNICAL OPERATION	NERES LER NO.	SHUTDOWN OR T.S. VIOLATION	NUMBER LEVEL (S) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
WAP-2	12/74	STANDARD	BE	397130 VIOLATION 100/N		0	SURVEILLANCE	CONTAINMENT	HI	Procedure review identified 25 valves not previously identified as containment isolation valves and therefore not included in surveillance.
YANKEE RDME	06/61	STANDARD	ME	029001 SHUTDOWN 100/N		196	LCD	PRIMARY COOLANT	LO	Primary coolant system boundary degradation due to the loop 1 steam generator water box vent line leakage.
YANKEE RDME	06/61	STANDARD	ME	029011 VIOLATION 100/N		0	SLULSSS	PRESSURE RELIEF	HI	The lift setpoint of a safety valve was found to exceed the Tech Spec tolerance. Each of the two safety relief valves is capable of preventing the main coolant pressure exceeding 27.25 psig.
YANKEE RDME	06/61	STANDARD	ME	029013 SHUTDOWN 100/N		307	LCD	AC POWER	HI	A fault in the 480V supply line to Bus 4-1 resulted in Bus 4-1 isolation and initiation of fire.
YANKEE RDME	06/61	STANDARD	ME	029014 VIOLATION 000/SD		0	LCD	ACCUMULATION	HI	As a result of a main coolant pressure transmitter failure two independent ECCS initiations occurred leaving the safety injection system nitrogen bottles pressures below Tech Specs due to a blown cap off a line on the accumulator safety valve header.
ZION 1	12/73	UNABLE	ME	295005 SHUTDOWN 000/SD		272 +	LCD	PRIMARY COOLANT	RED	During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled uncontainable leakage of approximately 18 GPM of primary coolant.
ZION 1	12/73	UNABLE	ME	295013 VIOLATION 100/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: The quarterly surveillance of fire sweep discharge radiation monitor was performed 11 days past the required time.
ZION 1	12/73	UNABLE	ME	295014 VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	During a periodic check, it was found that the vent stack particulate radiation monitor had failed low.
ZION 1	12/73	UNABLE	ME	295015 VIOLATION 000/SD		0	SURVEILLANCE	FINE PROTECTION	LO	Utility error: The semi-annual testing of the aircraft crash fire detection system was not completed until 5 months after the set date.
ZION 1	12/73	UNABLE	ME	295016 VIOLATION 099/N		0	LCD	CONTAINMENT	LO	The Zone 1 electrical penetration pressure was found to be below Tech Spec limit of 47 psig.
ZION 1	12/73	UNABLE	ME	295017 VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	During a test, the low range noble gas detector of the containment air monitor failed to respond to the check source.
ZION 1	12/73	UNABLE	ME	295018 VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	During a surveillance, the blower for the vent stack particulate and iodine sampler was found to be off.
ZION 1	12/73	UNABLE	ME	295019 VIOLATION 100/N		0	ADMINISTRATIVE		LO	Utility error: A required Tech Spec startup report was submitted late to the NEC.
ZION 1	12/73	UNABLE	ME	295020 VIOLATION 100/N		0	LCD	WASTE GAS	LO	Utility error: A release was made from a waste gas tank prior to the completion of the 45 day holding period.
ZION 1	12/73	UNABLE	ME	295021 SHUTDOWN 100/N		962	LCD	CONTAINMENT	RED	NEC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.
ZION 1	12/73	UNABLE	ME	295022 VIOLATION 000/SD		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: The weekly particulate, iodine and noble gas samples for containment purge radiation monitor were not collected on schedule.
ZION 1	12/73	UNABLE	ME	295023 VIOLATION 100/N		0	LCD	NOT IDENTIFIED	LO	During a visual inspection, two seismic suppressors (snubbers) were found inoperable.

Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION PLANT STATUS	POWER LEVEL (%) / DURATION (HRS)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ZION 1	12/73	UNIQUE	WE	295024	VIOLATION 000/HU	0	LCD	EECS	HI		Utility error: During heatup the primary system was allowed to exceed 1000 psig without the accumulators, safety injection pumps and charging pumps being in service.
ZION 1	12/73	UNIQUE	WE	295025	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION	LO		Utility error: penetration fire barrier surveillance not completed within required interval (18 months) because fire marshal was overextended.
ZION 1	12/73	UNIQUE	WE	295026	VIOLATION 006/SD	0	LCD	WASTE GAS	LO		While performing maintenance, it was found that gas was leaking from the Waste Gas Header to the volume control tank.
ZION 1	12/73	UNIQUE	WE	295028	VIOLATION 000/SD	0	ADMINISTRATIVE		LO		Utility error: A temporary procedure change was not completely reviewed within the 14 days required by Tech Specs.
ZION 1	12/73	UNIQUE	WE	295030	VIOLATION 074/N	0	SURVEILLANCE	REACTOR PROTECTION	MED		With the nuclear instrument system quadrant power tilt measurement declared inoperable, the Tech Spec requirement of hourly power tilt calculation was violated.
ZION 1	12/73	UNIQUE	WE	295033	VIOLATION 000/SD	0	ADMINISTRATIVE	CONTAINMENT	MED		Type 2 test of air locks not performed in accordance with 10 CFR 50 App. J due to failure to incorporate changes in App J into procedures.
ZION 1	12/73	UNIQUE	WE	295034	VIOLATION 000/HU	0	SURVEILLANCE	CHEM. & VOL. CONTROL	LO		Utility error: Boron concentration samples taken at 5 1/2 hour intervals (4 hr required) during sytem heatup.
ZION 1	12/73	UNIQUE	WE	295035	VIOLATION 062/N	0	LCD	NOT IDENTIFIED	LO		Utility error: One safety related snubber found in a degraded condition (staking pin removed) and repaired.
ZION 1	12/73	UNIQUE	WE	295036	VIOLATION NG/	0	LCD	CONTAINMENT	MED		Containment purge valve failed to seat completely. Failure to seat has occurred several times.
ZION 1	12/73	UNIQUE	WE	295037	VIOLATION 099/N	0	SURVEILLANCE	CORE MONITOR	MED		Reactor power was allowed to exceed turn-on power fraction for a period of 8 hrs without Axial Power Distribution Monitoring System (APDMS) type surveillance or base load operation.
ZION 1	12/73	UNIQUE	WE	295039	VIOLATION 099/N	0	SURVEILLANCE	RADIATION MONITOR	LO		During containment venting purge exhaust stack monitor did not function properly at all times.
ZION 2	09/74	UNIQUE	WE	304011	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LO		Utility error: During a containment purge it was discovered that the switch for the blower assembly of the service building exhaust monitor was in the off position, so this release path was not monitored.
ZION 2	09/74	UNIQUE	WE	304012	VIOLATION 000/SD	0	SURVEILLANCE	CONTAINMENT	LO		Utility error: During a refueling outage, shift management realized that the testing of the containment purge and vent system had not been performed prior to fuel moves as required by Tech Specs.
ZION 2	09/74	UNIQUE	WE	304014	VIOLATION 000/SD	0	LCD	NOT IDENTIFIED	LO		During a visual inspection five safety-related snubbers were found inoperable.
ZION 2	09/74	UNIQUE	WE	304015	VIOLATION 100/N	0	LCD	MAIN STEAM ISOLATION	LO		During normal surveillance it was discovered that loop D MBIV had no closing side hydraulic pressure.
ZION 2	09/74	UNIQUE	WE	304020	SHUTDOWN 100/N	21	LCD	--	LO		The containment temperature was calculated to be 120.48 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.

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Table B-1 (continued)
CLASSIFICATION OF LERS BY PLANT NAME AND LER NUMBER

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (X)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ZION 2	09/74	UNIQUE	WE	304023	VIOLATION 037/SU		0	SURVEILLANCE	RADIATION MONITOR	LO	During reactor startup, there was a thermal power change of greater than 15% in one hour. No reactor coolant sample for iodine concentration was taken 2 to 6 hours following the power change as required by Tech Specs.
ZION 2	09/74	UNIQUE	WE	304027	VIOLATION 099/N		0	SURVEILLANCE	PLANT COMPUTER	LO	Utility error: With flux difference alarm inoperable the flux difference was not logged hourly as required.
ZION 2	09/74	UNIQUE	WE	304029	VIOLATION 099/N		0	LCO	CONTAINMENT; CS	MED	Utility error: Removal of containment purge fan rendered both hydrogen purge fans inoperable (both must be operable when plant is critical).
*** Total ***							11265				

Table B-2. CLASSIFICATION OF LERs ACCORDING TO
SYSTEM AFFECTED

Table B-2

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	LEN'S NO.	SAFETY ON T.S. VIOLATION	POWER LEVEL (SI) VIOLATION	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
PORT ST. UNIT	01/79	UNIQUE	SH			0				
REACTOR 1	07/71	UNIQUE	RE			0				
REACTOR 2	09/74	UNIQUE	RE			0				
REACTOR 3	12/79	UNIQUE	RE			0				
REACTOR 4	10/78	UNIQUE	RE			0				
REACTOR 5	04/75	UNIQUE	RE			0				
REACTOR 6	04/75	UNIQUE	RE			0				
REACTOR 7	06/77	STANDARD	RE			0				
REACTOR 8	01/68	UNIQUE	RE			0				
REACTOR 9	01/68	UNIQUE	RE			0				
REACTOR 10	04/64	STANDARD	CE			0				

Utility errors: It was discovered that the weekly power operation surveillance had not been performed within the Tech Specs time requirement.

Utility errors: The results of the in-service inspection were not submitted to the MEC within 2 months of completion of inspection as required by Tech Specs.

Utility errors: A temporary change in a procedure was not reviewed by the station Operations Review Committee and approved by the station manager within the 14 days of implementation as required by Tech Specs.

It was found that a procedural change for in-service valve testing during cold shutdown was not approved by station manager or his designee within 14 days of implementation.

Utility errors: Four Temporary Change Notices were not approved within 14 days as required.

Utility errors: Procedures to process overtime request forms were not properly evaluated against Tech Specs prior to approval.

Table B-2 (continued)
CLASSIFICATION OF EVENTS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMENCEMENT OF OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESSAGE NUMBER	LEAD NO.	SAFETY LEVEL	POWER VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TURKEY POINT 3	12/72	UNUSABLE	ME	250004	VIOLATION	100/N	0	RELIANCE		LD	Utility error: Biweekly test for TUNE) and Billa-1 was not performed as required by Tech Specs.
210N 1	12/73	UNUSABLE	ME	250019	VIOLATION	100/N	0	ADMINISTRATIVE		LD	Utility error: A required Tech Spec startup report was submitted late to the MEC.
210N 1	12/73	UNUSABLE	ME	250025	VIOLATION	000/SD	0	ADMINISTRATIVE		LD	Utility error: A temporary procedure change was not completely reviewed within the 14 days required by Tech Specs.
210N 2	09/74	UNUSABLE	ME	304020	SAFETY	100/N	21	LCD		LD	The containment temperature was calculated to be 120.48 degrees F which violated the Tech Spec limit of 120 degrees F. Subsequent volume weighted average temperature was calculated to be 113 degrees F and plant was taken back to power.
CALVERT CLIFFS 2	04/77	STANDARD	CE	318005	VIOLATION	000/SD	0	LCD	AC POWER	HI	Utility error: During plant shutdown with one diesel generator inoperable, the second diesel generator was inadvertently taken out of service.
BARGE BRIDGES	02/74	UNUSABLE	BE	311001	SAFETY	025/NLM	134	LCD	AC POWER	HI	Diesel Generator "B" failed on high crankcase pressure during an operability test. The reactor entered a 7 day LCD but could not perform the maintenance and test before the deadline.
WITCH 1	12/75	UNUSABLE	BE	321007	VIOLATION	000/SD	0	LCD	AC POWER	HI	All 3 BE were out of service (1 failed) at the same time for approximately 12 hours (core was unloaded at the time). Only 1 is required to be operable in this mode.
WITCH 2	06/79	STANDARD	BE	366017	VIOLATION	000/SD	0	RELIANCE	AC POWER	HI	Utility error: Diesel generator test frequency was not modified as required after 3 failures in 100 tests time frequency should have been 7 days, tests were performed every 14 days.
LACKSSE	11/69	UNUSABLE	BE	405011	VIOLATION	000/MSB	0	LCD	AC POWER	HI	During a loss of offsite power both diesel generators started, one failed to load (brake fault). Testing of operable diesel was performed in 6.3 hrs instead of 4 hrs as required.
KEITH BRIDGE 2	12/80	STANDARD	ME	325013	SAFETY	100/N	179	LCD	AC POWER	HI	Plant was shutdown when 2 diesel generators tripped during surveillance testing.
SCIENCE 3	12/74	UNUSABLE	BE	287001	VIOLATION	100/N	0	LCD	AC POWER	HI	Utility error: It was discovered that a fuse in a switchgear load shed source was missing. This would require the ability to load shed eight nonessential components during a load shed action.
SWAN SHIPWAY 1	01/68	UNUSABLE	ME	296002	VIOLATION	000/SD	0	LCD	AC POWER	HI	During routine test of electrical circuits Diesel Generator 2 started unexpectedly, tripped on overvoltage and was declared inoperable. Since DG 1 was also inoperable an LCD was declared.
THOMAS RIVER	06/61	STANDARD	ME	029013	SAFETY	100/N	307	LCD	AC POWER	HI	A fault in the 480V supply line to Bus 4-1 resulted in Bus 4-1 isolation and initiation of fire.
CALLAWAY 1	01/80	STANDARD	ME	443005	VIOLATION	000/SD	0	LCD	AC POWER	LD	Utility error: With 1 B.B. out of service the required verification of the availability of 2 offsite sources was not performed within 1 hour.
CRYSTAL RIVER 3	03/77	STANDARD	BE	302006	VIOLATION	096/N	0	LCD	AC POWER	LD	Utility error: Following taking an emergency diesel generator out for maintenance the surveillance requirement that must be performed within one hour was not performed.

Table B-2 (continued)

CLASSIFICATION OF LEGS INJURED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NO. OF LEGS INJURED	SAFETY OR T.S. VIOLATION	POWER LEVEL (kW)	OUTSIDE RUNTIME (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CANADIAN RIVER 3	03/77	STRONG	04	300019	VIOLATION 000/0	0	LCD	AC POWER	LD	Utility errors: With one Diesel Generator inoperable a required operability test was not performed within required time limits (9 hrs) versus 8 hrs required).
ST. LUCIE 1	12/76	STRONG	CE	325011	VIOLATION 000/0	0	LCD	AC POWER	LD	5 days after test of diesel generator, fuel oil level was found to be 0.25 below Tech Spec limit.
WAP-2	12/84	STRONG	BE	257009	VIOLATION 000/0	0	SURVEILLANCE	AC POWER	LD	Test performed on diesel generators without required preidle/warmup (current design does not permit warmup).
WAP-2	12/84	STRONG	BE	257003	VIOLATION 000/0	0	SURVEILLANCE	AC POWER	LD	Performed test on diesel generators without required preidle/warmup (current design does not permit warmup).
WAP-2	12/84	STRONG	BE	257029	VIOLATION 001/	0	SURVEILLANCE	AC POWER	LD	2 tests on diesel generators performed without required preidle/warmup (current design does not permit warmup).
WAP-2	12/84	STRONG	BE	257041	VIOLATION 018/	0	SURVEILLANCE	AC POWER	LD	Performed test on diesel generator without required preidle/warmup (warmup not possible with current 30 design).
WAP-2	12/84	STRONG	BE	257029	VIOLATION 027/	0	SURVEILLANCE	AC POWER	LD	Twice test on diesel generator was performed without required preidle/warmup (warmup not possible with current 30 design).
WAP-2	12/84	STRONG	BE	257070	VIOLATION 000/0	0	SURVEILLANCE	AC POWER	LD	12 tests on diesel generators were performed without required preidle/warmup (due to design warmup by running at idle speed was not possible.)
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Twice test on diesel generator was performed without required preidle/warmup (warmup not possible with current 30 design).
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Vendor 30 problems resulted in 2 newly installed transformers not having required seismic qualification documentation. Transformers power 36 & low voltage switchgear room ventilation. New transformers were replaced with originals.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Fuel oil day tank for the 3 gas turbines held 270 gallons. Tech Spec allows allowed was 300 gallons, tank capacity was increased to 700 gallons.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Utility errors: Fuel viscosity surveillance requirements for the diesel generator and the gas turbine were not met.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Utility errors: 3 periodic tests were not performed within the required surveillance. The procedure was: heat detector functional test, smoke detector, degraded voltage/loss of voltage - 10 hrs, 3-4 permissive verification & heat tracing.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	During post-maintenance testing of diesel generator 2, the fuel oil tank level was found to be below the Tech Spec limits.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Utility errors: The offsite power was received for repairs with only one diesel generator being available.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Utility errors: 18 month surveillance to verify proper (less than 4700 hr) diesel generator load was performed 2.5 months late.
WAP-2	12/84	STRONG	BE	257003	VIOLATION 037/	0	SURVEILLANCE	AC POWER	LD	Utility errors: A Tech Spec surveillance requirement for a standby diesel generator was not performed within the required time.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION	
ALARM NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISSED LES NO.	MISSED LES NO. S.A. (T.S. LEVEL) / VIOLATION PLANT	POWER ON T.S. LEVEL (MS) / VIOLATION PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE		
SENSE 1	01/94	STANDARD	ME	370034	VIOLATION 000/70	0	SURVEILLANCE	AC POWER	ME3	Procedure deficiencies resulted in improper time delay responses for 3 emergency bus under-voltage relays and loading sequence was not tested on time (B.S. declared inoperable until sequence tested satisfactory).	
SUMP 1	12/72	UNFILE	ME	280000	SHUTDOWN 000/70	48	LCD	AC POWER	ME3	Nuclear Coolant Pump C tripped due to fracture of A Phase Main Load Bus Bar, resulting in instantaneous ground fault. (Mrs. due to early entry into refueling.)	
TRI-2	12/79	STANDARD	BM	320018	VIOLATION 000/70	0	LCD	AC POWER	ME3	While shutdown, SS 8 was out of service for maintenance for more than 7 days.	
AMP-2	12/94	STANDARD	ME	370112	VIOLATION 000/50	0	SURVEILLANCE	AC POWER	ME3	Utility error: Fuel oil samples for the diesel generators fuel oil tanks not received within required time frame (occurred 3 times).	
AMP-2	12/94	STANDARD	BE	370121	VIOLATION 000/70	0	SURVEILLANCE	AC POWER	ME3	Utility error: Diesel generator fuel oil tank chemistry test results not verified within the required time.	
BTM00	03/79	UNFILE	ME	244001	SHUTDOWN 076/70	0	LCD	ACCUMULATOR	LD	One accumulator pressure was found to be low due to a valve in closed position leaking nitrogen.	
RELLSTONE 2	12/75	STANDARD	CE	336003	VIOLATION 000/70	0	LCD	ACCUMULATOR	LD	Following some abnormalities with two safety injection tanks, it was discovered that the level was below the Tech Spec limits.	
NORTH 0000 2	12/80	STANDARD	ME	330010	VIOLATION 000/70	0	LCD	ACCUMULATOR	LD	Utility error: Accumulator isolation valves inadvertently opened and injected steam coolant during startup. Operators closed and demineralized valves (not allowed by LCD).	
EDMEE 1	07/73	UNFILE	BM	257001	SHUTDOWN 100/70	23	LCD	ACCUMULATOR	LD	Utility error: One of the core flood tanks had lower than Tech Spec required boron concentration for the pressure at which the reactor was operating.	
MILLSTONE 3	12/71	UNFILE	CE	255005	SHUTDOWN 077/70	0	LCD	ACCUMULATOR	LD	2 safety injection tanks were drained below the Tech Spec minimum level (only 1 may be out of service), 1 during calibration, the other due to a leaky valve.	
RYNCH 3220	04/75	UNFILE	BM	312017	VIOLATION 006/70	0	LCD	ACCUMULATOR	LD	During startup the breaker for an electrically operated vent valve on core flood tank 8 had not been cleared contrary to T.S. rule that these valves should be closed and breakers tagged open except during normal venting operations.	
SEN 0007RE 2	06/83	STANDARD	CE	361001	VIOLATION 100/70	0	LCD	ACCUMULATOR	LD	Leakage into one safety injection tank raised pressure above LCD limits while another tank was inoperable. Repair operations resulted in low levels in both accumulators.	
SEN 0007RE 3	04/94	STANDARD	CE	362042	VIOLATION 001/2	0	SURVEILLANCE	ACCUMULATOR	LD	Utility error: Required chemistry surveillance after refueling of accumulator performed 6 hours late.	
SEEDLING 1	07/81	STANDARD	ME	327005	SHUTDOWN 045/70	18	LCD	ACCUMULATOR	LD	One of the cold leg accumulators was declared inoperable when its boron concentration was above the Tech Spec limits. Since the concentration could not be restored to the allowable range in the required time the plant was shutdown.	
NORRICE 0000	06/81	STANDARD	ME	027014	VIOLATION 000/70	0	LCD	ACCUMULATOR	LD	As a result of a main coolant pressure transmitter failure two inadvertent ECCS initiations occurred leaving the safety injection system nitrogen bottle pressure below Tech Specs due to a blown cap off a line on the accumulator safety valve header.	

Table B-2 (continued)

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VERSION	LER NO.	SHAUTDOWN ON T.S. LEVEL (N)/ VIOLATION PLANT STATUS	POWER ON T.S. LEVEL (N)/ VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CALLAWAY 1	01/85	STANDARD	ME	463049	VIOLATION 000/50	0	LTD	ALU FEEDMASTER	ME		Pump section pressure indicator was out of specification and not placed in tripped condition within 1 hr (similar event for 8B main steam outlet pressure indicator).
COOK 1	06/75	STANDARD	ME	312004	SHAUTDOWN 100/0	79	LTD	ALU FEEDMASTER	ME		The throttle trip valve of the turbine driven auxiliary feed pump failed to trip the turbine in a test. The plant was shutdown since the situation could not be corrected in 72 hours.
COOK 1	06/75	STANDARD	ME	312015	VIOLATION 000/50	0	LTD	ALU FEEDMASTER	ME		Utility error: While in Mode 3 (during startup) aux feedwater pump switch was placed in neutral (no run or auto) position. In this mode aux feedwater switch is not to be in neutral position.
DAHLGREN REACT 2	07/74	UNFILE	ME	247023	VIOLATION 100/0	0	LTD	ALU FEEDMASTER	ME		Regulating valve may not have permitted minimum flow required in F508 Accident Analysis when throttled (initial flow rate limited to prevent water hammer event).
DAHLGREN 23	12/71	UNFILE	CE	252003	VIOLATION 000/50	0	LTD	ALU FEEDMASTER	ME		Seismic support for aux feedwater train B was found in a degraded condition. Apparently vibration had caused support to become disconnected.
DAHLGREN 23	12/71	UNFILE	CE	252019	SHAUTDOWN 000/0	133	LTD	ALU FEEDMASTER	ME		During testing of auxiliary feedwater pump, the pump showed overvoltage problems and was declared inoperable. The repair could not be performed in 72 hours allowed by the Tech Specs.
DAHLGREN	05/76	STANDARD	ME	344005	VIOLATION 100/0	0	LTD	ALU FEEDMASTER	ME		With 1 train of aux. feedwater removed from service for maintenance, a periodic test was performed on the other train. For approx. 80 mins. the safety injection & steam generator low-level automatic start signals to 2nd train disabled.
DAHLGREN 23	12/71	UNFILE	CE	252018	SHAUTDOWN 064/0	0	SURVEILLANCE	ALU FEEDMASTER	LD		Utility Error: Surveillance Test on Aux. Feedwater Pump Steam Supply Line Shutoff not performed prior to start-up.
DON SHAFER 2	04/74	STANDARD	CE	362043	VIOLATION 000/50	0	SURVEILLANCE	ALU FEEDMASTER	LD		Utility error: Monthly high point system venting had not been performed twice. All other system tests were performed with acceptable results.
SHAFER 2	05/73	UNFILE	ME	281017	VIOLATION 100/0	0	ADMINISTRATIVE	ALU FEEDMASTER	MEB		Due to a drawing error, aux feedwater crossover capability between the 2 units was not available during power operation.
TURNKEY REACT 3	12/72	UNFILE	ME	250004	VIOLATION 000/50	0	LTD	ALU FEEDMASTER	MEB		Utility error: RPMS pumps did not produce the required flow due to disposition of the manual governor speed control knob.
TURNKEY REACT 3	12/72	UNFILE	ME	250008	VIOLATION 000/50	0	LTD	ALU FEEDMASTER	MEB		One of the RPMS pumps was declared out of service due to flow oscillations during a monthly test.
TURNKEY REACT 3	12/72	UNFILE	ME	250032	VIOLATION 100/0	0	LTD	ALU FEEDMASTER	MEB		One Aux Feedwater pump was found to be inoperable and the required cooldown of either Unit 3 or 4 to below 320 degrees F was not performed.
WABULINE 1	12/81	STANDARD	ME	363003	VIOLATION 000/0	0	LTD	CHGR & VOL. CONTROL	ME		Utility error: Unsuccessful attempt made to start centrifugal charging pump 1A. Pump's breaker was not in the fully "connect" position. Attributed to personnel error as breaker was improperly connected & independent verification not properly done.
W.L. LUCIE 1	12/76	STANDARD	CE	325010	VIOLATION 000/0	0	LTD	CHGR & VOL. CONTROL	ME		Utility error: 1 charging pump out for maintenance, other 2 aligned to 8B 2 which was declared inoperable due to low fuel level, disabling all 3 pumps.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SHAUTDOWN ON T.S. LEVEL (S)/ VIOLATION PLANT	POWER ON T.S. LEVEL (S)/ SHAUTDOWN	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ARMADILLO 2	03/80	STANDARD	CE	3A4003 SHAUTDOWN	004/	0	LCD	CHEM & VOL. CONTROL	LO	At low power plant tripped on low steam generator pressure when emergency feedwater pump was taken off line to conserve condensate. Attempts to maintain pump & pressure failed (on 'cooling event') in part due to a boric acid leak. At 1 hr time for blockage of a channel of the boron dilution prevention system was excessive at 2 minutes .
BYRON 1	02/85	STANDARD	ME	454005 VIOLATION 000/SD		0	LCD	CHEM & VOL. CONTROL	LO	Reheat tank level was dropping at a rate of 2 mm violating the Tech Spec limits. The leak was in the vicinity of pressurizer control valve and was not a pressure boundary leakage.
BYRON-RENE 1	11/77	STANDARD	BN	246005 SHAUTDOWN 004/IN		20	LCD	CHEM & VOL. CONTROL	LO	For approximately 2.5 hours level in caustic makeup tank was below Tech Spec limit of 96.25 (actual level 96%).
CHATELAIN ISLAND 2	12/74	UNFILED	ME	306003 VIOLATION 100/IN		0	LCD	CHEM & VOL. CONTROL	LO	Utility error: Boron concentration samples taken at 3 1/2 hour intervals (4 hr required) during system heating.
CLASH 1	12/73	UNFILED	ME	250004 VIOLATION 000/NU		0	SURVEILLANCE	CHEM & VOL. CONTROL	LO	With 1 diesel generator inoperable the charging pump powered from the 2nd diesel generator was out of service. Charging pumps' capabilities were switched at shift turnover.
BYRON 1	02/85	STANDARD	ME	454005 VIOLATION 000/SD		0	LCD	CHEM & VOL. CONTROL	NEB	Utility error: Two boric acid flow paths from boric acid storage tank to charging pumps were blocked due to boric acid solidification.
BYRON SHIP 1	01/84	UNFILED	ME	206005 VIOLATION 100/IN		0	LCD	CHEM & VOL. CONTROL	NEB	Control Room chlorine analyzer trip switch setpoint was incorrect, resulting in noncompliance.
LUMBER 1	09/85	UNFILED	ME	320017 VIOLATION 000/SD		0	LCD	CALDRINE DETECTION	LO	System was out of service for more than 1 hr without control room vent system placed in recirculation mode.
TRI-2	12/78	STANDARD	BN	320022 VIOLATION 000/SD		0	LCD	CALDRINE DETECTION	LO	Inconsistencies were found in pump test requirements resulting in pump being declared inoperable. Test procedures modified to meet RSBE standards.
REDAKER VALLEY 1	04/77	STANDARD	ME	124013 VIOLATION 100/IN		0	SURVEILLANCE	COMP COOLING WATER	HI	Return Isolation Valve for Reactor Coolant Pump Thermal Barrier inadvertently failed closed.
SHLEIN 1	06/77	STANDARD	ME	272021 VIOLATION 000/SD		0	LCD	COMP COOLING WATER	HI	Utility error: System aligned to heat exchanger with no flow on saltwater side resulting in loss of both component cooling water trains.
BYRON SHIP 1	01/84	UNFILED	ME	206012 VIOLATION 000/SD		0	LCD	COMP COOLING WATER	HI	Utility error: The in-service inspection test of the component cooling water outlet valves from the shutdown cooling heat exchangers was missed. Valves are to be tested during cold shutdown.
BYRON SHIP 2	08/83	STANDARD	CE	361029 VIOLATION 000/SD		0	SURVEILLANCE	COMP COOLING WATER	HI	Local resident of saltwater cooling to train 3 of component cooling water system (CCWS) heat exchanger indicated a fault condition. Since train 3 of CCWS was out of service an LCD Tech Spec was violated.
BYRON SHIP 2	08/83	STANDARD	CE	361046 SHAUTDOWN 100/IN		0	LCD	COMP COOLING WATER	HI	Leakage in system heat exchangers from primary to secondary side, possible cause damage during maintenance.
CALVERT CLIFFS 1	05/75	STANDARD	CE	317005 SHAUTDOWN 100/IN		607	LCD	COMP COOLING WATER	LO	Utility error: During a quality assurance audit it was found that two surveillance procedures were inadequate. These procedures are for containment integrity penetration verification and switchover from safety injection to recirculation mode.
REDAKER VALLEY 1	04/77	STANDARD	ME	124005 VIOLATION 000/SD		0	SURVEILLANCE	CONTAINMENT	HI	

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

ALARM NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MODES LER NO. SHUTDOWN OR T.S. LEVELS// VIOLATION	POWER PLANT VIOLATION	OUTCOME DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CELLAR 1	01/85	STRONG	ME	483033 VIOLATION 000/50	0	SURVEILLANCE	CONTAINMENT	M	Utility error: After maintenance, required cycling test and response tests were not performed on some containment isolation valves. During performance of an operational maintenance check on the post accident sampling system, two containment isolation valves were opened. This violates the Tech Spec requirements of not opening containment isolation valves while at power.
CELLAR 2	07/79	STRONG	ME	483033 VIOLATION 000/50	0	LCD	CONTAINMENT	M	While performing containment leakage tests, it was found that the accumulated leakage rate exceeds the Tech Spec limits.
CELLAR 1	08/84	UNFILE	BE	010002 VIOLATION 000/50	0	LCD	CONTAINMENT	M	Utility error: The primary containment integrity was broken by a foramen by leaving the inner and outer personnel access doors open.
CELLAR 1	03/85	STRONG	BE	416619 VIOLATION 000/50	0	LCD	CONTAINMENT	M	Due to a design error the manual isolation signal needed concerned hi drywell press or reactor low level. Concurrence should not have been required.
CELLAR 1	01/84	UNFILE	ME	213011 VIOLATION 000/50	0	LCD	CONTAINMENT	M	While performing a containment integrated leak rate test, it was found that this rate exceeds the Tech Spec requirements.
CELLAR 1	01/84	UNFILE	ME	213012 VIOLATION 000/50	0	LCD	CONTAINMENT	M	While performing containment penetration local leak rate test, it was found that the leak rate exceeds the Tech Spec requirements.
CELLAR 2	08/79	STRONG	BE	366008 VIOLATION 000/50	0	SURVEILLANCE	CONTAINMENT	M	Utility error: Group 1 isolation logic channel checks and calibrations were not adequately incorporated into monthly procedures.
CELLAR 2	08/79	STRONG	BE	366037 VIOLATION 100/50	0	LCD	CONTAINMENT	M	During surveillance airlock door leakage in excess of Tech Specs was found.
CELLAR 2	07/79	UNFILE	ME	247001 VIOLATION 100/50	64	LCD	CONTAINMENT	M	Containment penetration pressurization could not be maintained due to leakage through the containment purge lines.
CELLAR 1	12/72	UNFILE	CE	309018 VIOLATION 097/50	0	LCD	CONTAINMENT	M	Utility error: A main steam line non-return valve bypass isolation valve required to be closed for containment integrity was found partially open.
CELLAR 1	12/71	UNFILE	CE	250008 VIOLATION 000/50	0	LCD	CONTAINMENT	M	Mechanical binding had been mistaken by an operator for full closure.
CELLAR 1	04/75	UNFILE	ME	312010 VIOLATION 000/50	0	SURVEILLANCE	CONTAINMENT	M	Leakage rate of the containment air was above the Tech Spec limits.
CELLAR 1	12/84	STRONG	BE	397130 VIOLATION 100/50	0	SURVEILLANCE	CONTAINMENT	M	Utility error: During a review of surveillance procedures it was discovered that the isolation valve surveillance tests were only partially performed prior to the end of last refueling outage.
CELLAR 1	04/77	STRONG	ME	334007 SHUTDOWN 100/50	76	LCD	CONTAINMENT	LD	Procedures review identified 25 valves not previously identified as containment isolation valves and therefore not included in surveillance.
CELLAR 1	01/85	STRONG	ME	483030 VIOLATION 000/50	0	LCD	CONTAINMENT	LD	Containment recirculation cooling coils Chilled Water System outlet isolation valve failed shut. Containment temperature increased to 105.08 degrees F violating the Tech Spec limit of 105 degrees F.
CELLAR 1	06/85	STRONG	ME	413004 VIOLATION 000/50	0	LCD	CONTAINMENT	LD	Containment temperature was to be calculated from average of 4 air cooler inlet temps. With one temp. element failed only 3 temps were used to calculate average temp.
CELLAR 1	06/85	STRONG	ME	413005 VIOLATION 000/50	0	LCD	CONTAINMENT	LD	Utility error: Daily surveillance of unit vent flow rate monitor was not performed.
CELLAR 1	06/85	STRONG	ME	413005 VIOLATION 000/50	0	LCD	CONTAINMENT	LD	Utility error: Containment integrity was not completely verified 72 hrs before fuel loading. 1 valve check was missed (containment hydrogen purge inlet test vent) due to procedural error.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMPLETION	TYPE OF TECHNICAL DESCRIPTION	REASON FOR T.S. LEVEL VIOLATION	OUTSIDE TEMPERATURE (°F)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
REACTOR 2	06/70	UNUSUAL	RE 227015 VIOLATION 001/70	0	SAFETY	CONTAINMENT	LD	During startup the pressure of the drywell equipment and floor drain traps was not done within Tech Spec specified time.
REACTOR 2	06/70	UNUSUAL	RE 227024 VIOLATION 000/70	0	LD	CONTAINMENT	LD	Utility error: Both the reactor building and turbine building interlocking doors were open simultaneously, violating secondary containment.
REACTOR 3	10/71	UNUSUAL	RE 249003 VIOLATION 001/70	0	LD	CONTAINMENT	LD	Utility error: Primary containment integrity was broken for 3 minutes to search for a missing individual.
REACTOR 3	10/71	UNUSUAL	RE 249008 VIOLATION 004/70	0	LD	CONTAINMENT	LD	Utility error: The differential pressure between drywell and torus was below 1 PSIG required by Tech Specs. Cause: a closed pressure control valve, due to improper completion of an earlier procedure.
REACTOR 3	10/71	UNUSUAL	RE 249019 VIOLATION 000/70	0	SAFETY	CONTAINMENT	LD	Improper calibration of test equipment to measure leakage rates resulted in a measured leakage greater than that allowed.
REACTOR 3	05/74	UNUSUAL	RE 321034 VIOLATION 090/74	0	LD	CONTAINMENT	LD	Utility error: During 1 month, four unintentional secondary violations of secondary containment occurred when 2 airlocks were simultaneously left open. These occurred as a result of defective door interlock and latching mechanisms.
REACTOR 3	05/74	UNUSUAL	RE 321038 VIOLATION 033/74	0	LD	CONTAINMENT	LD	4 secondary violations of secondary containment (2 airlock doors open simultaneously) during power.
REACTOR 3	07/75	UNUSUAL	RE 333014 VIOLATION 000/75	0	LD	CONTAINMENT	LD	3 secondary violations of secondary containment (2 airlock doors open simultaneously) during power.
REACTOR 3	05/74	UNUSUAL	RE 321025 VIOLATION 063/74	0	LD	CONTAINMENT	LD	Utility error: Violation of primary containment occurred when on 3 occasions both the inner and outer drywell entry hatch doors were left open for personnel entry and exit. The total duration of the violation was about 3 min.
REACTOR 3	05/74	UNUSUAL	RE 321038 VIOLATION 033/74	0	LD	CONTAINMENT	LD	Utility error: 8 supervised procedures were used to test drywell purge system flow prior to startup on 2 occasions.
REACTOR 3	01/68	UNUSUAL	RE 213019 VIOLATION 100/68	0	LD	CONTAINMENT	LD	Utility error: Proper test of the drywell purge compressor after maintenance and before startup was not performed.
REACTOR 3	01/68	UNUSUAL	RE 213019 VIOLATION 100/68	0	LD	CONTAINMENT	LD	REACTOR-0737 required post accident sampling system must be operated by each chemistry technician during plant operation. Such action violates containment integrity.
REACTOR 3	11/69	UNUSUAL	RE 409023 VIOLATION 094/69	0	LD	CONTAINMENT	LD	Inner door seals of containment airlock leaked in excess of acceptance criteria. When outer door opened, containment integrity was violated.
REACTOR 3	06/94	UNUSUAL	RE 374040 VIOLATION 093/94	0	SAFETY	CONTAINMENT	LD	3 drywell crane circuits (normally deenergized) were not included in the daily surveillance procedures as required.
REACTOR 3	06/94	UNUSUAL	RE 374043 VIOLATION 000/94	0	LD	CONTAINMENT	LD	Utility error: During hot shutdown primary containment vent and purge activities were conducted for 26.5 hrs, limit is 24 hrs.
REACTOR 3	12/69	UNUSUAL	RE 213004 VIOLATION 000/69	0	LD	CONTAINMENT	LD	The secondary containment integrity was violated when it was discovered that both the inner and outer doors of the airlock were open at the same time.
REACTOR 3	10/72	UNUSUAL	RE 301008 VIOLATION 000/72	0	LD	CONTAINMENT	LD	Hi leakage through 'g' reactor coolant pump component cooling water supply line check valve.
REACTOR 3	06/77	UNUSUAL	RE 272026 VIOLATION 000/77	12 + 120	LD	CONTAINMENT	LD	Leaking turbine rupture disk due to pressurization caused by leakage through steam bypass valve. Tech Specs require redundant operable isolation valve be maintained. No such valve exists at this plant.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION		
ALERT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	HEADING	ALERT NO.	STATUS	OR T.S. VIOLATION	READER	OUTLINE	TECHNICAL SPECIFICATION AFFECTED			
									UNDESIRABLE		SAFETY SIGNIFICANCE	
BARB SHUT-OFF 2	06/03	STANDARD	CE	361013	VIOLATION	100/N		0	LCD	CONFIRMED	LD	Utility error: Containment vented due to pressurization. Venting reduced pressure to below Tech Spec limit of -0.3 psig.
RELEVANCE 1	07/01	STANDARD	HE	327070	VIOLATION	100/N		0	LCD	CONFIRMED	LD	The inbound and outboard isolation valves for the ice condenser glycol system failed to close on demand.
RELEVANCE 2	06/02	STANDARD	HE	320010	VIOLATION	100/N		0	SURVEILLANCE	CONFIRMED	LD	Utility error: Tech Specs require that each containment purge isolation valve be deactivated operable within 24 hours after each closing of the valve. This requirement was not followed for four containment isolation valves.
RELEVANCE 2	06/02	STANDARD	HE	320013	VIOLATION	100/N		225	LCD	CONFIRMED	LD	During normal operation pressurizer relief tank rupture disc was ruptured due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressures. Pressure reached 0.35 PSIG exceeding LCD limit of 0.3 PSIG.
BARBER 1	01/94	STANDARD	HE	290006	VIOLATION	100/N		0	LCD	CONFIRMED	LD	Decurrent protection devices for circuit for plant piping system not initially included in Tech Specs.
BARBER 1	01/94	STANDARD	HE	290012	VIOLATION	100/N		0	SURVEILLANCE	CONFIRMED	LD	Utility error: Air lock surveillance required 72 hrs after air lock was not performed until 100 hrs after use.
TRU-2	12/79	STANDARD	BA	300013	VIOLATION	000/50		0	ADMINISTRATIVE	CONFIRMED	LD	Utility error: A temporary change notice for the operation of the react. bldg airlock doors which was approved by the site operations director was not submitted to MEC within 72 hours as required.
TURNKEY RELIEF 3	12/72	UNFILE	HE	250034	VIOLATION	000/50		0	LCD	CONFIRMED	LD	Isolation valve on the chem. & vol. control system would not close. Multiple isolation devices were available.
TURNKEY RELIEF 4	09/73	UNFILE	HE	251009	VIOLATION	000/50		0	LCD	CONFIRMED	LD	Utility error: In an attempt to drain the reactor coolant drain tanks, containment integrity was technically breached because valves between tank and environment were not qualified as containment isolation valves. No direct flow path existed.
TURNKEY RELIEF 4	09/73	UNFILE	HE	251020	VIOLATION	100/N		0	LCD	CONFIRMED	LD	Utility error: 1 of 2 redundant containment isolation valves on the service air header to the containment) was found open during maintenance. Redundant isolation valve was closed.
TIEN 1	12/73	UNFILE	HE	240016	VIOLATION	090/N		0	LCD	CONFIRMED	LD	The Zone 1 electrical penetration pressure was found to be below Tech Spec limit of 47 psig.
TIEN 2	09/74	UNFILE	HE	304012	VIOLATION	000/50		0	SURVEILLANCE	CONFIRMED	LD	Utility error: During a refueling outage, shift management realized that the testing of the containment purge and vent system had not been performed prior to fuel moves as required by Tech Specs.
BARBERS 2	03/80	STANDARD	CE	360012	VIOLATION	100/N		0	LCD	CONFIRMED	NE3	A primary containment overcurrent protection device was bypassed, repaired, since installation. Engineering analysis was performed to allow removal of the purgers.
CHLORINE CLIPPING 1	05/75	STANDARD	CE	317001	VIOLATION	100/N		0	LCD	CONFIRMED	NE3	Utility error: It was discovered that the post accident sampling system return to the reactor coolant drain tank isolation valve was open without being administratively controlled as required by Tech Specs.
CHLORINE 1	06/85	STANDARD	HE	413015	VIOLATION	000/50		0	LCD	CONFIRMED	NE3	Utility error: Required test of refueling water containment isolation valve after maintenance was not performed prior to power ascension.

Utility errors: Containment vented due to pressurization. Venting reduced pressure to below Tech Spec limit of -6.3 psig.

The inbound and outbound isolation valves for the ice condenser glycol system failed to close on demand.

Utility errors: Tech Specs require that each containment purge isolation valve be demonstrated operable within 24 hours after each closing of the valve. This requirement was not followed for four containment isolation valves.

During normal operation pressurizer relief tank regulators disc was required due to leaking pressurizer safety valve. This resulted in increased containment radiation level & pressures. Pressure reached 0.25 PSID exceeding LCD limit of 0.3 PSID.

Deactivated protection devices for circuit for plant purging system not initially included in Tech Specs.

Utility errors: Air lock surveillance required 72 hrs after air lock was not performed until 100 hrs after use.

Utility errors: A temporary change notice for the operation of the react. bldg airlock doors which was approved by the site operations director was not submitted to MCC within 72 hours as required.

Isolation valve on the chem. & vol. control system would not close. Multiple isolation devices were available.

Utility errors: In an attempt to drain the reactor coolant drain tanks, containment integrity was technically breached because valves between tank and environment were not qualified as containment isolation valves. No direct flow path existed.

Utility errors: 1 of 2 redundant containment isolation valves (on the service air header to the containment) was found open during maintenance. Redundant isolation valve was closed.

The Zone 1 electrical penetration pressure was found to be below Tech Spec limit of 47 psig.

Utility errors: During a refueling outage, shift management realized that the testing of the containment purge and vent system had not been performed prior to fuel moves as required by Tech Specs.

A primary containment overcurrent protection device was bypassed, repaired, since installation. Engineering analysis was performed to allow removal of the jumpers.

Utility errors: It was discovered that the post accident sampling system return to the reactor coolant drain tank isolation valve was open without being administratively controlled as required by Tech Specs.

Utility errors: Required test of refueling water containment isolation valve after maintenance was not performed prior to power ascension.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMPLETION OF INVESTIGATION	TYPE OF COMPLETION	NO. OF LEAKS	LEAK NO.	STATUS	OUTLINE OF DAMAGE	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
PLANT	DATE OF COMPLETION OF INVESTIGATION	TYPE OF COMPLETION	NO. OF LEAKS	LEAK NO.	STATUS	OUTLINE OF DAMAGE	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CHATEAU 1	06/95	STANDARD	NE	413020	VIBRATION 000/50	0	ADMINISTRATIVE CONTINGENT	NE3		Utility errors: Unsatisfactory test results on multiple containment electrical penetration tests were not noted at the time of test (issues not within required residence range).
CHATEAU 1	06/95	STANDARD	NE	413030	VIBRATION 000/400	0	ADMINISTRATIVE CONTINGENT	NE3		Utility errors: Inadequate procedures may have led to erroneous valve leak rate test results.
BLAKE BRIDLE 3	05/74	UNFILED	SE	321030	VIBRATION 096/4	0	LCD	CONTINGENT	NE3	Utility errors: Due to personnel error, two secondary containment airlock doors were simultaneously open violating the T.S. reqts.
FRIBLEY 1	12/77	STANDARD	NE	344010	VIBRATION 000/70	0	SURVEILLANCE CONTINGENT	NE3		Adequate leak rate tests of 2 fuel transfer tubes had not been performed due to procedural inadequacies.
FRIBLEY 1	12/77	STANDARD	NE	344016	VIBRATION 100/4	0	SURVEILLANCE CONTINGENT	NE3		Procedures to test stroke time of the reactor coolant drain tank discharge containment isolation valve was found to be inadequate.
FRIBLEY 2	07/82	STANDARD	NE	344014	VIBRATION 100/4	0	LCD	CONTINGENT	NE3	Utility errors: Open valve between lower and outer isolation valves on the containment purge line defeating outer isolation valve.
LACKOSKE	11/69	UNFILED	EC	409004	VIBRATION 075/4	0	LCD	CONTINGENT	NE3	Lower airlock handwheel leakage was identified during repairs. Outer airlock door was open violating containment integrity.
BRIDLE 2	04/75	UNFILED	SE	312014	VIBRATION 000/50	0	ADMINISTRATIVE CONTINGENT	NE3		Utility errors: During a refueling outage 5 electrical penetrations and 1 mechanical modification to an existing penetration were performed.
										Surveillance procedures for the local component leak rate was not revised to include these penetrations.
BRIDLE 2	10/81	STANDARD	NE	311006	SHUTDOWN 100/4	0	LCD	CONTINGENT	NE3	Utility errors: During routine surveillance three containment isolation valves became inoperable due to loss of a 48V vital bus as a result of paralleling of generators out of phase.
BRIDLE 2	04/84	STANDARD	CE	342019	VIBRATION 060/4	0	SURVEILLANCE CONTINGENT	NE3		Utility errors: Post maintenance inspection was not performed on 2 containment isolation valves.
BRIDLE 1	01/84	STANDARD	NE	295015	VIBRATION 000/50	0	LCD	CONTINGENT	NE3	Utility errors: 4 air supply valves were open to the 36 inch reactor purge valves. Valves were not properly verified closed during last surveillance.
BRIDLE 1	01/84	STANDARD	NE	295031	VIBRATION 000/50	0	SURVEILLANCE CONTINGENT	NE3		7 electrical penetrations of the containment were not included in Tech Specs. 3 have concurrent protection, 4 related to lighting systems do not. All seven to be added to Tech Specs.
TRU-2	12/78	STANDARD	SE	320003	VIBRATION 000/50	0	LCD	CONTINGENT	NE3	During a containment isolation verification test, one valve was found to be open violating the Tech Spec requirements.
TRU-2	12/78	STANDARD	SE	320007	VIBRATION 000/50	0	LCD	CONTINGENT	NE3	Utility errors: Reactor bldg purge/ventilation system isolation valve failed to close during test. System was used for the next 10 days, violating containment isolation capability LCD.
TRU-2	12/78	STANDARD	SE	320010	VIBRATION 000/50	0	LCD	CONTINGENT	NE3	Utility errors: As a part of a reactor bldg, chilled water pump pre-up test, several containment isolation valves were opened without the unit approval as required by T.S.
TRU-2	05/76	STANDARD	NE	344009	VIBRATION 000/50	0	LCD	CONTINGENT	NE3	A containment radiation monitor that measures the containment air noble gas and provides automatic isolation of containment purge and ventilation on high radiation levels was found to be inoperable.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION
ALARM NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TENDON	REASON FOR T.S. VIOLATION	POWER LEVEL (S) / VIOLATION PLANT	OUTLINE DESCRIPTION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE		
									STATUS	
VENTURER	11/72	UNITILE	BE	271011	VIOLATION 000/50	0	LCD	CONTAINMENT	NEO	During a containment leak relief testing, it was found that several isolation valves had not been closed above Tech Spec limits.
WAP-2	12/84	STRAND	BE	287032	VIOLATION 001/50	0	LCD	CONTAINMENT	NEO	Due to a disconnected interlock, inner door of airlock opened prior to outer door closure.
WAP-2	12/84	STRAND	BE	287100	VIOLATION 005/50	0	SURVEILLANCE	CONTAINMENT	NEO	Utility error: Closing time criteria of 2 isolation valves was apparently not met. Other surveillance procedures had not been performed according to Tech Specs.
ZION 1	12/73	UNITILE	BE	270021	VIOLATION 100/50	502	LCD	CONTAINMENT	NEO	MEC's examination of the 1981 and 1983 integrated leakage tests determined that the containment does not meet this requirement. Reactor was shutdown and a leakage test was performed.
ZION 1	12/73	UNITILE	BE	270033	VIOLATION 000/50	0	ADMINISTRATIVE	CONTAINMENT	NEO	Utility error: Type B test of air locks not performed in accordance with 10 CFR 50 App. J due to failure to incorporate changes in App J into procedures.
ZION 1	12/73	UNITILE	BE	270036	VIOLATION 061/50	0	LCD	CONTAINMENT	NEO	Containment purge valve failed to meet completely. Failure to meet has occurred several times.
CALLAWAY 1	01/85	STRAND	BE	483009	VIOLATION 000/50	0	LCD	CONTAINMENT	HI	Reval isolation valves were in the locked closed position while in mode 4.
BRIDGE BLF 1	03/85	STRAND	BE	415024	VIOLATION 004/50	0	LCD	CONTAINMENT	HI	Both containment spray loops of residual heat removal system were declared inoperable due to cracks in the piping and support deficiencies. (0 hrs. because plant is not operating.)
SAN BRIDGE 3	04/84	STRAND	CE	362009	VIOLATION 100/50	0	LCD	CONTAINMENT	HI	Utility error: Both trains of system inoperable due to closed manual isolation valves.
SELEWYN 1	07/81	STRAND	BE	327034	VIOLATION 000/50	0	LCD	CONTAINMENT	HI	Throttle valve to containment spray HX exchanger closed for 15 days during which 3 mode changes were made (LCD requires both system trains operable for mode changes).
BRIDGE 2	03/80	STRAND	CE	360018	VIOLATION 100/50	0	LCD	CONTAINMENT	LO	Utility error: Operator discovered 'gr' train sodium hydroxide pump manual discharge isolation valve in locked closed position, not required locked open position. Probable cause of misalignment was failure to reposition after previous monthly survey.
COOK 2	07/78	STRAND	BE	316004	VIOLATION 000/50	0	LCD	CONTAINMENT	LO	While shutdown for refueling, some ice condenser ice baskets were determined to be below the Tech Spec value of 1250 lbs.
COOK 1	08/75	STRAND	BE	315025	VIOLATION 100/50	0	ADMINISTRATIVE	CONTAINMENT	NEO	Utility error: Acceptance criteria of an ice condenser intermediate deck door test procedure were not the same as Tech Spec requirement. 7 doors that passed test did not meet Tech Specs.
SELEWYN 1	07/81	STRAND	BE	327019	VIOLATION 000/50	0	LCD	CONTAINMENT	NEO	Following the ice condenser ice weighting surveillance, it was found that the average basket weight was below the design limit, violating the I.C. rule.
COOK 1	08/75	STRAND	BE	315030	VIOLATION 005/50	0	LCD	CONTAINMENT	LO	With normal monitoring system inoperable, a grab sample was taken 8 minutes late (due to repair sampling system being temporarily inoperable).
LABALLE 2	05/84	STRAND	BE	374019	VIOLATION 020/50	0	SURVEILLANCE	CONTAINMENT	LO	Utility error: 3 hydrogen samples from the off-gas analyzers were taken from a valved out line rendering samples useless.

Table B-2 (continued)

PLANT NAME	DATE OF COMPLETION	TYPE OF TECHNICAL OPERATION	NOSS VENDOR	LER REL	SAUTOM OR V.S.	POWER LEVEL (N)	DURATION VIOLATION	STATUS	CLASSIFICATION OF LOSS BASED ON SYSTEM AFFECTED			
									OUTAGE (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE
LARVILLE 2	06/04	STANDARD	GE	374553	VIOLATION 015/SU				0	SURVEILLANCE	CONTAINMENT: CB	LO
SLICKLEHORN 1	06/03	STANDARD	GE	387012	VIOLATION 005/N				0	SURVEILLANCE	CONTAINMENT: CB	LO
BEAVER VALLEY 1	04/77	STANDARD	GE	334010	VIOLATION 100/N				0	LCD	CONTAINMENT: CB	NEB
FT. CALHOUN 1	09/73	UNIQUE	CE	250020	VIOLATION 100/				0	LCD	CONTAINMENT: CB	NEB
ZION 2	09/74	UNIQUE	GE	304029	VIOLATION 099/N				0	LCD	CONTAINMENT: CB	NEB
BAYVIEW-BEHE 1	11/77	STANDARD	BM	346005	VIOLATION 094/N				0	LCD	CONTROL ROOM	LO
SNOWMASS 1	01/68	UNIQUE	GE	206001	VIOLATION 000/SD				0	LCD	CONTROL ROOM	LO
BEAVER VALLEY 1	07/81	STANDARD	GE	327002	VIOLATION 100/N				0	LCD	CONTROL ROOM	LO
CODR 1	06/75	STANDARD	GE	315031	VIOLATION 100/N				0	SURVEILLANCE	CORE MONITOR	LO
BAYVIEW-BEHE 1	11/77	STANDARD	BM	346018	VIOLATION 000/SD				0	SURVEILLANCE	CORE MONITOR	LO
TWI-2	12/78	STANDARD	BM	320009	VIOLATION 000/SD				0	LCD	CORE MONITOR	LO
TWI-2	12/78	STANDARD	BM	320016	VIOLATION 000/SD				0	LCD	CORE MONITOR	LO
TWI-2	12/78	STANDARD	BM	320021	VIOLATION 000/SD				0	LCD	CORE MONITOR	LO
ZION 1	12/73	UNIQUE	GE	250037	VIOLATION 099/N				0	SURVEILLANCE	CORE MONITOR	NEB
BROWNS FERRY 1	06/74	UNIQUE	GE	259032	VIOLATION 100/N				0	LCD	CORE SPRAY	HI
DRENNEN 2	06/70	UNIQUE	GE	217003	VIOLATION 098/N				0	LCD	CORE SPRAY	HI

Utility error: A hydrogen sample on the off-gas sample was missed during a unit startup. The oversight was noted approx 7 hrs after the off-gas system was started.

Utility error: Due to administrative error quarterly surveillance of the off gas hydrogen analyzer train "B" was performed 4 days beyond violation date. During the performance of six month hydrogen recombiner test, one of the recombiner's thermal blower tripped and could not be fixed so was declared inoperable. Since it took over 30 days allowed to repair the recombiner, a T.S. was violated.

Utility error: One hydrogen analyzer was improperly returned to service after maintenance resulting in improper hydrogen concentration readings.

Utility error: Removal of containment purge fan rendered both hydrogen purge fans inoperable (both must be operable when plant is critical).

Utility error: During surveillance, both control room emergency ventilation chiller control power switches found in the off position. This rendered both control room emergency ventilation trains inoperable.

Due to drifting of tear gas onto the plant site, control room emergency air treatment system and toxic gas isolation systems were initiated manually.

Utility error: It was discovered that due to an incorrect calculation of duct area, both trains of control room emergency ventilation system were left with lower than acceptable flow rates for about 3 hours.

Utility error: The axial flux difference (AFD) monitor alarm was restored to operable status without monitoring the indicated AFD at least once per hr for the first 24 hrs after alarm restoration. The AFD was monitored 13 hrs later. A NIMBIN was inoperable and was not part of a functional test.

An incore thermocouple was declared inoperable. Three additional incore thermocouples declared inoperable (total of 22 of 52 now inoperable).

Three additional incore thermocouples declared inoperable (total of 25 of 52 thermocouples are now inoperable).

Utility error: Reactor power was allowed to exceed turn-on power fraction for a period of 8 hrs without axial Power Distribution Monitoring System (PDMS) type surveillance or base load operation.

Utility error: As a result of a personnel error during a core spray logic test, an inboard injection valve was left open allowing backflow of primary coolant. Loop 1 of the spray injection system was isolated and a 7 day LCD was started.

One core spray valve failed to operate from control room. The other one was operable.

Table B-2 (continued)

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO. SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (K)/ SHUTDOWN VIOLATION STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LACROSSE	11/69	UNIQUE	AC	409012 VIOLATION 095/N	0	LCD	CORE SPRAY	HI	System drive driven pump started but failed to run during test (both system pumps must be operable). (Failure required in less than 12 hrs as required by 3.0.3.)
LABELLE 2	06/64	STANDARD	BE	374030 VIOLATION 051/	0	LCD	CORE SPRAY	HI	High pressure core spray system was declared inoperable as the result of a relief valve's internal ballon seal failure.
SLEDSHAWAN 1	06/63	STANDARD	BE	387056 VIOLATION 100/N	0	SURVEILLANCE	CORE SPRAY	LO	The as built full flow test isolation signal is not in agreement with that specified by the Tech Specs.
MESSER 2	06/70	UNIQUE	BE	237004 VIOLATION 050/	0	LCD	CORE SPRAY	RED	During a test, core spray section valve failed to close from the control room.
SLEDSHAWAN 1	06/63	STANDARD	BE	387016 VIOLATION 000/5B	0	SURVEILLANCE	CRITICALITY MONITORS	LO	Utility error: The shift's channel check of the new fuel criticality monitors was not completed during its scheduled time period.
BERNER VALLEY 1	04/77	STANDARD	ME	334006 VIOLATION 000/5B	0	SURVEILLANCE	DC POWER	HI	Utility error: 18 month load tests on batteries did not test at actual emergency load levels.
CALLAWAY 1	01/85	STANDARD	ME	443039 VIOLATION 000/5B	0	LCD	DC POWER	HI	Due to loss of 48V DC power, a load sequencer under-voltage relay failed operational test and could not be placed in tripped condition. Plant shutdown was initiated.
BON DUFFRE 2	06/63	STANDARD	CE	361067 VIOLATION 000/5B	0	LCD	DC POWER	HI	Utility error: After maintenance, 1 battery was not properly tested.
MAP-2	12/84	STANDARD	BE	397111 VIOLATION 072/N	0	SURVEILLANCE	DC POWER	HI	Subsequently, 2 other batteries were removed from service leaving only 1 of 4 batteries tested operable and in service (2 of 4 required).
BROWNS FERRY 1	06/74	UNIQUE	BE	259019 VIOLATION 100/N	0	SURVEILLANCE	DC POWER	RED	Utility error: Quarterly battery maintenance was not performed as required due to incorrect setup of schedule.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302018 VIOLATION 075/N	0	ADMINISTRATIVE	DC POWER	RED	Test required measurement of battery pilot cell temperature as opposed to adjacent cell measured by Tech Specs. A revision to Tech Specs (to read pilot cell) is planned.
BIG ROCK POINT	12/62	UNIQUE	BE	125001 VIOL/SHUT 000/5B	371 + LCD	DEPRESSURIZA TION	DEPRESSURIZA TION	HI	Utility error: Battery specific gravity was not within test limits. LER was generated because event was not initially reported.
ONSTER CREEK	12/69	UNIQUE	BE	219026 SHUTDOWN 012/5U	440	LCD	DEPRESSURIZA TION	HI	Three out of 4 Reactor Depressurization System isolation valves failed to open during test.
DIRLID CANYON 1	05/85	STANDARD	ME	279013 VIOLATION 000/5B	0	LCD	EDCS	HI	During start-up surveillance testing, 2 of 3 relief valves associated with the automatic depressurization system failed to operate.
GLAD CITIES 1	06/72	UNIQUE	BE	254001 SHUTDOWN 086/N	0	LCD	EDCS	HI	While in hot standby it was discovered that both subsystems to emergency core cooling system were inoperable.
SALEN 1	06/77	STANDARD	ME	272012 SHUTDOWN 000/5B	0	LCD	EDCS	HI	During test on High Pressure Coolant Injection System pump operability, lubricating oil found contaminated with water and pump declared inoperable.
SALEN 2	10/81	STANDARD	ME	311111 SHUTDOWN 095/N	347	LCD	EDCS	HI	Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (LER is Unit 1. Shutdown was Unit 2 for 347 hrs. No Unit 2 LER generated though. Docket 50-311)
									Steam/Disk separation problems with RTD loop bypass valves. Some of these valves are used in the safety injection system. (No Unit 2 LER generated for this event. LER is Unit 1 8272012. Shutdown was Unit 2 for 347 hours. Docket 50-311).

Table B-2 (continued)
CLASSIFICATION OF LERS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ST. LUITE 2	06/83	STANDARD	CE	389002	VIOLATION	100/N	0	LCD	ECCS	HI	Utility error: 3 mode changes were made with Tech Spec required equipment out of service.
SUSQUEHANNA 2	01/85	STANDARD	GE	388012	VIOLATION	020/	0	LCD	ECCS	HI	Utility error: During maintenance 2 fuses removed that removed safety related signals to: A core spray system, A diesel generator, A residual heat removal system, ABC hi press inj and ABC 480V buses.
ZION 1	12/73	UNIQUE	ME	295024	VIOLATION	000/HI	0	LCD	ECCS	HI	Utility error: During heatup the primary system was allowed to exceed 1000 psig without the accumulators, safety injection pumps and charging pumps being in service.
NORTH ANNA 2	12/80	STANDARD	ME	339004	VIOLATION	100/N	0	SURVEILLANCE	ECCS	LO	Utility error: It was discovered that the thermal overload devices on safety related motor operated valves had not been calibrated within the specified surveillance interval and had to be declared inoperable.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302009	VIOLATION	097/N	0	SURVEILLANCE	ENGR. SAFEGUARDS	HI	Utility error: During normal operation it was discovered that the engineered safeguards monthly functional tests had not been performed.
FAIRLEY 2	07/82	STANDARD	ME	364010	VIOLATION	032/	0	LCD	ENGR. SAFEGUARDS	HI	S.G. steam flow channel exceeded allowable tolerance for difference in redundant channels. Channel not tripped within 1 hour as required (repaired in 4 hours).
PEACH BOTTOM 3	12/74	UNIQUE	BE	278003	VIOLATION	100/N	0	LCD	ENGR. SAFEGUARDS	HI	During an instrument surveillance testing the core spray logic fuse was blown, disabling part of core spray logic circuits and part of initiating logic circuits of diesel generator, RBH, HPCI and core spray system.
ROBINSON 2	03/71	UNIQUE	ME	261005	VIOLATION	000/SD	0	SURVEILLANCE	ENGR. SAFEGUARDS	HI	It was found that circuit for safety injection due to high steam line flow in coincident with low steam line pressure was not tested completely.
SALEN 2	10/81	STANDARD	ME	311011	SHUTDOWN	006/SD	189	LCD	ENGR. SAFEGUARDS	MED	Steam generator feedwater flow indication channels were inoperable during a test.
SAN ONOFRE 3	04/84	STANDARD	CE	362025	VIOLATION	000/SD	0	LCD	ENGR. SAFEGUARDS	MED	Utility error: The isolation valve between the containment and the wide range containment pressure transmitter was closed disabling 1 channel hi-hi cont. press. signal for an unknown period.
SAN ONOFRE 3	04/84	STANDARD	CE	362036	VIOLATION	000/SD	0	LCD	ENGR. SAFEGUARDS	MED	A steam generator level indicator failed. Maintenance was not initiated until the end of 7 day allowed outage time. Plant began cooldown but terminated it when repairs completed.
SEQUOYA 1	07/81	STANDARD	ME	327024	VIOLATION	000/SD	0	LCD	ENGR. SAFEGUARDS	MED	A level transmitter for steam generator number one was found inoperable and a mode change from mode 4 (less than 350 degrees F) to mode 3 (greater than 350 degrees F) was made violating the T.S.
SEQUOYA 2	06/82	STANDARD	ME	328005	VIOLATION	100/N	0	SURVEILLANCE	ENGR. SAFEGUARDS	MED	Utility error: Channel function test of emergency safety function instrumentation for automatic switchover to containment sump was not completed within the specified T.S. required time.
TRUJAN	05/76	STANDARD	ME	344001	VIOLATION	100/N	0	SURVEILLANCE	ENGR. SAFEGUARDS	MED	It was discovered that for several years the surveillance testing for a portion of the safety injection actuation logic was not performed as frequently as called for in the plant Tech Specs.
BYRON 1	02/85	STANDARD	ME	454008	VIOLATION	NS/	0	LCD	FIRE PROTECTION	HI	Utility error: Fire protection foam system for diesel oil storage tank was removed from service. Fire watch was established but removed prior to restoring foam system.

Table B-2 (continued)

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUES	LER NO.	SHUTDOWN OR T.S. LEVEL (N)/ VIOLATION PLANT STATUS	OUTSIDE DURATION (HRS)	CLASSIFICATION OF LERS BASED ON SYSTEM AFFECTED		EVENT DESCRIPTION
							TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	
									SAFETY SIGNIFICANCE
BYRON 1	02/85	STANDARD	ME	454042	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION HI	Utility error: A control valve for the CBE system in the river screen house was not properly included in the surveillance procedures.
CDER 1	08/75	STANDARD	ME	313005	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	Utility error: It was discovered that a fire door to the hallway to the air feed pump rooms was inoperable without a fire switch.
CDER 1	08/75	STANDARD	ME	313033	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	Utility error: Fire doors to pressurizer heater transformer and 4KV switchgear room failed surveillance test but were not declared inoperable due to personnel error.
CDER 2	07/78	STANDARD	ME	316009	VIOLATION 000/SD	0	LCD	FIRE PROTECTION HI	Utility error: During refueling it was discovered that the condenser fire protection system on the cable tunnel was isolated with no fire switch.
CDER 2	07/78	STANDARD	ME	316022	VIOLATION 000/SD	0	LCD	FIRE PROTECTION HI	Utility error: During refueling outage it was discovered that the condenser fire protection system on the reactor cable tunnel was isolated with no fire switch present.
BUILDUP CONTON 1	05/85	STANDARD	ME	275024	VIOLATION 000/NSB	0	SURVEILLANCE	FIRE PROTECTION HI	Utility error: It was discovered that a test of fire detection system supervisory circuitry was not performed within Tech Spec required time.
DEERBEN 2	08/70	UNIQUE	BE	237011	VIOLATION 096/N	0	LCD	FIRE PROTECTION HI	General unsealed penetrations were discovered in the fire walls of BG rooms.
FARLEY 1	12/77	STANDARD	ME	348007	VIOLATION 000/SD	0	LCD	FIRE PROTECTION HI	Utility error: A 4160V bus fire suppression system was found inoperable. No hourly fire switch was established.
FARLEY 1	12/77	STANDARD	ME	348013	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	Utility error: A continuous fire switch had not been posted in the component cooling water heat exchanger and pump room as required.
SINRA	03/70	UNIQUE	ME	244008	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	Utility error: Fire Protection to Turbine Bldg/Control Room wall spray system was unavailable due to an error leaving two isolation valves in closed position.
SINRA	03/70	UNIQUE	ME	244010	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	Utility error: It was discovered that for 15 hours a switch controlling the alarm bell and several auto actuation of the halon systems for a portion of fire protection system was left in the "off" position.
GRAND BLF 1	03/85	STANDARD	BE	416014	VIOLATION 000/SD	0	LCD	FIRE PROTECTION HI	Utility error: Ten fire penetrations found with breached seals. Fire switches established.
GRAND BLF 1	03/85	STANDARD	BE	416050	VIOLATION 004/	0	LCD	FIRE PROTECTION HI	Utility error: Safe shutdown related cable raceways (located in Unit 2 side of control bldg) found without required fire rated barriers (barriers were not included in construction document). Fire switches were not established in a timely manner.
HADDON NEDX	01/68	UNIQUE	ME	213001	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	A number of fire doors were found to be inoperable during power operation.
HADDON NEDX	01/68	UNIQUE	ME	213002	VIOLATION 100/N	0	LCD	FIRE PROTECTION HI	During a routine surveillance it was found that the fire detection system protecting the screenwall building was inoperable due to inoperability of both normal and backup power supplies.
HADDON NEDX	01/68	UNIQUE	ME	213022	VIOLATION 000/SD	0	LCD	FIRE PROTECTION HI	No fire barrier seal in barrier penetration between safety related areas Bus Feedwater Bldg and Cable Vault.
LACROSSE	11/69	UNIQUE	RC	409009	VIOLATION 063/N	0	LCD	FIRE PROTECTION HI	Utility error: Fire barrier in electrical penetration room blocked open (for ventilation) and no fire switch was established.

Table B-2 (continued)

CLASSIFICATION OF LEADS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SAFETY HAZARD OR I.S. VIOLATION	POWER LEVEL (K)/ PLANT	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
HILLSTONE 2	12/75	STANDARD	CE	336008 VIOLATION 100/N		0	LCD	FIRE PROTECTION HI		It was discovered that a breach in the fire barrier in the IC switchgear room exists.
PILGRIM 1	12/72	UNIQUE	BE	293006 VIOLATION 000/SD		0	LCD	FIRE PROTECTION HI		During an inspection some 37 fire doors were found to be potentially nonfunctional.
PILGRIM 1	12/72	UNIQUE	BE	293007 VIOLATION 000/SD		0	LCD	FIRE PROTECTION HI		During an inspection, a breach of three hour fire barrier was identified. Upon further inspection, a total of 38 penetration seals were found that did not meet the surveillance test acceptance criteria.
SRI DIOFRE 2	08/83	STANDARD	CE	361001 VIOLATION 100/N		0	LCD	FIRE PROTECTION HI		Discrepancies between the fire protection program and NRC requirements on a wide range of fire protection equipment were found.
SRI DIOFRE 2	08/83	STANDARD	CE	361015 VIOLATION 100/N		0	LCD	FIRE PROTECTION HI		Discrepancies between the fire protection program and NRC requirements on a wide range of fire protection equipment were found.
SRI DIOFRE 2	08/83	STANDARD	CE	361033 VIOLATION 100/N		0	LCD	FIRE PROTECTION HI		During hydrostatic test of new system a pipe rupture disabled entire fire protection system. Fire watches were established. All backup fire suppression requirements could not be met.
SRI DIOFRE 3	04/84	STANDARD	CE	362034 VIOLATION 000/		0	LCD	FIRE PROTECTION HI		Conduit fire wrapping for the turbine-driven exa feedwater pump power and control cables was missing contrary to the fire hazards analysis. An hourly fire watch patrol was established upon discovery.
SEALYON 1	07/81	STANDARD	ME	327073 VIOLATION 100/N		0	LCD	FIRE PROTECTION HI		110 fire doors failed to meet Underwriters Laboratory standards. Fire watch established as required by LCD.
SUMNER 1	01/84	STANDARD	ME	395021 VIOLATION 000/SD		0	LCD	FIRE PROTECTION HI		3 cable trays and 4 conduits in chase area of control building had degraded fire barriers. Fire watch established.
SUMNER 1	01/84	STANDARD	ME	395039 VIOLATION 081/N		0	LCD	FIRE PROTECTION HI		Fire barrier between service water booster pump A and overhead cable trays was found to have a hole. Fire watch established.
SUSQUEHANNA 1	06/83	STANDARD	BE	387021 VIOLATION 020/		0	LCD	FIRE PROTECTION HI		Utility error: During the installation of a modification to the emergency service water system, the fire barrier wrapping of several cable raceways was overlooked. A fire watch was established.
WANNACUS 2	03/80	STANDARD	CE	368016 VIOLATION 100/N		0	LCD	FIRE PROTECTION LD		A penetration fire barrier damper failed to completely close during a test. Damper is located in the exhaust duct for the IC electrical equipment room. A fire watch had previously been posted.
WANNACUS 2	03/80	STANDARD	CE	368017 VIOLATION 100/N		0	LCD	FIRE PROTECTION LD		A fire barrier penetration, containing telephone cabling, in a 3 hr barrier was found in a degraded state. A fire watch was established.
WANNACUS 2	03/80	STANDARD	CE	368029 VIOLATION 100/N		0	LCD	FIRE PROTECTION LD		Fire door between RD-1 and 2 would not fully close. Fire watch established.
BEAVER VALLEY 1	04/77	STANDARD	ME	334009 VIOLATION 000/		0	ADMINISTRATIVE	FIRE PROTECTION LD		Utility error: Procedures for test of containment smoke detectors received test only when unit was shut down. Tech Specs require detectors to be tested every 6 months.
BYRON 1	02/85	STANDARD	ME	454032 VIOLATION 000/SD		0	LCD	FIRE PROTECTION LD		Penetration in fuel handling building was not properly sealed. Hourly fire watch was established.
BYRON 1	02/85	STANDARD	ME	454041 VIOLATION 000/SD		0	LCD	FIRE PROTECTION LD		A fire detector (not proven operable) was used in the fuel handling building for 2 months with no fire watch.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MOSS LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (kW)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COLLINS 1	01/85	STANDARD	ME 483001	VIOLATION 000/SD		0	LOD	FIRE PROTECTION LO		Utility error: Hourly fire watch patrols for four rooms in the control building were missed. The missed rooms resulted in fire barriers with inoperable penetration seals not being patrolled during 1 fire patrol.
COOK 1	06/75	STANDARD	ME 315027	VIOLATION 100/N		0	LOD	FIRE PROTECTION LO		Utility error: Fire watch was 23 minutes late in performing hourly inspection of barrier protecting reactor cable tunnel.
DAVIS-BESSE 1	11/77	STANDARD	BM 346017	VIOLATION 090/N		0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: Monthly visual inspection of fire hose stations was completed 5.5 hrs late.
FABLEY 1	12/77	STANDARD	ME 348015	VIOLATION 100/N		0	LOD	FIRE PROTECTION LO		Utility error: In 2 cases, with sprinklers out of service, hourly, instead of the required continuous, fire watches were established.
FABLEY 1	12/77	STANDARD	ME 348019	VIOLATION 100/N		0	LOD	FIRE PROTECTION LO		A control room fire penetration barrier was found not to be properly sealed. Fire watch was established.
GRAND BULF 1	03/85	STANDARD	BE 416012	VIOLATION 000/SD		0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: Elevator doors in control and aux buildings act as fire doors and are required to be verified closed once a day (since they are not locked). Surveillance did not include these doors.
GRAND BULF 1	03/85	STANDARD	BE 416049	VIOLATION 000/SD		0	LOD	FIRE PROTECTION LO		Utility error: Hourly fire watch established per 1 LOD instead of continuous watch required since fire detector and door were inoperable.
GRAND BULF 1	03/85	STANDARD	BE 416041	VIOLATION 000/SD		0	LOD	FIRE PROTECTION LO		One hourly fire watch of two levels of the aux building was not performed (inspector became locked in B4B piping room).
WATSON 2	06/79	STANDARD	BE 366011	VIOLATION 000/SD		0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: On 6/2/84 it was found that required monthly surveillance not done on fire hose station HC-30. Tech Specs require each fire hose station be demonstrated operable at least once per 31 days. Last allowed date for this station 5/18/84.
LABALLE 1	10/82	STANDARD	BE 373004	VIOLATION 090/N		0	LOD	FIRE PROTECTION LO		During a reinspection of electrical cable firestops, electrical cable penetrations in the computer room 8 in the control room were identified as having breakthroughs. An hourly fire watch was placed in effect & fire detection verified operable.
LABALLE 1	10/82	STANDARD	BE 373005	VIOLATION 090/N		0	LOD	FIRE PROTECTION LO		A total of 18 cabinets/panels in auxiliary electrical equipment room were identified as having unsealed conduit penetrating the field of the firestop. An hourly fire watch was in effect. 6 other cabinets in CR with unsealed conduit were identified.
LABALLE 1	10/82	STANDARD	BE 373036	VIOLATION 090/N		0	LOD	FIRE PROTECTION LO		An unsealed penetration was found and initially improperly sealed. Later determined to be a required fire stop and a fire watch was established.
LABALLE 1	10/82	STANDARD	BE 373041	VIOLATION 090/N		0	LOD	FIRE PROTECTION LO		3 mechanical penetrations on fire rated walls/floors were not sealed properly. The penetrations were located in the aux/turbine bldg wall. Hourly fire watches are in effect in these areas at all times.
LABALLE 1	10/82	STANDARD	BE 373067	VIOLATION 000/SD		0	LOD	FIRE PROTECTION LO		3 fire penetrations were not properly sealed. Fire watches were established and seals repaired.
LINERTON 1	09/85	UNIQUE	BE 352003	VIOLATION 000/SD		0	LOD	FIRE PROTECTION LO		For 5 days the CSD system, required to be operable when systems it protects are operable, for control room was inoperable. (However, hand held fire extinguishers backup was available.)

Table B-2 (continued)

CLASSIFICATION OF LEADS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NCSB LER NO. SHUTDOWN OR T.S. LEVEL (S) VIOLATION	POWER OR T.S. LEVEL (S) VIOLATION	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
MAINE YANKEE	12/72	UNIQUE	CE 309013	VIOLATION 100/N	0	LCD	FIRE PROTECTION LO		An unsealed (fire) cable penetration between control and computer rooms found during inspection. Fire watch established within required 1 hour. (I don't see the violation.)
EDDGE 1	07/73	UNIQUE	BM 263005	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION LO		Administrative error resulted in exceeding (by 2 days) surveillance interval of fire protection system for the DC power supply system.
RESON BATTION 2	07/74	UNIQUE	BE 277015	VIOLATION 000/SD	0	LCD	FIRE PROTECTION LO		Battery and switchgear rooms smoke detectors removed from service while penetration barriers were being installed. Previously established hourly fire watches were not sufficient to meet revised Tech Spec requirements.
SUMNER 1	01/84	STANDARD	ME 375002	VIOLATION 100/N	0	LCD	FIRE PROTECTION LO		Utility error: An hourly roving fire watch in the sec. bldg. penetration room had not been performed.
SUMNER 1	01/84	STANDARD	ME 375013	VIOLATION 100/N	0	LCD	FIRE PROTECTION LO		Utility error: Fire detector alarms disabled for 2 areas in intermediate bldg due to software modifications in the system. Low fire probability areas affected, fire watches established.
SUMNER 1	01/84	STANDARD	ME 375033	VIOLATION 098/N	0	LCD	FIRE PROTECTION LO		A normally bolted closed fire barrier assembly in the sec bldg was closed but not bolted. Due to personnel errors, procedures were not properly adhered to.
SUMNER 1	01/84	STANDARD	ME 375040	VIOLATION 072/N	0	LCD	FIRE PROTECTION LO		Control room relay room fire barrier seal was found removed. Fire watch established.
TWI-2	12/78	STANDARD	BM 320012	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: It was discovered that an ionization type fire system detector was not tested within the required Tech Spec limit of time.
WATERFORD 3	06/85	STANDARD	CE 382002	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: 13 fire doors were not inspected for an 8 day period after issuance of low power license and no fire watches had been established.
ZION 1	12/73	UNIQUE	ME 275015	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: The semi-annual testing of the aircraft crash fire detection system was not completed until 5 months after the set date.
ZION 1	12/73	UNIQUE	ME 275025	VIOLATION 000/SD	0	SURVEILLANCE	FIRE PROTECTION LO		Utility error: Penetration fire barrier surveillance not completed within required interval (18 months) because fire marshal was overextended.
ANGLERS 2	03/80	STANDARD	CE 368015	VIOLATION 100/N	0	ADMINISTRATIVE	FIRE PROTECTION MED		Utility error: A breached fire protection barrier was not identified as such during a walkdown or as part of the verification of controlled documentation.
BYRCH 1	02/85	STANDARD	ME 434001	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Utility error: For 11 hours hourly fire watches were not performed due to a security manpower shortage.
CATTARAUGUS 1	06/85	STANDARD	ME 413005	VIOLATION 000/ASB	0	LCD	FIRE PROTECTION MED		Utility error: Required fire watches were not always performed in certain areas with inoperable fire detectors.
CATTARAUGUS 1	06/85	STANDARD	ME 413032	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Utility error: Seven inoperable fire barrier penetrations were discovered. The date the penetrations were initially left inoperable could not be determined.
COOK 1	08/75	STANDARD	ME 315003	VIOLATION 077/N	0	LCD	FIRE PROTECTION MED		Utility error: A fire door to the turbine driven gas feed pump room was not operable due to electrical cords being placed through the penetration. A continuous fire watch was not put into effect immediately.
COOK 1	08/75	STANDARD	ME 315013	VIOLATION 100/N	0	LCD	FIRE PROTECTION MED		Utility error: It was discovered that a fire watch had not been maintained in an area where fire retardant materials had been removed from a previously protected conduit containing safety related cables.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VENDOR	LER NO.	SAFETY/HAZARD ON T.S. LEVEL (S)/ VIOLATION PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
COOK 1	06/75	STANDARD	ME	315020	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	It was discovered that the control room cable vault supply fan damper was blocked with a piece of conduit.
COOK 1	06/75	STANDARD	ME	315025	VIOLATION 100/N	0	SURVEILLANCE	FIRE PROTECTION	RED	Due to drawing error and valve mislabeling, 2 fire protective valves went untested for an extended period.
COOK 1	06/75	STANDARD	ME	315001	VIOLATION 005/N	0	LCD	FIRE PROTECTION	RED	Utility error: A single hourly fire switch was allowed for the fire barrier penetration seals in the charging pump room.
COOK 2	07/78	STANDARD	ME	316016	VIOLATION 000/SO	0	LCD	FIRE PROTECTION	RED	Two fire seals were found inoperable without a fire switch being present.
COOK 2	07/78	STANDARD	ME	316023	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	A fire damper in the low pressure CO ₂ fire suppression system was found to be inoperable.
COOK 2	07/78	STANDARD	ME	316026	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: Fire damper in control room cable vault closed but did not latch. Personnel performing test failed to declare damper inoperable.
COOK 2	07/78	STANDARD	ME	316027	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: Due to personnel error, two cable vault fire protection system was isolated with no fire switch present for a period of over 8 hours.
DRESSEN 2	06/70	UNIQUE	GE	237005	VIOLATION 095/N	0	LCD	FIRE PROTECTION	RED	Following taking a security computer out of service, the fire manual was not notified until the following day for detection of operability of control room fire detection alarm and sprinkler alarm printer.
DRESSEN 2	06/70	UNIQUE	GE	237006	VIOLATION 100/N	0	SURVEILLANCE	FIRE PROTECTION	RED	Utility error: Cardos system master valve (part of fire protection system) had not been tested in the automatic mode.
DRESSEN 2	06/70	UNIQUE	GE	237017	VIOLATION 080/N	0	LCD	FIRE PROTECTION	RED	Utility error: Due to security computer being unavailable the fire protection and sprinkler control room alarms' indications were inoperable. This requires hourly fire inspection which was violated.
DRESSEN 2	06/70	UNIQUE	GE	237018	VIOLATION 078/N	0	SURVEILLANCE	FIRE PROTECTION	RED	Utility error: Reactor building monthly fire inspection was incomplete for Units 2&3.
DRESSEN 2	06/70	UNIQUE	GE	237020	VIOLATION 000/SO	0	LCD	FIRE PROTECTION	RED	Utility error: Two of seven recently installed hose station root valves were valued shut.
DUANE ANNEX	05/74	UNIQUE	GE	331044	VIOLATION 082/N	0	LCD	FIRE PROTECTION	RED	Utility error: 1 of 11 fire hose stations rendered inoperable during maintenance for approximately 10 hours (exceeding 1 hour limit). Cause: faulty communication.
FORLEY 1	12/77	STANDARD	ME	348021	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: 3 hourly fire switches in the service water intake structure were not performed.
FORLEY 1	12/77	STANDARD	ME	348022	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: A part of the fire protection system had been isolated for approximately 1.5 days. No fire switch was established.
FORLEY 2	07/82	STANDARD	ME	364002	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: An hourly firematch patrol in the B train was building battery charger room, as required by Tech Specs, had not been performed during the 1300-1400 and 1400-1500 hours.
FORLEY 2	07/82	STANDARD	ME	364007	VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED	Utility error: It was determined that a continuous fire switch had not been maintained as required by Tech Specs when fire protection sprinkler system 2B-25 was removed from service. A continuous fire switch was posted but not maintained as required.

Table B-2 (continued)

CLASSIFICATION OF LENS ISSUED ON SYSTEM AFFECTED							EVENT DESCRIPTION
PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NOSS LER NO. SHUTDOWN OR T.S. LEVEL (N) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM SAFETY SIGNIFICANCE	
FARLEY 2	07/82	STANDARD	ME 364015 VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED
FITZPATRICK	07/73	UNIQUE	BE 333017 VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED
SHAWNEE BLF 1	03/83	STANDARD	BE 416007 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
HADDON MECH	01/68	UNIQUE	ME 213003 VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED
HADDON MECH	01/68	UNIQUE	ME 213004 VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED
HADDON MECH	01/68	UNIQUE	ME 213006 VIOLATION 092/N	0	LCD	FIRE PROTECTION	RED
HADDON MECH	01/68	UNIQUE	ME 213007 VIOLATION 092/N	0	LCD	FIRE PROTECTION	RED
HADDON MECH	01/68	UNIQUE	ME 213008 VIOLATION 079/N	0	LCD	FIRE PROTECTION	RED
HADDON MECH	01/68	UNIQUE	ME 213018 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
HATCH 1	12/73	UNIQUE	BE 321018 VIOLATION 090/N	0	LCD	FIRE PROTECTION	RED
HATCH 2	08/79	STANDARD	BE 366029 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
INDIAN POINT 2	07/74	UNIQUE	ME 247007 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
LACROSSE	11/69	UNIQUE	RC 409005 VIOLATION 099/N	0	LCD	FIRE PROTECTION	RED
LINCOLN 1	09/85	UNIQUE	BE 352004 VIOLATION 000/SD	0	ADMINISTRATIVE	FIRE PROTECTION	RED
LINCOLN 1	09/85	UNIQUE	BE 352022 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
MOTHE YANKEE	12/72	UNIQUE	CE 309014 VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED
OYSTER CREEK	12/69	UNIQUE	BE 219013 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
REACH BUTION 2	07/74	UNIQUE	BE 277012 VIOLATION 000/SD	0	LCD	FIRE PROTECTION	RED
REACH BUTION 2	07/74	UNIQUE	BE 277014 VIOLATION 100/N	0	LCD	FIRE PROTECTION	RED

Utility error: With sec. building fire protection sprinklers inoperable, a continuous fire watch was not maintained.

Utility error: The remote alarm function for the east cable tunnel smoke detection system was declared inoperable due to a faulty transmitter and an hourly fire watch was put in effect. This fire watch was not conducted for a 2 hr period.

Utility error: Rising fumes would have prevented fire dampers from operating in the computer and control panel room.

During power operation it was found that a fire door was inoperable.

A penetration fire barrier was found inoperable during power operation.

A fire door separating a safety related room from a non-safety area was discovered inoperable during power operation.

A number of fire penetration seals were discovered inoperable during a routine inspection.

A fire door separating a safety-related room from a non-safety related area was discovered inoperable during power operation.

Utility error: Fire door propped open for unknown period, probably in excess of allowed time of 1 hour.

Utility error: During a fire barrier penetration shutdown it was discovered that numerous fire barrier penetration seals were not functional as required.

Utility error: In a switchgear room an open cabinet door prevented closure of a sliding fire barrier.

Utility error: For approximately 4 hours the continuous fire watch which was in effect due to failure of halon fire protection system was interrupted.

A cable raceway fire barrier penetration had not been identified as such and therefore had not been sealed.

4 fire hose stations were left off a surveillance procedure and therefore not tested.

2 reactor enclosure fire seals were discovered not sealed, fire watches immediately set up.

Deficiencies found in fire barriers: B.B. fire boundary and fire areas adjacent to containment plan and/or control center suppression system.

Utility error: The fire suppression water system became inoperable due to damage by a maintenance vehicle.

During a surveillance an inoperable horizontal fire damper was discovered in the cable spreading room.

Utility error: A continuous fire watch which was put in effect due to an out-of-service cardos system was inadvertently removed violating the Tech Spec requirements.

Table B-2 (continued)
CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MSR NO. MONITOR	LER NO. ON T.S. LEVEL (S) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
PIL BATH 1	16/79	UNILB	BE	PM300J VIOLATION 000/50	0	SURVEILLANCE	FIRE PROTECTION MED		Utility error: It was discovered that the diesel generator fire pump surveillance test had not been performed within the Tech Specs required time. It was discovered that 23 operators and 16 security personnel dedicated to the on-site fire brigade did not attend a quarterly classroom training as required by Tech Specs.
RAHLEDO BOLD	04/75	UNILB2	BM	J1P006 VIOLATION 000/50	0	ADMINISTRATIVE	FIRE PROTECTION MED		Utility error: Three certains in a fire damper were not tested in the refueling outage as required by Tech Specs. The cause of the error was improper identification of the dampers.
REBINSON 2	03/71	UNILB	ME	251002 VIOLATION 000/50	0	SURVEILLANCE	FIRE PROTECTION MED		Utility error: During an integrated leak rate test a fire suppression system isolation valve inside the containment was left closed. This left part of the fire suppression system inoperable.
SON ONPINE 1	01/68	UNILB	ME	216005 VIOLATION 000/50	0	LCD	FIRE PROTECTION MED		Utility error: A section of the sprinkler system was valved off & fire switches were not established within 1 hr. Areas affected: ass. feedwater pump room, cable room & part of safety equipment bldg.
SON ONPINE 8	06/63	STANDARD	CE	361034 VIOLATION 100/N	0	LCD	FIRE PROTECTION MED		2 cases of inadequate cable separation and fire wraps were discovered. Fire switches were established.
SON ONPINE 2	06/63	STANDARD	CE	361041 VIOLATION 000/50	0	LCD	FIRE PROTECTION MED		Utility error: One (of 2) fire pump was removed from service. Procedure to supply alternate pump did not properly align system.
SON ONPINE 2	06/63	STANDARD	CE	361075 VIOLATION 000/50	0	ADMINISTRATIVE	FIRE PROTECTION MED		Utility error: A fire protection deluge valve was found isolated with no continuous fire switch in place, violating T.S. reqts.
SEBLOWN 1	07/61	STANDARD	ME	327018 VIOLATION 000/50	0	LCD	FIRE PROTECTION MED		Utility error: A thermal detector was discovered inoperable during the performance of a surveillance instruction. Since a one hour fire switch was not established the T.S. reqts were violated.
SEBLOWN 1	07/61	STANDARD	ME	327043 VIOLATION 100/N	0	LCD	FIRE PROTECTION MED		Utility error: A total of 7 hourly fire switches were missed.
SEBLOWN 1	07/61	STANDARD	ME	327075 VIOLATION 100/N	0	LCD	FIRE PROTECTION MED		In the penetration access area 3 fire barrier deficiencies were noted (primarily damaged knucool wrapping).
SLURRY 1	01/64	STANDARD	ME	355036 VIOLATION 100/N	0	LCD	FIRE PROTECTION MED		Degraded fire barriers found in 2 battery ventilation rooms.
SLURRY 1	12/72	UNILB	ME	260018 VIOLATION 000/N	0	LCD	FIRE PROTECTION MED		Utility error: It was discovered that an air hose had blocked a fire door from being closed. Since no fire switch was in effect, Tech Specs were violated.
SLURRY 1	12/72	UNILB	ME	260021 VIOLATION 000/50	0	LCD	FIRE PROTECTION MED		Utility error: Fire suppression system unavailable and no fire switch posted in cable terminal area for a period of almost three hours.
SLISLE4000 1	05/63	STANDARD	SE	387032 VIOLATION 000/50	0	SURVEILLANCE	FIRE PROTECTION MED		Due to differences in Unit 1 and 2 Tech Specs some fire detectors common to both units were not inspected for 57 days beyond the allowable test dates.
SLISLE4000 1	05/63	STANDARD	SE	387046 VIOLATION 100/N	0	LCD	FIRE PROTECTION MED		Open fire penetration was discovered in the ceiling of the lower cable spreading room. Initially no fire switch was established. Also Robin. Tech
SLISLE4000 2	01/65	STANDARD	SE	386026 VIOLATION 000/50	0	LCD	FIRE PROTECTION MED		Spec error as revisions failed to include this barrier in surveillance.
SLISLE4000 2	01/65	STANDARD	SE	386027 VIOLATION 000/50	0	LCD	FIRE PROTECTION MED		Open fire penetration found in a rated fire barrier. A fire switch was established.
									3 conduits found that had not been coated with fire barrier coating. Fire switch assigned to area.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS VENDOR	LER NO.	SAFETY OR T.S. VIOLATION	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BLESSEDHARMA 2	01/85	STANDARD	GE	340023	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Utility error: Fire switch (req. for 2 maint. activities) in one area was removed when one activity ended. Fire switch missed for 11 days.
TNI-1	05/74	UNITLE	BM	285001	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Relay room floor fire barrier penetration seal was found to be in deficient condition. Since no hourly fire switch was in effect, Tech Spec requirements were violated.
TNI-1	05/74	UNITLE	BM	289003	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Utility error: Several penetrations were found that were missing fire-rated seals. Due to lack of fire switch, a Tech Spec requirement was violated.
TNI-2	12/78	STANDARD	BM	320015	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Utility error: It was discovered that a fire barrier penetration door between aux. and fuel handling buildings was breached. Since no hourly fire switch was established the Tech Spec requirements were violated.
TURKEY POINT 3	12/72	UNITLE	ME	250030	VIOLATION 100/N	0	SURVEILLANCE	FIRE PROTECTION MED		Utility error: Utility unable to complete required surveillance of motor and diesel driven fire pumps within required 18 month period.
WAP-2	12/84	STANDARD	GE	357006	VIOLATION 000/SD	0	LCD	FIRE PROTECTION MED		Utility error: Approximately 1/2 of an hourly fire switch was not performed by assigned operator.
WAP-2	12/84	STANDARD	GE	357122	VIOLATION 072/N	0	LCD	FIRE PROTECTION MED		Utility error: Fire door alarm circuit was removed due to a drawing error in a design change package.
CHITRAHA 1	06/85	STANDARD	ME	413003	VIOLATION 000/SD	0	LCD	FUEL HANDLING LO		Utility error: Two control rod drive assemblies were removed with the reactor building 23 ton crane rather than the manipulator crane and aux. hoist as required.
FT. CALVELIN 1	05/73	UNITLE	CE	285001	VIOLATION 100/N	0	LCD	FUEL HANDLING LO		Utility error: Tech Specs require that if a crane with the interlocks inoperable or bypassed is moving above the spent fuel pool, a supervisor be present. This requirement was violated for 20 minutes because a supervisor was not present.
ODDENSE 1	07/73	UNITLE	BM	285003	VIOLATION 100/N	0	LCD	FUEL HANDLING LO		Utility error: A piece of equipment (a gamma ray scanner) was temporarily suspended over fuel in the spent fuel pit.
OVSTER CREEK	12/69	UNITLE	GE	219010	VIOLATION 000/SD	0	LCD	FUEL HANDLING LO		Utility error: For an undetermined number of times the fuel pool gates have been moved over the spent fuel pool violating the Tech Spec requirement of the weight of objects to be moved above irradiated fuel.
OVSTER CREEK	12/69	UNITLE	GE	219029	VIOLATION 000/SD	0	LCD	FUEL HANDLING LO		Switches that limit crane hook and load height were not properly adjusted during lifting and transporting of empty Spent Fuel Shipping Cask.
CALVERT CLIFFS 2 04/77		STANDARD	CE	318001	VIOLATION 100/N	0	LCD	HEAT, VENT & RC HI		It was discovered that an EDCS pump room ventilation system exhaust fan discharge damper had been isolated.
COOK 2	07/78	STANDARD	ME	316033	VIOLATION 100/N	0	LCD	HEAT, VENT & RC HI		An obstruction was discovered in the safeguards ventilation ductwork above the south safety injection pump motor. Inability of the ventilation equipment to perform its cooling function may have rendered the pump inoperable during blackout conditions.
SAN ONOFRE 2	08/83	STANDARD	CE	361029	VIOLATION 100/N	0	LCD	HEAT, VENT & RC HI		Utility error: Inadvertently tripped breaker resulted in trip of emergency chillers, thus affecting plant inverters (cooled by chillers), LCD 3.0.3 entered, breaker immediately reset.

Table B-2 (continued)
CLASSIFICATION OF LERS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS LER NO. SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SAN ONOFRE 2	08/83	STANDARD	CE 361031	VIOLATION 100/N	0	LCD	HEAT, VENT & AC HI		Emergency chiller inadvertently started, tripped, and subsequent starts failed. Failure affected both plant inverters, LCD 3.0.3 entered, repairs made in approx. 0.5 hours.
WNP-2	12/84	STANDARD	BE 397103	SHUTDOWN 045/	0	LCD	HEAT, VENT & AC HI		Due to equipment motor failure, cooling was lost to the RPS room #1, Div I battery and battery charger rooms and emergency bus. This resulted in the assumption of many safety related systems being inoperable. (0 hrs. because plant is not operating.)
WNP-2	12/84	STANDARD	BE 397123	SHUTDOWN 096/	240	LCD	HEAT, VENT & AC HI		Critical Switchgear room HVAC unit found to be vibrating excessively; unit shutdown and equipment cooled by it declared inoperable, repair time expected to exceed LCD allotted time, unit shutdown. (Hrs based on Grey Book info availability chart.)
BYRON 1	02/85	STANDARD	ME 434006	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC LD		Prior to plant operation, construction activity resulted in the inability of the control room heating, ventilation and air conditioning system to maintain a positive pressure.
CRYSTAL RIVER 3	03/77	STANDARD	BN 302012	VIOLATION 099/N	0	LCD	HEAT, VENT & AC LD		An instrument air supply line to the dampers in the auxiliary building exhaust fans was broken, resulting in both exhaust fans being inoperable.
DAVIS-BESSE 1	11/77	STANDARD	BN 346016	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC LD		Spent fuel ventilation system technically was not operable during fuel movement. 1 train was out of service, second was operating but not tested as required.
DAVIS-BESSE 1	11/77	STANDARD	BN 346022	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC LD		Makeup flow of outside air for the control room emergency ventilation system exceeded test limits for several years.
DIABLO CANYON 1	05/85	STANDARD	ME 275002	VIOLATION 000/SD	0	LCD	HEAT, VENT & AC LD		It was discovered that both trains of control room ventilation system were powered from the same 480V Bus.
GINNA	03/70	UNIQUE	ME 244012	VIOLATION 100/N	0	LCD	HEAT, VENT & AC LD		Utility error: Aux Bldg exhaust fan was inoperable for an unspecified period during which fuel was moved in the spent fuel pit. Tech Specs require this fan to be operable during fuel movement.
INDIAN POINT 2	07/74	UNIQUE	ME 247020	VIOLATION 050/N	0	SURVEILLANCE	HEAT, VENT & AC LD		No air flow detected in cable tunnel during surveillance test of fans. Cause - closed louvers.
LABALLE 1	10/82	STANDARD	BE 373021	VIOLATION 050/N	0	LCD	HEAT, VENT & AC LD		Utility error: Improper performance of maintenance resulted in control room heating, ventilation and AC ammonia detector inoperability.
LABALLE 2	06/84	STANDARD	BE 374015	SHUTDOWN 005/SU	216	LCD	HEAT, VENT & AC LD		Utility error: Operational mode was changed (to run from start-up) while an LCD was in effect (control room ventilation emergency makeup train B out of service).
McGUIRE 1	12/81	STANDARD	ME 369018	VIOLATION 100/N	0	LCD	HEAT, VENT & AC LD		Both trains of control room vent system were inoperable, power reduction started, both system trains repaired and power ascension started (power reduction was to 97%).
ST. LUCIE 1	12/76	STANDARD	CE 335004	VIOLATION 099/N	0	LCD	HEAT, VENT & AC LD		During a surveillance both shield building exhaust fan dampers were found to be out of adjustment leading to flow rates that are less than the required 6000 CFM on each train.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SHAUTDOWN OR T.S. LEVEL (%) / VIOLATION PLANT STATUS	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ST. LUCIE 2	06/83	STANDARD	CE	389008 VIOLATION 000/50	0	LCD	HEAT, VENT & RC LD		Utility error: Fuel movement performed while both trains of control room emergency ventilation system inoperable (one due to excessive flow, second due to RC power maint.).
SLABBLE-HAND 1	06/83	STANDARD	BE	387024 VIOLATION 100/N	0	LCD	HEAT, VENT & RC LD		Utility error: The station's reactor bldg ventilation zones were inadvertently cross-connected. The condition was rectified within 25 min of discovery.
TRI-2	12/78	STANDARD	BM	320001 VIOLATION 000/50	0	LCD	HEAT, VENT & RC LD		While submerged desaturated system and reactor building purging were taking place, aux bldg. exhaust and supply fans tripped. Purging without fans violates an LDD. Condition existed for approximately .3 hours.
TRI-2	12/78	STANDARD	BM	320019 VIOLATION 000/50	0	LCD	HEAT, VENT & RC LD		Fuel handling building vent system exhaust flow rate was 3000 cfm below Tech Spec limit of 36000 cfm while processing of liquid radioactive was being performed.
TRIUM	05/76	STANDARD	ME	344012 VIOLATION 000/50	0	LCD	HEAT, VENT & RC LD		Utility error: During refueling outage, new nuclear fuel assemblies were transferred from new fuel storage room to spent fuel pool without an operable train of spent fuel pool ventilation in service. A small fire occurred during this time.
COCK 1	06/75	STANDARD	ME	313024 VIOLATION 100/N	0	LCD	HEAT, VENT & RC LD		During test spent fuel vent system dampers did not change position on spent fuel pit high radiation alarm. Tech Specs require at least 1 operable during fuel movement.
REDUANCE	06/74	UNFILE	ME	305021 VIOLATION 100/N	0	LCD	HIGH PRESSURE INJ.	HI	Utility error: Boric acid tank isolation switch was misaligned and would have prevented switchover to safety injection section from refueling water storage tank.
RAIWE YANKEE	12/72	UNFILE	CE	309003 VIOLATION 080/7	0	LCD	HIGH PRESSURE INJ.	HI	Utility error: It was found that the power supply breaker for a motor operated valve which is on the path of one high pressure safety injection pump for long term recirculation was open.
RAI190023	12/71	UNFILE	CE	255020 VIOLATION 075/N	0	SURVEILLANCE	HIGH PRESSURE INJ.	HI	Utility error: Seven valves in the hot leg injection system had not been tested since their installation (approx. 3 years). Valves not included in surveillance program due to personnel error.
BAROHO SECO	04/75	UNFILE	BM	312011 VIOLATION 000/50	0	ADMINISTRATIVE	HIGH PRESSURE INJ.	HI	It was discovered that the configuration tables for cross-tie isolation valves in surveillance procedures for high pressure injection loops A and B were mislabeled and incorrect.
SULEN 2	10/81	STANDARD	BE	311016 SHAUTDOWN 100/N	460	LCD	HIGH PRESSURE INJ.	HI	A leakage was discovered on the common section line to the charging pumps. The pumps were declared inoperable. The leak was due to a 3 inch crack.
SAN ONFWE 1	01/68	UNFILE	ME	206014 VIOLATION 000/50	0	LCD	HIGH PRESSURE INJ.	HI	Low level in RWT, below Tech Spec limit of 240,000 gals, resulting from combination of safety injection system test and level gauge uncertainty.
SAN ONFWE 3	04/84	STANDARD	CE	362025 VIOLATION 100/N	0	LCD	HIGH PRESSURE INJ.	HI	Train A removed from service for testing while Train B cooling was inoperable (component cooling water ht. exchanger B being cleaned).
SLABBLE-HAND 2	01/85	STANDARD	BE	388022 VIOLATION 098/N	0	LCD	HIGH PRESSURE INJ.	HI	System declared inoperable due to vibration during test. Also, for 40 minutes the auto depressurization system was inoperable for routine surveillance.
TRIUM	05/76	STANDARD	ME	344002 VIOLATION 100/N	0	LCD	HIGH PRESSURE INJ.	HI	One of safety injection pump's lube oil cooler was found to be packed with sediment preventing service water from passing through cooler. Since this condition has built up over several months it was assumed pump inoperable over 72 hrs.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NRCSS LER NO. VENDOR	LER NO. SHUTDOWN OR T.S. LEVEL (41) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
TELESTAR	05/76	STANDARD	ME	344015 VIOLATION 000/SD	0	LCD	HIGH PRESSURE INJ.	HI	Utility error: During change of mode from 5 to 4 it was found that one of the centrifugal charging pumps was tagged out for service. This violates the Tech Spec requirement of both pumps being available when in mode 4.
DRESDEN 2	03/70	UNIQUE	BE	237014 VIOLATION 000/	0	SURVEILLANCE	HIGH PRESSURE INJ.	LO	Utility error: Surveillance of HECI (Initiation?) due to turbine trip on low reactor pressure was performed two days past the due date.
REDWATER	06/74	UNIQUE	ME	305015 SHUTDOWN 100/N	0	LCD	HIGH PRESSURE INJ.	LO	Utility error: Refueling Meter Storage Tank level was discovered to be 1.2% below Tech Spec limit due to an earlier human error in valve misalignment.
SLUGLEAKAGE 1	06/83	STANDARD	BE	387009 VIOLATION 001/SD	0	LCD	HIGH PRESSURE INJ.	LO	During restart the system steam supply pressure indicator was not operating properly. Reactor pressure exceeded 150 psig (Tech Spec limit) but not 320 psig before system declared operable.
NEWMONT YONKES	11/72	UNIQUE	BE	271024 VIOLATION 100/N	0	SURVEILLANCE	HIGH PRESSURE INJ.	LO	Utility error: Functional testing of the HECI-torres water level system was not performed during the week of 10-1-84. Tech Specs require monthly functional testing.
SNOW DRIFT 1	01/68	UNIQUE	ME	206410 VIOLATION 000/SD	0	LCD	HIGH PRESSURE INJ.	NEB	Two of three boric acid flow paths required to be operable. Twice, one path was out of service for maintenance and one declared inoperable.
SNOW DRIFT 1	01/68	UNIQUE	ME	206416 VIOLATION 087/N	0	LCD	HIGH PRESSURE INJ.	NEB	Two boric acid transfer pumps failed to deliver flow (2 of 3 required). Event similar to LER 206-010.
TURKEY POINT 3	12/72	UNIQUE	ME	250017 VIOLATION 100/N	0	LCD	HIGH PRESSURE INJ.	NEB	To repair a leaky valve the primary water storage tank was isolated for less than the allowed outage time.
CLON 1	08/75	STANDARD	ME	315014 VIOLATION 100/N	0	LCD	LOW PRESS INJ.	HI	Utility error: During scheduled surveillance nonlicensed operator inadvertently isolated north low head safety (N) pump by closing a valve. The licensed CR operator had previously isolated south pump making whole system inoperable for 3 to 5 mins.
DRESDEN 2	08/70	UNIQUE	BE	237010 VIOLATION 005/SD	0	LCD	LOW PRESSURE INJ.	HI	Lack of breaker indication for bus 29 in control room resulted in a breaker check leading to inadvertent breaker trip and leaving LPCI system inoperable for about 28 minutes.
DRESDEN 3	10/71	UNIQUE	BE	249014 VIOLATION 086/N	0	SURVEILLANCE	LOW PRESSURE INJ.	HI	Utility error: Required surveillance not performed on "g" loop prior to removing "g" loop from service for maintenance.
SLUGLEAKAGE 2	05/74	UNIQUE	BE	331009 VIOLATION 100/N	0	LCD	LOW PRESSURE INJ.	HI	During the performance of a low pressure coolant injection surveillance test, the residual heat removal system discharge pressure dropped to zero PSIG violating an LCD Tech Spec.
PALESTINE 3	12/71	UNIQUE	CE	255017 VIOLATION 000/SD	0	LCD	LOW PRESSURE INJ.	HI	A LPS flow valve was not fully open as required by plant Tech Specs for reactor criticality.
SLUGLEAKAGE 2	01/85	STANDARD	BE	388006 VIOLATION 002/SD	0	LCD	LOW PRESSURE INJ.	NEB	Low pressure coolant injection system "g" loop was declared inoperable.
CLAYTON CLIFFS 1	05/75	STANDARD	CE	317018 SHUTDOWN 100/N	320	LCD	MAIN STEAM ISOLATION	LO	Due to actuator oil leakage MSIV seat could be damaged during fast closure resulting in inability of valve to isolate completely.
INDIAN POINT 2	07/74	UNIQUE	ME	247005 VIOLATION 000/SD	0	LCD	MAIN STEAM ISOLATION	LO	During shutdown the main steam isolation valves failed to close within 5 second period required by Tech Specs.

Table B-2 (continued)

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS	LER NO.	SHUTDOWN ON I.S. VIOLATION	POWER LEVEL(S)/ VIOLATION STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ZION 2	09/74	UNIQUE	ME	304015	VIOLATION	100/N	0	LO	MAIN STEAM ISOLATION	LO	During normal surveillance it was discovered that loop B MSIV had no closing side hydraulic pressure.
ONSTER CREEK	12/69	UNIQUE	BE	219016	VIOLATION	000/SD	0	SAFETY	NOT IDENTIFIED	LO	Utility error: All the excess flow check valves (primarily on low flow instrument lines) had not been functionally tested.
ZION 2	09/74	UNIQUE	ME	304027	VIOLATION	095/N	0	SAFETY	PLANT COMPUTER	LO	Utility error: With flow difference alarm inoperable the flow difference was not logged hourly as required.
SEABOARD 1	07/81	STANDARD	ME	327048	VIOLATION	100/N	0	LO	PROTECTOR MONITOR	MED	During a review of instrumentation drawings it was discovered that only one post accident monitoring reactor coolant system pressure channel exists in the field. Tech Specs require two independent channels.
SALEN 1	06/77	STANDARD	ME	272024	VIOL/SHUT	000/SH	48 + LO	LO	POWER	HI	During startup S.B. Feedwater Reg. Valves closed due to an unidentified spurious feedwater trip signal.
SEABOARD 1	06/83	STANDARD	BE	387025	VIOLATION	100/N	0	SAFETY	POWER	LO	Utility error: Weekly surveillance operability tests of the main turbine bypass valves and the main turbine overspeed protection system valves were completed approx. 3 hrs late.
FAIRLEY 1	12/77	STANDARD	ME	348017	VIOLATION	100/N	0	LO	POWER	MED	Both channels of feedwater isolation were rendered inoperable to a regulating valve when that valve was removed from service for repair.
BRAND GULF 1	03/85	STANDARD	BE	416060	VIOLATION	000/SD	0	SAFETY	POWER	MED	Utility error: Turbine stop and control valves had not been cycled for 34 days following startup, valves are to be cycled every 14 days.
SUNNY 1	12/72	UNIQUE	ME	280007	VIOLATION	100/N	0	LO	POWER	MED	Utility error: It was discovered that the main feed regulator valves would not have tripped closed upon receiving a feedwater isolation signal. The pumps would have been tripped. This was due to a wrong connection from instrument air to reg. valve.
BROWNS FERRY 3	03/77	UNIQUE	BE	296012	SHUTDOWN	005/SH	58	SAFETY	PRESSURE RELIEF	HI	Utility error: During test of Main Steam Relief Valves, reactor water level decreased to close to Tech Spec limit - manual action followed. Test procedure inadequacy cited.
NINE MILE POINT	12/69	UNIQUE	BE	220013	SHUTDOWN	005/SH	23	LO	PRESSURE RELIEF	HI	Three out of six main steam line solenoid actuated relief valves failed during test. Two valves stuck open and the third blew fuses and failed to open.
NINE MILE POINT	12/69	UNIQUE	BE	220014	SHUTDOWN	012/SH	116	LO	PRESSURE RELIEF	HI	During main steam pressure relief valve testing, one valve failed to close and three showed seat leakage.
GLAD CITIES 2	10/72	UNIQUE	BE	265005	SHUTDOWN	001/SH	22	LO	PRESSURE RELIEF	HI	Two relief valves were found to have high leakage rates.
SEABOARD 1	07/81	STANDARD	ME	327031	SHUTDOWN	000/SD	0	LO	PRESSURE RELIEF	HI	Inoperable pressurizer relief valve.
TURKEY POINT 3	12/72	UNIQUE	ME	250035	VIOLATION	000/SD	0	LO	PRESSURE RELIEF	HI	PRV block valve would not close completely.
ONSTER CREEK	12/69	UNIQUE	BE	219032	VIOLATION	049/N	0	SAFETY	PRESSURE RELIEF	LO	Utility error: Channel Test of the Main Steam Line Safety and Relief Valve Acoustic Monitors was not performed within specified (required Tech Spec.) time frame.
POINT BEACH 2	10/72	UNIQUE	ME	301001	VIOLATION	100/N	0	LO	PRESSURE RELIEF	LO	Utility error: A snubber on the pressurizer relief valve piping support was removed prior to modification of Tech Specs to allow removal.
SUNNER 1	01/84	STANDARD	ME	375038	VIOLATION	080/N	0	SAFETY	PRESSURE RELIEF	LO	Procedural inadequacies resulted in only 1 of 2 PRV position indication channels being tested during surveillance. Second channel declared inoperable until tested.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NEEDS LER REL. MAINTENANCE OR T.S. LEVEL (S)/ VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
BECKER VALLEY 1	04/77	STANDARD	ME 334019 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	Safety relief valve pilot cartridge set pressure was not within limits of 2405 plus or minus 1%.
DREXEL 3	10/71	UNIQUE	BE 249009 VIOLATION 091/N	0	LCD	PRESSURE RELIEF	NEB	High concentration of oxygen was found in the torus. Causes failure of the torus to reactor building vacuum breaker.
FT. CALHOUN 1	09/73	UNIQUE	CE 285002 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	During a test it was found that five of the ten main steam safety valves failed to lift within the plus or minus 1% of their nameplate setpoint values.
HATCH 1	12/75	UNIQUE	BE 321024 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	Six main steam relief valves failed to lift within plus or minus 1% tolerance required by Tech Specs.
HATCH 2	06/79	STANDARD	BE 366002 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	During performance of Myle Laboratories testing of main steam safety relief valves (SRVs), five SRVs failed to lift in the 1% tolerance range required by Tech Specs.
PILGRIM 1	12/72	UNIQUE	BE 293004 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	During refueling the plant was notified by Myle Laboratories that both of the main steam safety valves set pressures were more than 1% below the nameplate setpoint.
PILGRIM 1	12/72	UNIQUE	BE 293005 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	The utility was notified by Myle Laboratories that the safety relief valves during tests did not lift within specifications.
SHOSHONE 2	01/80	STANDARD	BE 388009 VIOLATION 000/50	0	LCD	PRESSURE RELIEF	NEB	Malfunction of the suppression chamber drywell vacuum breakers. (0 hrs. because plant is not operating.)
YANKEE ROWE	06/61	STANDARD	ME 029011 VIOLATION 100/N	0	LCD	PRESSURE RELIEF	NEB	The lift setpoint of a safety valve was found to exceed the Tech Spec tolerance. Each of the two safety relief valves is capable of preventing the main coolant pressure exceeding 2735 psia.
SEABOARD 1	07/81	STANDARD	ME 327061 VIOLATION 000/50	0	SURVEILLANCE	PRESSURIZER	LD	Pressurizer relief tank pressure indicators in the main control room had range of 0-10 psia instead of 0-100 psia.
TRIUMPH	05/76	STANDARD	ME 344013 VIOLATION 000/50	0	ADMINISTRATIVE	PRESSURIZER	LD	Utility error: Use of incorrect scaling factors lead to lower than actual (by up to 10%) pressurizer level indications.
SEABOARD 1	07/81	STANDARD	ME 327061 VIOLATION 100/N	0	LCD	PRESSURIZER	NEB	The pressurizer pressure indicator in the auxiliary control room was found to be inoperable.
INDIAN FERRY 1	08/74	UNIQUE	BE 299005 VIOLATION 000/50	173	LCD	PRIMARY COOLANT	HI	Drywell leakage from unidentified source exceeded the 5 GPM Tech Spec limit. It was found that the leakage was due to one recirculation pump seal failure.
FT. CALHOUN 1	09/73	UNIQUE	CE 285008 VIOLATION 000/50	1390	LCD	PRIMARY COOLANT	HI	During startup a large leakage of 110 GPM at 1800 PSIA was noticed. This was due to steam generator tube rupture. (Hours due to extension of outage.)
WAP-2	12/84	STANDARD	BE 357106 VIOLATION 000/50	0	LCD	PRIMARY COOLANT	HI	1 of 2 fuel zone level transmitters improperly installed, resulting in incorrect vessel level indication.
APPROX 2	03/80	STANDARD	CE 368022 VIOLATION 100/N	0	LCD	PRIMARY COOLANT	LD	Both containment atmospheric monitoring system units were not operable. Therefore reactor coolant leakage systems were below Tech Spec operability limits.
BRUNNEN 2	11/75	STANDARD	BE 324005 VIOLATION 057/N	0	LCD	PRIMARY COOLANT	LD	Utility error: During review of plant documentation it was found that when valve packing of the reactor water cleanup sys. inlet outboard isolation valve was adjusted the personnel failed to follow plant instructions with respect to entering a LCD.

Table B-2 (continued)

CLASSIFICATION OF LEAK BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION
ALERT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MS&D VENDOR	LEN REL. SHUTDOWN OR T.S. LEVEL (%) VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE		
CLUBBY CLIFFS 2 04/77	STANDARD	CE	318006	SHUTDOWN 097/N	214	LCD	PRIMARY COOLANT LD		Reactor coolant leakage from unidentified source of greater than 1 GPM. The leakage was found to be due to cracked weld at the interface of reactor coolant pump control bleedoff line and the pump seal.	
BREXEN 3 10/71	UNIQUE	BE	249006	VIOLATION 000/SD	0	LCD	PRIMARY COOLANT LD		Utility error: Reactor vessel was not vented at less than 145 degrees F.	
BLANE AMOLB 05/74	UNIQUE	BE	331013	SHUTDOWN 100/N	412	LCD	PRIMARY COOLANT LD		Reactor coolant system leakage of greater than 5 GPM was detected to the drywell floor. Leakage was found to be due to a recirculation pump discharge bypass valve and the associated vent valve.	
BLANE AMOLB 05/74	UNIQUE	BE	331041	SHUTDOWN 036/N	0	LCD	PRIMARY COOLANT LD		Plant was shutdown due to high reactor water conductivity of 14 microhm/cm vs Tech Spec limit of 10.	
F.C. COLVUM 1 09/73	UNIQUE	CE	285004	VIOLATION 000/	0	LCD	PRIMARY COOLANT LD		During shutdown reactor coolant radioactivity was found to be in excess of 1.0 microcurie/gm dose equivalent. 8 hr sample interval was instituted.	
BRAND BLF 1 03/85	STANDARD	BE	416023	VIOLATION 004/	0	LCD	PRIMARY COOLANT LD		Utility error: All continuous conductivity monitors were inoperable and on line measurements were not taken every 4 hours (for 10.5 hrs.).	
BRAND BLF 1 03/85	STANDARD	BE	416047	VIOLATION 020/	0	LCD	PRIMARY COOLANT LD		Bypass switches were in bypass (for longer than 1 hr limit) on the leakage detection systems of the reactor water columns, residual heat removal and reactor core isolation cooling systems.	
WITCH 2 08/79	STANDARD	BE	366013	VIOLATION 900/SD	0	SURVEILLANCE	PRIMARY COOLANT LD		Utility error: With the reactor water conductivity recorder out of service for maintenance, reactor water samples from alternate sources were not taken every 24 hrs as required.	
WITCH 2 08/79	STANDARD	BE	366030	VIOLATION 099/N	0	ADMINISTRATIVE	PRIMARY COOLANT LD		Utility error: A Tech Spec change in frequency of test (18 months to 30 days) was not incorporated into procedures, resulting in 2 missed main steam line temperature channel tests.	
WITCH 2 08/79	STANDARD	BE	366038	SHUTDOWN 099/N	77	LCD	PRIMARY COOLANT LD		Drywell floor drain pumps failed and drain leakage exceeded Tech Spec limits (due to hinge pin leakage on containment feedwater check valve).	
KILLSTONE 1 12/70	UNIQUE	BE	245017	SHUTDOWN 100/N	42	LCD	PRIMARY COOLANT LD		A leakage of greater than 2.5 GPM from an unidentified source into primary containment was detected. Causes 1" instruments stop valve leaking.	
AC-BUJIE 1 12/81	STANDARD	ME	369004	VIOLATION 096/N	0	LCD	PRIMARY COOLANT LD		Utility error: Required leak test was not performed after installation of two incore detectors.	
AC-BUJIE 1 12/81	STANDARD	ME	369007	SHUTDOWN 000/SD	0	SURVEILLANCE	PRIMARY COOLANT LD		Utility error: It was discovered that the 18 months functional testing of the reactor coolant pump time delay overcurrent protective device was not done properly.	
AC-BUJIE 2 03/84	STANDARD	ME	370007	VIOLATION 000/	0	LCD	PRIMARY COOLANT LD		Utility error: Required leak test was not performed after installation of two incore detectors.	
PAULINBES 12/71	UNIQUE	CE	255014	VIOLATION 000/HSD	0	LCD	PRIMARY COOLANT LD		Utility error: The RCS temperature fell below 325 degrees F due to excessive atmospheric steam dump opening.	
PAULINBES 12/71	UNIQUE	CE	255024	VIOL./SHUT 000/HSD	96	LCD	PRIMARY COOLANT LD		Control rod drive seal housing failed resulting in a temporarily unidentified primary leakage in excess of Tech Spec limits.	
PAULINBES 12/71	UNIQUE	CE	255025	VIOL./SHUT 000/HSD	48	LCD	PRIMARY COOLANT LD		Chemical and Volume Control relief valve leakage resulted in a temporarily unidentified leakage in excess of Tech Spec leak rate limit.	
REACH BOTTOM 2 07/74	UNIQUE	BE	277003	VIOLATION 000/BU	0	LCD	PRIMARY COOLANT LD		Utility error: During startup it was discovered that in a one hour period the rate of heatup exceeded 100 degrees F by 10 degrees F, violating the Tech Spec limit.	

Table G-2 (continued)

CLASSIFICATION OF LERS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	ISSUE VENDOR	LER NO.	SHUTDOWN OR T.S. LEVEL (%) / VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
PERCH BOTTOM 3	12/74	UNIQUE	GE	278002	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		Utility error: During reactor startup the heatup rate was 111 degrees F/hour violating the Tech Spec limit of 100 degrees F/hour.
PERCH BOTTOM 3	12/74	UNIQUE	GE	278004	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		Utility error: Due to inadvertent initiation of feedwater system during cold shutdown the vessel was slightly pressurized and the reactor coolant temperature dropped below 120F violating the Tech Spec limits. Cause: operator error.
RANCHO SECO	04/75	UNIQUE	BN	312016	VIOLATION 092/N	0	LCD	PRIMARY COOLANT LO		While reviewing records it was found that the reactor coolant pump seal return line isolation valve had exceeded its Tech Spec stroke time limit of 8 seconds by 0.12 second in a surveillance test.
RANCHO SECO	04/75	UNIQUE	BN	312024	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		Utility error: Reactor startup was commenced during reactor coolant system deboration (no safety limit was exceeded).
SAN ONOFRE 2	08/83	STANDARD	CE	361008	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		Due to instrument error during mode 4 operation, reactor coolant temp. was allowed to exceed (by 1 degree) 350 degree limit for 2 minutes. Containment isolation, aux. feedwater and safety inj. tanks were not fully operable.
SAN ONOFRE 2	08/83	STANDARD	CE	361014	VIOLATION 100/N	0	SURVEILLANCE	PRIMARY COOLANT LO		Total core flow calculated by core protection calculators was not compared to value based on calorimetric calc. every 31 days as required because plant computer did not use this method as thought.
SAN ONOFRE 3	04/84	STANDARD	CE	362015	VIOLATION 080/N	0	LCD	PRIMARY COOLANT LO		On 3 occasions primary coolant activity exceeded 1 microcurie/gram dose equivalent iodine. System purified within 48 hrs each time. During this time all required 4 hr samples had not been taken.
SEQUOIA 2	06/82	STANDARD	WE	328007	VIOLATION 070/N	0	LCD	PRIMARY COOLANT LO		Utility error: The bus undervoltage timing relay for one of the reactor coolant pumps was discovered failed. Tech Specs require that undervoltage bistables be tripped within 1 hour. This reqt was violated.
SURRY 2	05/73	UNIQUE	WE	281006	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		Utility error: With the primary system temperature below 440 degrees F, the rate of reactor cooldown was found to be 65 degrees F/hour, exceeding the 50 degrees F/hour Tech Spec limits.
SURRY 2	05/73	UNIQUE	WE	281007	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		With the unit at cold shutdown, the breakers for the accumulator discharge valves were not locked open with the valves closed. This is a Tech Spec requirement when PORVs are inoperable.
SUSQUEHANNA 1	06/83	STANDARD	GE	387041	VIOLATION 100/N	0	SURVEILLANCE	PRIMARY COOLANT LO		Utility error: After thermal power changes the appropriate chemistry tests were not run within the required time frame.
TNI-2	12/78	STANDARD	BN	320020	VIOLATION 000/SU	0	SURVEILLANCE	PRIMARY COOLANT LO		System samples drawn through temporary sampling tube may not have been representative of vessel volume. Condition existed since 1980.
TROJAN	05/76	STANDARD	WE	244014	VIOLATION 000/SU	0	LCD	PRIMARY COOLANT LO		Identified leak of greater than 10 gpm (violating LCD) found.
TURKEY POINT 3	12/72	UNIQUE	WE	250016	VIOLATION 100/N	0	SURVEILLANCE	PRIMARY COOLANT LO		Utility error: The isotopic analysis for iodine in the RCS was not performed within the time interval required by Tech Specs.
TURKEY POINT 3	12/72	UNIQUE	WE	250019	SHUTDOWN 100/N	22	LCD	PRIMARY COOLANT LO		Reactor coolant system leakage of approximately 10 GPM exceeding the Tech Spec limits.
TURKEY POINT 3	12/72	UNIQUE	WE	250020	SHUTDOWN 100/N	112	LCD	PRIMARY COOLANT LO		Reactor coolant system leakage of approximately 13.5 GPM exceeding the Tech Spec limits.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL(%)/ PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
YANKEE ROWE	06/61	STANDARD	WE	029001	SHUTDOWN	100/N	196	LCD	PRIMARY COOLANT LD		Primary coolant system boundary degradation due to the loop 1 steam generator water box vent line leakage.
ANANIS 2	03/80	STANDARD	CE	368023	VIOLATION	000/SD	0	LCD	PRIMARY COOLANT MED		Hydrogen purge activities led to inaccuracies in coolant level indication (temp. indicator being used). RCS partially drained cavitating RHR pump. In correcting problem, coolant temp. increased to 205 degrees F changing operational mode from 5 to 4
FARLEY 2	07/82	STANDARD	WE	364008	SHUTDOWN	100/N	352	LCD	PRIMARY COOLANT MED		Two steam generator tubes were found to be defective based on tests.
FITZPATRICK	07/75	UNIQUE	GE	333007	VIOLATION	000/SD	0	LCD	PRIMARY COOLANT MED		A local leak rate test on two main steam isolation valves showed local leak rates exceeding the Tech Spec limits.
FITZPATRICK	07/75	UNIQUE	GE	333008	VIOLATION	001/SU	0	LCD	PRIMARY COOLANT MED		Utility error: During routine startup operations the 100 degrees F per hour heatup rate limit of Tech Specs was exceeded by 4 degrees F during a one hour period.
NORTH ANNA 1	06/78	STANDARD	WE	338001	SHUTDOWN	001/	748	LCD	PRIMARY COOLANT MED		High primary coolant system leakage from unidentified source. The primary cause was determined to be due to steam generator tube rapture.
OCONEE 3	12/74	UNIQUE	BM	287006	SHUTDOWN	100/N	321	LCD	PRIMARY COOLANT MED		Primary to secondary leakage in Steam Generator 3 exceeded Technical Specification limits (2 leaking tubes identified).
PARLISADES	12/71	UNIQUE	CE	255012	VIOLATION	000/MED	0	LCD	PRIMARY COOLANT MED		Primary coolant leak rate from unidentified source greater than 1 GPM. Cause: check valves to safety injection lines.
PARLISADES	12/71	UNIQUE	CE	255013	VIOLATION	000/SD	0	LCD	PRIMARY COOLANT MED		Primary coolant leakage rate from unidentified source found to be greater than 1 GPM. Cause: charging pump seal leak.
PAWRITZ 2 AND 1	12/73	UNIQUE	WE	282010	VIOLATION	063/	0	LCD	PRIMARY COOLANT MED		Eddy current tests showed 3 tubes with greater than 50% thru-wall penetrations. Test results not properly diagnosed until after restart and subsequent leakage.
SEQUEYAH 1	07/81	STANDARD	WE	327030	SHUTDOWN	030/	500	LCD	PRIMARY COOLANT MED		Reactor coolant system leakage of 25-35 GPM due to an incore detector thimble tube failure.
ST. LUCIE 1	12/76	STANDARD	CE	335022	VIOLATION	000/SD	0	SURVEILLANCE	PRIMARY COOLANT MED		Steam generator testing was expanded to 100% testing (category 3) of one steam generator and category 2 testing of the second, i.e., a number of degraded/defective tubes were found.
TWI-1	09/74	UNIQUE	BM	289004	VIOLATION	000/SD	0	LCD	PRIMARY COOLANT MED		Utility error: Following a test, it was discovered that a tube in one of the steam generators that was required to have been plugged was not plugged. The tube next to it was mistakenly plugged instead.
ZION 1	12/73	UNIQUE	WE	295005	SHUTDOWN	000/SD	272	LCD	PRIMARY COOLANT MED		During repair of a leaking high pressure seal at the seal table, the fitting broke loose resulting in uncontrolled unisolable leakage of approximately 18 GPM of primary coolant.
BROWNS FERRY 1	08/74	UNIQUE	GE	259017	VIOLATION	097/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: Routine check of a radiation monitor that monitors control room air supply duct was not performed within the required time by Tech Specs.
BRUNSWICK 1	03/77	STANDARD	GE	325015	VIOLATION	076/N	0	ADMINISTRATIVE	RADIATION MONITOR	LD	Utility error: It was discovered that the test procedure for channel functional test of main service water system effluent rad. monitor did not provide T.S. required testing of monitor downscale & high voltage supply low inoperable alarm functions.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION	
PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SHUTDOWN ON T.S. LEVEL (H)/ VIOLATION PLANT	POWER ON T.S. LEVEL (H)/ VIOLATION PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE		
BURGHEIM 1	03/77	STANDARD	GE	325019	VIOLATION 100/N	0	LCD	RADIATION MONITOR	LD	Utility error: Reactor building ventilation radiation monitor was inoperable for 2 months due to the removal of an annunciator point card.	
BURGHEIM 1	03/77	STANDARD	GE	325024	VIOLATION 000/SD	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: The required grab sampling of gaseous radioactive effluents from off-gas stack was not performed until approx. 120 hours beyond the sampling frequency requirement.	
BYRON 1	02/85	STANDARD	GE	454004	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Process radiation monitor for train A control room NMC failed and train A isolated. A makeup filter unit not yet declared operable was initially used to replace isolated train.	
BYRON 1	02/85	STANDARD	GE	454007	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: With vent stack radiation monitors inoperable, some required 12 hr grab samples were not taken.	
BYRON 1	02/85	STANDARD	GE	454009	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Samples taken from aux bldg. vent stack particulate & iodine monitors while the stack monitor was inoperable were not analyzed within 48 hours as required.	
BYRON 1	02/85	STANDARD	GE	454014	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: 12 hr grab samples from process monitors for the reactor containment fan coolers and essential service water outlets were not obtained within the specified time limit.	
BYRON 1	02/85	STANDARD	GE	454015	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Aux bldg vent stack monitor was declared inoperable. A gas grab sample required by the Tech Specs action statement was missed due to personnel error.	
CALLAWAY 1	01/85	STANDARD	GE	483006	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Continuous sampling of iodine and particulate while the unit vent wide range gas monitor was turned off was not performed.	
CALLAWAY 1	01/85	STANDARD	GE	483007	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Continuous sampling of iodine and particulate while the unit vent wide range gas monitor was turned off was not performed.	
CALLAWAY 1	01/85	STANDARD	GE	483008	VIOLATION 100/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Required leak tests of sealed sources were not performed within the 6 month test frequency specified by Tech Specs.	
CALVERT CLIFFS 1	05/75	STANDARD	GE	317012	VIOLATION 000/	0	LCD	RADIATION MONITOR	LD	Utility error: During waste gas tank purging the vent particulate monitor was out of service. Env. Tech Specs require this monitor to be operable.	
CALVERT CLIFFS 2	04/77	STANDARD	GE	318002	VIOLATION 096/N	0	LCD	RADIATION MONITOR	LD	It was discovered that a condenser off-gas radiation monitor was not operating correctly.	
CATTARAUGUS 1	06/85	STANDARD	GE	413002	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Three liquid waste releases were made without an accurate analysis of the sample activity. Inaccurate sample results were caused by software problems.	
CATTARAUGUS 1	06/85	STANDARD	GE	413007	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Composite sampler on the conventional waste water treatment system declared inoperable and required grab sample prior to a water release was not made.	
CATTARAUGUS 1	06/85	STANDARD	GE	413011	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Discharge from liquid radiowaste system was made after liquid radiowaste monitor had been inoperable for 14 days. Tech Spec LCD is 14 days.	
CATTARAUGUS 1	06/85	STANDARD	GE	413016	VIOLATION 000/SD	0	LCD	RADIATION MONITOR	LD	Multiple radiation monitors were out of service at the same time (particulate, gas & vent plus vent sampling pump failed due to electric breaker fault).	

Table B-2 (continued)
CLASSIFICATION OF LEADS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENDOR	LEA NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (K) PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
CITRADA 1	06/85	STANDARD	ME	413019	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Multiple monitors were out of service at the same time (particulate, gas and vent plus vent sampling pump failed due to personnel error).
CODK 1	06/75	STANDARD	ME	315015	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: Due to failure of a radiation monitor, once-a-day monitoring of the area with portable monitoring instrumentation was in effect. Requirement was violated when the technician failed to make daily surveys of spent fuel storage area.
CODK 1	06/75	STANDARD	ME	315022	VIOLATION	100/N	0	LCD	RADIATION MONITOR	LD	Utility error: It was found that incorrect dose rate factors were being calculated for the gaseous releases.
CODK 1	06/75	STANDARD	ME	315023	VIOLATION	100/N	0	LCD	RADIATION MONITOR	LD	Utility error: The steam generator blowdown sample collection was not taken on daily basis as required by Tech Specs.
CODK 1	06/75	STANDARD	ME	315035	VIOLATION	100/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: With an building radiation monitor inoperable, required 8 hr grab sample not taken for approximately 13 hours.
CODK 2	07/78	STANDARD	ME	316021	VIOLATION	000/MSB	0	ADMINISTRATIVE	RADIATION MONITOR	LD	Utility error: Revision to procedures did not adequately consider Tech Specs, resulting in operation of valves to take upper containment air samples in violation of LCDs.
CODPER	07/74	UNFILE	BE	258006	VIOLATION	070/N	0	LCD	RADIATION MONITOR	LD	Utility error: The off-gas stack sampler was taking a sample from the off-gas filter building rather than the off-gas stack.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302007	VIOLATION	046/J	0	SURVEILLANCE	RADIATION MONITOR	LD	During a routine secondary plant liquid release, it was discovered that the flow recorder was not functioning properly.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302016	VIOLATION	056/N	0	LCD	RADIATION MONITOR	LD	During an audit it was found that the alarm/trip setpoint for the fuel storage pool area gaseous activity process was set at higher level than Tech Spec requirement. The requirement that no spent fuel movement be allowed was violated.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302017	VIOLATION	057/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: An auxiliary bldg and fuel handling area exhaust duct monitor grab sample analysis was not performed within 2 to 5 hours following a change in power level exceeding 15%.
CRYSTAL RIVER 3	03/77	STANDARD	BM	302020	VIOLATION	042/N	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: After power level change, required an. building fuel handling area exhaust duct sample not taken on schedule.
DIBOLD CANYON 1	05/85	STANDARD	ME	275017	VIOLATION	000/SD	0	LCD	RADIATION MONITOR	LD	Utility error: With the plant vent iodine sampler flow rate monitor inoperable, plant personnel did not comply with the Tech Spec sampling requirements for about 9 days.
GRAND BULL 1	03/85	STANDARD	BE	416021	VIOLATION	003/J	0	LCD	RADIATION MONITOR	LD	Utility error: With the condenser offgas hydrogen monitor inoperable, required 4 hr grab samples were taken from 3 to 20 minutes late.
GRAND BULL 1	03/85	STANDARD	BE	416035	VIOLATION	004/J	0	SURVEILLANCE	RADIATION MONITOR	LD	Utility error: Test results were voided due to analyst error resulting in exceeding surveillance interval.
GRAND BULL 1	03/85	STANDARD	BE	416037	VIOLATION	000/J	0	LCD	RADIATION MONITOR	LD	Utility error: On 3 occasions with the radon/bldg building noble gas monitor inoperable, the required 8 hr grab samples were taken late (by up to 24 minutes).

Table B-2 (continued)

CLASSIFICATION OF LEADS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VENDOR	LER NO.	SHUTDOWN ON T.S. VIOLATION	POWER LEVEL (%) PLANT	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
GRAND BULF 1	03/85	STANDARD	BE	416048	VIOLATION 019/		0	LCD	RADIATION MONITOR	LD	Utility errors: With electric power off to fuel handling area vent system flow rate monitor and sample flow rate monitor, required 8 hr estimates of flow rates were not taken.
GRAND BULF 1	03/85	STANDARD	BE	416054	VIOLATION 000/SD		0	SURVEILLANCE	RADIATION MONITOR	LD	Utility errors: Effluent cumulative dose calculations were not calculated within the Tech Spec time limits (1 day later).
HATCH 2	08/79	STANDARD	BE	366028	VIOLATION 001/		0	LCD	RADIATION MONITOR	LD	Utility errors: With the drywell iodine monitor out of service the frequency at which containment atmosphere grab samples surveillance was being performed was incorrect. Samples had been taken every 24 hrs, should have been taken every 4 hours.
LACROSSE	11/69	UNIQUE	AC	409013	VIOLATION 098/M		0	SURVEILLANCE	RADIATION MONITOR	LD	Sampling of offgas was not performed within the Tech Spec frequency requirements.
LABALLE 1	10/82	STANDARD	BE	373027	VIOLATION 062/M		0	LCD	RADIATION MONITOR	LD	Utility errors: A reactor reduction of power created a need for 4 hr grab samples (rather than 8 hr) due to off gas analyzers being inoperable. The first sample was obtained 3.5 hrs after power drop.
LABALLE 1	10/82	STANDARD	BE	373048	VIOLATION 062/		0	SURVEILLANCE	RADIATION MONITOR	LD	Utility errors: A grab sample for noble gases was not taken during a 10 hr run of the standby gas treatment system.
LABALLE 1	10/82	STANDARD	BE	373065	VIOLATION 057/M		0	LCD	RADIATION MONITOR	LD	A nonconservative (by a factor of 2 over Tech Spec limit) trip setpoint on radiation monitor during liquid radioactive discharge.
LABALLE 2	06/84	STANDARD	BE	374070	VIOLATION 100/M		0	ADMINISTRATIVE	RADIATION MONITOR	LD	Utility errors: Contractor employee left main steam tunnel door (high radiation area barrier) unlatched and open.
LINEBROOK 1	09/85	UNIQUE	BE	352001	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LD	Utility errors: Prior to criticality control rod withdrawal. Required across discharge volume and refueling area vent radiation monitor surveillance not performed.
LINEBROOK 1	09/85	UNIQUE	BE	352009	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LD	With a service water radiation monitor valued out, a radioactivity sample was not taken within an 8 hour period.
LINEBROOK 1	09/85	UNIQUE	BE	352027	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LD	Utility errors: With a service water radiation monitor valued out, a radioactivity sample was not taken within an 8 hour period.
MAINE PRINCEE	12/72	UNIQUE	CE	309012	VIOLATION 100/M		0	SURVEILLANCE	RADIATION MONITOR	LD	Utility errors: Containment air particulate detector and gas monitor were removed from service with no backup capability supplied for greater than 48 hours.
OLD CITIES 2	10/72	UNIQUE	BE	265013	VIOLATION 000/SD		0	SURVEILLANCE	RADIATION MONITOR	LD	A service water effluent sample could not be collected due to reduced flow in the service water system.
ROCKING SEED	04/75	UNIQUE	BM	312012	VIOLATION 062/PE		0	LCD	RADIATION MONITOR	LD	Utility errors: During power escalation, sampling of the auxiliary building stack was missed even though the gas concentration at the site boundary exceeded 10% of the maximum permissible concentration for I-131.
SARL 2	10/81	STANDARD	ME	311014	VIOLATION 100/M		0	LCD	RADIATION MONITOR	LD	Tech Specs allow use of a plant vent radioactivity monitor in place of a contain. monitor for purge & pressure relief if the plant vent monitor setpoints are reduced to contain. monitor values. This requirement was violated in a containment pressure relief.

Table B-2 (continued)
CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NEOS LER NO. MONITOR	POWER OR T.S. LEVEL (VIOLATION PLANT STATUS)	OUTSIDE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SW 1A #	10/81	STRAD000	ME	311003 VIOLATION 000/50	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Plant vent sample pump (needed for iodine sampling) turned off for up to 19 hours - reason unknown.
SW 1B #	10/81	STRAD000	ME	311003 VIOLATION 100/50	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Plant vent particulate sample was taken but not analyzed for 2 months due to priority for other samples.
SW 1C #	10/81	STRAD000	ME	311005 VIOLATION 000/50	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: 3 releases from the chemical and volume control system monitor tank were monitored but not recorded as required.
SW 1D #	08/83	STRAD000	IF	361005 VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	Utility error: With stack monitors out of service but operable and containment purges in progress, flow rate estimates were required every 4 hrs but not performed.
SW 1E #	08/83	STRAD000	CE	361005 VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	Both control room airborne radiation monitors were in alarm default mode, disabling control room isolation system (1 of 3 signals that activates control room emergency air cleanup system).
SW 1F #	08/83	STRAD000	CE	361072 VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	Utility error: Monitor required for operation of control room isolation system was in alarm default mode for approximately 9 hrs.
SW 1G #	04/84	STRAD000	CE	362020 VIOLATION 100/50	0	LCD	RADIATION MONITOR	LO	With condenser evacuation system radiation monitors out of service, 8 hr grab samples were being taken in accordance with LCD. However, the grab sample due at 0800 was not taken until 0945 because sample lines were temporarily out of service.
SW 1H #	04/84	STRAD000	CE	362027 VIOLATION 000/50	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: A daily containment airborne particulate and iodine sample was not taken.
SW 1I #	07/81	STRAD000	ME	327042 VIOLATION 100/50	0	LCD	RADIATION MONITOR	LO	Due to an incomplete modification, a radiation monitor would not provide automatic isolation of direct releases from the neutralization tank.
SW 1J #	07/81	STRAD000	ME	327071 VIOLATION 100/50	0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Containment Vent. Isolation radiation monitors were not being verified as operable (particulate channels) as required for fuel handling operations.
SW 1K #	01/84	STRAD000	ME	355001 VIOLATION 100/50	0	LCD	RADIATION MONITOR	LO	Utility error: On 2 occasions daily grab samples of the service water effluent were not taken.
SW 1L #	01/84	STRAD000	ME	355003 VIOLATION 100/50	0	LCD	RADIATION MONITOR	LO	Multiple quarterly composite samples from main plant exhaust vent and reactor bldg. purge were lost after analysis.
SW 1M #	01/84	STRAD000	ME	355025 VIOLATION 095/50	0	LCD	RADIATION MONITOR	LO	Utility error: Sporadic hi radiation alarms resulted in reactor building purge monitor. Monitor declared inoperable, utility exceeded 72 hrs limit without performing alternate monitoring.
SW 1N #	01/84	STRAD000	ME	355042 VIOLATION 080/50	0	LCD	RADIATION MONITOR	LO	In certain plant configurations, only 1 of 2 required reactor building exhaust monitors is operable.
SW 1O #	01/84	STRAD000	ME	355047 VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	Utility error: During release of liquid from waste monitor tank, both liquid effluent radiation monitors were inoperable (1 of 2 required).
SW 1P #	06/83	STRAD000	BE	387005 VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	Utility error: With service water effluent line radiation monitor inoperable a once-per-shift grab sample was missed.
SW 1Q #	06/83	STRAD000	BE	387015 VIOLATION 000/50	0	LCD	RADIATION MONITOR	LO	Background radiation in the area of the service water radiation monitor reached levels such that the monitor's high alarm setpoint could not ensure that the monitor would detect and alarm at 1 MPC DS-137 equivalent.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS MEMBER	LER NO.	STATUS	POWER ON T.S. VIOLATION	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
SLUSLEY-00000 1	06/83	STANDARD	GE	387022	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	Spurious turbine bldg spring purge command resulted in a purge flow; purge reset and normal sample flow resumed.
SLUSLEY-00000 1	06/83	STANDARD	GE	387027	VIOLATION 100/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: 2 grab samples were not taken within the required time limits.
SLUSLEY-00000 1	06/83	STANDARD	GE	387039	VIOLATION 100/N		0	LCD	RADIATION MONITOR	LO	Temporary iodine and particulate monitors in the turbine bldg failed while the permanent monitor was out of service.
TRU-2	12/78	STANDARD	BM	320011	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: During stochastic rad. monitor calibration, the CR air inlet rad. monitor interlock was placed in defeat. When neither CR emergency air cleanup sys was put in recirc. mode in 4 hrs nor monitor returned to service in 4 hrs, TS violated.
VERMONT FARMCE	11/72	UNIQUE	BE	271003	VIOLATION 100/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: Monthly air particulate and charcoal samples were discarded as rubbish by mistake instead of sending them to the analytical laboratory.
VERMONT FARMCE	11/72	UNIQUE	BE	271006	VIOLATION 092/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: A weekly air particulate and charcoal cartridge sampling was not performed as required by Tech Specs.
VERMONT FARMCE	11/72	UNIQUE	BE	271010	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	It was discovered that stack gas radiation monitors were not responding properly due to one monitor having the wrong detector installed and the other one having a faulty circuit card.
VERMONT FARMCE	11/72	UNIQUE	BE	271014	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	During a weekly environment air sample collection it was discovered that the sample is not being drawn continuously as required by Tech Specs.
VERMONT FARMCE	11/72	UNIQUE	BE	271017	VIOLATION 000/SD		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: While the service water system radiation monitor was out of service two daily samplings of the service water system were not taken as required by Tech Specs.
WAP-2	12/84	STANDARD	GE	357008	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: Standby service water monitor declared inoperable. Required sampling not performed.
ZIDM 1	12/73	UNIQUE	ME	295013	VIOLATION 100/N		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: The quarterly surveillance of fire sweep discharge radiation monitor was performed 11 days past the required time.
ZIDM 1	12/73	UNIQUE	ME	295014	VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	During a periodic check, it was found that the vent stack particulate radiation monitor had failed low.
ZIDM 1	12/73	UNIQUE	ME	295017	VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	During a test, the low range noble gas detector of the containment air monitor failed to respond to the check source.
ZIDM 1	12/73	UNIQUE	ME	295018	VIOLATION 099/N		0	LCD	RADIATION MONITOR	LO	During a surveillance, the blower for the vent stack particulate and iodine sampler was found to be off.
ZIDM 1	12/73	UNIQUE	ME	295022	VIOLATION 000/SD		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: The weekly particulate, iodine and noble gas samples for containment purge radiation monitor were not collected on schedule.
ZIDM 1	12/73	UNIQUE	ME	295039	VIOLATION 099/N		0	SURVEILLANCE	RADIATION MONITOR	LO	During containment venting purge exhaust stack monitor did not function properly at all times.
ZIDM 2	09/74	UNIQUE	ME	304011	VIOLATION 000/SD		0	LCD	RADIATION MONITOR	LO	Utility error: During a containment purge it was discovered that the switch for the blower assembly of the service building exhaust monitor was in the off position, so this release path was not monitored.

Table B-2 (continued)
CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED

ALARM NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (SI) PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ZION 2	09/74	UNIQUE	ME	304023	VIOLATION 037/SU		0	SURVEILLANCE	RADIATION MONITOR	LO	Utility error: During reactor startup, there was a thermal power change of greater than 15% in one hour. No reactor coolant sample for iodine concentration was taken 2 to 6 hours following the power change as required by Tech Specs.
DRESDEN 2	08/70	UNIQUE	BE	237006	VIOLATION 000/		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: URCI corner room submarine door to the torus basement was found open and unattended.
DRESDEN 3	10/71	UNIQUE	BE	245005	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Submarine door between torus and low pressure coolant injection pump room was open and unattended.
HADDON NECK	01/68	UNIQUE	ME	213020	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Unqualified health physics technician given the responsibility to record employee dose readings in a high exposure area.
LABELLE 1	10/82	STANDARD	BE	373025	VIOLATION 095/N		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: A trapdoor on the auxiliary building roof, which allows entry into a high radiation area (irradiated pipe tunnel), was neither posted as a high radiation area nor secured in any manner.
LABELLE 1	10/82	STANDARD	BE	373034	VIOLATION 100/M		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: A high radiation area door, which leads to the URC tank room of the turbine building was found open with no positive access control.
LABELLE 1	10/82	STANDARD	BE	373036	VIOLATION 045/		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Entrance to the Unit 2 reactor meter cleanup hold pump room was found to be closed but not latched. The electrical strike mechanism on the locking device was sticking in the open position.
LABELLE 1	10/82	STANDARD	BE	373042	VIOLATION 100/M		0	SURVEILLANCE	RADIATION PROTECTION	LO	Utility error: A radiation area, reactor meter cleanup isolation valve room, was not surveyed for 5 months during which it became a high radiation area.
LABELLE 1	10/82	STANDARD	BE	373070	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Area including BFP pump room initially not classified as a high radiation area for maintenance. Later classified as a high radiation area.
LABELLE 1	10/82	STANDARD	BE	373079	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Door to a high radiation area (RGIV room) was not posted due to management confusion over which door actually needed posting.
LABELLE 1	10/82	STANDARD	BE	373083	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: There was no barrier on an alternate (although unlikely) entrance to a high radiation area in the reactor building.
LABELLE 1	10/82	STANDARD	BE	373092	VIOLATION 100/M		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Positive control not maintained on an entrance to a temporary high radiation area.
LABELLE 1	10/82	STANDARD	BE	373093	VIOLATION 070/M		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Technician found radioactive debris bag in an area not marked as a high radiation area. Room was unattended and unsecured.
LABELLE 2	06/84	STANDARD	BE	374022	VIOLATION 037/		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Door to a high radiation area was left open and unattended.
LABELLE 2	06/84	STANDARD	BE	374034	VIP 8710M 070/M		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Area known to be a high radiation area when reactor power is above 50% was not posted as such until reactor power reached 70%.
LABELLE 2	06/84	STANDARD	BE	374038	VIOLATION 053/N		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Door to reactor meter cleanup heat exchanger room (hi radiation area) was ajar for 16 hrs. One attempt to close door failed because technician checked wrong door.
LABELLE 2	06/84	STANDARD	BE	374049	VIOLATION 000/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: 3 areas with controlled access were raised as high radiation areas. However, computer controlled access status was not updated allowing normal access.

Table B-2 (continued)

CLASSIFICATION OF LEIS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LABALLE 2	06/84	STANDARD	GE	374082	VIOLATION 030/N		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	A rectangular hole was discovered in the top of the entrance way to the Unit 2 condenser water box which is posted as a high rad area.
NORTH ANNA 1	06/78	STANDARD	WE	338017	VIOLATION 030/SD		0	ADMINISTRATIVE	RADIATION PROTECTION	LO	Utility error: Technician assigned to provide continuous health physics coverage to workers was found asleep, therefore continuous coverage not provided.
RANCHO SECO	04/75	UNIQUE	BN	312013	VIOLATION 091/N		0	LCD	RADIATION PROTECTION	LO	Utility error: It was found that the doors to the radwaste and filter rooms and decay heat cooler rooms were left open. Both of these doors are secured high radiation areas.
TREHAN	05/76	STANDARD	WE	344008	VIOLATION 100/N		0	SURVEILLANCE	RADIATION PROTECTION	LO	Utility error: It was discovered that the Tech Spec periodic surveillance requirement for leakage testing of 8 sealed sources containing mixed isotope radioactive material was not met.
CALLAWAY 1	01/85	STANDARD	WE	483038	VIOLATION 000/SD		0	LCD	RAWASTE	LO	Excess oxygen in system resulted in oxygen monitors being turned off. Required samples were taken from the wrong gas decay tank for a period of 5 days. System returned to service without proper testing.
DIABLO CANYON 1	05/85	STANDARD	WE	275010	VIOLATION 000/HSD		0	LCD	RAWASTE	LO	Utility error: The liquid radwaste effluent line isolation valve failed to close during a surveillance test.
DIABLO CANYON 1	05/85	STANDARD	WE	275027	VIOLATION 000/SD		0	LCD	RAWASTE	LO	Oxygen content of gaseous radwaste system exceeded 4% for more than 1 hour due to operational error (support system was depressurized drawing air into gaseous radwaste system).
DRESDEN 1	08/60	UNIQUE	GE	010001	VIOLATION 000/SD		0	LCD	RAWASTE	LO	Utility error: During unit shutdown an unplanned radioactive release to discharge canal was discovered which exceeded the Tech Spec limits.
SPIN ONEFIRE 1	01/68	UNIQUE	WE	206013	VIOLATION 000/SD		0	SURVEILLANCE	RAWASTE	LO	Utility error: Improper test administration resulted in failure to obtain required mid-point sample during routine liquid radwaste discharge.
BIG ROCK POINT	12/62	UNIQUE	GE	195014	VIOLATION 091/N		0	SURVEILLANCE	REACTOR CONTROL	LO	Utility error: The daily exercise of each control rod that is not fully inserted was not performed one day.
BROWNS FERRY 1	08/74	UNIQUE	GE	259004	SHUTDOWN 014/		21	LCD	REACTOR CONTROL	LO	During manual shutdown, the reactor mode switch was moved from "run" to "startup" resulting in a half scram. To rapidly shutdown the reactor the rod notch override switch was used, violating the Tech Specs.
POINT BEACH 2	10/72	UNIQUE	WE	301002	VIOLATION 100/N		0	LCD	REACTOR CONTROL	LO	Utility error: Operation at 100% power with control rods inserted further than allowed by Tech Specs (225 vs 228 steps). Change in specification proposed after the event.
WNP-2	12/84	STANDARD	GE	397062	VIOLATION 020/		0	SURVEILLANCE	REACTOR CONTROL	LO	Utility error: Reactor power was reduced in preparation for main turbine trip testing. Surveillance requirements on rod sequence control system were not performed in the required time frame.
WNP-2	12/84	STANDARD	GE	397087	VIOLATION 035/		0	LCD	REACTOR CONTROL	LO	When an out of sequence rod was selected, the rod worth minimizer did not initiate select error light. Therefore no operator was stationed to verify control rod movement.
CRYSTAL 1	06/85	STANDARD	WE	413010	VIOLATION 000/SD		0	ADMINISTRATIVE	REACTOR CONTROL	MED	Utility error: During test, more than one control rod bank was removed from fully inserted. Administrative/procedural error cited.

Table B-2 (continued)

CLASSIFICATION OF LENS BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION	
PLANT NAME	DATE OF COMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS VENDOR	LER NO.	SAUTUDOM OR T.S. VIOLATION	POWER LEVEL (S) / DAMPION	OUTAGE	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	
							(HRS)	CATEGORY			
CODEN 2	07/78	STANDARD	ME	316018	SAUTUDOM 003/SU		49	LCD	REACTOR CONTROL	HEB	During the initial startup two control rods were found to be misaligned violating Tech Spec limits. A differential pressure switch was jumpered 1 hr longer than the allowable time. Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation). Nonconservative parameters had been input into the computer code that calculate peak pin power and radial peaking factors. Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel 9 core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs. It was discovered that the across discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency. Utility error: Reactor recirculation pump onto trip relays had been removed from their sockets. Installation and connection of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84. Utility error: Part of the control rod drive across discharge level functional test was not being performed due to confusing procedures. Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SBLSSS violation. Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs. Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration. Utility error: Full in limit switch on a control rod drive was jumpered during refueling without removing rod from service. Utility error: Detensioning of the reactor vessel studs was begun with a reactor coolant system boron concentration of 1899 ppm which is lower than the minimum 2000 ppm required by Tech Specs. Utility error: At power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit. Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
SUBELEMENT 2	01/85	STANDARD	BE	366007	VIOLATION 000/		0	LCD	REACTOR H2O CLEANSUP	LO	
SUBELEMENT 2	01/85	STANDARD	BE	366020	VIOLATION 100/N		0	LCD	REACTOR H2O CLEANSUP	LO	
REACTOR 2	03/80	STANDARD	CE	366010	VIOLATION 100/N		0	SBLSSS	REACTOR PROTECTION	HI	
REACTOR 2	03/80	STANDARD	CE	366025	VIOLATION 100/N		0	SBLSSS	REACTOR PROTECTION	HI	
WITCH 1	12/75	UNIQUE	BE	321004	VIOLATION 100/N		0	SURVEILLANCE	REACTOR PROTECTION	HI	During the initial startup two control rods were found to be misaligned violating Tech Spec limits. A differential pressure switch was jumpered 1 hr longer than the allowable time. Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation). Nonconservative parameters had been input into the computer code that calculate peak pin power and radial peaking factors. Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel 9 core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs. It was discovered that the across discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency. Utility error: Reactor recirculation pump onto trip relays had been removed from their sockets. Installation and connection of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84. Utility error: Part of the control rod drive across discharge level functional test was not being performed due to confusing procedures. Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SBLSSS violation. Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs. Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration. Utility error: Full in limit switch on a control rod drive was jumpered during refueling without removing rod from service. Utility error: Detensioning of the reactor vessel studs was begun with a reactor coolant system boron concentration of 1899 ppm which is lower than the minimum 2000 ppm required by Tech Specs. Utility error: At power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit. Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
WITCH 2	08/79	STANDARD	BE	366014	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	HI	
LABELLE 2	06/84	STANDARD	BE	374059	VIOLATION 000/		0	SURVEILLANCE	REACTOR PROTECTION	HI	During the initial startup two control rods were found to be misaligned violating Tech Spec limits. A differential pressure switch was jumpered 1 hr longer than the allowable time. Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation). Nonconservative parameters had been input into the computer code that calculate peak pin power and radial peaking factors. Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel 9 core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs. It was discovered that the across discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency. Utility error: Reactor recirculation pump onto trip relays had been removed from their sockets. Installation and connection of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84. Utility error: Part of the control rod drive across discharge level functional test was not being performed due to confusing procedures. Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SBLSSS violation. Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs. Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration. Utility error: Full in limit switch on a control rod drive was jumpered during refueling without removing rod from service. Utility error: Detensioning of the reactor vessel studs was begun with a reactor coolant system boron concentration of 1899 ppm which is lower than the minimum 2000 ppm required by Tech Specs. Utility error: At power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit. Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
PALISHADES	12/71	UNIQUE	CE	255023	VIOLATION 000/SD		0	SBLSSS	REACTOR PROTECTION	HI	
SALEN 2	10/81	STANDARD	ME	311007	VIOLATION 093/N		0	SURVEILLANCE	REACTOR PROTECTION	HI	During the initial startup two control rods were found to be misaligned violating Tech Spec limits. A differential pressure switch was jumpered 1 hr longer than the allowable time. Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation). Nonconservative parameters had been input into the computer code that calculate peak pin power and radial peaking factors. Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel 9 core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs. It was discovered that the across discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency. Utility error: Reactor recirculation pump onto trip relays had been removed from their sockets. Installation and connection of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84. Utility error: Part of the control rod drive across discharge level functional test was not being performed due to confusing procedures. Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SBLSSS violation. Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs. Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration. Utility error: Full in limit switch on a control rod drive was jumpered during refueling without removing rod from service. Utility error: Detensioning of the reactor vessel studs was begun with a reactor coolant system boron concentration of 1899 ppm which is lower than the minimum 2000 ppm required by Tech Specs. Utility error: At power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit. Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
CODEN 2	07/78	STANDARD	ME	316015	VIOLATION 000/SD		0	SURVEILLANCE	REACTOR PROTECTION	LO	
DRESDEN 2	08/70	UNIQUE	BE	237021	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	LO	During the initial startup two control rods were found to be misaligned violating Tech Spec limits. A differential pressure switch was jumpered 1 hr longer than the allowable time. Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation). Nonconservative parameters had been input into the computer code that calculate peak pin power and radial peaking factors. Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel 9 core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs. It was discovered that the across discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency. Utility error: Reactor recirculation pump onto trip relays had been removed from their sockets. Installation and connection of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84. Utility error: Part of the control rod drive across discharge level functional test was not being performed due to confusing procedures. Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SBLSSS violation. Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs. Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration. Utility error: Full in limit switch on a control rod drive was jumpered during refueling without removing rod from service. Utility error: Detensioning of the reactor vessel studs was begun with a reactor coolant system boron concentration of 1899 ppm which is lower than the minimum 2000 ppm required by Tech Specs. Utility error: At power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit. Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
FABLEY 1	12/77	STANDARD	ME	348003	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	LO	
61006	03/70	UNIQUE	ME	244011	VIOLATION 100/N		0	LCD	REACTOR PROTECTION	LO	During the initial startup two control rods were found to be misaligned violating Tech Spec limits. A differential pressure switch was jumpered 1 hr longer than the allowable time. Maintenance activities on a high flow delta p switch caused an isolation of this system (this is an ESF actuation). Nonconservative parameters had been input into the computer code that calculate peak pin power and radial peaking factors. Incorrect data used to calibrate resistance temperature detector which provides cold leg temp input to channel 9 core protection calculator. Also a calibration error discovered. Each could have resulted in nonconservative uncertainty in CPC calcs. It was discovered that the across discharge volume high level thermal level sensors had not been functionally tested at the required Tech Spec frequency. Utility error: Reactor recirculation pump onto trip relays had been removed from their sockets. Installation and connection of these relays cannot be verified during the period of time from 12/21/83 until 1/13/84. Utility error: Part of the control rod drive across discharge level functional test was not being performed due to confusing procedures. Utility error: Low flow trip calibration not scheduled or performed resulting in incorrect trip values in a surveillance procedure leading to a SBLSSS violation. Utility error: During routine surveillance of control rod assemblies, it was discovered that operability of 4 rods were not verified once per 31 days as required by Tech Specs. Utility error: The shutdown margin determination surveillance grace period was exceeded as a result of a late sample analysis on the reactor coolant system boron concentration. Utility error: Full in limit switch on a control rod drive was jumpered during refueling without removing rod from service. Utility error: Detensioning of the reactor vessel studs was begun with a reactor coolant system boron concentration of 1899 ppm which is lower than the minimum 2000 ppm required by Tech Specs. Utility error: At power the control rod position indication system was made inoperable for maintenance on 13V DC power circuit. Response time of several primary coolant loop RTDs was larger than the Tech Spec limits.
WILLSTONE 2	12/75	STANDARD	CE	336006	SAUTUDOM 100/N		118	LCD	REACTOR PROTECTION	LO	

Table B-2 (continued)

CLASSIFICATION OF LERS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NISS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%) / PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
OYSTER CREEK	12/69	UNIQUE	GE	219014	VIOLATION 000/SD		0	SURVEILLANCE	REACTOR PROTECTION	LD	The reactor low level instrumentation test was not performed within the Tech Spec required period.
SUMNER 1	01/84	STANDARD	ME	395020	VIOLATION 000/SD		0	SURVEILLANCE	REACTOR PROTECTION	LD	Inadequate calibration procedure for "low fluid oil pressure" switches resulted in switches being out of Tech Spec limits (in Chap. 15 FSAR no credit is taken for this trip).
SUSQUEHANNA 1	06/83	STANDARD	GE	387006	VIOLATION 000/SD		0	SURVEILLANCE	REACTOR PROTECTION	LD	Weekly SAR & IRR surveillance requires sensor movement (which is a core alteration). Such alterations are prohibited by Tech Specs.
TURKEY POINT 4	09/73	UNIQUE	ME	251012	VIOLATION 091/N		0	LCD	REACTOR PROTECTION	LD	Moderator temperature coefficient exceeded the Tech Spec limits.
AVONHAMS 2	03/80	STANDARD	CE	368005	VIOLATION 050/N		0	LCD	REACTOR PROTECTION	MED	Channel A of the excore flux monitor subchannel was out of service due to detector saturation for a period exceeding the allowed Tech Spec limit of 48 hours.
AVONHAMS 2	03/80	STANDARD	CE	368006	VIOLATION 080/N		0	LCD	REACTOR PROTECTION	MED	Utility error: For 2 minutes one channel (of 4) of the core protection calculators was bypassed while a second channel was out of service for modifications to software.
AVONHAMS 2	03/80	STANDARD	CE	368009	VIOLATION 100/N		0	LCD	REACTOR PROTECTION	MED	The response time of one resistance temp. detector (RTD) was beyond Tech Spec limits for greater than 1 hr after discovery. RTD is used for RPS channel cold leg temp. input.
BEAVER VALLEY 1	04/77	STANDARD	ME	334018	VIOLATION 000/SD		0	ADMINISTRATIVE	REACTOR PROTECTION	MED	Pressurizer pressure trip channel test procedure used an improper reference pressure. Trip value was 35 higher than it should have been.
CALLAWAY 1	01/85	STANDARD	ME	463021	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	MED	Utility error: Train A (inhibited) and train B (test) of SSPS were inoperable, rendering source range flux doubling inoperable.
CALLAWAY 1	01/85	STANDARD	ME	463043	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	MED	Utility error: Steamline pressure indication had been improperly calibrated.
COOK 2	07/78	STANDARD	ME	316017	VIOLATION 000/HSD		0	SURVEILLANCE	REACTOR PROTECTION	MED	Steamline low pressure safety injection trips declared inoperable.
COOK 2	07/78	STANDARD	ME	316019	VIOLATION 000/HSD		0	LCD	REACTOR PROTECTION	MED	Utility error: It was found that the shiftly channel checks for the intermediate range excore detectors were not performed.
FARLEY 1	12/77	STANDARD	ME	348014	VIOLATION 100/N		0	SURVEILLANCE	REACTOR PROTECTION	MED	Utility error: 1 (of 4) reactor coolant pumps was removed from service. The associated Tave channel was not placed in the tripped position as required.
FARLEY 2	07/82	STANDARD	ME	364011	VIOLATION 100/N		0	LCD	REACTOR PROTECTION	MED	Potentiometers for the input from power range channel NI-43 to the overtemperature-delta-T circuit had not been adjusted following recaling.
GINNA	03/70	UNIQUE	ME	244013	VIOLATION 100/N		0	ADMINISTRATIVE	REACTOR PROTECTION	MED	Potentiometer settings for power range channel NA3 to overtemperature-delta-T circuit had not been within Tech Spec requirements.
HADDON MECK	01/68	UNIQUE	ME	213027	VIOLATION 000/HSD		0	SLALSSS	REACTOR PROTECTION	MED	Utility error: Procedural change to surveillance test allowed omission of a particular rod bank test that should not have been omitted.
HATCH 1	12/75	UNIQUE	GE	321009	VIOLATION 000/SU		0	SURVEILLANCE	REACTOR PROTECTION	MED	Setpoint drift caused 2 overpower trip setpoints to be above Tech Spec limits.
HATCH 2	08/79	STANDARD	GE	366027	VIOLATION 000/SD		0	LCD	REACTOR PROTECTION	MED	Utility error: During startup it was discovered that the APRM 15s flux scan test had not been performed within 24 hours of startup as required.
											Utility error: Isolation valves and test valves for 4 pressure transmitters were mispositioned. The mispositioning was the result of personnel error. The plant was operated in a condition prohibited by Tech Specs.

Table B-2 (continued)

CLASSIFICATION OF EVENTS BASED ON SYSTEM AFFECTED										EVENT DESCRIPTION
PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NESS LER NO.	SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	
INDIAN POINT 2	07/74	UNITILE	ME 247003	SHUTDOWN 100/N		28	SLALSSS	REACTION PROTECTION	RED	RPJ channel drift.
INDIAN POINT 3	06/76	UNITILE	ME 286007	VIOLATION 100/N		0	SLALSSS	REACTION PROTECTION	RED	One of the nuclear power range channels was found to be faulty due to instrument drift.
LACROSSE	11/69	UNITILE	AC 409018	SHUTDOWN 096/		59	SURVEILLANCE	REACTION PROTECTION	RED	During test of Nuclear Instrumentation Channel a separate spurious high flux spike resulted in reactor scram.
MILLSTONE 2	12/75	STANDARD	CE 336007	VIOLATION 100/N		0	SURVEILLANCE	REACTION PROTECTION	RED	Utility error: The monthly surveillance for thermal margin/low pressure operability check was missed due to human error.
OYSTER CREEK	12/69	UNITILE	BE 219022	VIOLATION 000/SD		0	LCD	REACTION PROTECTION	RED	Utility error: Due to improperly installed diaphragm in solenoid operated valve, 3 scram discharge volume vent and drain valves exceeded maximum allowable closing times.
OYSTER CREEK	12/69	UNITILE	BE 219024	VIOLATION 001/SD		0	SURVEILLANCE	REACTION PROTECTION	RED	One of two switches failed to operate during test of low-low reactor water level sensor. Failure was due to test procedure inadequacy.
SEABOARD 1	07/81	STANDARD	ME 327025	VIOLATION 000/SD		0	LCD	REACTION PROTECTION	RED	Utility error: Sampling of the reactor coolant system for boron concentration caused the pressurizer level transmitter to become inoperable. A scale change was performed with the instrument inoperable violating the Tech Spec reqts. Lifted leads disabled turbine trip on "g" trains: 95 HI level or safety injection signal. Condition possibly existed for 40 days.
SLURRY 1	01/84	STANDARD	ME 355002	VIOLATION 075/N		0	LCD	REACTION PROTECTION	RED	Intermediate source range monitor failure.
SLURRY 1	12/72	UNITILE	ME 280008	SHUTDOWN 000/SD		0	LCD	REACTION PROTECTION	RED	3 fastest control rods to position 45 in a 2x2 array did not meet test requirements.
SLURRY 1	06/83	STANDARD	BE 387044	VIOLATION 100/N		0	LCD	REACTION PROTECTION	RED	Utility Error: Failure to perform 18 month test of scram discharge volume vent and drain valves. Valves subsequently failed response time test.
SLURRY 1	06/83	STANDARD	BE 387043	SHUTDOWN 000/		85	SURVEILLANCE	REACTION PROTECTION	RED	One source range monitor was bypassed during fuel loading operations.
SLURRY 2	01/85	STANDARD	BE 388002	VIOLATION 000/SD		0	LCD	REACTION PROTECTION	RED	Utility error: Daily calibration of the nuclear power range was not performed as required by Tech Specs.
TURKEY POINT 3	12/72	UNITILE	ME 250022	VIOLATION 100/N		0	SURVEILLANCE	REACTION PROTECTION	RED	One of three Nuclear Instrumentation channels had diminished operability due to incorrect variable setpoints caused by swapped leads. Channel declared inoperable resulting in violation of LCD.
TURKEY POINT 3	12/72	UNITILE	ME 250028	VIOLATION 100/N		0	SLALSSS	REACTION PROTECTION	RED	Utility error: Daily calibration of the nuclear power range was not performed as required.
TURKEY POINT 4	09/73	UNITILE	ME 251019	VIOLATION 100/N		0	SURVEILLANCE	REACTION PROTECTION	RED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (10 outage hours because plant is not operating.)
WAP-2	12/84	STANDARD	BE 397003	SHUTDOWN 000/SD		0	LCD	REACTION PROTECTION	RED	Three intermediate range neutron flux monitoring detectors were found to be inoperable. (10 outage hrs. because plant is not operating.)
WAP-2	12/84	STANDARD	BE 397004	SHUTDOWN 001/SD		0	LCD	REACTION PROTECTION	RED	Neutron flux high shutdown trip was set beyond Tech Spec limits.
WAP-2	12/84	STANDARD	BE 397116	VIOLATION 000/SD		0	SLALSSS	REACTION PROTECTION	RED	

Table B-2 (continued)

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MISS LER NO. SHUTDOWN OR T.S. VIOLATION	POWER LEVEL (%)	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
ZION 1	12/73	UNIQUE	ME 2750330	VIOLATION 074/N	0	SURVEILLANCE	REACTION PROTECTION	RED	With the nuclear instrument system quadrant power tilt measurement declared inoperable, the Tech Spec requirement of hourly power tilt calculation was violated.
GRAND BILF 1	03/85	STANDARD	BE 416028	SHUTDOWN 004/SD	0	LCD	RECIRCULATION	LD	One recirculation pump could not be started following a storm and loss of a 500 KV switchyard bus. (0 hrs. because plant is not operating.)
GRAND BILF 1	03/85	STANDARD	BE 416041	SHUTDOWN 001/SD	0	LCD	RECIRCULATION	LD	Difficulties with more than one jet pump during surveillance. (0 hrs. because plant is not operating.)
LINERICK 1	09/85	UNIQUE	BE 352016	VIOLATION 062/SD	0	SURVEILLANCE	RECIRCULATION	LD	"g" recirculation pump was started without preoperational test of delta T between loop coolant and vessel coolant.
PEACH BOTTOM 2	07/74	UNIQUE	BE 277010	VIOLATION 000/SD	0	LCD	RECIRCULATION	LD	A crack was discovered in the jet pump instrumentation penetration.
PEACH BOTTOM 2	07/74	UNIQUE	BE 277016	VIOLATION 000/SD	0	LCD	RECIRCULATION	LD	Cracks were discovered in the Jet Pump inlet riser safe ends.
PEACH BOTTOM 3	12/74	UNIQUE	BE 278008	VIOLATION 000/SD	0	LCD	RECIRCULATION	LD	During routine maintenance three through-wall cracks were discovered in a jet pump instrumentation penetration.
BURNE ARKOLD	05/74	UNIQUE	BE 331005	VIOLATION 100/REM	0	LCD	RESIDUAL HT. REMOVAL	HI	During plant operation the residual heat removal/core spray fill pump motor was tripped by the circuit breaker thermal overload relay lowering the system pressure and violating T.S. requirements.
LADUESSE	11/69	UNIQUE	AC 409022	VIOLATION 094/N	0	LCD	RESIDUAL HT. REMOVAL	HI	Utility error: 1 of 2 inlet control valves on the shutdown condenser was removed from service for maint. (for 1 hr). LCD requires both valves be operable.
LABILLE 2	06/84	STANDARD	BE 374005	VIOLATION 000/SD	0	LCD	RESIDUAL HT. REMOVAL	HI	System train B fall flow test valve failed to close during surveillance after maintenance on pump 2B.
BELOUVIN 2	06/82	STANDARD	ME 328012	VIOLATION 100/N	0	LCD	RESIDUAL HT. REMOVAL	HI	Utility error: During surv. testing for external containment piping leakage both trains of RHR system were inoperable for 2 hrs, 47 min. due to a valve opening as part of procedures. Later determined procedure could be performed w/o valve opening.
SLEBUEVANN 2	01/85	STANDARD	BE 388019	SHUTDOWN 021/	0	LCD	RESIDUAL HT. REMOVAL	HI	Due to intermittent breaker problems a residual heat removal pump failed a test while the high pressure coolant injection system was inoperable. Shutdown begun.
LINERICK 1	09/85	UNIQUE	BE 352044	VIOLATION 000/SD	0	LCD	RESIDUAL HT. REMOVAL	LD	"g" train of system was removed from service during cold shutdown. Alternate cooling method was not demonstrated operable within 1 hr.
PEACH BOTTOM 2	07/74	UNIQUE	BE 277006	VIOLATION 093/N	0	LCD	RESIDUAL HT. REMOVAL	LD	It was discovered that due to a Residual Heat Removal System heat exchanger fault, approximately 1170 to 2130 microcuries of radiation was released to the discharge pond.
SLEBUEVANN 1	06/83	STANDARD	BE 387038	VIOLATION 100/N	0	SURVEILLANCE	RESIDUAL HT. REMOVAL	LD	Utility error: No surveillance test had been performed on the high differential temperature isolation relays of the residual heat removal system.
SLEBUEVANN 2	01/85	STANDARD	BE 388016	VIOLATION 020/	0	SURVEILLANCE	RESIDUAL HT. REMOVAL	LD	Utility error: Due to disconnection a pump instrumentation surveillance was performed 3 hrs beyond 31 day limit and allowable extension.
TNI-2	12/78	STANDARD	BM 320004	VIOLATION 000/SD	0	LCD	RESIDUAL HT. REMOVAL	LD	Utility error: Decay heat removal pumps were declared inoperable due to missing the T.S. required surveillance. No surveillance will be performed until preventive maintenance on the decay heat removal system components is completed.

Table B-2 (continued)
CLASSIFICATION OF LEAS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	NSSS VENDOR	LER NO.	SHUTDOWN OR T.S. VIOLATION PLANT STATUS	POWER LEVEL (K)/ DURATION (HRS)	OUTAGE TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
WMP-2	12/84	STANDARD	GE	397126	VIOLATION 09B/N	0	SURVEILLANCE	RESIDUAL HT. REMOVAL	LO	First temp monitoring required in the residual ht. removal pump room whenever equipment is in use. Surveillance procedure required it in modes 1, 2 or 3 only.
BYRON 1	02/85	STANDARD	ME	454002	VIOLATION 000/SD	0	SURVEILLANCE	RESIDUAL HT. REMOVAL	MED	Utility error: Required flow and operability surveillance requirements were not performed for an 8 hr period during shutdown.
FAIRLEY 1	12/77	STANDARD	ME	348018	VIOLATION 000/CD	0	LCD	RESIDUAL HT. REMOVAL	MED	Utility error: During cooldown both system trains were placed in recirc mode. According to Tech Specs the system was then inoperable. Procedures did not prohibit this action.
SAN GEOFRE 2	08/83	STANDARD	CE	361017	VIOLATION 100/N	0	SURVEILLANCE	RESIDUAL HT. REMOVAL	MED	Shutdown cooling heat exchanger throttle valve was found in full open position instead of throttle position required to prevent low pump suction press. under some accident conditions.
HATCH 2	08/79	STANDARD	GE	366015	VIOLATION 000/SD	0	SURVEILLANCE	SEISMIC	LO	Utility error: Monitoring of settlement of seismic category 1 structures had been performed 9 days after end of 45 day grace period.
ZION 2	09/74	UNIQUE	ME	304014	VIOLATION 000/SD	0	LCD	SEISMIC	LO	During a visual inspection five safety-related snubbers were found inoperable.
SAN GEOFRE 2	08/83	STANDARD	CE	361079	VIOLATION 000/SD	0	LCD	SEISMIC	MED	88 deficient snubbers were found during surveillance (about 8% of plant snubbers).
ZION 1	12/73	UNIQUE	ME	295023	VIOLATION 100/N	0	LCD	SEISMIC	MED	During a visual inspection, two seismic suppressors (snubbers) were found inoperable.
ZION 1	12/73	UNIQUE	ME	295035	VIOLATION 062/N	0	LCD	SEISMIC	MED	Utility error: One safety related snubber found in a degraded condition (staking pin removed) and repaired.
SEQUOYA 1	07/81	STANDARD	ME	327069	VIOLATION 100/N	0	SURVEILLANCE	SERVICE WATER	HI	During test, valve supplying cooling to DG 28 was found inoperable.
TURKEY POINT 4	09/73	UNIQUE	ME	251018	VIOLATION 100/N	0	LCD	SERVICE WATER	HI	Utility error: The intake cooling water strainer was taken out for cleaning longer than 24 hours permitted by Tech Specs.
BROWNS FERRY 1	08/74	UNIQUE	GE	259029	VIOLATION 100/N	0	LCD	SERVICE WATER	LO	RGME section XI pump pressure criteria were not met by 4 residual heat removal service pumps (RHRSMP) although the Tech Spec flow criteria were met.
BROWNS FERRY 1	08/74	UNIQUE	GE	259031	VIOLATION 100/N	0	SURVEILLANCE	SERVICE WATER	MED	During power operation one residual heat removal service water pump became inoperable. Tech Specs allow 30 day operation if the other pump is proved operable immediately and every 15 days. Immediate operability of second loop was not demonstrated.
CRYSTAL RIVER 3	03/77	STANDARD	BN	302011	VIOLATION 094/N	0	LCD	SERVICE WATER	MED	A discharge check valve on one of the required nuclear service's seawater pumps was found stuck open due to corrosion resulting in lack of redundancy.
SALEN 2	10/81	STANDARD	ME	311020	VIOLATION 100/N	0	SURVEILLANCE	SPENT FUEL POOL	LO	Utility error: Surveillance neglect of checking the current position of all valves not locked or secured and servicing safety-related equipment was violated for a spent fuel pit heat exchanger flow control valve. Valve not locked due to human error.
DRESDEN 3	10/71	UNIQUE	GE	249013	SHUTDOWN 091/	0	LCD	STANDBY GAS TREATMENT	LO	A butterfly valve between the drywell and Standby Gas Treatment System was taken out to repair a leak, violating the Tech Spec requirements relating to the primary containment purge system operability.
HATCH 1	12/75	UNIQUE	GE	321008	VIOLATION 100/N	0	SURVEILLANCE	STANDBY GAS TREATMENT	LO	Utility error: It was discovered that due to a surveillance tracking computer miscalculation the surveillance due dates for the standby gas treatment system ventilation and valve operability had been missed.

Table B-2 (continued)

CLASSIFICATION OF EVENTS BASED ON SYSTEM AFFECTED										
PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	MESS LER NO.	SHAUTDOWN OR T.S. VIOLATION	POWER LEVEL (s) PLANT VIOLATION	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION AFFECTED CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
LARVILLE 1	10/82	STANDARD	BE	373072	VIOLATION 000/SD	0	LCD	STANDBY GAS TREATMENT	LO	Outlet air flow was 250 acfs less than the required 4000 acfs plus or minus 10%. Reason: 3 of 7 doors to system were not properly closed.
OYSTER CREEK	12/69	UNIQUE	BE	219007	VIOLATION 000/SD	0	LCD	STANDBY GAS TREATMENT	LO	Due to failure of diesel generator 1 to fast start during a test it was declared inoperable and thus the standby gas treatment system 1 was considered inoperable violating the Tech Spec requirement of operability of redundant SGTS trains.
OYSTER CREEK	12/69	UNIQUE	BE	219018	VIOLATION 000/SD	0	SURVEILLANCE	STANDBY GAS TREATMENT	LO	The flow rate through Standby Gas Treatment System #2 was found to be below the Tech Spec design requirements.
COOPER	07/74	UNIQUE	BE	298007	SHAUTDOWN 070/N	42	LCD	STANDBY GAS TREATMENT	MED	Standby Gas Treatment System inoperable due to a construction crew mistake in knocking a fire hydrant and subsequent water hammer creation.
OYSTER CREEK	12/69	UNIQUE	BE	219011	VIOLATION 000/SD	0	LCD	STANDBY GAS TREATMENT	MED	Both trains of the standby gas treatment system were rendered inoperable for 9 minutes during performance of preventive maintenance on a circuit breaker.
PENON BOTTOM 2	07/74	UNIQUE	BE	277008	VIOLATION 000/	0	LCD	STANDBY GAS TREATMENT	MED	The standby gas treatment system was not functioning after a manual start due to an inoperable solenoid valve.
PENON BOTTOM 3	12/74	UNIQUE	BE	278012	SHAUTDOWN 100/N	0	LCD	STANDBY GAS TREATMENT	MED	Standby Gas Treatment System ductwork in the reactor building swap room was found to be collapsed resulting in lack of secondary containment integrity.
VERMONT YANKEE	11/72	UNIQUE	BE	271012	VIOLATION 000/SD	0	LCD	STANDBY GAS TREATMENT	MED	System was "potentially" bypassed during fuel movement when reactor bldg air conditioning was not tagged out of service and properly aligned during maintenance.
OYSTER CREEK	12/69	UNIQUE	BE	219027	VIOLATION 024/	0	LCD	STANDBY LIQUID	HI	Utility error: Lack of administrative controls resulted in dilution of boron in liquid poison tank to below acceptable level of 10.3%.
SLISLE-0000 1	06/83	STANDARD	BE	387023	VIOLATION 100/N	0	LCD	STANDBY LIQUID	LO	The 31-day chemistry surveillance of the standby liquid control system indicated that the sodium pentaborate concentration in the SBC tank was 14.33%. This value is above the Tech Spec limit for the tank.
SLISLE-0000 1	06/83	STANDARD	BE	387030	VIOLATION 100/N	0	LCD	STANDBY LIQUID	LO	System level and boron concentration were 378 gallons and .45 respectively below the Tech Spec limits.
VERMONT YANKEE	11/72	UNIQUE	BE	271013	VIOLATION 000/SD	0	LCD	STANDBY LIQUID	LO	Two relief valves in the standby liquid control system were found to have setpoints below Tech Spec requirements.
CITICORP 1	06/85	STANDARD	ME	413022	VIOLATION 000/SD	0	LCD	SUMP	HI	Utility error: Containment sump inlet screen doors were opened during power operation violating LDO.
OLVERT CLIFFS 1	05/75	STANDARD	CE	317006	VIOLATION 003/	0	LCD	SUMP	LO	With power less than 3%, S.E. chemistry conditions were being improved. The operator discovered that channel A narrow range power that he had relied on was malfunctioning-the power actually was close to 7% with contain. sump level alarm inoperable.
LINERIX 1	09/85	UNIQUE	BE	352043	VIOLATION 006/SD	0	SURVEILLANCE	SUMP	LO	Stroke time testing procedure for suppression pool level instrumentation solenoid valve did not adequately test stroke time of valve.
SLISLE-0000 1	06/83	STANDARD	BE	387049	VIOLATION 087/N	0	LCD	SUMP	LO	A suppression chamber purge was initiated without the required sampling and analyses. The suppression chamber oxygen concentration exceeded the limit in Tech Specs.

Table B-2 (continued)

CLASSIFICATION OF LEAKS BASED ON SYSTEM AFFECTED

PLANT NAME	DATE OF COMMERCIAL OPERATION	TYPE OF TECHNICAL SPECIFICATION	HESS LER NO. VENDOR	VIOLATION ON T.S. VIOLATION PLANT STATUS	OUTAGE DURATION (HRS)	TECHNICAL SPECIFICATION CATEGORY	SYSTEM AFFECTED	SAFETY SIGNIFICANCE	EVENT DESCRIPTION
THI-2	12/78	STANDARD	BU 320006	VIOLATION 000/50	0	LCD	SUMP	LD	The reactor building water level indication was found inoperable. Since the duration of repair was greater than 8 hrs, a Tech Spec limit was violated.
WAP-2	12/84	STANDARD	GE 357008	VIOLATION 000/50	0	LCD	SUMP	LD	Due to incorrect valve lineup, suppression pool level dropped approx. 3 inches below required level of 30 ft. 9.75 inches. Event occurred during shutdown.
ACCU-1	12/81	STANDARD	ME 363029	SHUTDOWN 100/70	30	LCD	UPPER HEAD INJECTION	LD	High Nitrogen Concentration in Accumulator above limit of 80 cubic feet per 1800 cubic feet of water. Cause: repetitive makeup from system surge tank due to valve leakage.
CELL-1	01/80	STANDARD	ME 443003	VIOLATION 000/50	0	LCD	WASTE BPS	LD	With an inoperable oxygen outlet monitor, 24 hr grab samples are required for the waste gas holdup system. One such sample was missed.
COOR-1	08/75	STANDARD	ME 313000	VIOLATION 100/70	0	LCD	WASTE BPS	LD	Utility error: Waste gas system sample line was removed from service and the system was not properly realigned, i.e., both compressors were not shut off.
81000	03/70	UNIQUE	ME 244004	VIOLATION 000/50	0	LCD	WASTE BPS	LD	Waste Gas System oxygen analyzer was inoperable requiring samples to be taken every 4 hours. This requirement was violated.
ZION-1	12/73	UNIQUE	ME 250020	VIOLATION 100/70	0	LCD	WASTE BPS	LD	Utility error: A release was made from a waste gas tank prior to the completion of the 45 day holding period.
ZION-1	12/73	UNIQUE	ME 250026	VIOLATION 000/50	0	LCD	WASTE BPS	LD	While performing maintenance, it was found that gas was leaking from the Waste Gas Header to the volume control tank.

*** Total ***

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