ANNOTATED BIBLIOGRAPHY OF SAFETY-RELATED OCCURRENCES IN BOILING-WATER NUCLEAR POWER PLANTS AS REPORTED IN 1976

R. L. Scott - R. B. Gailaher

**PREPARED FOR THE U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REGULATORY RESEARCH
UNDER INTERAGENCY AGREEMENTS ERDA NO. 40-551-75 and 40-552-75**

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**Prepared by the
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FOREWORD

The Nuclear Safety Information Center (NSIC), which was established in March 1963 at Oak Ridge National Laboratory, is principally supported by the U.S. Nuclear Regulatory Commission's Office of Nuclear Regulatory Research. Support is also provided by the Division of Reactor Development and Demonstration of the U.S. Energy Research and Development Administration. NSIC is a focal point for the collection, storage, evaluation, and dissemination of safety information to aid those concerned with the analysis, design, and operation of nuclear facilities. A system of key words is used to index the information cataloged by the Center. The title, author, installation, abstract, and key words for each document reviewed are recorded at the central computing facility in Oak Ridge. The references are cataloged according to the following categories:

1. General Safety Criteria
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4. Aerospace Safety (inactive ~1970)
5. Heat Transfer and Thermal Hydraulics
6. Reactor Transients, Kinetics, and Stability
7. Fission Product Release, Transport, and Removal
8. Sources of Energy Release under Accident Conditions
9. Nuclear Instrumentation, Control, and Safety Systems
10. Electrical Power Systems
11. Containment of Nuclear Facilities
12. Plant Safety Features - Reactor
13. Plant Safety Features - Nonreactor
14. Radionuclide Release, Disposal, Treatment, and Management
(inactive September 1973)
15. Environmental Surveys, Monitoring, and Radiation Dose Measurements
(inactive September 1973)
16. Meteorological Considerations
17. Operational Safety and Experience
18. Design, Construction and Licensing

19. Internal Exposure Effects on Humans Due to Radioactivity in the Environment (inactive September 1973)
20. Effects of Thermal Modifications on Ecological Systems (inactive September 1973)
21. Effects of Radionuclides and Ionizing Radiation on Ecological Systems (inactive September 1973)

Computer programs have been developed that enable NSIC to (1) operate a program of selective dissemination of information (SDI) to individuals according to their particular profile of interest, (2) make retrospective searches of the stored references, and (3) produce topical indexed bibliographies. In addition, the Center Staff is available for consultation, and the document literature at NSIC offices is available for examination. NSIC reports (i.e., those with the ORNL/NSIC and ORNL/NUREG/NSIC numbers) may be purchased from the National Technical Information Service (see inside front cover). All of the above services are free to NRC and ERDA personnel as well as their direct contractors. They are available to all others at a nominal cost as determined by the ERDA Cost Recovery Policy. Persons interested in any of the services offered by NSIC should address inquiries to:

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FTS number is 850-7253

PARTS AND METHOD OF INDEXING ABSTRACTS.

PREVIOUS REPORTS IN THIS SERIES

1. W. R. Casto and E. N. Cramer, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1967 and 1968*, ORNL/NSIC-69 (July 1970) (available from NTIS for \$5.50).
2. R. L. Scott and W. R. Casto, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1969*, ORNL/NSIC-87 (August 1971) (available from NTIS for \$5.50).
3. R. L. Scott, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1970*, ORNL/NSIC-91 (December 1971) (available from NTIS for \$10.50).
4. R. L. Scott and R. B. Gallaher, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1971*, ORNL/NSIC-106 (September 1972) (available from NTIS for \$12.50).
5. R. L. Scott and R. B. Gallaher, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1972*, ORNL/NSIC-109 (December 1973) (available from NTIS for \$15.00).
6. R. L. Scott and R. B. Gallaher, *Annotated Bibliography of Safety-Related Occurrences in Nuclear Power Plants as Reported in 1973*, ORNL/NSIC-114 (November 1974) (available from NTIS for \$15.00).
7. R. L. Scott and R. B. Gallaher, *Annotated Bibliography of Safety-Related Occurrences in Nuclear Power Plants as Reported in 1974*, ORNL/NSIC-122 (May 1975) (available from NTIS for \$15.00).
8. R. L. Scott and R. B. Gallaher, *Annotated Bibliography of Safety-Related Occurrences in Boiling-Water Nuclear Power Plants as Reported in 1975*, ORNL/NUREG/NSIC-126 (July 1976) (available from NTIS for \$11.00).
9. R. L. Scott and R. B. Gallaher, *Annotated Bibliography of Safety-Related Occurrences in Pressurized-Water Nuclear Power Plants as Reported in 1975*, ORNL/NUREG/NSIC-127 (July 1976) (available from NTIS for \$10.75).

ANNOTATED BIBLIOGRAPHY OF SAFETY-RELATED OCCURRENCES IN
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AS REPORTED IN 1976

R. L. Scott R. B. Gallaher

ABSTRACT

This bibliography contains 100-word abstracts of reports to the U.S. Nuclear Regulatory Commission concerning operational events that occurred at boiling-water reactor nuclear power plants in 1976. The report includes 1253 abstracts that describe incidents, failures, and design or construction deficiencies that were experienced at the facilities. They are arranged alphabetically by reactor name and then chronologically for each reactor. Key-word and permuted-title indexes are provided to facilitate location of the subjects of interest, and tables that summarize the information contained in the bibliography are provided. The information listed in the tables includes instrument failures, equipment failures, system failures, causes of failures, deficiencies noted, and the time of occurrence (i.e., during refueling, operation, testing, or construction). Three of the unique events that occurred during the year are reviewed in detail.

INTRODUCTION

This report (along with ORNL/NUREG/NSIC-138) represents the ninth of a series issued annually by the Nuclear Safety Information Center (NSIC), which presents abstracts of safety-related occurrences reported by light-water reactor licensees in the United States during the previous year. In particular, this report contains abstracts of 1253 occurrences reported by licensees of boiling-water reactor nuclear power plants in the United States during 1976. The nine previous reports¹⁻⁹ covered the period 1967 through 1975. In addition, four related NSIC reports¹⁰⁻¹³ contain information on reactor operating experiences reported by the U.S. Nuclear Regulatory Commission (formerly the Atomic Energy Commission) for the period 1966 through 1974.

Previous reports in this series contained the occurrences for both pressurized- and boiling-water reactor facilities; however, due to the continual growth in the number of facilities and consequently in the

number of occurrences reported, it has been necessary since 1975 to list the occurrences in two separate reports. The report that contains the 1976 occurrences at pressurized-water reactor nuclear power plants is ORNL/NUREG/NSIC-138, *Annotated Bibliography of Safety-Related Occurrences in Pressurized-Water Nuclear Power Plants as Reported in 1976*.

The occurrence reports listed in this bibliography were submitted by power plant licensees to the NRC in accordance with federal regulations. The reporting requirements for nuclear facility licensees are included in *Title 10, Code of Federal Regulations, Parts 20, 40, 50, 70, and 73*, and described in detail in *USNRC Regulatory Guide No. 1.16*.¹⁴ The requirements for reporting design or construction deficiencies of facilities that have construction permits are given in *Title 10, Code of Federal Regulations, Part 50, Section 55, Paragraph e*.¹⁵

The information for this report was obtained from the computer files of NSIC in the form of 100-word abstracts of reports from power reactor licensees. The abstracts, together with appropriate key words used for computer storage and retrieval, were prepared by technical specialists at NSIC. Input to the computer is a continuing process; therefore, persons desiring an updating of the information on operating experiences at nuclear power plants may obtain a literature search by contacting the NSIC.

The NSIC computer also provides a bimonthly printout of the current experiences at operating plants; these are published in each issue of the *Nuclear Safety* journal. Information on the current experiences at reactors undergoing startup testing or under construction can also be obtained by contacting the NSIC.

The 100-word abstracts in this report are arranged alphabetically according to the name of the reactor and then chronologically for each reactor. In addition, tables are presented that indicate the number of times a piece of equipment, an instrument, or a system was reported as having been involved in a malfunction. Included in the tables are causes, deficiencies, and time of occurrence (i.e., during operation, testing, refueling, or construction). This summary is followed by a brief discussion of three occurrences that were considered to be the most interesting of those reported during the year.

In addition to the abstracts describing each event, key-word and permuted-title indexes are provided for quickly determining the abstracts that discuss a particular item of interest. For example, persons interested in the problems with diesel generators can find the relevant abstracts listed under the key word "generator, diesel"; or, using the permuted-title index, they can find the abstracts listed with the word "diesel" or the word "generator."

Before reviewing the bibliography, it may also be helpful to review the "Parts and Methods of Indexing Abstracts," which shows a typical abstract with its component parts identified (p. vii). Note the list of key words, which gives a quick indication of the contents of the abstract. The availability of the material is indicated for all abstracts except those that appear in sources such as technical journals, which are available in most technical libraries. In these cases, the name of the journal, issue, date, and page numbers are given above the abstract. Generally, the material related to licensed facilities may be found in the USNRC Public Document Room, 1717 H Street, Washington, D.C. 20545, and/or the material may be purchased from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22151.

SUMMARY OF OCCURRENCE DATA

The 1253 abstracts in the bibliography were reviewed and tabulations made of significant items to indicate the total number of reports concerned with those items. These tabulations indicate items that should receive more attention by reactor operators, designers, or other interested parties.

Table 1 lists the number of reports concerned with the various systems. In the same order as in 1975, the three systems most frequently reported on were containment isolation, main cooling, and reactor protection. One reason that the containment isolation system was reported on more than any other one may be that it encompasses many of the other systems listed, such as main cooling, high-pressure coolant injection (HPCI), reactor core isolation cooling (RCIC), core spray, etc.

Table 1. Number of reports concerned
with the listed systems

System	Percent of total number of reports	Number of reports
Containment isolation	10	130
Main cooling	9	116
Reactor protection	7	82
HPCI ^a	7	74
RCIC ^a	5	60
Shutdown cooling	5	60
Pressure relief	4	51
Emergency power	4	49
Core spray	3	38
LPCI ^a	3	36
Ventilation	2	30
Condenser cooling	2	29
Waste disposal	2	29
Emergency cooling	2	26
Electric power	2	22
Radiation monitoring	2	21
Coolant purification	1	18
Service water	1	17
Feedwater	1	16
Secondary shutdown	1	15
Containment purge	1	14
Cooling tower	1	13
Pneumatic	1	13
Standby gas treatment	1	13
Containment spray	1	11
Auxiliary cooling	<1	6
Hydraulic	<1	4
Component cooling	<1	3

^a HPCI - high-pressure coolant injection; RCIC - reactor core isolation cooling; LPCI - low-pressure coolant injection.

This system consists of valves and controls required to isolate the many lines penetrating the containment, and it follows that most of the reports on this system involve malfunctioning valves and controls - approximately 61% of the reports are concerned with valves and approximately 26% with instrument switches. It should also be pointed out that the major or critical systems were reported on more often than the less important systems; however, this only reflects the attention given to

these major systems by the utilities in the form of surveillance testing, etc., as well as the emphasis which the Nuclear Regulatory Commission has placed on them in its reporting requirements.

Table 2 lists the number of reports concerned with the various items of equipment. Again this year, as in previous years, valves, piping, and pumps were the equipment items that experienced problems most frequently. These three items accounted for over one-third of the reports. Diesel generators, seals, and valve operators accounted for another 15% of the reports: thus, the first six items in the list accounted for 50% of the reports.

Table 3 is a list of various kinds of instrumentation which presented problems during the year and the number of reports concerned with each item. Since 1971 when similar tables were first prepared, switches have been at the top of the list, accounting for more malfunctions than any other instrument. Apparently, the reason for this is the large number of switches in safety-related systems as well as their delicacy and sensitivity. As will be seen in Table 6, at least 167 of these reports involved set-point drift, which has been a problem for years. Various monitors and sensors account for most of the remaining reports on instrumentation problems.

Table 4 lists the identified causes of the safety-related occurrences and the number of reports concerned with each cause. Thirty-two percent of the occurrences involved inherent failures. Examples of items considered to be inherent include (1) excessive fish impingement on intake screens, (2) instrument set-point drift, and (3) spurious trips of instruments or equipment. Approximately 23% of the reports did not give a cause of failure, and in most of these cases an investigation was continuing.

Table 5 lists the various time periods in which the events took place and the associated number of reports. The 559 events which were discovered (or occurred) during testing could be remedied with little or no effect on operation.

Table 6 is a list of items considered to be of interest and the associated number of reports. As in previous years, instrument calibration and set-point drift were the most frequently reported items followed

Table 2. Number of reports concerned
with the listed equipment

Equipment	Percent of total number of reports	Number of reports
Valves	20	246
Pipes and fittings	9	110
Pumps	6	80
Diesel generator	6	74
Seals	5	68
Valve operators	4	51
Cables and connectors	4	46
Support structures	4	44
Turbines	3	41
Shock absorber	3	37
Breakers	2	29
Control-rod drives	2	27
Solenoids	2	27
Filter, screen	2	26
Check valves	2	26
Fasteners	2	22
Storage container	2	20
Bearings	2	19
Pressure vessels	2	19
Control rods	1	16
Batteries and chargers	1	15
Containment vacuum breakers	1	15
Motors	1	15
Blowers	1	14
Tubing	1	10
Filters	1	9
Generators	1	8
Transformers	1	7
Fuel elements	<1	6
Heat exchangers	<1	6
Heaters	<1	6
Nozzles	<1	6
Accumulators	<1	5
Flange	<1	4
Crane	<1	3
Demineralizers	<1	3
Insulation	<1	3
Jet pumps	<1	3
Air driers	<1	2
Digital computer	<1	2
Recombiners	<1	2

Table 3. Number of reports concerned
with the listed instrumentation

Instrumentation	Percent of total number of reports	Number of reports
Switch	22	271
Pressure sensor	10	128
Radiation monitors	5	68
Level sensor	4	56
Relays	3	43
Flow sensor	2	28
Electronic function unit	2	23
Temperature sensor	2	23
Position sensor	2	20
Recorders	2	20
Power range instrument	1	17
Stack monitor	1	13
Air monitor	1	11
In-core instrument	1	10
Intermediate range instrument	1	7
Annunciators	<1	6
Solid-state device	<1	6
Containment leak monitor	<1	5
Indicators	<1	5
Startup range instrument	<1	5
Thermocouple	<1	5
Alarms	<1	3

Table 4. Number of reports concerned with the
listed cause of safety-related occurrences

Cause	Percent of total number of reports	Number of reports
Inherent failure	32	395
Maintenance error	12	153
Design error	10	128
Administrative error	9	113
Operator error	7	90
Installation error	4	54
Fabrication error	2	23
Weather	1	11

Table 5. Number of reports for the listed
time of occurrence of an
off-normal event

Time of occurrence	Percent of total number of reports	Number of reports
Operation	42	528
Testing	45	559
Refueling	10	131
Construction	3	35

Table 6. Number of reports concerned
with the listed deficiency

Deficiency	Percent of total number of reports	Number of reports
Instrument calibration	14	181
Set-point drift	13	167
Leak	9	114
Procedures	6	78
Crud	4	55
Crack	3	35
Welds	3	32
Flow blockage	2	29
Vibration	2	24
Airborne release	2	23
Communication	2	22
Response time	2	22
Fish or crab mortality	2	21
Wear	2	21
Lubrication	1	16
Liquid radioactivity release	1	15
Corrosion	1	14
Fire	1	12
Age effect	1	7
Erosion	<1	5
Personnel exposure	<1	4
Lightning	<1	2

closely by piping and seal leaks. Procedural deficiencies most frequently involved inadequate procedures, but failure of operators to follow procedures is included. "Communication" is a new item which has been added and it represents primarily those events involving a misunderstanding between personnel.

Table 7 is an alphabetical listing of the nuclear reactor units and the associated number of reports. Those nuclear units which were in commercial operation all year are listed first, followed by those which were in the power ascension phase part of the year and then by those which were under construction all year. The total number of nuclear units listed in the table is 35. For the 22 nuclear units which were operable all year, there are 1157 reports - an average of 52 reports per unit. For the 3 units in the power ascension phase, there are 134 reports - an average of 44 reports per unit. For the 10 units which were under construction all year, there are 34 reports - an average of 3 reports per year. The total number of reports listed in Table 7 is 1325, whereas the bibliography contains abstracts of 1253 reports. The reason for this discrepancy is that a few of the reports involved more than one unit of a multiple-unit plant, and this is particularly true of those units which were under construction.

Tables 8a and 8b tabulate the number of reports for the listed units which were commercially operable all year. In Table 8a the tabulation is by age, and in Table 8b the tabulation is by power - design electrical rating (DER) in megawatts (electrical) [MW(e)]. These tables were prepared to see if age or power level was a factor in the number of occurrences reported by a nuclear unit. Both appear to be factors, although it may not be readily apparent from just looking at the tables.

The total number of reports for the 11 oldest reactors was 379. The number of reports for the 11 most recently built reactors was 778 - more than twice the number of reports as for the older reactors. This tends to indicate that there will be fewer failures or malfunctions of safety-related equipment as the unit ages and experience is gained in operation.

Table 7. Number of reports involving the
alphabetically listed units

Name	Percent of total number of reports	Number of reports	Age (years)	Design electrical rating [net MW(e)]
In commercial operation all year				
Arnold	8	98	2.6	538
Big Rock Point	3	40	14.1	72
Browns Ferry 1	2	26	3.2	1065
Browns Ferry 2	2	23	2.3	1065
Brunswick 2	16	197	1.7	821
Cooper	4	56	2.6	778
Dresden 1	1	18	16.7	200
Dresden 2	6	70	6.7	809
Dresden 3	3	40	5.4	809
Fitzpatrick	7	93	1.9	821
Humboldt Bay	1	12	13.7	63
Lacrosse	1	17	8.7	50
Millstone 1	5	58	6.1	650
Monticello	2	24	5.8	545
Nine Mile Point 1	3	32	7.2	610
Oyster Creek	2	29	7.3	650
Peach Bottom 2	8	99	2.9	1065
Peach Bottom 3	7	83	2.3	1065
Pilgrim 1	3	33	4.5	655
Quad Cities 1	3	39	4.7	789
Quad Cities 2	2	21	4.6	789
Vermont Yankee	4	49	4.3	514
In power ascension part of year				
Browns Ferry 3	2	31		
Brunswick 1	1	8		
Hatch 1	8	95		
Under construction all year				
Grand Gulf 1	1	9		
Grand Gulf 2	1	10		
Hanford 2	<1	1		
Hartsville 1	<1	2		
Hartsville 2	<1	2		
Hartsville 3	<1	2		
Hartsville 4	<1	2		
La Salle 1	<1	2		
La Salle 2	<1	2		
Shoreham	<1	2		

Table 8a. Number of reports for the listed units which were commercially operable all year

Name	Age (years)	Percent of total number of reports	Number of reports
By age since 1st electrical generation ^a			
Dresden 1	16.7	1	18
Big Rock Point	14.1	3	40
Humboldt Bay	13.7	1	12
Lacrosse	8.7	1	17
Oyster Creek	7.3	2	29
Nine Mile Point 1	7.2	3	32
Dresden 2	6.7	6	70
Millstone 1	6.1	5	58
Monticello	5.8	2	24
Dresden 3	5.4	3	40
Quad Cities 1	4.7	3	39
Quad Cities 2	4.6	2	21
Pilgrim 1	4.5	3	33
Vermont Yankee	4.3	4	49
Browns Ferry 1	3.2	2	26
Peach Bottom 2	2.9	8	99
Arnold	2.6	8	98
Cooper	2.6	4	56
Browns Ferry 2	2.3	2	23
Peach Bottom 3	2.3	7	83
Fitzpatrick	1.9	7	93
Brunswick 2	1.7	16	197

^a Average age - 5.9; median age - 4.7.

Table 8b. Number of reports for the listed units which were commercially operable all year

Name	DER	Percent of total number of reports	Number of reports
By design electrical rating -- net MW(e) ^a			
Browns Ferry 1	1065	2	26
Browns Ferry 2	1065	2	23
Peach Bottom 2	1065	8	99
Peach Bottom 3	1065	7	83
Brunswick 2	821	16	197
Fitzpatrick	821	7	93
Dresden 2	809	5	70
Dresden 3	809	3	40
Quad Cities 1	789	3	39
Quad Cities 2	789	2	21
Cooper	778	4	56
Pilgrim 1	655	3	33
Millstone 1	650	5	58
Oyster Creek	650	2	29
Nine Mile Point 1	610	3	32
Monticello	545	2	24
Arnold	538	8	98
Vermont Yankee	514	4	49
Dresden 1	200	1	18
Big Rock Point	72	3	40
Humboldt Bay	63	1	12
Lacrosse	50	1	17

^a Average DER - 656; median DER - 477.

The same type of count was made based on power level. The number of reports for the 11 smallest units was 410. The number of reports for the 11 largest units was 747 - almost double the number for the smaller units. This seems to indicate that fewer problems can be expected with smaller units.

While it should be recognized that the data presented is not absolute, especially when you consider that the reporting habits throughout the industry may not be uniform, the tables and data do seem to indicate that a low-powered, older reactor will probably have fewer problems than a high-powered, newly built reactor. However, one factor to be considered with this conclusion is that the newly built reactors are the larger units and, to date, the feedback of operating information, from operators to designers of the larger units, has been limited.

The final bit of information gleaned from reviewing the bibliography is that, of the 1253 reports, 48 of them indicated that a reactor shutdown occurred or was required because of equipment failure or malfunction.

REVIEW OF SELECTED OCCURRENCES

A review of the report occurrences indicated that most were of a routine and inconsequential nature; however, a few were significant or unique. Three of those occurrences that were considered to be the most interesting are presented here to illustrate the types of experiences that occurred in 1976.

Unplanned Criticality

Millstone Point Unit No. 1 of the Millstone Nuclear Power Station had been shut down for scheduled refueling and maintenance. The reactor pressure vessel head and internals had been removed, the refueling cavity was filled with water, and fuel loading was in progress. Five hundred and forty-three (543) of the 580 fuel assemblies in the total core complement had been loaded, and the licensee was proceeding to conduct a shutdown margin test. Administrative requirements specified that such testing be completed once each operating shift after 36 fuel

assemblies had been loaded, and these tests were being done on a routine basis. The shutdown margin test is performed by full withdrawal of the highest-worth rod and partial withdrawal of the diagonal rod to a pre-determined position that demonstrates a safe specified shutdown margin.

Administrative controls for fuel loading and unloading required movement of the highest-worth control rod, 46-23, at the existing core configuration to the fully withdrawn position followed by reinsertion of this rod to notch position 10 (21% withdrawn), a position determined by calculation. Then the diagonal control rod, 42-19, was also to be withdrawn to notch position 10 followed by full withdrawal of the high-worth rod to notch position 48 with the reactor remaining subcritical, thus demonstrating an adequate shut-down margin.

Although specific instructions were provided specifying the correct control rods and movement sequence, the licensed reactor operator incorrectly selected one of the four directly adjacent control rods, rod 46-19, (instead of control rod 42-19, the correct and designated rod), and withdrew this rod to notch position 10. Without recognizing his selection error, he then withdrew the high-worth rod.

A reactor trip occurred when control rod 46-23 was being notched out from position 14 to 16 (27% withdrawn). The duration of the resultant transient was approximately 7 sec, and the high flux condition was terminated by the reactor protection system intermediate range monitors (IRMs), which were in the most sensitive range position. Four IRM channels tripped and terminated the event.

At the time of the occurrence, the rod worth minimizer (RWM), a plant feature that provides automatic supervision to ensure that control rods will not be withdrawn or inserted out of sequence, had been bypassed and was not programmed for the shutdown margin test sequence. The reactor mode switch was in the startup mode, a condition which permits the withdrawal of more than one control rod.

The operator had performed the shutdown margin test by himself the control room console with the prior authorization of the shift supervisor, a licensed senior reactor operator. The circumstances of the reactor trip were reported to the shift supervisor who attributed

the trip to be the result of "electronic noise" and therefore not meaningful. A second test, under the direction of the shift supervisor, was performed contrary to procedural requirements concerning evaluation of instrumentation. Again, the operator erroneously selected control rod 46-19 and positioned it at notch 10. Subsequent movement of the high-worth rod from notch 10 to notch 12 (25% withdrawn) resulted in a flux increase, and the high-worth rod was immediately reinserted by the operator to avert a second trip. Following the recognition of the previous rod selection errors, a third shutdown margin test using the correct and designated rods was successfully completed and the reactor remained subcritical.

During the next 2 1/2 hr, fuel loading was resumed and an additional 11 assemblies were loaded into the core. Contrary to procedural requirements, the event was not reported to the appropriate management personnel until their arrival on the next scheduled work day. Additionally, testing and refueling operations were permitted without first assessing potential overexposure to personnel or possible fuel damage as a result of the event.

A visual inspection of fuel assemblies surrounding the high-worth control rod disclosed no apparent damage and provided further verification of calculations which showed that the event was of no consequence with respect to fuel and cladding integrity.

The thermal evaluations of the core area of interest indicated a centerline differential temperature of less than 259 K (7°F) and an increase in fuel enthalpy of less than 4186 J/kg (1 cal/g).

The thermoluminescent dosimeters of all personnel on site involved with Unit No. 1 revealed no gamma exposure outside of that expected; no neutron exposure was indicated either. The five area radiation monitors and the continuous air monitor showed no increase in the background radiation; none of the monitors sounded an alarm nor was the standby gas-treatment system initiated. The reactor building exhaust plenum monitor recorder and the stack gas monitor recorder also showed no change in radiation level or background. No work was being conducted in the drywell at the time of the event, and no radiation detectors sounded their

alarms. However, contrary to *Title 10, Code of Federal Regulations, Part 20, Section 203*, the required drywell access control had not been adequately provided.

Refueling operations were suspended pending a complete review of the event. Existing refueling-related procedures were revised to further preclude the possibility of a similar occurrence. A number of new procedures were generated to further define precautions and actions to be taken during refueling activities. A retraining program was established to ensure that all licensed personnel were aware of the new procedures and changes in addition to the Technical Specification requirements.^{16,17}

Explosion in Stack Filter House

On Jan. 19, 1976, Unit No. 2 of the Brunswick Nuclear Power Station was operating at 84.7% of full power. At 12:30 AM, an auxiliary operator completed a routine inspection of the filter-house area and found all to be in order. Shortly thereafter (1:00 AM), he was notified by control room personnel to return to the filter house and attempt to blow down the stack monitoring sample line. Over a period of about 45 min, these monitors had apparently detected activity increases from 20 to 200 and from 150 to 350 counts/sec. Because of this anomaly, the shift foreman stopped further power increases. As the auxiliary operator entered the filter house, he found the local area radiation monitor sounding its alarm (the alarm point is 1 mR/hr) and noticed water on the floor and a heavy mist overhead. By 1:30 AM, when the shift foreman checked the filter house, the radiation reading had increased from 4 mR/hr to 6 mR/hr. After his inspection, both he and the auxiliary operator were found to be contaminated over their entire bodies. The fact that off-gas monitors had not increased as stack monitors tended upward was noted at 3:15 AM. At 3:30 AM the operations supervisor was notified of the stack-gas abnormalities. At 4:00 AM an auxiliary operator, outfitted with proper protective equipment and clothing, entered the area and filled the loop seals with "large amounts of water." He was unable to determine if the seals had been blown. A few hours later, at 7:58 AM, control room annunciators signaled trouble at the off-gas

discharge header and in the process off-gas sample flow. At about the same time, a security guard informed the control room personnel that an explosion had occurred in the filter house. Reactor power reduction was started 2 min later, and the fire alarm sounded. By 8:28 AM the reactor pressure was 6.44×10^6 Pa (920 psig), and there was no longer a fire nor radiological danger.

The incident was initiated by an improperly installed demister that permitted water to reach the filter. Also, the freezing weather had increased the moisture problem. The moisture increased the pressure drop across the filter and caused back pressure in the system to be high enough to blow the off-gas loop seals. Unfortunately, the vent line from the seal sump in the filter house to the stack had been blocked with tape, and instrument air was discharging from the Unit 2 auxiliary off-gas supply-line drain into the sump. The explosion was ignited when the back pressure became high enough to actuate the relay in the filter house and to initiate isolation of the loop seals. This conclusion is substantiated by the fact that a light that was broken in the explosion was bent away from the relay which operated to effect isolation.

The following corrective actions have been taken. A blank was installed to separate the auxiliary off-gas system from the process system. Consideration is also being given to installing a 0.61-m (2-ft) loop seal on this drain line. It was found that loop seals on the process system were set at 0.51 m (1.7 ft) of water instead of the specified 0.61 m (2 ft), and isolation was set for initiation at 0.53 m (1.7 ft). The loop seals were set to 0.61 m (2 ft), and the isolation set point was changed to 0.41 m (1.3 ft). An annunciator was installed to signal high off-gas pressure, and the tape was removed from the vent line for the sump. Hereafter, the filter house will be entered only after checking for an explosive atmosphere. A manometer for indicating a drop in filter pressure was installed, and procedures were established for readings to be taken once per shift. Increased surveillance of off-gas flow, stack radiation, and radiation at the filter house has been instituted, and a "No Smoking" sign has been posted.

It should be noted that the operating group had no warning of the occurrence. Excess differential pressure on the filter was not annunciated, and the fact that the loop seal or seals had blown was determined by the increases on the stack monitor and on the filter-house-area radiation monitor.^{18,19}

Inadvertent Release of Tritium

During a routine pumpdown of the fuel oil storage tank sump at the Vermont Yankee Nuclear Power Plant, the operator noted an unexpected increase in water level in an adjacent area. Investigation revealed that water was entering from an electrical conduit that was in communication with the condensate storage tank (CST) moat. Examination of the CST moat revealed an elevated water level.

Pumpdown of the fuel oil storage tank was terminated, and the CST sump pump was started to transfer water from the moat to radwaste storage facilities. During the pumpdown, a station operator observed flow from the CST overflow pipe, although the control room indication of CST level was a normal 85%. A sample of the water indicated the presence of tritium at a concentration of 5×10^{-3} $\mu\text{Ci/ml}$.

Additional investigation revealed that a second flow path existed between the flooded subterranean portion of the CST moat and a pipe chase. The chase contained a drain that allowed contaminated water to leak unmonitored into the Connecticut River.

The inadvertent, unmonitored release of contaminated water was caused by two leakage paths from the CST moat to the storm drain system and the overflow of the CST. The maximum water level in the CST moat was approximately 0.5 m (20 in.) above the moat floor level. The first leakage path was a nonwatertight electrical junction box located 0.3 m (1 ft) above the floor level inside the CST moat. Conduit from the junction box runs below ground level from the fuel oil transfer pump room to the fuel oil storage tank sump from which rain water is routinely pumped to the storm drain after only a sample analysis for the presence of oil. The second leakage path was from seepage around pipe penetrations in a chase that runs through the CST moat sump

wall. The drain line for this chase discharges to the same storm drain system as the fuel oil storage tank sump.

It is estimated that a total of 1.6 Ci of tritium was released in a 46-hr discharge period. When fully diluted, this amount of tritium discharge would be indistinguishable from the normal variation of background tritium concentration in the river water from month to month. The net environmental impact was negligible; full use of the river (i.e., water supply, swimming, fishing, etc.) was in no way impaired by the incident, and there was no hazard to the general public.

Tritium acts chemically as normal hydrogen and cannot be removed by radioactive waste treatment. Vermont Yankee voluntarily elected to recycle the tritium effluent for reuse in the plant rather than periodically discharge it into the river within federal and state allowable limits. By doing so, the significance and risk of an unmonitored spill is increased as the inventory of tritium builds up with continued plant operation.

After 4 years of operation, the 5678-m³ (1,500,000-gal.) recycle water reservoir contains approximately 30 Ci of tritium. If this quantity of tritium had been released within regulatory limits over the past 4 years, approximately 28 Ci more of tritium would have been released to the environment.

Adequate precautions have been taken to ensure that this incident is not likely to be repeated. In addition, a review was made to identify all plant equipment and structures that can potentially provide an unmonitored flow path of radioactive liquid to the river.^{20,21}

CONCLUSION

We can all profit by the experiences of others as long as there is free communication among the interested parties. This compilation was prepared with this objective in mind and is intended to provide some guidance as to where additional effort can be expended to minimize the occurrence and the recurrence of incidents. In this way, the safety, reliability, and availability of nuclear facilities should be improved.

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3. R. L. Scott, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1970*, ORNL/NSIC-91 (December 1971).
4. R. L. Scott and R. B. Gallaher, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1971*, ORNL/NSIC-106 (September 1972).
5. R. L. Scott and R. B. Gallaher, *Safety-Related Occurrences in Nuclear Facilities as Reported in 1972*, ORNL/NSIC-109 (December 1973).
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12. *Abnormal Reactor Operating Experiences 1969-1971*, ORNL/NSIC-103 (May 1972).
13. *Reactor Operating Experiences 1972-1974*, ORNL/NSIC-121 (December 1975).
14. "Reporting of Operating Information" - Appendix A, Technical Specifications, *USNRC Regulatory Guide No. 1.16*, USNRC Office of Standards Development, August 1975.

15. 10 CFR 50.55(e), "Conditions of Construction Permits," *Federal Register* 37(62), 6460 (Thursday, Mar. 30, 1972).
16. Letter from Northeast Nuclear Energy Co. to U.S. Nuclear Regulatory Commission, Docket 50-245, Nov. 24, 1976, enclosing Licensee Event Report 76-34, available at NRC Public Document Room.
17. *Current Events - Power Reactors*, 1 October-31 December 1976, U.S. Nuclear Regulatory Commission.
18. Letter from E. E. Utley, Carolina Power & Light Co., to Region 2 of the Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Docket 50-324, Feb. 2, 1976, available at NRC Public Document Room.
19. W. R. Casto (Comp.), "Selected Safety-Related Occurrences Reported in January and February 1976," *Nucl. Safety* 17(3), 378-79 (May-June 1976).
20. Letter from Vermont Yankee Nuclear Power Corp. to the U.S. Nuclear Regulatory Commission, Docket 50-271, Aug. 5, 1976, enclosing Licensee Event Report 76-22, available at NRC Public Document Room.
21. *Current Events - Power Reactors*, July-September 1976, U.S. Nuclear Regulatory Commission.

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BOILING WATER REACTORS

110256
NEPR OUT OF SPECIFICATIONS AT ANNUAL
LOW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 Pgs. LTR W/NO TO-003 TO NRC OFFICE OF I & E, REGION III, JAN. 23, 1970, SUBJECT 50-333, TYPE--DM, NW--WEL...
AS--COMMONWEALTH ASSOC.

CAUSE - OPERATOR ERROR. FOLLOWING CONTROL AND WITHDRAWALS TO ACCOUNT FOR FUEL DEPLETION, POWER WAS SLIGHTLY INCREASED TO 594. NEPR REACHED 1.475 (LIMIT 1.53). DURING THE REACTOR TRANSIENT, EACH OF FREQUENT SURVEILLANCE ALLOWED NEPR TO INCREASE BEYOND THE LIMIT. DUE TO LACK OF CURRENT TECH SPECS IN THE CONTROL ROOM, CORRECTIVE ACTION OF ADJUSTING CONTROL RODS WAS NOT TAKEN WITHIN 15 MINUTES AND THE LIMIT WAS EXCEEDED FOR MORE THAN 2 HOURS. CONTROL ROOM TECH SPECS WERE UPGRADED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + REACTOR STABILITY + AERON + POWER DISTRIBUTION + HOT CHANNEL + ANNUAL (DM) + TRANSIENT

110257
SET POINT DRIFT IN LEVEL SWITCH AT ANNUAL
LOW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 Pgs. LTR W/NO TO-003 TO NRC OFFICE OF I & E, REGION III, JAN. 23, 1970, SUBJECT 50-333, TYPE--DM, NW--WEL...
AS--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 85% POWER, LEVEL SWITCH 1 WAS 2 TRIPPED AT -159.9 INCHES, WHICH IS LESS THAN THE -149.5 INCH LIMIT. THE LARGE WAS INSTRUMENT DRIFT. THE TANNAY MODEL 440C SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + ANNUAL (DM) + EMERGENCY COOLING SYSTEM + PURIFT + SENSORS, LEVEL

111407
SET POINT DRIFT IN FLOW INSTRUMENT AT ANNUAL
LOW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 Pgs. LTR W/NO TO-003 TO NRC OFFICE OF I & E, REGION III, JAN. 29, 1970, SUBJECT 50-333, TYPE--DM, NW--WEL...
AS--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 85% POWER, A MAIN STEAM HIGH FLOW INSTRUMENT TRIPPED AT 119.5 PSID. THE LIMIT IS 110 PSID IN 1964 PSID. THE TANNAY MODEL 200 PRESSURE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + ANNUAL (DM) + DRIFT + SENSORS, FLOW

110335
NEPR LIMIT EXCEEDED DURING FUEL PRECONDITIONING AT ANNUAL
LOW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 Pgs. LTR W/NO TO-003 TO NRC OFFICE OF I & E, REGION III, JAN. 30, 1970, SUBJECT 50-333, TYPE--DM, NW--WEL...
AS--COMMONWEALTH ASSOC.

CAUSE - OPERATOR ERROR. DURING FUEL PRECONDITIONING RAMP FOLLOWING CONTROL ROD PATTERN ADJUSTMENT, NEPR REACHED 1.459 (LIMIT 1.475). NONEQUILIBRIUM AERON AND STANDING PATTERN FLOW SHAPE DURING POWER INCREASE CAUSED THE NEPR TO INCREASE BEYOND THE LIMIT. FLOW CONTROL RODS WERE IMMEDIATELY INSERTED 1 NOTCH TO RETURN NEPR WITHIN LIMITS WITHIN 24 MINUTES. THE REACTOR ENGINEER WILL PROVIDE MORE SPECIFIC INSTRUCTIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + AERON + POWER DISTRIBUTION + HOT CHANNEL + ANNUAL (DM) + CONTROL RODS

111403
TORUS OXYGEN CONCENTRATION EXCEEDS LIMIT AT ANNUAL
LOW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 Pgs. LTR W/NO TO-003 TO NRC OFFICE OF I & E, REGION III, FEB. 6, 1970, SUBJECT 50-333, TYPE--DM, NW--WEL...
AS--COMMONWEALTH ASSOC.

CAUSE - RUPTURED BELLONIS IN SAMPLE PUMPS. DURING TESTING INVOLVING PRESSURIZATION OF THE DAYMILL WITH THE REACTOR AT 85% POWER, OXYGEN CONCENTRATION IN THE TORUS WAS OBSERVED TO BE 3.06. HIGH-POWER PUMP REDUCED OXYGEN CONCENTRATION TO LESS THAN 46 30 HOURS LATER. RUPTURED BELLONIS IN 2 OXYGEN ANALYZER SAMPLE PUMPS CAUSED AIR TO BE PUMPED IN THE TORUS. ONE PUMP WAS REPLACED. ANOTHER ONE IS ON ORDER.

111403 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT • HYDROGEN • SAMPLING • TEST, SYSTEM OPERABILITY • SEAL • CONTAINMENT ATMOSPHERE • ANNUAL
 (0001) • CONCENTRATION • FAILURE, INSTRUMENT • PUMPS • TUBES

111405
 ALIC VALVE FAILS TO OPERATE AT ANNUAL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/NO 70-009 TO NRC OFFICE OF I & E, REGION III, FEB. 12, 1970, DCKET 50-331, TYPE--DNR, NRC--G.E.,
 AE--COMMONWEALTH ASSOC.

CAUSE - UNKNOWN AFTER OPERATOR MGMT. DURING OPERATION AT 436 POWER, A ALIC VALVE WAS DISCOVERED
 TO BE SEPARATED FROM THE ACTUATOR DUE TO UNKNOWN MGMT. REPAIRS WERE MADE WITHIN 4 HOURS.
 THE CAUSE IS UNDER INVESTIGATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT • FASTENER • TEST, SYSTEM OPERABILITY • ANNUAL (0001) • ALIC • VALVE OPERATORS • PUMPS

111406
 LEVEL SWITCH FAILS TO RESET AT ANNUAL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/NO 70-009 TO NRC OFFICE OF I & E, REGION III, FEB. 12, 1970, DCKET 50-331, TYPE--DNR, NRC--G.E.,
 AE--COMMONWEALTH ASSOC.

CAUSE - NOT YET DETERMINED. DURING TESTING WITH THE REACTOR AT 436 POWER, RP-LS-420 FAILED TO
 RESET RESULTING IN PARTIAL COMPLETION OF THE RPS TRIP LOGIC. FAILURE IS CONSERVATIVE. THE CAUSE
 WILL BE INVESTIGATED AND REPAIRS MADE DURING THE UPCOMING SHUTDOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

REACTOR PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • ANNUAL
 (0001) • SENSORS, LEVEL

111409
 VALVE CLOSING TIMES FASTER THAN LIMIT AT ANNUAL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/NO 70-009 TO NRC OFFICE OF I & E, REGION III, FEB. 17, 1970, DCKET 50-331, TYPE--DNR, NRC--G.E.,
 AE--COMMONWEALTH ASSOC.

CAUSE - TECH SPEC ERROR. DURING TESTING WITH THE REACTOR AT 436 POWER, PCIS CV 4300, 4303, AND
 4309 CLOSING TIMES WERE 2.17, 2.09, AND 2.73 SECONDS RESPECTIVELY. THE TECH SPEC LIMIT OF GREATER
 THAN 3 AND LESS THAN 5 SECONDS IS IN ERROR. AN EVALUATION CONFIRMED THAT THERE IS NO TECHNICAL
 REASON WHY THE VALVES SHOULD NOT BE ALLOWED TO CLOSE FASTER THAN 3 SECONDS. A TECH SPEC CHANGE
 WILL BE SUBMITTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

RESPONSE TIME • TEST, SYSTEM OPERABILITY • FAILURE, ADMINISTRATIVE CONTROL • ANNUAL (0001) • PUMPS

111415
 SET POINT DRIFT IN TEMPERATURE SWITCHES AT ANNUAL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 3 PGS, LTR W/NO 70-009 TO NRC OFFICE OF I & E, REGION III, FEB. 25, 1970, DCKET 50-331, TYPE--DNR, NRC--G.E.,
 AE--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING A MAIN STEAM LINE AREA HIGH TEMPERATURE INSTRUMENT TEST WITH THE
 REACTOR AT 408 POWER, 2 SUBCHANNELS TRIPPED AT 200.5 AND 200.3 F. THE LIMITING SET POINT IS 204
 F. THEY WERE IMMEDIATELY RECALIBRATED. IF FURTHER DRIFT IS NOTED, THE INPUT CABLES TO THE
 INSTRUMENTS WILL BE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM
 OPERABILITY • SET POINT • ANNUAL (0001) • DRIFT • SENSORS, TEMPERATURE

111421
 INSTRUMENT LINE CHECK VALVES FAIL TO CLOSE AT ANNUAL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/NO 70-010 TO NRC OFFICE OF I & E, REGION III, MARCH 15, 1970, DCKET 50-331, TYPE--DNR, NRC--
 G.E., AE--COMMONWEALTH ASSOC.

112151 CONTINUED

CAUSE - POOR TEST POINT LOCATION. DURING TESTING OF INSTRUMENT LINE ACCESS PLUG CHECK VALVES, THREE FAILED TO CLOSE. TWO FAILED DUE TO POOR TEST POINT LOCATION. THESE TEST POINTS WILL BE RELOCATED. THE REASON FOR FAILURE OF THE THIRD VALVE IS UNKNOWN. THE VALVE WAS REPLACED. THE PLANT WAS SHUTDOWN FOR REFUELING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • TUBING • ARMED (DOWN) • VALVE, CHECK • INSTRUMENTS, MISC.

112152

OIL FOUND IN VALVE HOUSING OPERATOR HOUSINGS AT ARNOLD

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/NO TO-015 TO NRC OFFICE OF I & E, REGION III, MARCH 20, 1970, JACKET 50-331, TYPE--DM, MW--
U.S., AE--COMMONWEALTH ASSOC.

CAUSE - EXCESS GREASE IN GEAR SUSPECTED. DURING REFUELING UTILITY INSPECTIONS, SEVERAL LIMITING VALVE HOUSING OPERATORS WERE IDENTIFIED AS HAVING SIGNIFICANT AMOUNTS OF OIL IN THE HOUSING HOUSINGS. THE ACTUAL CAUSE IS UNKNOWN. EXCESS GREASE IN THE HOUSING HOUSING RECEIVED FROM THE VENTILATION IS SUSPECTED. ALL HOUSINGS WERE CLEANED WHERE APPROPRIATE. THEY WILL BE REINSPECTED IN ABOUT 6 MONTHS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, FABRICATION ERROR • REFUELING • TEST, SYSTEM OPERABILITY • PLURIFICATION • ARMED (DOWN) • VALVE OPERATORS

112153

SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT ARNOLD

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/NO TO-015 TO NRC OFFICE OF I & E, REGION III, MARCH 20, 1970, JACKET 50-331, TYPE--DM, MW--
U.S., AE--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE CORE SPRAY LOGIC WITH THE UNIT IN A REFUELING OUTAGE, A DIFFERENTIAL PRESSURE SWITCH TRIPPED AT LESS THAN 2.0 PSID. THE LOWER LIMIT IS 2.0 PSID. THE CAUSE WAS INSTRUMENT DRIFT. THE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • REFUELING • TEST, SYSTEM OPERABILITY • SET POINT • ARMED (DOWN) • DRIFT • SENSORS, PRESSURE

112154

SECONDARY CONTAINMENT VIOLATED DURING FUEL MOVEMENT AT ARNOLD

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/NO TO-015 TO NRC OFFICE OF I & E, REGION III, MARCH 23, 1970, JACKET 50-331, TYPE--DM, MW--
U.S., AE--COMMONWEALTH ASSOC.

CAUSE - PERSONNEL ERROR. DURING MOVEMENT OF IRRADIATED FUEL, SECONDARY CONTAINMENT WAS VIOLATED SINCE THE STEAM TUNNEL ACCESS DOOR WAS OPEN. PERSONNEL OVERLOOKED TECH SPEL REQUIREMENTS. DURING SUBSEQUENT USED FUEL MOVEMENT, THE DOOR WAS OPENED ONLY ENOUGH TO PASS HOSE CABLES. SORT WAS OPERATED TO VERIFY THE REQUIRED NEGATIVE PRESSURE WITH THE DOOR PARTIALLY OPEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • CONTAINMENT INTEGRITY • REFUELING • ARMED (DOWN)

112155

LEAK RATE OF MSIV'S EXCEEDS LIMIT AT ARNOLD

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/NO TO-015 TO NRC OFFICE OF I & E, REGION III, MARCH 23, 1970, JACKET 50-331, TYPE--DM, MW--
U.S., AE--COMMONWEALTH ASSOC.

CAUSE - SEAT SURFACE IRREGULARITIES. DURING THE SCHEDULED REFUELING UTILITY LEAK RATE TESTING, 6 MSIV'S WERE FOUND TO BE LEAKING GREATER THAN THE 11.5 SLF PER HOUR LIMIT. THE CAUSE WAS SLIGHTLY OUT-OF-ROUND PILOT DISKS AND SURFACE IRREGULARITIES ON THE MAIN DISKS AND PILOT SEATS. DISKS AND SEATS WILL BE LAPPED AND VALVES RETESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • STEAM • TEST, LEAK RATE • REFUELING • TEST, SYSTEM OPERABILITY • MAIN COOLING SYSTEM • LEAK RATE • ARMED (DOWN) • FAILURE, INSTRUMENT • VALVES

112302

SMALL FIRE ON THE DIESEL EXHAUST MANIFOLD AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/LEA 70-012 TO NRC OFFICE OF I & E, REGION III, MARCH 20, 1970, DOCKET 50-331, TYPE--DNR, NRC--G.E., AC--COMMONWEALTH ASSOC.

CAUSE - OIL LEAKING FROM COVER PLATE. DURING TESTING OF THE STANBY DIESEL GENERATOR WITH THE REACTOR SHUT DOWN FOR REFUELING, A SMALL FIRE OCCURRED ON THE EXHAUST MANIFOLD. IT WAS QUICKLY EXTINGUISHED BY PERSONNEL WHO WERE OBSERVING THE TEST. OIL WAS APPARENTLY LEAKING FROM THE FRONT COVER PLATE ON THE DIESEL. A SIMILAR FIRE HAD OCCURRED IN DECEMBER 1973. INSTALLATION OF NEW INSULATION AND AN OIL SHIELD HAD NOT BEEN COMPLETED SINCE THAT FIRE. THE COVER PLATE WAS LOOSENED AND AN OIL COMPUND PLACED AROUND THE GASKET. GASKETS WERE RETIGHTENED. NEW INSULATION AND AN ALUMINUM SHIELD WERE INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

PHASE • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • CLEAN • ARNOLD (DNR) • INSULATION • FUEL, FUELS • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL

112303

SMALL FIRE NEAR EXHAUST MANIFOLD PLANGE ON DIESEL AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/NO 70-21 TO NRC OFFICE OF I & E, REGION III, MARCH 20, 1970, DOCKET 50-331, TYPE--DNR, NRC--G.E., AC--COMMONWEALTH ASSOC.

CAUSE - LEAKING FLAME GASKET. DURING TESTING OF STANBY DIESEL GENERATORS WITH THE REACTOR SHUT DOWN FOR REFUELING, A SMALL FIRE WAS OBSERVED NEAR THE EXHAUST MANIFOLD-TURBOCHARGER PLANGE ON A DIESEL. IT WAS QUICKLY EXTINGUISHED. THE FLANGE GASKET LEAKED EXHAUST GASES WITH TRACES OF OIL ONTO THE EXTENSION OF THE FLANGE. THE OIL APPARENTLY WAS IGNITED BY EXHAUST HEAT. THE FLANGE GASKET AND MANIFOLD INSULATION WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

PHASE • REFUELING • TEST, SYSTEM OPERABILITY • FLANGE • LEAK • ARNOLD (DNR) • FAILURE, IMMINENT • ENGINES, INTERNAL COMBUSTION • GENERATION, DIESEL

112304

SODIUM PENTABORATE CONCENTRATION LOW AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/LEA 70-020 TO NRC OFFICE OF I & E, REGION III, MARCH 20, 1970, DOCKET 50-331, TYPE--DNR, NRC--G.E., AC--COMMONWEALTH ASSOC.

CAUSE - UNKNOWN. DURING TESTING WITH THE PLANT IN THE REFUELING UNPAID, THE SODIUM PENTABORATE CONCENTRATION OF THE SOLC TANK WAS DETERMINED TO BE 12.34. THIS IS LESS THAN THE 134 MINIMUM LIMIT. THE CAUSE IS UNKNOWN AT THIS TIME. VALVES WHICH COULD LEAK DEMINERALIZED WATER TO THE TANK WILL BE INSPECTED. CHEMICALS WERE ADDED TO BRING THE SOLUTION WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

PHASE, SCHEDULE • REFUELING • STORAGE CONTAINER • TEST, SYSTEM OPERABILITY • SODIUM TANK SYSTEM, SECONDARY • ARNOLD (DNR) • CONCENTRATION

112305

SET POINT DRIFT IN AC UNDERVOLTAGE RELAY AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/LEA 70-19 TO NRC OFFICE OF I & E, REGION III, APRIL 5, 1970, DOCKET 50-331, TYPE--DNR, NRC--G.E., AC--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING THE REFUELING OUTAGE TESTING OF 120 VOLT INSTRUMENT AC UNDERVOLTAGE RELAYS, A RELAY TRIPPED AT 14V VOLTS, WHICH IS LESS THAN THE 200 VOLT LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE RELAY SERVES AN ALARM FUNCTION ONLY. THE TESTINGHOUSE TYPE SV RELAY WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • REFUELING • TEST, SYSTEM OPERABILITY • SET POINT • ARNOLD (DNR) • DRIFT • RELAYS

112306

SET POINT DRIFT IN UNDERVOLTAGE RELAY AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/LEA 70-10 TO NRC OFFICE OF I & E, REGION III, APRIL 5, 1970, DOCKET 50-331, TYPE--DNR, NRC--G.E., AC--COMMONWEALTH ASSOC.

112004 CONTINUED

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE 24 VOLT UNDERVOLTAGE RELAYS, WHILE THE UNIT WAS SHUT DOWN FOR REFUELING, A RELAY WAS DETERMINED TO HAVE A TRIP SETTING OF 13.00 VOLTS, WHICH IS BELOW THE 20.05 VOLT LIMIT. IT SERVES AN ALARM FUNCTION ONLY. THE CAUSE WAS INSTRUMENT DRIFT. THE HOLE DISCHARGES MODEL AND 000 120 RELAY WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • REFUELING • TEST, SYSTEM OPERABILITY • SET POINT • ANNULO (000) • DRIFT • RELAYS

112707

LEAK RATE OF FEEDWATER CHECK VALVE EXCESSIVE AT ANNULO
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR WYER TO-23 TO NRC OFFICE OF I & E, REGION III, APRIL 9, 1970, DUCLET 50-331, TYPE--000, RF--0000.
AE--COMMONWEALTH ASSOC.

CAUSE - RAGS INSIDE THE VALVE. DURING THE REFUELING OUTAGE LEAK RATE TESTING A FEEDWATER CHECK VALVE HAD AN UNACCEPTABLE LEAK RATE. INSPECTION FOUND 2 RAGS INSIDE THE VALVE WHICH PREVENTED THE VALVE DISC FROM CLASING AGAINST ITS SEAT. THE RAGS APPARENTLY CAME FROM ACIL SYSTEM PIPING. MAINTENANCE PERSONNEL APPARENTLY DID NOT REMOVE ALL OF THEM DURING MAINTENANCE OF A RMC CHECK VALVE DURING THE CURRENT OUTAGE. THE RAGS WERE REMOVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TEST, LEAK RATE • 0000 • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • MAIN COOLING SYSTEM • LEAK RATE • ANNULO (000) • PULVE, CHECK • FEEDWATER

112706

CLOSING TIME OF TORMS PURGE VENT VALVE EXCESSIVE AT ANNULO
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR WYER TO-24 TO NRC OFFICE OF I & E, REGION III, APRIL 7, 1970, DUCLET 50-331, TYPE--000, RF--0000.
AE--COMMONWEALTH ASSOC.

CAUSE - DIRTY PILOT SOLENOID VALVE. DURING TESTING OF THE PCS LOGIC WITH THE UNIT SHUT DOWN FOR REFUELING, A TORMS PURGE VENT VALVE DID NOT CLOSE WITHIN THE TIME INTERVAL REQUIRED BY TECH SPECS. THE PILOT SOLENOID VALVE WAS DIRTY WHICH ALLOWED AIR TO BE BLEW OFF THE ACTUATOR. THE PILOT ASSEMBLY WAS CLEANED. THE VALVE WAS STROKED SEVERAL TIMES TO VERIFY OPERABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT PURGE • CONTAINMENT ISOLATION • RESPONSE TIME • CAUSE • REFUELING • TEST, SYSTEM OPERABILITY • ANNULO (000) • FAILURE, INHERENT • SOLENOID • VALVES • TORMS

112224

SOURCE RANGE MONITOR FOUND TO BE READING LOW AT ANNULO
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR WYER TO-10 TO NRC OFFICE OF I & E, REGION III, APRIL 9, 1970, DUCLET 50-331, TYPE--000, RF--0000.
AE--COMMONWEALTH ASSOC.

CAUSE - DEFECTIVE VOLTAGE PREREGULATOR. DURING SRM TRIP FUNCTION TESTING WITH THE REACTOR SHUT DOWN FOR REFUELING, SRM A WAS FOUND TO BE READING 508 LOW. THE SRM, TYPE 190R300W01, • 20 VOLT VOLTAGE PREREGULATOR HAD A FAULTY SHOR. THE PREREGULATOR WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

SOLID STATE DEVICE • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • TEST, SYSTEM OPERABILITY • INSTRUMENT, STARTUP RANGE • ANNULO (000) • FAILURE, INHERENT

112070

SET POINT DRIFT IN EMERGENCY BUS UNDERVOLTAGE RELAY AT ANNULO
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR WYER TO-22 TO NRC OFFICE OF I & E, REGION III, APRIL 12, 1970, DUCLET 50-331, TYPE--000, RF--0000.
G.E., AE--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING A REFUELING OUTAGE TESTING OF A 24V EMERGENCY BUS UNDERVOLTAGE RELAYS, ONE GE TYPE MGA RELAY TRIPPED AT 19.4 VOLTS. THE LIMIT IS 20 VOLTS. INSTRUMENT DRIFT IS THE CAUSE. THE RELAY WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • REFUELING • TEST, SYSTEM OPERABILITY • SET POINT • ANNULO (000) • DRIFT • RELAY

112671
UNDERVOLTAGE RELAY FAILS TO TRIP AT ARNOLD
JMW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS. LTR W/NO 70-25 TO NRC OFFICE OF I & E, REGION III, APRIL 13, 1970, DUCRET 50-331, TYPE--OHR, NRC--G&E,
AE--COMMONWEALTH ASSOC.

CAUSE - BINDING OF MECHANISM. DURING REFUELING WATER INSTRUMENT AT UNDERVOLTAGE TESTING, A RELAY DID NOT TRIP WHEN THE SUPPLY PUSES WERE PULSED. BINDING OF THE RELAY MECHANISM WAS CAUSED BY THE TARGET RESET MECHANISM BEING OUT OF ADJUSTMENT. THE CAUSE FOR THE OUT OF ADJUSTMENT IS UNKNOWN. THE RELAY TARGET RESET MECHANISM WAS READJUSTED FOR PROPER TARGET OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + ARNOLD (OHR) + RELAYS

112674
PILOT PANTS OF NOISYS HAVE EXCESSIVE LEAKAGE AT ARNOLD
JMW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS. LTR W/NO 70-20 TO NRC OFFICE OF I & E, REGION III, APRIL 15, 1970, DUCRET 50-331, TYPE--OHR, NRC--G&E,
AE--COMMONWEALTH ASSOC.

CAUSE - STEAM LUTTING OF DISC. DURING OPERATIONAL HYDROSTATIC TESTING FOLLOWING A REFUEL OUTAGE, EXCESSIVE WATER LEAKAGE WAS OBSERVED FROM THE PILOT PANTS AND EXHAUST PANTS ON A MAIN STEAM RELIEF VALVES. EXCESSIVE STEAM LUTTING OF THE PILOT VALVE DISC ON 5 OF THE 6 VALVES WAS FOUND. THE CAUSE IS UNKNOWN. REPAIRS INCLUDED REPLACEMENT OF PILOT VALVE DISCS ON 5 VALVES AND LANTERN RINGS ON 2.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + STEAM + TEST, PROOF + REFUELING + TEST, SYSTEM OPERABILITY + EMISSION + MAIN COOLING SYSTEM + CLEAN RATE + ARNOLD (OHR) + VALVES

113512
RWD SEQUENCE CONTROL SYSTEM NOT FUNCTIONING AT ARNOLD
JMW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS. LTR W/NO 70-20 TO NRC OFFICE OF I & E, REGION III, APRIL 30, 1970, DUCRET 50-331, TYPE--OHR, NRC--G&E,
AE--COMMONWEALTH ASSOC.

CAUSE - UNAUTHORIZED BYPASS JUMPER. DURING RWD SEQUENCE CONTROL SYSTEM TESTING WITH THE REACTOR AT 30% POWER, IT WAS FOUND THAT THE SYSTEM WAS NOT FUNCTIONING AND THAT ANY RWD COULD BE SELECTED. A BYPASS JUMPER HAD BEEN INSTALLED WITHOUT AUTHORIZATION DURING TESTING THE PREVIOUS DAY. IT WAS NOT PROPERLY LOCKED. VERIFICATION OF JUMPER REMOVAL WAS NOT MADE. THE JUMPER WAS REMOVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM + FAILURE, OPERATOR ERROR + PROCEDURES AND MANUALS + REACTOR CONTROL + TEST, SYSTEM OPERABILITY + BYPASS + ARNOLD (OHR) + CONTROL RUDS

114170
SET POINT DRIFT IN FLOW BIAS UNIT AT ARNOLD
JMW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
3 PGS. LTR W/NO 70-27 TO NRC OFFICE OF I & E, REGION III, MAY 17, 1970, DUCRET 50-331, TYPE--OHR, NRC--G&E,
AE--COMMONWEALTH ASSOC.

CAUSE - SQUARE ROOT CONVERTER DRIFT. DURING APR/RWD FLOW BIAS TESTING FOR STARTUP, FLOW UNIT C VOLTAGE SET POINT WAS FOUND TO BE GREATER THAN THE MAXIMUM VALUE ALLOWED. THE GC OPEN NO. 1300301A0001 SQUARE ROOT CONVERTER HAD DRIFTED. IT WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + ARNOLD (OHR) + DRIFT + SENSORS, FLOW

114177
SET POINT DRIFT IN FLOW COMPARTOR AT ARNOLD
JMW ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
3 PGS. LTR W/NO 70-27A TO NRC OFFICE OF I & E, REGION III, MAY 17, 1970, DUCRET 50-331, TYPE--OHR, NRC--G&E,
AE--COMMONWEALTH ASSOC.

CAUSE - DEFECTIVE SUMMA CIRCUIT. DURING APR/RWD FLOW BIAS TESTING FOR A STARTUP, FLOW UNIT C COMPARTOR TRIPPED AT 130. THE LIMIT IS 100. DRIFT WAS CAUSED BY A DEFECTIVE FLOW UNIT SUMMA CIRCUIT. THE DEFECTIVE CIRCUIT WAS REPLACED AND THE FLOW UNIT COMPARTOR WAS CALIBRATED.

114477 CONTINUED

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTION PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • ANNALD (OWN) • PURSUIT • SENSORS, FLUX

114478

TURBINE PRESSURE SWITCH FOUND INOPERABLE AT ANNALD

IONA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/NO 70-29 TO NRC OFFICE OF I & E, REGION III, MAY 10, 1970, INCL 50-331, TYPE--BOM, RW--WELL, AE--COMMONWEALTH ASSOC.

CAUSE - RUPTURED WELDS. PRIOR TO PERFORMING A MAIN CONDENSER LOSS OF VACUUM TRIP TEST, A PRESSURE SWITCH WAS FOUND INOPERABLE. THE SWITCH MECHANISM WAS RUPTURED. APPARENTLY, THE MECHANISM WAS DAMAGED DURING THE RECENT REFUEL OUTAGE. SOURCE OF DAMAGE IS UNKNOWN. THE SWITCH WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • REACTION PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • ANNALD (OWN) • SENSORS, PRESSURE

114413

OFF GAS PRETREATMENT RADIATION MONITOR INOPERABLE AT ANNALD

IONA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/TECH. SPEC. VIOLATION 70-1 TO NRC OFFICE OF NUCLEAR REACTION REGULATION, MAY 24, 1970, INCL 50-331, TYPE--BOM, RW--WELL, AE--COMMONWEALTH ASSOC.

CAUSE - DIRTY CONNECTION. DURING THE JULY RADIATION MONITOR TESTING, THE OFF GAS PRETREATMENT MONITOR WAS FOUND TO BE INOPERABLE. THE CAUSE WAS A DIRTY CONNECTION ON THE DETECTOR INPUT CABLE. THE CONNECTION WAS CLEANED AND THE MONITOR WAS FUNCTIONALLY TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • CABLE • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • ANNALD (OWN) • CABLES AND CONNECTIONS • RADIATION MONITORS

114412

MAIN STEAMLINE HIGH TEMPERATURE SWITCH INADVERTENTLY SHUTTED OUT AT ANNALD

IONA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/NO 70-31 TO NRC OFFICE OF I & E, REGION III, MAY 27, 1970, INCL 50-331, TYPE--BOM, RW--WELL, AE--COMMONWEALTH ASSOC.

CAUSE - PERSONNEL ERROR. DURING MAIN STEAMLINE HIGH TEMPERATURE TESTING WITH THE REACTOR AT ONE POWER, TEMPERATURE ELEMENT 4444 SUBCHANNEL 1 WAS INADVERTENTLY SHUTTED-OUT BY ELECTRICAL MAINTENANCE PERSONNEL DUE TO PERSONNEL ERROR. THE REGULATOR MODEL A-7000-6500-AT TEMPERATURE ELEMENT WAS BYPASSED AND THEN REPLACED LATER DURING A SHUTDOWN. A DESIGN CHANGE WILL BE MADE TO FACILITATE TESTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STEAM • FAILURE, INSTRUMENT • MODIFICATION • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • MAIN COOLING SYSTEM • ANNALD (OWN) • SENSORS, TEMPERATURE

114411

TEMPERATURE ELEMENT BYPASSED WITHOUT APPROVAL AT ANNALD

IONA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

3 PGS, LTR W/NO 70-31 TO NRC OFFICE OF I & E, REGION III, MAY 27, 1970, INCL 50-331, TYPE--BOM, RW--WELL, AE--COMMONWEALTH ASSOC.

CAUSE - PERSONNEL ERROR. DURING TESTING WITH THE REACTOR AT ONE POWER, INSTRUMENT TECHNICIANS BYPASSED A FAULTY MAIN STEAMLINE HIGH TEMPERATURE ELEMENT WITHOUT PROPER DOCUMENTATION AND APPROVAL. THE INTENT OF BYPASSING THE ELEMENT WAS TO PREVENT A REDUCED ONE MAIN GROUP 1 ISOLATION SIGNAL. THE TECHNICIANS DID NOT FOLLOW CONTROL PROCEDURE REQUIREMENTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS • FAILURE, MAINTENANCE ERROR • BYPASS • ANNALD (OWN) • RECORDS • PERSONNEL, TEMPERATURE

114410

MAIN STEAM TUNNEL TEMPERATURE ELEMENT REMOVED FROM SERVICE AT ANNALD

IONA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

114710 CONTINUED
 2 PGS, LTR W/LEA 70-33 TO NRC OFFICE OF I & E, REGION III, JUNE 2, 1970, DUCRET 50-331, TYPE--BWR, RFG--G&E, AE--COMMONWEALTH ASSOC.

CAUSE - TUNNEL DAMPER PARTIALLY CLOSED. WHILE OPERATING AT 714 PWR, A MAIN STEAM TUNNEL HIGH TEMPERATURE ELEMENT WAS REMOVED FROM SERVICE TO PREVENT A NEEDLESS ONE HALF GROUP ISOLATION SIGNAL. VISUAL INSPECTION HAS VERIFIED THAT A STEAM TUNNEL LEAK DID NOT EXIST. THE HIGH TEMPERATURE RESULTED FROM THE TUNNEL MANUAL OUTLET DAMPER BEING PARTIALLY CLOSED. THE DAMPER WAS OPENED FULLY. THE TEMPERATURE ELEMENT WAS RETURNED TO OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + CONTAINMENT ISOLATION + VENTILATION SYSTEM + MAIN COOLING SYSTEM + ARNOLD (BWR) + COMPARTMENT + SENSORS, TEMPERATURE + PIPES AND PIPE FITTINGS

114701
 BREAKER FOR MSIV LEAKAGE CONTROL SYSTEM TRIPS AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LEA 70-33C TO NRC OFFICE OF I & E, REGION III, JUNE 3, 1970, DUCRET 50-331, TYPE--BWR, RFG--G&E, AE--COMMONWEALTH ASSOC.

CAUSE - BINDING OF INTERLOCK. DURING TESTING WHILE THE REACTOR WAS SHUT DOWN, THE BREAKER FOR MSIV LEAKAGE CONTROL SYSTEM INLET VALVE TRIPPED AND THE ASSOCIATED CONTACTOR STARTER COIL WAS DAMAGED. THE CAUSE WAS BINDING OF THE MECHANICAL INTERLOCK. THE MECHANICAL INTERLOCK AND THE STARTER COIL WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + INSTRUMENT, INTERLOCK + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + ARNOLD (BWR) + BREAKER + VALVES

114757
 MECHANICAL VACUUM PUMP NOT TESTED ON SCHEDULE AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LEA SPEC VIOLATION 70-2 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JUNE 4, 1970, DUCRET 50-331, TYPE--BWR, RFG--G&E, AE--COMMONWEALTH ASSOC.

CAUSE - TEST OMITTED FROM SCHEDULE. TESTING TO VERIFY AUTOMATIC SECURING AND ISOLATION OF THE MECHANICAL VACUUM PUMP WAS NOT PERFORMED DURING THE FIRST OPERATING CYCLE. THE TEST WAS INADVERTENTLY OMITTED FROM THE SURVEILLANCE PROGRAM SCHEDULE. IT WAS SUCCESSFULLY COMPLETED ON THE SAME DAY THE VIOLATION WAS IDENTIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING + FAILURE, ADMINISTRATIVE CONTROL + TEST INTERVAL + PRESSURE, SUBATMOSPHERIC + ARNOLD (BWR) + PUMPS

114702
 SET POINT DRIFT IN APRM CHANNEL AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LEA 70-34 TO NRC OFFICE OF I & E, REGION III, JUNE 8, 1970, DUCRET 50-331, TYPE--BWR, RFG--G&E, AE--COMMONWEALTH ASSOC.

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 024 PWR, APRM CHANNEL A UPSCALE TRIP WAS FOUND AT 55.58, EXCEEDING THE 55.06 LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. APRM MODEL 12003110 ANAL CARD WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + INSTRUMENT, POWER RANGE + SET POINT + ARNOLD (BWR) + DRIFT + FAILURE, INHERENT

114756
 COMPENSATE STORAGE TANK SWITCH FAILS AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LEA 70-38 TO NRC OFFICE OF I & E, REGION III, JUNE 10, 1970, DUCRET 50-331, TYPE--BWR, RFG--G&E, AE--COMMONWEALTH ASSOC.

CAUSE - COMPENSATE IN JUNCTION BOX. DURING A TEST WITH THE REACTOR AT 018 PWR, THE LOW LEVEL SWITCH IN THE COMPENSATE STORAGE TANK FAILED TO SIGNAL A SUCTION TRANSFER FROM THE CST TO THE TUBES. COMPENSATION FROM WITHIN THE CST WHERE SENSOR WIRES ENTER THE TANK THROUGH UNSEALED PENETRATIONS COLLECTED IN THE JUNCTION BOX. THE SWITCH WAS DRIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

114750 *CONTINUED*
 WATER • COMPENSATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • STORAGE CONTAINER • TEST, SYSTEM
 OPERABILITY • FAILURE, DESIGN ERROR • ARMED (BHR) • SENSORS, LEVEL

114750
 MCPA LIMIT VIOLATED TWICE AT ARMED
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 5 PGS, LTR #/ENR 70-37 TO NRC OFFICE OF I & E, REGION III, JUNE 10, 1970, DCKET 50-331, TYPE--BHR, RFG--GEC.,
 AE--COMMONWEALTH ASSOC.

CAUSE - NONEQUILIBRIUM KENCA. DURING CONTROL ROD WITHDRAWALS, 2 MAXIMUM CRITICAL POWER RATIO
 VIOLATIONS OCCURRED. FIRST, MCPA REACHED 1.759 (LIMIT 1.701), SECOND, MCPA REACHED 1.000 (LIMIT
 1.717). GROUP 42 RODS WERE INSERTED A NOTCH IN BOTH CASES TO RETURN MCPA WITHIN LIMITS.
 NONEQUILIBRIUM KENCA CONDITION EXISTED DURING THE ROD WITHDRAWAL PERIODS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

REACTIVITY EFFECT • PHENOM • NOT SPOT • POWER DISTRIBUTION • FAILURE, ADMINISTRATIVE CONTROL • ARMED (BHR)

115120
 MILK FARM STOPS PROVIDING MILK SAMPLES AT ARMED
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR #/ENR, APT 70-3 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JUNE 10, 1970, DCKET 50-331, TYPE--
 BHR, RFG--GEC., AE--COMMONWEALTH ASSOC.

CAUSE - NOT STATED. A MILK FARM WILL DISCONTINUE PROVIDING MILK SAMPLES FOR THE ENVIRONMENTAL
 PROGRAM AFTER 6/15/70. ANOTHER MILK FARM IN THE SAME SECTOR HAS BEEN CONTACTED FOR SAMPLES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

•SAMPLING • MILK • MONITORING PROGRAM, ENVIRONMENTAL • ARMED (BHR) • FOOD CHAIN • FAILURE, IMMINENT

114700
 TORUS LEVEL EXCEEDS LIMIT DURING A SCRAM AT ARMED
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR #/ENR 70-30 TO NRC OFFICE OF I & E, REGION III, JUNE 10, 1970, DCKET 50-331, TYPE--BHR, RFG--GEC.,
 AE--COMMONWEALTH ASSOC.

CAUSE - LEVEL SIGNAL RESET TOO SOON. DURING A REACTOR SCRAM, TORUS LEVEL INCREASED ABOVE THE
 LIMIT. THE LOW-LOW LEVEL SIGNAL RESET BEFORE MPC1 AND RCIC INJECTION VALVES SEALED IN. THE 2
 SYSTEMS REMAINED ON MINIMUM FLOW VALVE LINEUP TO THE TORUS DURING SCRAM AND RECOVERY. WATER
 VOLUME IN THE TORUS INCREASED TO 69300 CU. FT. EXCEEDING THE 61500 CU. FT. LIMIT. LEVEL WAS
 RESTORED IN 20 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • SYSTEM CAPACITY • ARMED (BHR) • SENSORS, LEVEL • TORUS

115125
 SOIL SAMPLES NOT OBTAINED DURING GROWING SEASON AT ARMED
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 1 PG, LTR #/ENR, APT 70-4 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JUNE 14, 1970, DCKET 50-331, TYPE--
 BHR, RFG--GEC., AE--COMMONWEALTH ASSOC.

CAUSE - MISUNDERSTANDING OF REQUIREMENTS. DURING A QUALITY ASSURANCE AUDIT, IT WAS FOUND THAT
 SOIL SAMPLES WERE NOT OBTAINED DURING THE GROWING SEASON AT PARTICULAR SAMPLING POINTS. SAMPLES
 WERE TAKEN IN NOVEMBER AND DECEMBER 1970 WHICH IS CONSIDERED TO BE OUT OF THE GROWING SEASON.
 THE PROCEDURE WHICH STATES THAT SAMPLES SHOULD BE COLLECTED ANNUALLY WILL BE REVISED TO REFLECT
 TECH SPEC REQUIREMENTS FOR SAMPLING DURING THE GROWING SEASON.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

PROCEDURES AND MANUALS • •SAMPLING • •SOIL • FAILURE, ADMINISTRATIVE CONTROL • MONITORING PROGRAM,
 ENVIRONMENTAL • TEST INTERVAL • ARMED (BHR) • COMMUNICATION

115129
 OXYGEN ANALYZER FAILS AT ARMED
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR #/ENR 70-39 TO NRC OFFICE OF I & E, REGION III, JUNE 15, 1970, DCKET 50-331, TYPE--BHR, RFG--GEC.,
 AE--COMMONWEALTH ASSOC.

CAUSE - OXYGEN CELL DETERIORATION. WHILE OPERATING AT 80% POWER, SURVEILLANCE TESTING FOUND A
 DETERIORATING OXYGEN CELL IN 1 OF THE 2 LAD SYSTEM ANALYZERS. THE O2 CONCENTRATION WAS FOUND AT

115147 CONTINUED

5.70. THE LIMIT IS LESS THAN 48. THE G2 CELL DEGENERATED SLIGHTLY OVER A 3 DAY PERIOD. IT WAS SAMPLING A PARTIAL HEATED CONDITION DURING A PLANT TRIP IN A STARTUP THIS JUNE JOINING EXCESSIVE CHEMICALS IN THE CELL. THE G2 CELL WAS RECHARGED, CALIBRATED, AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • MONITOR • TEST, SYSTEM OPERABILITY • CONTAINMENT ATMOSPHERE • ARNOLD (BWR)

115120

RESPONSE TIME OF INSIDE MSIV TOO RAPID AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR D/LER 70-40 TO NRC OFFICE OF I & E, REGION III, JUNE 15, 1970, DUCRET 50-331, TYPE--BWR, NRC--WEC, AE--COMMONWEALTH ASSOC.

CASE - UNKNOWN AT THIS TIME. DURING TESTING WHILE OPERATING AT 60% POWER, A MSIV CLOSED IN 2.4 SECONDS EXCEEDING THE 3 SECOND LIMIT. BECAUSE THE MSIV IS INSIDE THE UPTWELL, THE EXACT CAUSE OF THE FAST TIME IS NOT KNOWN. THE OUTSIDE MSIV ON THE SAME STEAM LINE WAS CLOSED TO CONFORM TO TECH SPECS AND ALLOW CONTINUED PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • STEAM • RESPONSE TIME • TEST, SYSTEM OPERABILITY • MAIN COOLING SYSTEM • ARNOLD (BWR) • VALVES

115147

RELAY BLOCK INADVERTENTLY LEFT IN MPC1 RELAY AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

3 PGS, LTR D/LER 70-41 TO NRC OFFICE OF I & E, REGION III, JUNE 16, 1970, DUCRET 50-331, TYPE--BWR, NRC--WEC, AE--COMMONWEALTH ASSOC.

CASE - PERSONNEL ERROR. DURING ROUTINE SHIFT SURVEILLANCE WITH THE REACTOR AT 77% POWER, IT WAS DISCOVERED THAT A RELAY BLOCK HAD BEEN INADVERTENTLY LEFT IN A MPC1 ISOLATION TRIP RELAY. THE RELAY BLOCK WAS USED IN A TEST PERFORMED 5 HOURS EARLIER. THROUGH PERSONNEL ERROR, THE RELAY BLOCK WAS NOT REMOVED ACCORDING TO A TEST STEP. IN THE FUTURE, ALL RELAY BLOCKS WILL BE CONSIDERED THE SAME AS LIFTED LEADS AND AS SUCH WILL BE TAGGED AND REQUIRE AUTHORIZATION PRIOR TO USE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR • PROCEDURES AND MANUALS • TEST, SYSTEM OPERABILITY • ARNOLD (BWR) • RELAYS • MPC1

115441

DIESEL GENERATOR TRIPPED ON HIGH COOLANT TEMPERATURE AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

4 PGS, LTR D/LER 70-43 TO NRC OFFICE OF I & E, REGION III, JUNE 23, 1970, DUCRET 50-331, TYPE--BWR, NRC--WEC, AE--COMMONWEALTH ASSOC.

CASE - PLUNGED STRAINER IN ESW SYSTEM. WHILE TESTING THE DIESEL WITH THE REACTOR AT 70% POWER, IT TRIPPED ON JACKET HIGH TEMPERATURE. THE EMERGENCY SERVICE WATER SYSTEM PUMP DISCHARGE STRAINER PLUNGED DUE TO MUD BUILDUP CAUSING LOW FLOW TO THE DIESEL. A RECENT DESIGN CHANGE RESULTED IN THE ESW SYSTEM NOT RUNNING CONTINUOUSLY. MUD AND SILT BUILT UP IN THE ESW PITS. THE MUD AND SILT WERE REMOVED. A STUDY IS UNDERWAY TO PREVENT THE BUILDUP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CAUD • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • FLOW BLOCKAGE • ARNOLD (BWR) • TEMPERATURE • SERVICE WATER SYSTEM • ENGINE, INTERNAL COMBUSTION • GENERATOR, DIESEL • FILTERS

115440

SET POINT DRIFT IN CONTAINMENT SPRAY/REACTOR SPRAYED LEVEL SWITCH AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

4 PGS, LTR D/LER 70-45 TO NRC OFFICE OF I & E, REGION III, JUNE 23, 1970, DUCRET 50-331, TYPE--BWR, NRC--WEC, AE--COMMONWEALTH ASSOC.

CASE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 70% POWER, THE CONTAINMENT SPRAY/REACTOR SHROU REACTOR PERMISSIVE SWITCH TRIPPED AT 200 INCHES. THE LIMIT IS 250.0 INCHES. THE CAUSE WAS INSTRUMENT LAIFT. THE YAWAY MODEL NO. 4418C SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • ARNOLD (BWR) • EMERGENCY COOLING SYSTEM • DRIFT • SENSORS, LEVEL

115671

NECPR VIOLATION OCCURS AT ARNOLD
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 76-46 TO NRC OFFICE OF I & E, REGION III, JULY 9, 1970, Docket 50-331, TYPE--BWR, NRU--UCC,
AE--DECEL

CAUSE - NONEQUILIBRIUM XENON CONDITION. DURING CONTROL AND WITHDRAWAL AFTER A ROD PATTERN SEQUENCE EXCHANGE WITH THE REACTOR AT 50% POWER, ONE NECPR VIOLATION OCCURRED. NECPR WAS 1.72% THE LIMIT WAS 1.70%. NONEQUILIBRIUM XENON CONDITION EXISTED DURING THE ROD WITHDRAWAL PERIODS. NEW ROD SEQUENCE AND 62% FUEL CAUSED NECPR LIMIT TO BE EXCEEDED AT LOW POWER CONDITION. GROUP 42 RODS WERE INSERTED 1 NOTCH TO RETURN WITHIN LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REASON - POWER DISTRIBUTION - HOT CHANNEL - ARNOLD (BWR) - FAILURE, INHERENT

115676

RCIC ISOLATION VALVE FAILS TO CLOSE AT ARNOLD
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 76-47 TO NRC OFFICE OF I & E, REGION III, JULY 9, 1970, Docket 50-331, TYPE--BWR, NRU--UCC,
AE--DECEL

CAUSE - UNKNOWN. DURING TESTING WHILE OPERATING AT 62% POWER, AN RCIC ISOLATION VALVE IN THE STEAM LINE FAILED TO STROKE CLOSED. THE CAUSE WAS NOT DETERMINED AS IT STROKED NORMALLY UPON TESTING PRIOR TO PERFORMING ANY MAINTENANCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT - CONTAINMENT ISOLATION - TEST, SYSTEM OPERABILITY - ARNOLD (BWR) - FAILURE - PROBABLE

115672

STEAMLINE AREA TEMPERATURE SWITCHES TRIP ABOVE LIMIT AT ARNOLD
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 76-44 TO NRC OFFICE OF I & E, REGION III, JULY 9, 1970, Docket 50-331, TYPE--BWR, NRU--UCC,
AE--DECEL

CAUSE - MISCALIBRATED. DURING TESTING OF MAIN STEAMLINE AREA HIGH TEMPERATURE WHILE OPERATING AT 70% POWER, 4 SUBCHANNELS OF TIS-4445 TRIPPED AT 208.1, 207.8, 208.5, AND 208.9 F AND ONE SUBCHANNEL OF TIS-4444 TRIPPED AT 209.5 F. THE LIMIT IS 234 F. TIS-4445 ELEMENTS WERE MISCALIBRATED DURING PREVIOUS TESTS. TIS-4445 WAS INSTRUMENT DRIFT. CHANNELS WERE RECALIBRATED. IMPLY CARD FOR TIS-4444 WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION - INSTRUMENT CALIBRATION - FAILURE, INSTRUMENT - INSTRUMENT, SWITCH - TEST, SYSTEM OPERABILITY - FAILURE, MAINTENANCE ERROR - RESET POINT - ARNOLD (BWR) - COMPARTMENT - LIMIT - SENSORS, TEMPERATURE

115693

UPDATE REPORT ON SDC STORAGE TANK LOW CONCENTRATION AT ARNOLD
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
3 PGS, LTR W/LEA 76-20 TO NRC OFFICE OF I & E, REGION III, JULY 12, 1970, Docket 50-331, TYPE--BWR, NRU--UCC,
AE--DECEL

CAUSE - ADEQUATE MARGIN NOT MAINTAINED. AS REPORTED EARLIER, THE STANBY LIQUID CONTROL STORAGE TANK SODIUM PENTABORATE CONCENTRATION WAS FOUND TO BE 12.3% DURING THE REFUELING OUTAGE. THE REQUIRED MINIMUM CONCENTRATION WAS 13.0%. THE CAUSE MAY BE DETERMINED TO BE NOT MAINTAINING AN ADEQUATE MARGIN ABOVE THE MINIMUM REQUIRED CONCENTRATION. THIS DID NOT ALLOW SMALL NORMAL CONCENTRATION AND VOLUME CHANGES (DUE TO EVAPORATION, ETC.) TO OCCUR WITHOUT VIOLATING TECH SPECS. PROCEDURES WERE REVISED TO REQUIRE INCREASING THE CONCENTRATION IF THE ACTUAL CONCENTRATION COMES WITHIN 0.5% OF THE MINIMUM REQUIRED VALUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS - SAMPLING - MODIFICATION - REFUELING - STORAGE CONTAINER - TEST, SYSTEM OPERABILITY - SHUTDOWN SYSTEM, SECONDARY - FAILURE, ADMINISTRATIVE CONTROL - ARNOLD (BWR) - CONCENTRATION

115673

CONDENSATE STORAGE TANK LEVEL SWITCH FAILS AT ARNOLD
IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 76-42 TO NRC OFFICE OF I & E, REGION III, JULY 14, 1970, Docket 50-331, TYPE--BWR, NRU--UCC,
G.E., AE--DECEL

CAUSE - UNKNOWN. THE LOW LEVEL SWITCH IN THE CONDENSATES STORAGE TANK FAILED TO SIGNAL A SHUTDOWN

113673 PC-CONTINUOUS

TRANSFER IN THE MPCI FROM THE CST TO THE TCRUS. THIS IS THE SECOND FAILURE IN A WEEK. THE CAUSE IS UNKNOWN. THE SWITCH IS CONSIDERED IMPERABLE UNTIL FINAL RESOLUTION OF THE PROBLEM. THE UNIT WAS AT THE PUMP AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COMMENSATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + STORAGE CONTAINER + TEST, SYSTEM OPERABILITY + ENGINEERED SAFETY FEATURE + ANALOG (EMR) + SENSORS, LEVEL + MPCI

113605

PLUM IN EMERGENCY SERVICE WATER LOOP LOW AT ANNULO

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/RE TO-48 TO NRC OFFICE OF I & E, REGION III, JULY 29, 1970, DUCRET 50-331, TYPE--DMR, MF--G.E., AE--DECNTEL

CAUSE - PRO IN LINES AND STRAINERS. DURING EMERGENCY SERVICE WATER TESTING WITH THE REACTOR AT 65% POWER, THE MAXIMUM ALLOWABLE RIVER WATER TEMPERATURE FOR THE FLOW OBTAINED IN LOOP B WAS DETERMINED TO BE 81.5 F. ACTUAL RW TEMPERATURE WAS 79.5 F. HOWEVER, EARLIER IN THE DAY RW TEMPERATURE HAD EXCEEDED THIS LIMIT. INLET STRAINERS AND INSTRUMENT LINES WERE CLEARED OF PRO AND THE TEST WAS RESUMED. FLOW HAD INCREASED TO GIVE A MAXIMUM ALLOWABLE RW TEMPERATURE OF 87.2 F.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FILTER, SCREEN + TEST, SYSTEM OPERABILITY + FLOW BLOCKAGE + EMERGENCY LOCKING + OFLOW + ANALOG (EMR) + SEDIMENT + FAILURE, INHERENT + SERVICE WATER SYSTEM

113699

UPDATE REPORT ON DISCHARGE PIPING FOR MAIN STEAM RELIEF VALVE AT ANNULO

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

4 PGS, LTR W/UPDATE RPT TO AG 50-336/75-35 TO NRC OFFICE OF I & E, REGION III, JULY 29, 1970, DUCRET 50-331, TYPE--DMR, MF--G.E., AE--DECNTEL

CAUSE - DESIGN DEFICIENCY. AN INSPECTION ON 7/30/75 OF THE DISCHARGE PIPING FOR MAIN STEAM RELIEF VALVES FOUND DAMAGE TO UNICATS AND PIPING. THE DESIGN APPARENTLY DID NOT CORRECTLY IDENTIFY THE LOADS THAT WOULD BE IMPOSED ON THE PIPING UNDER RELIEF VALVE DISCHARGE CONDITIONS. DESIGN CHANGES WERE MADE TO ALL DISCHARGE LINES AND THEIR SUPPORT STRUCTURES. ANALYSIS INDICATED THAT THE LOAD CARRYING CAPABILITY OF THE NEW SUPPORT DESIGN HAD BEEN INCREASED BY A FACTOR OF 4 AND SHOULD PROVIDE ADEQUATE SUPPORT. AN INSPECTION ON 7/15/76 FOUND NO ABNORMALITIES AFTER SEVERAL RELIEF VALVE OPERATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HYDRAULIC EFFECT + MODIFICATION + PRESSURE RELIEF + FAILURE, DESIGN ERROR + DAMAGE + SUPPORT STRUCTURE + ANALOG (EMR) + DISCHARGE + VALVES + PIPES AND PIPE FITTINGS

117086

WIRE SPRAY SPARGER OP INSTRUMENT ALARM CARD FOUND PULSED AT ANNULO

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/RE TO-51 TO NRC OFFICE OF I & E, REGION III, AUG. 19, 1970, DUCRET 50-331, TYPE--DMR, MF--G.E., AE--DECNTEL

CAUSE - OPERATOR ERROR. DURING TESTING WITH THE REACTOR AT 65% POWER, THE ALARM CARD FOR A CORE SPRAY SPARGER DIFFERENTIAL PRESSURE INSTRUMENT WAS FOUND PULSED. THE ALARM HAD BEEN DISABLED TO STOP ITS INTERMITTENT ANNUNCIATION WHILE THE PLANT WAS SHUT DOWN. THE DISABLING WAS NOT LOGGED. THE CARD WAS REINSERTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + FAILURE, OPERATOR ERROR + TEST, SYSTEM OPERABILITY + ANALOG (EMR) + RECORDS + SENSORS, PRESSURE + ELECTRONIC FUNCTION UNITS + ANNUNCIATORS

117085

SET POINT DRIFT IN ADS TIMER AT ANNULO

IDA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/RE TO-52 TO NRC OFFICE OF I & E, REGION III, AUG. 19, 1970, DUCRET 50-331, TYPE--DMR, MF--G.E., AE--DECNTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 65% POWER, AN ADS TIMER SETTING WAS FOUND TO BE 120.90 SECONDS. THE UPPER LIMIT IS 120 SECONDS. THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE TIMER WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

117005 *CONTINUED*
 REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * PRESSURE
 RELIEF * TEST, SYSTEM OPERABILITY * SET POINT * ANNUL (BWR) * DRIFT * RELAYS

117409
 TWO LEADS TO AN ALARM FOUND BUT TERMINATED AT ANNUL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 3 PGS, LTR W/LTR 70-50 TO NRC OFFICE OF I & E, REGION III, AUG. 20, 1970, DUCRET 50-331, TYPE--BWR, RFW--WEE.,
 AE--DECHTEL

CAUSE - DESIGN CHANGE NOT COMPLETED. DURING PERFORMANCE OF AN UNRELATED TEST WHILE OPERATING AT
 50% POWER, 2 LEADS WERE FOUND NOT TO BE TERMINATED. THEY HAD BEEN INSTALLED DURING THE LAST
 REFUEL OUTAGE AS PART OF A DESIGN CHANGE. THE LEADS WERE IN AN INCONSPICUOUS LOCATION AND
 PROBABLY WERE NOT NOTICED BY THE MAN MAKING THE TERMINATIONS. THE LEADS WERE CORRECTED. THEY
 ONLY PROVIDE ALARM FUNCTIONAL. DESIGN CHANGE FURMAN HAS BEEN MODIFIED TO INCLUDE FUNCTIONAL
 TESTING OF THE INVOLVED SYSTEMS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CORE SPRAY * TEST, SYSTEM OPERABILITY * FAILURE, INSTALLATION ERROR * ANNUL (BWR) * INSTRUMENT, ALARM *
 CABLES AND CONNECTORS

117770
 SET POINT DRIFT IN SOURCE RANGE MONITOR AT ANNUL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LTR 70-53 TO NRC OFFICE OF I & E, REGION III, AUG. 30, 1970, DUCRET 50-331, TYPE--BWR, RFW--WEE.,
 AE--DECHTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE THE UNIT WAS SHUTDOWN, SOURCE RANGE MONITOR U
 UPSCALE ROD BLOCK TRIP OCCURRED AT 173000 CPS. IT SHOULD HAVE OCCURRED AT LESS THAN 100000 CPS.
 THE APPARENT CAUSE WAS INSTRUMENT DRIFT. TRIP POINT WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM
 OPERABILITY * INSTRUMENT, STARTUP RANGE * SET POINT * ANNUL (BWR) * DRIFT * FAILURE, IMMINENT

118257
 GASEOUS RELEASE RATE EXCEEDS LIMIT AT ANNUL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LTR 70-55 TO NRC OFFICE OF I & E, SEPT. 13, 1970, DUCRET 50-331, TYPE--BWR, RFW--WEE., AE--DECHTEL

CAUSE - STEAM LEAKS FROM VALVES. ON 3 DAYS 6% OF THE MAXIMUM ALLOWABLE GASEOUS RELEASE RATE WAS
 EXCEEDED. VALUES WERE 5.326, 4.308, AND 5.008 OF THE TECH SPEC LIMIT. INVESTIGATION LOCATED
 SUBSTANTIAL STEAM LEAKS FROM VALVES LOCATED IN THE STEAM TUNNEL. THE PLANT WAS SHUTDOWN AND THE
 IDENTIFIED LEAKS WERE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

PAIRBORNE RELEASE * FAILURE, EQUIPMENT * RELEASE RATE * STEAM * LEAK * ANNUL (BWR) * REACTOR SHUTDOWN *
 FAILURE, IMMINENT * VALVES

117951
 ORYWELL OXYGEN CONCENTRATION EXCEEDS 4% AT ANNUL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LTR 70-55 TO NRC OFFICE OF I & E, REGION III, SEPT. 10, 1970, DUCRET 50-331, TYPE--BWR, RFW--
 WEE., AE--DECHTEL

CAUSE - MISCALCULATED CONCENTRATION. DURING TESTING WITH THE REACTOR AT 72% POWER, ORYWELL OXYGEN
 CONCENTRATION WAS FOUND TO EXCEED 4%. THE OPERATOR HAD MISCALCULATED OXYGEN CONCENTRATION. THIS
 IS COMPOUNDED BY A DESIGN PROBLEM WHICH ALLOWS AIR TO LEAK PAST THE SEALS ON THE SUCTION SIDE OF
 THE COMPRESSOR USED TO MAINTAIN THE ORYWELL-FORUS DP. NITROGEN PURGE WAS COMMENCED AND THE
 CONCENTRATION WAS LESS THAN 4% WITHIN 2 HOURS OF THE DISCOVERY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT * FAILURE, OPERATOR ERROR * OXYGEN * TEST, SYSTEM OPERABILITY * CONTAINMENT ATMOSPHERE *
 MATHEMATICAL TREATMENT * ANNUL (BWR) * CONCENTRATION

117952
 PRESSURE SWITCH ADDT VALVE FOUND CLOSED AT ANNUL
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LTR 70-54 TO NRC OFFICE OF I & E, REGION III, SEPT. 10, 1970, DUCRET 50-331, TYPE--BWR, RFW--
 WEE., AE--DECHTEL

117951 CONTINUED
 WEE--AE--DECNTEL

CAUSE - VALVE NOT ON PRESTARTUP CHECK LIST. DURING TESTING WITH THE REACTOR AT 904 POWER, THE ROOT VALVE TO A MAINSTEAM LOW PRESSURE SWITCH WAS FOUND CLOSED. THE INSTRUMENT LINE FOR THE SWITCH WAS REWON DURING THE 1976 REFUEL OUTAGE. THE ROOT VALVE IS NOT ON THE PRESTARTUP SPECIALIST AND WAS NOT VERIFIED OPEN. THE PROBLEM WAS NOT NOTICED EARLIER BECAUSE OF VALVE LEAK BY. THE VALVE WAS OPENED. THE CHECK LIST WAS REVISED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • PROCEDURES AND MANUALS • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, ADMINISTRATIVE CONTROL • ARNOLD (DNR) • VALVES • SENSORS, PRESSURE

117956
 REACTOR BUILDING RADIATION MONITOR FAILS TO RESPOND AT ARNOLD
 IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/AC 70-50 TO NRC OFFICE OF I & E, REGION III, SEPT. 10, 1976, DUCRET 50-331, TYPE--DNR, NRC--WEE--AE--DECNTEL

CAUSE - UNKNOWN. REACTOR BUILDING VENT RADIATION MONITOR 70000 DID NOT RESPOND TO AN INCREASE IN RADIATION. RMP000A INDICATED 25 NR/MR WHILE RMP000B INDICATED 2.5 NR/MR. THE REACTOR BUILDING WAS ALREADY ISOLATED AT THE TIME. THE REACTOR WAS OPERATING AT 904 POWER. THE CAUSE IS UNKNOWN. BGM MONITORS DEMONSTRATED SATISFACTORY OPERATION WHEN CHECKED WITH A SOURCE THE NEXT DAY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

VENTILATION SYSTEM • BUILDING • FAILURE, INSTRUMENT • TEST, SYSTEM OPERABILITY • ARNOLD (DNR) • RADIATION MONITORS

117949
 TORUS LEVEL EXCEEDS MAXIMUM ALLOWABLE LIMIT AT ARNOLD
 IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/AC 70-50 TO NRC OFFICE OF I & E, REGION III, SEPT. 10, 1976, DUCRET 50-331, TYPE--DNR, NRC--WEE--AE--DECNTEL

CAUSE - OPERATOR ERROR. WHILE USING MPC1 AND ACIC TO MAINTAIN REACTOR PRESSURE DURING A PLANT SHUTDOWN, THE TORUS LEVEL EXCEEDED THE MAXIMUM ALLOWABLE LIMIT. DURING SHUTDOWN, THE MSIV'S WERE CLOSED TO REDUCE COOLDOWN. MPC1 AND ACIC WERE INITIATED TO CONTROL PRESSURE. THE OPERATOR'S ATTENTION WAS DIRECTED TO ANOTHER EVOLUTION FOR SEVERAL MINUTES AND THE TORUS LEVEL EXCEEDED THE LIMIT. NORMAL LEVEL WAS RESTORED WITHIN 30 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • SYSTEM CAPACITY • ARNOLD (DNR) • TORUS

110254
 DIFFERENTIAL PRESSURE SWITCH FAILS AT ARNOLD
 IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/AC 70-50 TO NRC OFFICE OF I & E, REGION I, SEPT. 21, 1976, DUCRET 50-331, TYPE--DNR, NRC--WEE--AE--DECNTEL

CAUSE - BELLWIS UNIT LEAK. WHILE OPERATING AT 904 POWER, A RECIRCULATION RISEN UP INSTRUMENT SWITCH FAILED IN THE TRIPPED CONDITION. IT WAS VALVED OUT PENDING REPAIR. FILL FLUID LEAKED OUT OF THE SEAL BETWEEN THE BELLWIS UNIT AND THE FRAME OF THE POIS CAUSING THE INSTRUMENT TO DRIFT CAUSALLY. BELLWIS UNIT IS ON ORDER AND THE INSTRUMENT WILL BE REPAIRED WHEN IT IS RECEIVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • SEAL • LEAK • ARNOLD (DNR) • FAILURE, INSTRUMENT • SENSORS, PRESSURE

120085
 PRESSURE DIFFERENTIAL SWITCH FAILS AT ARNOLD
 IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 1 PG, LTR W/AC 70-50 TO NRC OFFICE OF I & E, REGION III, OCT. 7, 1976, DUCRET 50-331, TYPE--DNR, NRC--WEE--AE--DECNTEL

CAUSE - MICROSWITCH FAILURE. THE RELAY FOR A HIGHER THAN 0 PRESSURE DIFFERENTIAL INDICATING SWITCH POIS-4043 WAS OBSERVED NOT RESPONDING TO SURGES IN SYSTEM PRESSURE. THE POIS WAS VALVED OUT AND LEFT IN THE TRIPPED CONDITION. THE MICROSWITCH FOR THE POIS HAD FAILED. IT WAS REPLACED AND THE INSTRUMENT WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

120009 *CONTINUED*
 ARNOLD (DNR) * INSTRUMENT, SWITCH * *SENSORS, PRESSURE * FAILURE, INSTRUMENT * FAILURE, IMMERENT * SHUTDOWN
 COOLING SYSTEM * EMERGENCY COOLING SYSTEM

110709
 RRM PRESSURE DIFFERENTIAL SWITCH FAILS TO RESPOND AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LR 70-00 TO NRC OFFICE OF I & E, REGION III, OCT. 7, 1970, DUKRET 50-331, TYPE--DNR, MFU--WLE., AE--DECNTEL

CAUSE - MICROSWITCH FAILURE. A RRM PRESSURE DIFFERENTIAL INDICATING SWITCH FAILED TO RESPOND TO
 SLICES IN SYSTEM PRESSURE. IT WAS VALVED OUT AND LEFT IN TRIPPED CONDITION. INVESTIGATION
 REVEALED THAT THE MICROSWITCH HAD FAILED. THE MICROSWITCH WAS REPLACED AND THE INSTRUMENT
 RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * *INSTRUMENT, SWITCH * SHUTDOWN COOLING SYSTEM * ARNOLD (DNR) *
 FAILURE, IMMERENT * SENSORS, PRESSURE

110001
 FLOW INSTRUMENT EQUALIZING VALVE LEAKS AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LR 70-00 TO NRC OFFICE OF I & E, REGION III, OCT. 12, 1970, DUKRET 50-331, TYPE--DNR, MFU--WLE.,
 AE--DECNTEL

CAUSE - UNKNOWN. A MPC1 TURBINE STEAM LINE HIGH FLOW INSTRUMENT EQUALIZING VALVE LEAKS THROUGH
 RESULTING IN REDUCED REACTIVITY. INSPECTION OF THE VALVE SEATING SURFACES DID NOT INDICATE
 ANYTHING ABNORMAL. THE VALVE WAS CLEANED AND PRESSURE CHECKED SATISFACTORILY. LEAKAGE COULD
 HAVE BEEN CAUSED BY A SMALL PIECE OF FOREIGN MATERIAL NOT DETECTED. THE REACTOR WAS AT 948 POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT * TEST, SYSTEM OPERABILITY * LEAK * TURBINE * ARNOLD (DNR) * VALVES * SENSORS, FLOW * MPC1

119329
 FLOW INSTRUMENT EQUALIZING VALVE LEAKS THROUGH AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LR 70-00 TO NRC OFFICE OF I & E, REGION III, OCT. 12, 1970, DUKRET 50-331, TYPE--DNR, MFU--WLE.,
 AE--DECNTEL

CAUSE - UNKNOWN. DURING TESTING WITH THE REACTOR AT 948 POWER, MPC1 TURBINE STEAM LINE HIGH FLOW
 INSTRUMENT PD152245 EQUALIZING VALVE WAS FOUND TO BE LEAKING THROUGH. THE VALVE WAS CLEANED AND
 PRESSURE CHECKED. INSPECTION OF SEATING SURFACES DID NOT INDICATE ANYTHING ABNORMAL. LEAKAGE
 COULD HAVE BEEN CAUSED BY A SMALL PIECE OF UNDETECTED FOREIGN MATERIAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * CRUD * *INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * OFLOW *
 TURBINE * *BYPASS * ARNOLD (DNR) * VALVES * SENSORS, FLOW * MPC1

110707
 RECIRC PUMP SUCTION PRESSURE SWITCH FAILS TO OPEN AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LR 70-00 TO NRC OFFICE OF I & E, REGION III, OCT. 12, 1970, DUKRET 50-331, TYPE--DNR, MFU--WLE.,
 AE--DECNTEL

CAUSE - MICROSWITCH CONTACTS WELDED SHUT. WITH THE REACTOR AT 348 POWER, THE RECIRC PUMP SUCTION
 PRESSURE HIGH SWITCH WOULD NOT OPEN AT ANY PRESSURE. THIS SWITCH CAUSES SHUTDOWN COOLING
 ISOLATION AND PREVENTS OPENING THE RRM SUCTION VALVES WHEN REACTOR PRESSURE IS ABOVE 135 PSIG.
 THE MICROSWITCH CONTACTS WERE WELDED SHUT. THE MICROSWITCH WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

INSTRUMENT CALIBRATION * PROTECTION SYSTEM * FAILURE, INSTRUMENT * *INSTRUMENT, SWITCH * TEST, SYSTEM
 OPERABILITY * ARNOLD (DNR) * FAILURE, IMMERENT * SENSORS, PRESSURE

110700
 SET POINT DRIFT IN PRESSURE SWITCHES AT ARNOLD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/LR 70-00 TO NRC OFFICE OF I & E, REGION III, OCT. 12, 1970, DUKRET 50-331, TYPE--DNR, MFU--WLE.,
 AE--DECNTEL

118700 "CONTINUED"

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 94% POWER, 3 REACTOR HIGH PRESSURE REACTOR PUMP TRIP PRESSURE SWITCHES TRIPPED AT GREATER THAN THE MAXIMUM TECH SPEC LIMIT OF 1135 PSIG. THIS IS A RECURRING PROBLEM OF INSTRUMENT DRIFT. ALL 3 WERE RECALIBRATED AND RETESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + ANALOG (HWR) + DRIFT + FAILURE, INHERENT + SENSORS, PRESSURE

118990

END OF CYCLE CORE EXPOSURE DATA INCORRECT AT ARNOLD

IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 70-03 TO NRC OFFICE OF I & E, REGION III, OCT. 10, 1970, DOCKET 50-331, TYPE--BWR, NRC--G.E.,
AC--BECNTEL

CAUSE - CHANGE OF DEFINITION. BSSS VENDOR INFORMED LICENSEE THAT END OF CYCLE CORE EXPOSURE DATA WAS INCORRECT. THE VENDOR CHANGED THE DEFINITION OF THE END OF CYCLE CORE EXPOSURE. THIS CAUSED ERRORS IN NEPA LIMITS AS DETERMINED BY THE PLANT PROCESS COMPUTER. THE MISCALCULATION RESULTED IN 7 NEPA VIOLATIONS. CORRECT DATA IS NOW IN USE AND THE REACTOR IS BEING OPERATED WITHIN PROPER CORE THERMAL PARAMETER LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PFULL BURNUP + ANALYTICAL MODEL + POWER DISTRIBUTION + REACTOR POWER + FAILURE, DESIGN ERROR + ANALOG (HWR)

118995

ERRORS FOUND IN LAPLACE CALCULATIONS AT ARNOLD

IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 70-02 TO NRC OFFICE OF I & E, REGION III, OCT. 10, 1970, DOCKET 50-331, TYPE--BWR, NRC--G.E.,
AC--BECNTEL

CAUSE - NEW CRITERIA USED. BSSS VENDOR INFORMED LICENSEE THAT ERRORS HAD BEEN MADE IN THE LIMITING AVERAGE PLASMA LINEAR HEAT GENERATION RATE FOR TYPE 80274 FUEL. THE NEW LIMITS ARE MORE LIMITING THAN THOSE IN EFFECT SINCE THE 1970 REFUELLING OUTAGE AND APPLY TO THE PERIOD SINCE THEN. LAPLACE LIMITS HAVE BEEN VIOLATED ON DIFFERENT OCCASIONS. THE VENDOR RECOMPUTED LAPLACE USING NEW CRITERIA.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ACCIDENT ANALYSIS + DESIGN CRITERIA + ACCIDENT, LOSS OF COOLANT + POWER DISTRIBUTION + FLOW CHANNEL ANALYSIS + FAILURE, DESIGN ERROR + ARNOLD (HWR)

118965

DIESEL GENERATOR HAS BROKEN LOWER DRIVE COUPLER, HUB AT ARNOLD

IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/LEA 70-04 TO NRC OFFICE OF I & E, REGION III, OCT. 21, 1970, DOCKET 50-331, TYPE--BWR, NRC--G.E.,
AC--BECNTEL

CAUSE - UNKNOWN. DURING A SURVEILLANCE TEST INVOLVING AN ANNUAL INSPECTION OF STANDBY DIESEL GENERATOR 16-21 WHILE THE REACTOR WAS AT 94% POWER, THE DIESEL ENGINE WAS FOUND TO HAVE A BROKEN LOWER DRIVE HUB. THE HUB PART NO. 1A-300-320, OF THE FAIRBANKS MORSE ENGINE, S/N 38087107705H12, WAS REPLACED IN KIND. VENDOR ANALYSIS OF THE FAILED PART IS CONTINUING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PFailure, COMPONENT + TEST, SYSTEM OPERABILITY + ARNOLD (HWR) + ENGINES, INTERNAL COMBUSTION + GENERATOR, DIESEL

119313

RADIOIODINE LEVEL IN MILK SAMPLE EXCEEDS REPORT LIMIT AT ARNOLD

IJWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
2 PGS, LTR W/ENV. RPT. 70-5 TO NRC OFFICE OF I & E, REGION III, OCT. 26, 1970, DOCKET 50-331, TYPE--BWR, NRC--G.E.,
AC--BECNTEL

CAUSE - NUCLEAR WEAPONS TEST BY CHINA. RADIOIODINE LEVEL IN MONTHLY MILK SAMPLES EXCEEDED 10 TIMES THE CONTROL STATION VALUE. INITIAL INVESTIGATION INDICATES THAT THE INCREASE WAS DUE TO THE ATMOSPHERIC NUCLEAR WEAPONS TEST CONDUCTED 9/27/70 BY THE PEOPLES REPUBLIC OF CHINA.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PIODINE + ATMOSPHERIC POLLUTION + TEST, WEAPONS + SAMPLING + MILK + MONITORING PROGRAM, ENVIRONMENTAL + ARNOLD (HWR) + CONCENTRATION + FOOD CHAIN + FAILURE, INHERENT

119534
 SA-89 AND SA-90 RELEASE FOR THIRD QUARTER NOT DETERMINED AT ARNOLD
 IDHA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/ENR. RPT. TO-6 TC NRC OFFICE OF NUCLEAR REACTOR REGULATION, OCT. 27, 1970, DUCART 50-331, TYPE--
 BUR, RFG--C.E., AE--BECHTEL

CAUSE - TECHNICIAN ERROR. RESULTS OF ANALYSIS INDICATED THAT THE YIELD OF SA-89 AND SA-90 FOR THE
 THIRD QUARTER WAS 0%. DUE TO TECHNICIAN ERROR, ENOUGH PRECIPITATE WAS LOST DURING THE ANALYSIS
 TO CAUSE A 0% YIELD FOR THE FINAL RESULT. A LARGE DIAMETER FILTER PAPER WAS USED INSTEAD OF A
 SMALL DIAMETER PAPER CAUSING THE LOSS DURING THE ASHING PROCESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

EFFLUENT + FAILURE, OPERATOR ERROR + STRUTTING + CHEMICAL ANALYSIS + RADIOCHEMICAL ANALYSIS + MONITORING
 PROGRAM, ENVIRONMENTAL + ARNOLD (IDHA)

119531
 MSIV-LC SUBSYSTEMS FOUND INOPERABLE AT ARNOLD
 IDHA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/ENR TO-66 TO NRC OFFICE OF I & E, REGION III, OCT. 29, 1970, DUCART 50-331, TYPE--BUR, RFG--C.E.,
 AE--BECHTEL

CAUSE - LIMIT SWITCH OUT OF ADJUSTMENT. DURING TESTING WITH THE REACTOR AT 936 POWER, MSIV-LC
 SUBSYSTEMS A, B, AND D WERE FOUND INOPERABLE. SUBSYSTEMS B AND D WERE EXERCISED AND MADE
 OPERABLE. THE PLANT WAS SHUT DOWN 8 DAYS LATER AND SUBSYSTEM A WAS MADE OPERABLE. LATER ON THE
 LIMITSWITCH OPERATOR FOR RDV 8403A FAILED TO GIVE A PERMISSIVE SIGNAL TO RDV'S 8401A AND 8402A.
 THESE VALVES FAILED TO OPERATE DUE TO THIS LIMIT SWITCH BEING OUT OF ADJUSTMENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

CONTROL SYSTEM + FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + STEAM + INSTRUMENT, SWITCH + TEST, SYSTEM
 OPERABILITY + FAILURE, MAINTENANCE ERROR + MAIN COOLING SYSTEM + INSTRUMENT, POSITION + ARNOLD (IDHA) + VALVES

119902
 CPRAT EXCEEDS LIMIT AT ARNOLD
 IDHA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/ENR TO-67 TO NRC OFFICE OF I & E, REGION III, NOV. 2, 1970, DUCART 50-331, TYPE--BUR, RFG--C.E.,
 AE--BECHTEL

CAUSE - LPM DRIFT DUE TO SEAL LEAKS. FOLLOWING A POWER INCREASE FROM 596 TO 836, A LPM
 CALIBRATION PROGRAM WAS RUN. INITIAL CALCULATIONS INDICATED A CPRAT OF 1.001 WHICH VIOLATES THE
 TECH SPEC LIMIT OF 1.000. PRIOR TO THE INCREASE CPRAT WAS 0.990. RECIRC FLOW WAS IMMEDIATELY
 REDUCED WHICH REDUCED CPRAT TO 0.997. THE CAUSE WAS LPM DRIFT DUE TO LEAKING SEALS. A MORE
 CONSERVATIVE APPROACH TO RED PULS AND POWER CHANGES SHALL BE OBSERVED TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

ARNOLD (IDHA) + HOT CHANNEL + POWER DISTRIBUTION + REACTOR STABILITY + FAILURE, INSTRUMENT + INSTRUMENT, POWER
 RANGE + DRIFT + FAILURE, INHERENT

119532
 MSIV-LCS FAILS TO INDICATE CLOSED AT ARNOLD
 IDHA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/ENR TO-68 TO NRC OFFICE OF I & E, REGION III, NOV. 2, 1970, DUCART 50-331, TYPE--BUR, RFG--C.E.,
 AE--BECHTEL

CAUSE - CONTROL RELAY NOT MAKING CONTACT. DURING TESTING WITH THE REACTOR AT 876 POWER, MSIV-LCS
 RDV-8401D WOULD NOT INDICATE CLOSED (HAD BOTH OPEN/CLOSED INDICATION) AND RDV-8401D WOULD NOT
 OPERATE. THE CONTROL RELAYS WERE NOT MAKING CONTACT IN THE SOCKET. RELAYS ARE MOUNTED
 HORIZONTALLY AND, AFTER A PERIOD OF TIME, TEND TO DROOP CAUSING LOSS OF ELECTRICAL CONTINUITY.
 THEY WERE INSERTED SLIGHTLY IN THE SOCKET. SPRING CLIPS HAVE BEEN INSTALLED TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

CONTROL SYSTEM + CONTAINMENT ISOLATION + MODIFICATION + TEST, SYSTEM OPERABILITY + FAILURE, DESIGN ERROR +
 MAIN COOLING SYSTEM + ARNOLD (IDHA) + VALVES + RELAYS

119404
 MSIV-LCS RELAY MOUNTINGS FAIL TO MEET SEISMIC DESIGN CRITERIA AT ARNOLD
 IDHA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PGS, LTR W/ENR TO-69 TO NRC OFFICE OF I & E, REGION III, NOV. 2, 1970, DUCART 50-331, TYPE--BUR, RFG--C.E., AE--
 BECHTEL

CAUSE - VENDOR DESIGN MIXUP. WHILE OPERATING AT 778 POWER, IT WAS FOUND THAT MOUNTINGS FOR MSIV-

119404 *CONTINUED*

LCS RELAYS DID NOT MEET SEISMIC DESIGN REQUIREMENTS. THE PLANT WAS BROUGHT TO COLD SHUTDOWN AND SPRING CLIPS WERE ADDED TO THE MOUNTINGS. RELAYS NOW MEET SEISMIC REQUIREMENTS. THERE HAD BEEN A FIPLO IN DRAWING AND DOCUMENTATION CONTACT AT GC RESULTING IN THE SPRING CLIPS NOT BEING SPECIFIED OR SUPPLIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM • DESIGN CRITERIA • CONTAINMENT ISOLATION • MODIFICATION • FAILURE, DESIGN ERROR • MAIN COOLING SYSTEM • ARNOLD (BWR) • SEISMIC DESIGN • REACTOR SHUTDOWN • VALVES • RELAYS

119533

THERMAL OVERLOAD RELAY FOR MSIV TRIPS AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR N/LEA 70-004 TO NRC OFFICE OF I & E, REGION III, NOV. 2, 1970, DCKET 50-331, TYPE--BWR, NRC--G.E., AE--DECATEL

CASE - SET POINT TUG LOGS WHILE ATTEMPTING TO CYCLE MSIV-LCS NOW 04020 WITH THE REACTOR AT 078 PUNCH, THE THERMAL OVERLOAD RELAY TRIPPED MAKING THE VALVE IMPERMEABLE. THE RELAY SET POINT WAS AT NORMAL OPERATING CURRENT DUE TO NO ACCURACY TOLERANCE IN SETTING. THE SET POINT HAS BEEN INCREASED SLIGHTLY. THE VALVE WAS CYCLED REPEATEDLY WITHOUT FURTHER PROBLEMS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • STEAM • FAILURE, INSTRUMENT • TEST, SYSTEM OPERABILITY • FAILURE, ADMINISTRATIVE CONTROL • MAIN COOLING SYSTEM • SET POINT • ARNOLD (BWR) • VALVES • RELAYS

119405

DAILY RADIATION MONITOR SENSOR CHECKS NOT PERFORMED AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR N/LEA 70-004 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, NOV. 3, 1970, DCKET 50-331, TYPE--BWR, NRC--G.E., AE--DECATEL

CASE - PERSONNEL ERROR. DAILY RADIATION MONITOR SENSOR CHECKS, REQUIRED BY ETS, WERE NOT PERFORMED ONE DAY. THE DAY TECHNICIAN, WHO WAS SCHEDULED TO PERFORM THE CHECKS, WAS INVOLVED WITH A REACTOR STARTUP AND DECIDED TO HAVE THE SECOND SHIFT TECHNICIAN PERFORM THEM. THIS TECHNICIAN DID NOT REALIZE THAT THE CHECKS HAD TO BE PERFORMED THAT DAY. WHEN THE ERROR WAS DISCOVERED, ALL SENSORS WERE CHECKED AND RESPONDED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • TESTING • TEST INTERVAL • ARNOLD (BWR) • RADIATION MONITORS

119734

IRM FAILS TO OVERLAP THE SR AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR N/LEA 70-71 TO NRC OFFICE OF I & E, REGION III, NOV. 10, 1970, DCKET 50-331, TYPE--BWR, NRC--G.E., AE--DECATEL

CASE - HIGH VOLTAGE CABLE UNPLUGGED. DURING A REACTOR STARTUP, IRM F DID NOT DEMONSTRATE OVERLAP BY THE TIME SR M INDICATION WAS 100,000 CPS. ALL OTHER IRM'S INDICATED PROPERLY. A QUICK CHECK SHOWED THAT THE HIGH VOLTAGE CABLE HAD NOT CONNECTED. THE CABLE WAS CONNECTED AND THE IRM WAS OPERATED OUT SATISFACTORILY. NO REASON WAS FOUND FOR THE CABLE TO BE UNPLUGGED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARNOLD (BWR) • INSTRUMENT, INTERMEDIATE RANGE • INSTRUMENT, ABNORMAL INDICATION • CABLES AND CONNECTORS • FAILURE, INSTRUMENT

120400

MSIV-LCS VALVE FAILS TO OPEN AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR N/LEA 70-72 TO NRC OFFICE OF I & E, REGION III, NOV. 10, 1970, DCKET 50-331, TYPE--BWR, NRC--G.E., AE--DECATEL

CASE - LIMIT SWITCH CONTACT PRESSURE INSUFFICIENT. DURING TESTING, MAIN STEAM ISOLATION VALVE LEAKAGE CONTROL SYSTEM VALVE NOW 04014 FAILED TO OPEN. THE LIMIT SWITCH CONTACT PRESSURE WAS INSUFFICIENT FOR GOOD ELECTRICAL CONNECTION. CONTACT FINGERES WERE ADJUSTED TO PROVIDE PROPER PRESSURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARNOLD (BWR) • VALVES • CONTAINMENT LEAKAGE CONTROL • MAIN COOLING SYSTEM • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • INSTRUMENT, SWITCH • VALVE OPERATORS • FAILURE, DESIGN ERROR • CONTAINMENT ISOLATION

110003

CPR FOUND TO BE LESS THAN LIMIT AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR WROD 70-70 TO NRC OFFICE OF I & E, REGION III, NOV. 23, 1970, DUCRET 50-331, TYPE--DNR, NFO--UCL..

AE--DECTEL

CAUSE - VENDOR SUPPLIED ROD PATTERN. FOLLOWING A STARTUP AND POWER ASCENSION TO 474, AN LPRM CALIBRATION WAS RUN AND CPR WAS FOUND TO BE 1.704, BELOW THE TECH SPEC MPA LIMIT OF GREATER THAN OR EQUAL TO 1.706. THE OPERATOR DROVE RODS AND INCREASED CPR TO 2.035. THE NSSS VENDOR SUPPLIED ROD PATTERN WAS NOT CONDUCTIVE TO TRANSIENT OPERATION. DURING POWER ASCENSION, THE ROD PATTERN PRODUCED AN UNEVEN POWER DISTRIBUTION. THE REACTOR IS NOW BEING OPERATED WITH A ROD PATTERN WHICH REDUCES PEAKING FACTOR AND PRODUCES A MORE EVEN POWER DISTRIBUTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARNOLD (DNR) * POWER DISTRIBUTION * NOT CHANNEL * FAILURE, DESIGN ERROR * CONTROL ROD INTERACTION * CONTROL ROD WORTH * REACTOR CONTROL * REACTOR STABILITY

120199

CPR LESS THAN LIMIT AFTER POWER INCREASE AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR WROD 70-73 TO NRC OFFICE OF I & E, REGION III, NOV. 24, 1970, DUCRET 50-331, TYPE--DNR, NFO--UCL..

AE--DECTEL

CAUSE - VENDOR SUPPLIED ROD PATTERN. FOLLOWING A POWER INCREASE FROM 859 MWt TO 944 MWt, AN LPRM CALIBRATION WAS RUN AND CPR WAS FOUND TO BE 1.020, WHICH IS BELOW THE TECH SPEC MPA LIMIT OF 1.003. THE NSSS VENDOR SUPPLIED ROD PATTERN WAS NOT CONDUCTIVE TO TRANSIENT OPERATION. DURING POWER INCREASE, THE ROD PATTERN PRODUCED A MORE UNEVEN POWER DISTRIBUTION THAN DESIRED. THE OPERATOR DROVE RODS AND INCREASED CPR TO 1.091. THE REACTOR IS NOW BEING OPERATED WITH A NEW ROD PATTERN, MORE CONSERVATIVE LIMITS ARE BEING USED, AND LPRM CALIBRATIONS ARE BEING RUN MORE FREQUENTLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARNOLD (DNR) * POWER DISTRIBUTION * CONTROL ROD INTERACTION * REACTOR TRANSIENT * REACTOR POWER * TRANSIENT * FAILURE, DESIGN ERROR * REACTOR CONTROL * REACTOR STABILITY

120200

MSIV LEAKAGE CONTROL SYSTEM VALVE FAILS TO OPEN AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR WROD 70-76 TO NRC OFFICE OF I & E, REGION III, NOV. 24, 1970, DUCRET 50-331, TYPE--DNR, NFO--UCL..

AE--DECTEL

CAUSE - OPEN TORQUE SWITCH FAILED. DURING TESTING WITH THE REACTOR AT 704 POWER, MSIV LEAKAGE CONTROL SYSTEM SUBSYSTEM A MOV 0401A SHOULD NOT GIVE A FULLY OPEN INDICATION. THE OPEN TORQUE SWITCH, TS-1, ON MOV 0401A WAS FAILED. THE LIMITTORQUE SWITCH WAS REPLACED IN AINW. A DESIGN REVIEW IS UNDERWAY TO DETERMINE THE ACCEPTABILITY OF JUMPING THIS SWITCH.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARNOLD (DNR) * VALVES * CONTAINMENT LEAKAGE CONTROL * LEAK * CONTROL * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * CONTAINMENT INTEGRITY * MAIN COOLING SYSTEM * FAILURE, DESIGN ERROR * TEST, SYSTEM OPERABILITY

120201

MSIV LEAKAGE CONTROL SYSTEM VALVE FAILS TO OPEN AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR WROD 70-80 TO NRC OFFICE OF I & E, REGION III, NOV. 24, 1970, DUCRET 50-331, TYPE--DNR, NFO--UCL..

AE--DECTEL

CAUSE - LIMIT SWITCH OUT OF ADJUSTMENT. DURING TESTING, MSIV LEAKAGE CONTROL SYSTEM SUBSYSTEM B MOV 0401B FAILED TO GIVE A FULLY OPEN INDICATION. DUE TO THE PREVIOUS FAILURE OF SUBSYSTEM A MOV 0401A, THE LCO HAD BEEN VIOLATED. AN ORDERLY SHUTDOWN OF THE REACTOR WAS INITIATED. MOV 0401B WAS OUT OF ADJUSTMENT AND FAILED TO GIVE THE FULLY OPEN INDICATION. THE LIMIT SWITCH WAS ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARNOLD (DNR) * VALVES * CONTAINMENT LEAKAGE CONTROL * LEAK * CONTROL * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * CONTAINMENT INTEGRITY * MAIN COOLING SYSTEM * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * REACTOR SHUTDOWN

120401

AIC VALVE OPERATOR FOUND LOOSE AT ARNOLD

IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

120401 CONTINUED
 2 PWS, LTR N/RA 70-03 TO NRC OFFICE OF I & E, REGION III, DEC. 1, 1970, WCKET 50-331, TYPE--BWR, NRC--G.E.,
 AE--DECTEL

CAUSE - UNKNOWN. DURING AN INSPECTION OF VALVE OPERATIONS, AIC TRIP THROTTLE VALVE RVV 2405 WAS FOUND TO BE EXCESSIVELY LOOSE BETWEEN THE YORE NUT AND YORE OF THE TRIP-THROTTLE MECHANISM. THE CAUSE IS UNKNOWN. CAP SCREWS SECURING THE OPERATOR TO THE TRIP-THROTTLE MECHANISM WERE PROPERLY TIGHTENED. THE YORE NUT WAS PROPERLY SECURED TO THE YORE. THE REACTOR WAS AT 790 POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ANALOG (BWR) - VALVES - CONTROL - AIC - VALVE OPERATIONS - FASTENER - SURVEILLANCE PROGRAM - FAILURE, EQUIPMENT

120425
 SET POINT DRIFT IN WYTHELL PRESSURE SWITCH AT ARMAD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PWS, LTR N/RA 70-77 TO NRC OFFICE OF I & E, REGION III, DEC. 3, 1970, WCKET 50-331, TYPE--BWR, NRC--G.E.,
 AE--DECTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 570 POWER, WYTHELL HIGH PRESSURE INSTRUMENT PS-31C TRIPPED AT 2.12 PSID, EXCEEDING THE 2.0 PSID LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE STATIC WYTHELL PRESSURE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ANALOG (BWR) - INSTRUMENT, SWITCH - INSTRUMENT CALIBRATION - SENSORS, PRESSURE - TEST, SYSTEM OPERABILITY - FAILURE, INSTRUMENT - SET POINT - DRIFT - FAILURE, INHERENT - CONTAINMENT - ENGINEERED SAFETY FEATURE

120420
 STACK RADIATION MONITOR SENSORS NOT CHECKED PROPERLY AT ARMAD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PWS, LTR N/RA 70-81 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, DEC. 8, 1970, WCKET 50-331, TYPE--BWR, NRC--G.E., AE--DECTEL

CAUSE - TECHNICIAN ERROR. ENVIRONMENTAL SURVEILLANCE TEST PROCEDURE REQUIRES DAILY OPERABILITY CHECK OF THE OFF-GAS STACK RADIATION MONITOR SENSORS. PROCEDURE REQUIRES EXPOSURE OF THE RADIATION ELEMENTS TO CHECK SOURCES AND UPSCALE RESPONSE VERIFICATION ON PANEL METER. THE RADIATION PROTECTION TECHNICIAN PERFORMING THE TEST PERFORMED A CHANNEL COMPARISON ONLY AND FAILED TO INSERT THE CHECK SOURCE ON 2 DAYS. HE HAS BEEN REINSTRUCTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMAD (BWR) - TESTING - RADIATION MONITOR - OFF GAS - STACK - MONITOR, STACK - TEST INTERVAL - FAILURE, OPERATOR ERROR - PROCEDURES AND MANUALS

120410
 SET POINT DRIFT IN MAIN STEAM LINE FLOW SWITCH AT ARMAD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PWS, LTR N/RA 70-70 TO NRC OFFICE OF I & E, REGION III, DEC. 7, 1970, WCKET 50-331, TYPE--BWR, NRC--G.E.,
 AE--DECTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 840 POWER, MAIN STEAM LINE O HIGH FLOW PS154306 TRIPPED AT 120 PSID. THE REQUIRED SET POINT IS 125 +/- 3 PSID. THE CAUSE WAS INSTRUMENT DRIFT. THE BARTON MODEL 200 PRESSURE DIFFERENTIAL INDICATING SWITCH WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ANALOG (BWR) - INSTRUMENT, SWITCH - INSTRUMENT CALIBRATION - SENSORS, FLOW - TEST, SYSTEM OPERABILITY - FAILURE, INSTRUMENT - SET POINT - DRIFT - MAIN COOLING SYSTEM - FAILURE, INHERENT - CONTAINMENT ISOLATION

120419
 INSPECTION OF DIESEL GENERATORS NOT COMPLETED ON TIME AT ARMAD
 IOWA ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA
 2 PWS, LTR N/RA 70-87 TO NRC OFFICE OF I & E, REGION III, DEC. 8, 1970, WCKET 50-331, TYPE--BWR, NRC--G.E.,
 AE--DECTEL

CAUSE - DELAY IN RECEIVING REQUIRED MATERIAL. SURVEILLANCE TEST PROCEDURE REQUIRES ANNUAL INSPECTION OF STANDBY DIESEL GENERATORS 10-21 AND 10 WAS NOT COMPLETED BY THE PRESCRIBED DATE. THERE WAS A DELAY IN RECEIVING MATERIAL REQUIRED AS PART OF THE SURVEILLANCE. INSPECTIONS WERE TO BE COMPLETED BY 9/22/70 AND WERE ACTUALLY COMPLETED ON 10/21/70. FUTURE INSPECTIONS SHALL BE SCHEDULED DURING THE ANNUAL REFUEL OUTAGE. MATERIAL REQUIREMENTS SHALL BE REVIEWED FAR ENOUGH IN ADVANCE TO ALLOW PERFORMANCE IN A TIMELY MANNER.

120419 (CONTINUED)

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) • TEST INTERVAL • TESTING • GENERATOR, DIESEL • FAILURE, ADMINISTRATIVE CONTROL • EMERGENCY POWER, ELECTRIC • ENGINES, INTERNAL COMBUSTION

120417

SET POINT DRIFT IN HIGH FLOW SWITCH AT ARMUO

100A ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/NO 70-76 TO NRC OFFICE OF I & E, REGION III, DEC. 8, 1970, UCAET 50-331, TYPE--BWR, NFO--WEC., AE--DECTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE MPC1 STEAM SUPPLY HIGH FLOW SWITCHES WITH THE REACTOR AT 71% POWER, PUS2205 TRIPPED AT -05 INCHES OF WATER. THE LIMIT IS -130 +/- 7 INCHES. THE CAUSE WAS INSTRUMENT DRIFT. THE BARTON MODEL 200 PRESSURE DIFFERENTIAL INDICATOR SWITCH WAS RECALIBRATED. HIGH FLOW CONDITION WILL ALWAYS PRESENT A POSITIVE VALUE WITH RESPECT TO THIS SWITCH SO THIS DRIFT HAD NO EFFECT ON SYSTEM OPERABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) • INSTRUMENT, SWITCH • INSTRUMENT CALIBRATION • SENSORS, FLOW • TEST, SYSTEM OPERABILITY • PWR, IE, INSTRUMENT • SET POINT • DRIFT • MPC1 • FAILURE, IMMEDIATE

120412

WPL REPORT ON DRIVE COUPLING AND FAILURE AT ARMUO

100A ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/UPHATE MPT TO LER 70-04 TO NRC OFFICE OF I & E, REGION III, DEC. 8, 1970, UCAET 50-331, TYPE--BWR, NFO--WEC., AE--DECTEL

CAUSE - INCORRECT MATERIAL. DURING TESTING OF STANDBY DIESEL GENERATOR 1-21 WITH THE REACTOR AT 94% POWER, THE ENGINE WAS FOUND TO HAVE A BROKEN LOWER VERTICAL DRIVE COUPLING AND, AS REPORTED EARLIER, THE VENDOR DETERMINED THAT THE HUB WAS MADE OF CAST IRON BUT SHOULD HAVE BEEN JUILITE IRON. THE PART WAS REPLACED WITH ONE OF PROPER MATERIAL. THE REMAINING COUPLINGS IN BOTH DIESELS WILL BE INSPECTED FOR PROPER MATERIAL AND REPLACED IF APPROPRIATE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) • GENERATOR, DIESEL • ENGINES, INTERNAL COMBUSTION • FAILURE, EQUIPMENT • FAILURE, FABRICATION ERROR • MATERIAL • TEST, SYSTEM OPERABILITY • EMERGENCY POWER, ELECTRIC • COMPONENTS

120405

CAD SYSTEM FOUND WITH LESS THAN REQUIRED NITROGEN AT ARMUO

100A ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/NO 70-02 TO NRC OFFICE OF I & E, REGION III, DEC. 10, 1970, UCAET 50-331, TYPE--BWR, NFO--WEC., AE--DECTEL

CAUSE - ANNUAL SURVEILLANCE TEST. DURING TESTING WITH THE REACTOR AT 31% POWER, THE CONTAINMENT ATMOSPHERE DILUTION SYSTEM WAS FOUND TO CONTAIN LESS THAN THE REQUIRED 5000 SCF OF NITROGEN. THE ANNUAL SURVEILLANCE TEST ON THE CAD SYSTEM WAS PERFORMED THE PREVIOUS DAY WHICH DEPLETED THE NITROGEN SUPPLY. THE SYSTEM WAS RESTORED TO WITHIN LIMIT. THE TEST WILL BE MODIFIED TO ENSURE THE NITROGEN VOLUME IS SUFFICIENT FOLLOWING THE TEST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) • SYSTEM CAPACITY • CONTAINMENT ATMOSPHERE • DILUTION • NITROGEN • STORAGE CONTAINER • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR

120001

ACIC GLAND SEAL CONDENSATE PUMP FAILS TO RUN AT ARMUO

100A ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PGS, LTR W/LEA 70-05 TO NRC OFFICE OF I & E, REGION III, DEC. 21, 1970, UCAET 50-331, TYPE--BWR, NFO--WEC., AE--DECTEL

CAUSE - STARTER COIL CONNECTIONS DIRTY. DURING 40% POWER OPERATION, THE ACIC VACUUM SEAL CONDENSATE HIGH LEVEL ALARM CAME IN WITH A PUMP RUNNING INDICATION. ACIC GLAND SEAL CONDENSATE PUMP 1P220 WAS FOUND TO BE NOT RUNNING. THE PUMP MOTOR STARTER COIL CONNECTIONS WERE FOUND TO BE DIRTY. THEY WERE CLEANED AND TIGHTENED. THE PUMP WAS TESTED SATISFACTORY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) • PUMPS • ACIC • SEAL • FAILURE, EQUIPMENT • FAILURE, MAINTENANCE ERROR • CABLES AND CONNECTIONS

120735

AIRBORNE RELEASE RATES EXCEED LIMIT AT ARMUO

100W ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PUS, LTR W/LEN 70-80 TO NRC OFFICE OF I & E, REGION III, DEC. 22, 1970, DUCRET 50-331, TYPE--BWR, MFU--GUE, AE--DECHTEL

CAUSE - MINOR FUEL CLADDING PERFORATIONS. THE AIRBORNE RELEASE RATE AVERAGED OVER THE CALENDAR QUARTER WILL EXCEED 20 OF TECH SPECS DURING THE YEAR OF 12/1970. THE PRIMARY SOURCE OF ACTIVITY IS NUCLEAR FUEL PRODUCTS RELEASED TO THE COOLANT THROUGH FUEL CLADDING PERFORATIONS WHICH RESULTS FROM NORMAL OPERATION. RELEASES ARE INCREASED DURING CYCLING TO MINIMIZE THE INCREASE, THE REACTOR WILL BE BASE LOADED AS MUCH AS POSSIBLE DURING THE REMAINING OPERATING CYCLES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) * RELEASE RATE * AIRBORNE RELEASE * FAILURE, CLADDING * FAILURE, IMMINENT * FUEL ELEMENTS

120737

MSIV LEAKAGE CONTROL SYSTEM HEATER FAILS TO REACH TEMPERATURE AT ARMUO

100W ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PUS, LTR W/LEN 70-80 TO NRC OFFICE OF I & E, REGION III, DEC. 22, 1970, DUCRET 50-331, TYPE--BWR, MFU--GUE, AE--DECHTEL

CAUSE - VALVES LEAK WATER INTO HEATER. DURING TESTING WITH THE REACTOR AT 948 POWER, MSIV & LEAKAGE CONTROL SYSTEM HEATER DID NOT REACH 450 F IN A REASONABLE PERIOD OF TIME. MOV'S 84010 AND 84012 FAILED TO FULLY SEAL AND CONDENSATE COLLECTED IN THE HEATER PREVENTING IT FROM REACHING THE REQUIRED TEMPERATURE. THE VALVES WERE MADE TO SEAL, THE WATER IS OUT OF THE HEATER AND IT NOW REACHES THE REQUIRED TEMPERATURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) * HEATERS * LEAK * CONTROL * VALVES * CONTAINMENT ISOLATION * MAIN COOLING SYSTEM * TEST, SYSTEM OPERABILITY * FAILURE, EQUIPMENT * FAILURE, MAINTENANCE ERROR

120730

MPC1 TURBINE TRIPS ON HIGH FLOW INDICATION AT ARMUO

100W ELECTRIC LIGHT & POWER CO., CEDAR RAPIDS, IA

2 PUS, LTR W/LEN 70-80 TO NRC OFFICE OF I & E, REGION III, DEC. 30, 1970, DUCRET 50-331, TYPE--BWR, MFU--GUE, AE--DECHTEL

CAUSE - NEW SET POINTS REVERSED. DURING TESTING WITH THE REACTOR AT 814 POWER, MPC1 TURBINE TRIPPED BY FAST START WITH HIGH FLOW INDICATION. TESTS PERFORMED 3 DAYS EARLIER INSERTED NEW SET POINTS. THE SET POINTS WERE REVERSED DUE TO PROCEDURAL DEFICIENCY. DUE TO THE NECESSITY OF EXPEDITING A TECH SPEC CHANGE, THE COMPLETE DESIGN CHANGE INCLUDING POST MODIFICATION TESTING HAS NOT COMPLETED WHEN THIS SET POINT WAS CHANGED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ARMUO (BWR) * TURBINE * MPC1 * FAILURE, EQUIPMENT * TEST, SYSTEM OPERABILITY * FAILURE, ADMINISTRATIVE CONTROL * PROCEDURES AND MANUALS * INSTRUMENT, SWITCH * SET POINT

120857

PRESSURE INSTRUMENTS HAVE INADEQUATE DESIGN PRESSURE RATING AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PUS, LTR W/LEN 70-80 TO NRC OFFICE OF I & E, REGION III, FEB. 2, 1970, DUCRET 50-155, TYPE--BWR, MFU--GUE, AE--DECHTEL

CAUSE - DESIGN DEFICIENCY. DURING A REVIEW OF TESTING REQUIREMENTS, SEVERAL CONTAINMENT PRESSURE SENSING SWITCHES WERE FOUND TO HAVE INADEQUATE DESIGN PRESSURE RATINGS. FOR 4 MERCURY PRESSURE SWITCHES, THE ANTICIPATED 23 PSIG PRESSURE DURING A DMA WOULD SHIFT THE SET POINT. BUT THIS WOULD OCCUR AFTER THEY HAD PERFORMED THEIR SAFETY FUNCTIONS. SEVERAL VACUUM SWITCHES WOULD NOT PERFORM PROPERLY IF EXPOSED TO 23 PSIG FOR A PERIOD OF TIME. REPLACEMENT OF ALL OF THESE SWITCHES WITH INSTRUMENTS HAVING PROPER PRESSURE RATINGS IS BEING PURSUED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * DESIGN CRITERIA * CONTAINMENT INTEGRITY * PROTECTION SYSTEM * INSTRUMENT, SWITCH * FAILURE, DESIGN ERROR * PRESSURE, INTERNAL * REVIEW * SYSTEM OPERABILITY IN ACCIDENT * SENSORS, PRESSURE

121000

LEAK SPRAY VALVE PUMP SUPPLIES NOT TAPPED AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PUS, LTR W/LEN 70-80 TO NRC OFFICE OF I & E, REGION III, MARCH 1, 1970, DUCRET 50-155, TYPE--BWR, MFU--GUE, AE--DECHTEL

111650 *CONTINUED*

CAUSE - OPERATOR ERROR. DURING REACTOR VESSEL HEAD REMOVAL IN PREPARATION FOR REFUELING, THE PUMPER SUPPLIES TO THE MTCR-OPERATED BACKUP CORE SPRAY VALVES WERE NOT TAGGED IN THE DE-ENERGIZED POSITION AS REQUIRED. PERSONNEL FAILED TO ADHERE TO TECH SPECS. PUMPER SUPPLIES WERE TAGGED UPON DISCOVERY OF THE ERROR. PROCEDURES WILL BE REVISED PRIOR TO THE NEXT USE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * CORE SPRAY * FAILURE, OPERATOR ERROR * ELECTRIC POWER * REFUELING * IDENTIFICATION * VALVE OPERATORS

112729

DEFECTIVE WELD FOUND IN CORE SPRAY PIPING AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MICHIGAN

2 PGS., LTR W/RO-3-76 TO U.S. NRC, REGION III, APRIL 5, 1976, DCKET 50-155, TYPE--BWR, MFU--U.S., AC--BECHTEL

CAUSE - INSTALLATION ERROR. DURING RELOCATION OF THE PRIMARY CORE SPRAY VALVES IN MAY 1975, SEVERAL WELDS WERE MADE. ONE WAS DEEMED ACCEPTABLE AT THAT TIME BUT WAS LATER DEEMED UNACCEPTABLE DURING A LEVEL III TECHNICAL REVIEW IN JUNE 1975. DUE TO FAILURE OF ADMINISTRATIVE CONTROLS, THE RESULTS WERE NOT RECEIVED ON SITE UNTIL FEB. 25, 1976. REPLACEMENT OF THE PIPING CONTAINING THE DEFECTIVE WELD IS BEING DONE DURING THE CURRENT REFUELING OUTAGE. THE PIPING CONNECTS THE FIRE WATER SYSTEM TO THE CORE SPRAY SYSTEM. ADMINISTRATIVE CONTROLS ARE BEING REVISED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE--MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * CORE SPRAY * WELDS * FAILURE, ADMINISTRATIVE CONTROL * QUALITY ASSURANCE * COMMUNICATION * PIPES AND PIPE FITTINGS

113277

SURFACE CRACKS FOUND ON STEAM DRUM RELIEF VALVES AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS., LTR W/ER RO-5-76 TO NRC OFFICE OF I & E, REGION III, APRIL 9, 1976, DCKET 50-155, TYPE--BWR, MFU--U.S., AC--BECHTEL

CAUSE - NOT STATED. DURING THE REFUELING OUTAGE, NOT REVEALED SURFACE CRACKING IN THE STAINLESS STEEL NOZZLES OF 4 OF 7 STEAM DRUM RELIEF VALVES INCLUDING ONE SPARE. LEAKAGE DID NOT OCCUR. THE NOZZLE INSERTS WILL BE REPAIRED OR REPLACED IF NECESSARY PRIOR TO STARTUP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * STEAM * PRESSURE RELIEF * REFUELING * TEST, SYSTEM OPERABILITY * TEST, NONDESTRUCTIVE * NOZZLE * MAIN COOLING SYSTEM * CRACK * VALVES

113200

DIESEL GENERATOR TRIPS ON HIGH COOLING WATER TEMPERATURE AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS., LTR W/ER RO-4-76 TO U.S. NRC, REGION III, APRIL 15, 1976, DCKET 50-155, TYPE--BWR, MFU--U.S., AC--BECHTEL

CAUSE - PLUGGED INLET SCREEN. DURING TESTING WITH THE REACTOR SHUT DOWN FOR REFUELING, THE EMERGENCY DIESEL GENERATOR TRIPPED DUE TO HIGH COOLING WATER TEMPERATURE. THE WATER PUMP SUCTION SCREEN HAD BECOME PLUGGED BY MARINE GROWTH AND FOREIGN MATERIAL. THE SCREEN WAS CLEANED AND THE UNIT TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * FAILURE, EQUIPMENT * CRUD * FILTER, SCREEN * REFUELING * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * CLOGGING * ENGINE, INTERNAL COMBUSTION * GENERATOR, DIESEL

113550

LEAK RATE OF VENTILATION SUPPLY VALVE EXCESSIVE AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

1 PGS., LTR W/RO 6-76 TO U.S. NRC, REGION III, MAY 3, 1976, DCKET 50-155, TYPE--BWR, MFU--U.S., AC--BECHTEL

CAUSE - OUT OF ADJUSTMENT. DURING THE REFUELING OUTAGE, LEAK RATE TESTING OF THE VENTILATION SUPPLY VALVES REVEALED THAT 1 OF THE 2 VALVES IN SERIES WAS LEAKING ABOUT 10 TIMES THE LIMIT. THE DISC AND PACKING WERE ADJUSTED AND THE VALVE CLEANED. LEAKAGE IS NOW ACCEPTABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * CONTAINMENT PURGE * CONTAINMENT ISOLATION * TEST, LEAK RATE * REFUELING * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * LEAK RATE * VALVES

113402
RESIN SAUCE LINE ISOLATION VALVES FAIL TO CLOSE AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
2 PGS, LTR W/RO-7-70 TO U.S. NRC, REGION III, MAY 12, 1970, DOCKET 50-155, TYPE--DNR, RFL--G.E., AE--BECHTEL

CAUSE - SOLENOID VALVE PLUNGER DEFECTIVE. DURING TESTING WITH THE UNIT IN A REFUELING OUTAGE, 3 RESIN SAUCE LINE ISOLATION VALVES FAILED TO CLOSE ON A REMOTE SIGNAL. THE VALVES WERE LOCALLY SHUT. THE PLUNGER IN ASCC, TYPE A, FORM F, MODEL 031020 SOLENOID VALVE IN THE AIR OPERATING LINE TO THE 3 VALVES WAS DEFECTIVE. THE SOLENOID VALVE WAS REPAIRED AND TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (DNR) + FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + REFUELING + TEST, SYSTEM OPERABILITY + RESIN + PNEUMATIC SYSTEM + SCHEMATIC + VALVES

113600
DIESEL GENERATOR BREAKER INTERLOCK FAILS TO FUNCTION AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
2 PGS, LTR W/RO-9-70 TO U.S. NRC, REGION III, JUNE 9, 1970, DOCKET 50-155, TYPE--DNR, RFL--G.E., AE--BECHTEL

CAUSE - UNKNOWN. WITH THE UNIT IN COOL SHUTDOWN AND FOLLOWING AN OVERLOAD TRIP OF THE 2A-2B BUS THE BREAKER, THE DIESEL GENERATOR OUTPUT BREAKER INTERLOCK INVOLVING SHUNT TRIPPING OF THE 1A-2B THE BREAKER DID NOT FUNCTION AND POWER WAS NOT AUTOMATICALLY SUPPLIED TO THE 1B BUS. REMOTE MANUAL SWITCHING RESTORED ACQUIRED POWER SERVICES. THE PROBLEM WAS NOT REPEATABLE BY EITHER OPERATIONAL TESTING OR DEMO TESTING OF THE SHUNT TRIP DEVICE. THE EXACT CAUSE IS NOT KNOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (DNR) + EMERGENCY POWER, ELECTRIC + FAILURE, EQUIPMENT + INSTRUMENT, INTERLOCK + BREAKER + GENERATOR, DIESEL

113602
EMERGENCY DIESEL GENERATOR TRIPS AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
2 PGS, LTR W/RO-9-70 TO U.S. NRC, REGION III, JUNE 9, 1970, DOCKET 50-155, TYPE--DNR, RFL--G.E., AE--BECHTEL

CAUSE - HIGH COOLING WATER TEMPERATURE. DURING A SHUTDOWN, DIESEL GENERATOR WAS SUPPLYING A LOAD OF 95 KW TO BUSES 1A AND 1B FOLLOWING AN OVERLOAD TRIPPING OF BREAKER 52-2A WHEN IT TRIPPED ON HIGH COOLING WATER TEMPERATURE. THE COOLING PUMP SHAFT WAS FOUND TO BE SEIZED AND WAS REPLACED. THE INLET SCREEN WAS PARTIALLY PLUGGED AND THE DISCHARGE CANAL WAS FLUSHED AFTER REMOVING STOP LOGS TO CLEAR DEBRIS FROM THE DISCHARGE CANAL BAY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (DNR) + EMERGENCY POWER, ELECTRIC + FAILURE, EQUIPMENT + FLOW BLOCKAGE + COOLING + TEMPERATURE + FAILURE, INHERENT + ENGINES, INTERNAL COMBUSTION + GENERATOR, DIESEL

113603
SET POINT SHIFT IN ACCUMULATOR PRESSURE SWITCH AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
2 PGS, LTR W/RO-10-70 TO U.S. NRC, REGION III, JUNE 25, 1970, DOCKET 50-155, TYPE--DNR, RFL--G.E., AE--BECHTEL

CAUSE - PROBABLY ADJUSTED IMPROPERLY. DURING TESTING WHILE THE REACTOR WAS SHUT DOWN, 1 OF THE 2 RGL DRIVE ACCUMULATOR PRESSURE SWITCHES WAS FOUND TO OPERATE AT 603 PSIG. THE LOWER LIMIT IS 700 PSIG. IT IS POSTULATED THAT THE SWITCH MAY HAVE BEEN PREVIOUSLY ADJUSTED USING A DEFECTIVE LOCAL PRESSURE GAUGE. THE SWITCH WAS READJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (DNR) + INSTRUMENT CALIBRATION + PROTECTION SYSTEM + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SET POINT + DRIFT + SENSORS, PRESSURE

113700
DIESEL GENERATOR CONTROL CIRCUIT DEFICIENCY AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
2 PGS, LTR W/RO-11-70 TO U.S. NRC, REGION III, JULY 2, 1970, DOCKET 50-155, TYPE--DNR, RFL--G.E., AE--BECHTEL

CAUSE - INADEQUATE DESIGN REVIEW. THE EMERGENCY DIESEL GENERATOR OUTPUT BREAKER CONTROL CIRCUIT WAS MODIFIED WITHOUT ADEQUATE DESIGN REVIEW. THE SUPPLY WAS CHANGED FROM A 20-AMP BREAKER CIRCUIT ON THE PLANT STATIC BATTERY TO A 2-AMP FUSED CIRCUIT ON THE NEW UPS BATTERY A. THE CIRCUIT COULD TRIP UNDER NORMAL LOAD. THE FUSE WAS REPLACED BY WIRING. THE CIRCUIT IS NOW SUPPLIED THROUGH A 10-AMP BREAKER. THE INITIAL CHANGE WAS MADE WITHOUT ADEQUATE INFORMATION OF THE CIRCUIT CHARACTERISTICS.

115730 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • CONTAINMENT SYSTEM • DESIGN CRITERIA • MODIFICATION • ACTION • FAILURE, ADMINISTRATIVE CONTROL • GENERATOR, DIESEL

115737
 LEAKAGE OF CONTAINMENT VENTILATION VALVES EXCESSIVE AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR W/RO-12-76 TO NRC OFFICE OF I & E, REGION III, JULY 2, 1976, JUCRAT 50-155, TYPE--BWR, RFU--G.E., AE--BECHTEL

CAUSE - UNKNOWN. DURING LEAK RATE TESTING OF 2 CC • VENTILATION SUPPLY VALVES WHILE THE UNIT WAS SHUT DOWN, LEAKAGE EXCEEDED THAT ALLOWANCE. 2060 BOTH SEATS WERE CLEANED AND MINOR SEAT ADJUSTMENTS WERE MADE ON ONE. THEY WERE SUCCESSFULLY RETESTED. THE EXACT CAUSE IS UNKNOWN. SUSPECT CAUSES INCLUDE TEMPERATURE EFFECT ON SEATING MATERIAL, DIRT COLLECTION ON SEATING SURFACES, AND WEAR OF SEATING MATERIAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • CONTAINMENT • FAILURE, EQUIPMENT • CONTAINMENT PURGE • TEST, LEAK RATE • VENTILATION SYSTEM • TEST, SYSTEM OPERABILITY • LEAK RATE • VALVES

115800
 REACTOR WATER LEVEL INSTRUMENT IN ERROR AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR W/RO-13-76 TO U.S. NRC, REGION III, JULY 19, 1976, JUCRAT 50-155, TYPE--BWR, RFU--G.E., AE--BECHTEL

CAUSE - EQUALIZING VALVE LEFT OPEN. DURING A PLANT STARTUP FOR REACTOR DEPRESSURIZING SYSTEM TESTING, 1 OF THE 4 REACTOR WATER LEVEL INSTRUMENTS WAS ERRONEOUS. AN INSTRUMENT EQUALIZING VALVE HAD BEEN LEFT OPEN. A SPECIAL SET POINT CHANGE PROCEDURE HAD BEEN USED FOR PHASE DOWN ON THE LEVEL INSTRUMENT BUT IT DID NOT SPECIFY USE OF A CHECK LIST TO RETURN THE SYSTEM TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • REACTOR PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • FAILURE, MAINTENANCE ERROR • SENSORS, LEVEL

115801
 UNIDENTIFIED LEAKAGE EXCEEDS LIMIT AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR W/RO-14-76 TO U.S. NRC, REGION III, JULY 19, 1976, JUCRAT 50-155, TYPE--BWR, RFU--G.E., AE--BECHTEL

CAUSE - UNKNOWN. FOLLOWING HUT TESTING OF THE REACTOR DEPRESSURIZING SYSTEM VALVES, PRIMARY SYSTEM LEAKAGE AT 130 PSIG WAS 1.25 GPM EXCEEDING THE 1 GPM LIMIT. THE PLANT WAS BEING SHUT DOWN AT THE TIME. SUBSEQUENT TESTING DID NOT REVEAL ANY UNUSUAL LEAKAGE. THE EXACT CAUSE IS UNKNOWN. HOWEVER, POST INCIDENT SYSTEM RELIEF VALVES IN CONTAINMENT ARE SUSPECTED OF SEAL LEAKAGE DURING THE EVENT BASED ON CIRCUMSTANCES OF THE TEST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • CONTAINMENT • PRESSURE RELIEF • TEST, SYSTEM OPERABILITY • MAIN COOLING SYSTEM • LEAK RATE • VALVES

116090
 UPDATE REPORT ON STEAM DRUM RELIEF VALVE CRACKS AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR W/UPDATE RPT OF RU-3-76 TO U.S. NRC, REGION III, JULY 19, 1976, JUCRAT 50-155, TYPE--BWR, RFU--G.E., AE--BECHTEL

CAUSE - STRESS CORROSION/CASTING DEFECTS. DURING THE REFUELING UTILITY, INSPECTION OF THE STEAM DRUM RELIEF VALVES REVEALED SURFACE CRACKING ON THE NOZZLE OF 5 OF 7 VALVES. CRACKING IN THE 19-9 AL MATERIAL IS POSTULATED TO HAVE BEEN CAUSED BY STRESS CORROSION IN THE HIGH UTILITY STEAM SERVICE ENVIRONMENT. DURING SEAL WELDING OF REPLACEMENT NOZZLES ON 6 VALVES, DYE PENETRANT INDICATIONS WERE NOTED IN ALL VALVE BODIES ADJACENT TO THE SEAL WELD AREA. CRACKING IS POSTULATED TO BE PROPAGATION OF MINOR CASTING DEFECTS DURING THERMAL STRESS CONDITIONS OF ADJACENT NOZZLE SEAL WELDING. THE VALVES WERE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • STEAM • PRESSURE RELIEF • FAILURE, FABRICATION ERROR • REFUELING • STRESS CORROSION • DAMAGE • PEAT TREATMENT • CRACK • VALVES

110535
STATION BATTERY CHARGER FAILS AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
C PUS, LTR N/AU-15-70 TO NAC OFFICE OF I & E, REGION III, JULY 30, 1970, DUCRET 50-155, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SILICON RECTIFIERS. DURING A COLD SHUTDOWN, THE STATION BATTERY CHARGER FAILED AND LEDS ON THE BATTERY REDUCED VOLTAGE TO ABOUT 120 V AND SPECIFIC GRAVITY TO AN AVERAGE OF 1.175. THE CHARGER WAS REPLACED WITH A SPARE UNIT. DEFECTIVE SILICON RECTIFIERS WERE REPLACED IN THE ORIGINAL CHARGER. IT WAS THEN RETURNED TO SERVICE. AN EQUALIZING CHARGE RESTORED SPECIFIC GRAVITY TO GREATER THAN 1.200.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * FAILURE, EQUIPMENT * EMERGENCY POWER, ELECTRIC * FAILURE, INCIDENT * BATTERIES & CHARGERS

110000
CONTROL ROD DRIVE PILLS TO WITHDRAW AT BIG ROCK POINT 1
CONSUMERS POWER CO., MI
C PUS, LTR N/AU-18-70 TO U.S. NRC, REGION III, AUG. 4, 1970, DUCRET 50-155, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - FOREIGN OBJECT IN DRIVE SLEEVE. DURING ROUTINE TESTING OF ROD DRIVE COUPLING INTEGRITY WHILE THE PLANT WAS SHUT DOWN, DRIVE #4 WOULD NOT WITHDRAW. THE REACTION MEAS. WAS REMOVED AND A FOREIGN OBJECT WAS REMOVED FROM THE DRIVE SLEEVE. THIS HAS OCCURRED ON 3 PREVIOUS OCCASIONS. OBJECTS ARE POSTULATED TO BE REMNANTS FROM REACTOR UPPER WHIRL STRUCTURE REPAIR IN 1967. THE ROD WHIRL WAS RETURNED TO SERVICE FOLLOWING TESTING.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * FAILURE, EQUIPMENT * CAUSE * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * CONTROL ROD DRIVES

110001
SPECIFIC GRAVITY OF STATION BATTERY ACID LOW AT BIG ROCK POINT
CONSUMERS POWER CO., MI
C PUS, LTR N/AU-17-70 TO U.S. NRC, REGION III, AUG. 4, 1970, DUCRET 50-155, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - ADDITION OF EXCESS WATER. WHILE THE PLANT WAS IN COLD SHUTDOWN, SPECIFIC GRAVITY READINGS TAKEN FOLLOWING WATER ADDITION TO THE STATION BATTERY REVEALED MANY CELLS AT LESS THAN 1.2. ADDITION OF EXCESS WATER CAUSED THE REDUCTION OF SPECIFIC GRAVITY. PROCEDURE FOR ADDING WATER IN TERMS OF FREQUENCY AND AMOUNT WILL BE REVISED. THE BATTERY WAS PLACED ON EQUALIZING CHARGE FOR THE 24-HOUR PERIODS TO BRING THE CELLS TO FULLY CHARGED CONDITION.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * DILUTION * MAINTENANCE AND REPAIR * PROCEDURES AND MANUALS * TEST, SYSTEM OPERABILITY * FAILURE, ADMINISTRATIVE CONTROL * ACID * BATTERIES & CHARGERS

110700
REACTOR DEPRESSURIZING SYSTEM BATTERY C ACID SPECIFIC GRAVITY LOW AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
C PUS, LTR N/AU-20-70 TO U.S. NRC, REGION III, AUG. 19, 1970, DUCRET 50-155, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - ADDITION OF WATER. DURING A TEST OF THE REACTOR DEPRESSURIZING SYSTEM BATTERY C WITH THE REACTOR AT 25% POWER, THE PILOT CELL WAS BELOW 1.200 SPECIFIC GRAVITY. WATER HAD BEEN ADDED TO IT A DAY EARLIER AND CELL GRAVITY HAD NOT COME UP TO SPECIFICATION IN THE SHORT PERIOD OF TIME. THE BATTERY WAS PLACED ON EQUALIZING CHARGE AND RESTORED TO NORMAL WITHIN 24 HOURS. PROCEDURES TO CONTROL FREQUENCY AND AMOUNT OF WATER ADDITION TO BATTERY CELLS ARE BEING REVISED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * DILUTION * MAINTENANCE AND REPAIR * PROCEDURES AND MANUALS * TEST, SYSTEM OPERABILITY * FAILURE, ADMINISTRATIVE CONTROL * ACID * BATTERIES & CHARGERS

110701
REACTOR DEPRESSURIZING SYSTEM BATTERY C ACID SPECIFIC GRAVITY LOW AT BIG ROCK POINT
CONSUMERS POWER CO., JACKSON, MI
C PUS, LTR N/AU-19-70 TO U.S. NRC, REGION III, AUG. 19, 1970, DUCRET 50-155, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - ADDITION OF WATER. DURING A TEST OF THE REACTOR DEPRESSURIZING SYSTEM BATTERY C WHILE THE REACTOR WAS IN COLD SHUTDOWN, THE PILOT CELL WAS BELOW THE 1.200 SPECIFIC GRAVITY SPECIFICATION. THE EXACT CAUSE IS UNKNOWN, HOWEVER, ADDITION OF WATER MAY HAVE RESULTED IN THE 1.190 SPECIFIC GRAVITY. THE BATTERY WAS RECHARGED. PROCEDURES ARE BEING REVISED TO CONTROL WATER ADDITION.

110707 (CONTINUED)
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • QUALIFICATION • MAINTENANCE AND REPAIR • PROCEDURES AND MANUALS • TEST, SYSTEM OPERABILITY • FAILURE, ADMINISTRATIVE CONTROL • PACID • BATTERIES & CHARGERS

110706
 STARTING TIME OF DIESEL GENERATOR EXCEEDS LIMIT AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR WFO-10-76 TO U.S. NRC, REGION III, AUG. 19, 1976, DUCRET 50-155, TYPE--BWR, NRU--UOL, AC--BCHTEL

CAUSE - UNKNOWN. DURING WEEKLY TESTING OF THE EMERGENCY DIESEL GENERATOR WHILE THE REACTOR WAS IN COLD SHUTDOWN, THE STARTING TIME OF 25 SECONDS WAS IN EXCESS OF THE 15 SECOND EOLD CRITERIA. THE EXACT CAUSE OF VARIATIONS IN STARTING CHARACTERISTICS IS NOT KNOWN. HOWEVER, PLANS TO MODIFY THE STARTING TIME CYCLE ARE IN PROGRESS. THE DIESEL WAS RETESTED SATISFACTORILY PRIOR TO PLANT STARTUP ACTIVITIES.

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BIG ROCK POINT (BWR) • EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • RESPONSE TIME • TEST, SYSTEM OPERABILITY • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL

110706
 DIESEL GENERATOR FAILS TO START WITHIN TIME LIMIT AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR WFO-21-76 TO U.S. NRC, REGION III, SEPT. 3, 1976, DUCRET 50-155, TYPE--BWR, NRU--UOL, AC--BCHTEL

CAUSE - UNKNOWN. WHILE OPERATING AT 67% POWER, THE EMERGENCY DIESEL GENERATOR FAILED TO START WITHIN THE REQUIRED 15 SECONDS DURING TESTING. THE WATER JACKET HEATER WAS FOUND TO BE INOPERATIVE. IT WAS REPAIRED. THE EXACT CAUSE OF VARIATIONS IN STARTING CHARACTERISTICS IS UNKNOWN. PLANS TO MODIFY THE CRANKING-TIME CYCLE ARE IN PROGRESS. HEATER FAILURE MAY HAVE CONTRIBUTED TO THE PROBLEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • RESPONSE TIME • TEST, SYSTEM OPERABILITY • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL • HEATERS

110707
 DIESEL GENERATOR NOT RETESTED AFTER MAINTENANCE AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR WFO-23-76 TO U.S. NRC, REGION III, SEPT. 3, 1976, DUCRET 50-155, TYPE--BWR, NRU--UOL, AC--BCHTEL

CAUSE - MISUNDERSTANDING OF CRITERIA. FOLLOWING FAILURE OF THE EMERGENCY DIESEL GENERATOR TO START WITHIN THE 15 SECOND CRITERIA DURING TESTING WHILE THE REACTOR WAS AT 67% POWER, THE UNIT WAS RETURNED TO OPERABLE STATUS WITHOUT RETESTING TO ESTABLISH THAT THE CRITERIA COULD BE MET. THE SIGNIFICANCE OF THE STARTING TIME CRITERIA WAS NOT UNDERSTOOD BY OPERATIONS PERSONNEL. THE TEST PROCEDURE IS BEING REVISED TO CLARIFY RETEST REQUIREMENTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • EMERGENCY POWER, ELECTRIC • FAILURE, OPERATION ERROR • PROCEDURES AND MANUALS • TESTING • COMMUNICATION • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL

110154
 DIESEL GENERATOR FAILS TO MEET STARTING CRITERIA AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR WFO-25-76 TO U.S. NRC, REGION III, OCT. 1, 1976, DUCRET 50-155, TYPE--BWR, NRU--UOL, AC--BCHTEL

CAUSE - UNDEFINED FUEL PROBLEM. DURING A WEEKLY START TEST OF THE EMERGENCY DIESEL GENERATOR, THE UNIT DID NOT MEET THE 15-SECOND STARTING CRITERIA. IT STARTED SLOWLY AND REACHED FULL SPEED AFTER 35 SECONDS. IT STARTED SATISFACTORILY ON A RETEST. FAILURE APPEARS TO BE RELATED TO AN UNDEFINED FUEL SYSTEM PROBLEM. THE REACTOR WAS AT 60% POWER AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • FAILURE, EQUIPMENT • RESPONSE TIME • TEST, SYSTEM OPERABILITY • ENGINES, INTERNAL COMBUSTION

110162
 FIRE PUMP ACTUATION TESTS NOT PERFORMED AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI

11702 CONTINUED
 2 Pgs, LTR WPA-20-70 TO USSA, NRC, REGION III, OCT. 20, 1970, DUCRET 50-155, TYPE--BWR, NRC--G.E., AE--BECHTEL

CASE - PROCEDURES NOT DEVELOPED. NEW REQUIREMENTS FOR MONTHLY FIRE PUMP ACTUATION TESTS ASSOCIATED WITH THE REACTOR DEPRESSURIZATION SYSTEM TECH SPECS WERE NOT PERFORMED. TESTING MAY BECOME LONGER DURING THE INITIAL CHECKOUT OF THE SYSTEM BUT THE METHOD USED IS NOT FEASIBLE WHEN THE PLANT IS OPERATING. DUE TO AN OVERSIGHT, AN APPROPRIATE METHOD HAS NOT BEEN DEVELOPED. PROCEDURES WERE DEVELOPED AND TESTING COMPLETED.

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BIG ROCK POINT (BWR) • PROCEDURES AND MANUALS • TESTING • PRESSURE RELIEF • FAILURE, ADMINISTRATIVE CONTROL • TEST INTERVAL • FIRE PROTECTION • PUMPS

11904
 BATTERY PILOT CELL SPECIFIC GRAVITY FOUND LOW AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 Pgs, LTR WPA-20-70 TO USSA, NRC, REGION III, OCT. 20, 1970, DUCRET 50-155, TYPE--BWR, NRC--G.E., AE--BECHTEL

CASE - WATER ADDITION. WHILE OPERATING AT 85% POWER, THE BSR D BATTERY PILOT CELL SPECIFIC GRAVITY WAS FOUND AT 1.104. FURTHER TESTING REVEALED THAT 3 OTHER CELLS IN THE BANK OF 40 CELLS WERE ALSO LOW. WATER HAS BEEN ADDED TO THESE 4 CELLS THE PREVIOUS DAY AND RISING WAS NOT COMPLETE. OPEN TESTS WERE MADE. INSTRUCTIONS ON FREQUENCY AND AMOUNT OF WATER ADDITION HAVE BEEN REVISED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • BATTERIES & CHANNELS

11905
 EXPANSION JOINTS OF CONTAINMENT PENETRATIONS NOT VISUALLY INSPECTED AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 Pgs, LTR WPA-20-70 TO USSA, NRC, REGION III, OCT. 20, 1970, DUCRET 50-155, TYPE--BWR, NRC--G.E., AE--BECHTEL

CASE - MISUNDERSTANDING. WHILE OPERATING AT 85% POWER, A REVIEW OF INSPECTION REPORTS REVEALED THAT EXPANSION JOINTS AT THE CONTAINMENT PENETRATIONS HAVE NOT BEEN VISUALLY INSPECTED PER TECH SPECS. NO JOINTS WERE INSPECTED BUT NO EVIDENCE EXISTS THAT THE JOINT BODIES WERE. THE EXACT REQUIREMENTS OF THE TECH SPECS WERE APPARENTLY MISUNDERSTOOD. AN INITIAL INSPECTION WILL BE MADE AT THE NEXT SCHEDULED COLD SHUTDOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) • CONTAINMENT INTEGRITY • TEST, NONDESTRUCTIVE • FAILURE, ADMINISTRATIVE CONTROL • COMMUNICATION • CONTAINMENT PENETRATION

11910
 EXHAUST FLOW IN RAPID LIMITS AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 3 Pgs, LTR WPA-20-70 TO USSA, NRC, REGION III, OCT. 20, 1970, DUCRET 50-155, TYPE--BWR, NRC--G.E., AE--BECHTEL

CASE - UPDATING OF THE ANALYSIS. DURING THE ECCS STUDY BY EXXON NUCLEAR CO. USING AN UPDATED ANALYSIS FOR THE PROPOSED G-E FUEL DESIGN, THE G-3 ANALYSIS RESULTS, WHICH INCLUDED A CHANGE IN THE LIMITING BREAK SIZE, SUGGESTED THAT EXISTING RAPID LIMITS FOR THE PREVIOUS EXXON G RELOAD FUEL TYPES AT HIGH EXPOSURE WOULD BE REDUCED WITH THE UPDATED ANALYSIS. NEW ANALYSIS WERE PERFORMED FOR RELOAD G AND RELOAD G-3 FUEL. AS A RESULT, MORE RESTRICTIVE LIMITS ARE PRESENTLY IMPOSED FOR CURRENT OPERATION.

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ACCIDENT ANALYSIS • BIG ROCK POINT (BWR) • ACCIDENT, LOSS OF COOLANT • MIT CHANNEL ANALYSIS • FAILURE, DESIGN ERROR • EMERGENCY COOLING CONSIDERATIONS

11975
 REACTOR DEPRESSURIZING SYSTEM BATTERY PILOT CELL FOUND LOW AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 Pgs, LTR WPA-20-70 TO USSA, NRC, REGION III, NOV. 22, 1970, DUCRET 50-155, TYPE--BWR, NRC--G.E., AE--BECHTEL

CASE - WATER ADDED. DURING A SURVEILLANCE CHECK OF REACTOR DEPRESSURIZING SYSTEM BATTERY A PILOT CELL 55 WHILE OPERATING AT 85% POWER, THE SPECIFIC GRAVITY WAS FOUND TO BE 1.109. DURING EQUALIZING CHARGE, THE SPECIFIC GRAVITY WAS FOUND AT 1.104. FOLLOWING A 24-HOUR CHARGE, THE GRAVITY WAS RESTORED TO 1.104. ALL OTHER CELLS WERE ABOVE 1.100 SPECIFIC GRAVITY. WATER HAS BEEN ADDED TO THE CELL 5 DAYS PREVIOUSLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

119749 *CONTINUED*

OLW ROCK POINT (BWR) * BATTERIES & CHARGERS * SYSTEM CAPACITY * PRESSURE RELIEF * CONTROL SYSTEM * MAIN
 COOLING SYSTEM * TEST, SYSTEM OPERABILITY * ELECTRICAL POWER * ON SITE

119751

EMERGENCY DIESEL GENERATOR FAILS TO START AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS, LTR WFO-31-70 TO U.S. NRC, REGION III, NOV. 23, 1970, DUCREF 50-155, TYPE--DNR, WFO--WFO, AC--DECONTEL

CAUSE - EXACT CAUSE UNKNOWN. WHILE OPERATING AT 85% POWER, THE EMERGENCY DIESEL GENERATION FAILED
 TO START WITHIN THE PRESCRIBED TIME LIMITS DURING THE REGULAR START TEST. IT WAS RETESTED AND
 STARTED SATISFACTORILY. THE EXACT CAUSE IS UNKNOWN. FURTHER INVESTIGATION INDICATES THAT THE
 FUEL GOVERNOR CONTROL UNIT IS A POSSIBLE CAUSE. PURCHASEMENT OF A REPLACEMENT GOVERNOR UNIT HAS
 BEEN INITIATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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OLW ROCK POINT (BWR) * RESPONSE TIME * GENERATION, DIESEL * CONTROL SYSTEM * TEST, SYSTEM OPERABILITY *
 FAILURE, EQUIPMENT * ENGINES, INTERNAL COMBUSTION

119750

REACTOR DEPRESSURIZING SYSTEM CHANNEL REMOVED FROM SERVICE AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS, LTR WFO-34-70 TO U.S. NRC, REGION III, NOV. 23, 1970, DUCREF 50-155, TYPE--DNR, WFO--WFO, AC--DECONTEL

CAUSE - MAINTENANCE ACTIVITY. WHILE OPERATING AT 85% POWER, REACTOR DEPRESSURIZING SYSTEM CHANNEL
 1 WAS REMOVED FROM SERVICE TO FACILITATE CORRECTIVE MAINTENANCE FOLLOWING TEST CIRCUITRY FAILURE
 DISCOVERED DURING ROUTINE TESTS. POWER SOURCES ARE ROUTINELY TURNED OFF FOR SUCH MAINTENANCE
 ACTIVITIES FOR PERSONNEL SAFETY AND CIRCUIT COMPONENT INTEGRITY. THE SYSTEM WAS RESTORED TO
 SERVICE WITHIN THE 4-HOUR PERIOD ALLOWED BY TECH SPECS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

OLW ROCK POINT (BWR) * CONTROL SYSTEM * PRESSURE RELIEF * ENGINEERED SAFETY FEATURE * MAINTENANCE AND REPAIR
 * FAILURE, INHERENT

120270

EMERGENCY DIESEL GENERATOR START TIME EXCEEDS LIMIT AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS, LTR WFO-32-70 TO NRC OFFICE OF I & E, REGION III, DEC. 1, 1970, DUCREF 50-155, TYPE--DNR, WFO--WFO,
 AE--DECONTEL

CAUSE - FUEL GOVERNOR MALFUNCTION. WHILE OPERATING AT 85% POWER, THE EMERGENCY DIESEL GENERATION
 START TIME WAS 2.2 SECONDS SLOWER THAN THE REQUIRED TIME DURING THE REGULAR START TEST. IT WAS
 RETESTED AND STARTED SATISFACTORILY. PREVIOUS INVESTIGATION INDICATES POSSIBLE MALFUNCTION
 OPERATION OF THE FUEL GOVERNOR. A REPLACEMENT UNIT HAS BEEN ORDERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

OLW ROCK POINT (BWR) * RESPONSE TIME * ENGINES, INTERNAL COMBUSTION * TEST, SYSTEM OPERABILITY * EMERGENCY
 POWER, ELECTRIC * FAILURE, COMPLAINT * FAILURE, INHERENT * GENERATION, DIESEL

120271

SPECIFIC GRAVITY ON PILOT CELL OF NDS BATTERY LOW AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS, LTR WFO-33-70 TO NRC OFFICE OF I & E, REGION III, DEC. 1, 1970, DUCREF 50-155, TYPE--DNR, WFO--WFO,
 AE--DECONTEL

CAUSE - UNKNOWN. DURING ROUTINE CHECKS OF SPECIFIC GRAVITY WHILE THE REACTOR WAS AT 85% POWER,
 THE PILOT CELL ON REACTOR DEPRESSURIZING SYSTEM WAS 1.192. ALL OTHER CELLS WERE ABOVE 1.200.
 FOLLOWING EQUALIZING CHARGE, THE SPECIFIC GRAVITY WAS 1.204. THE BATTERY IS SCHEDULED FOR
 EXTENDED EQUALIZING CHARGE TO DETERMINE NEED FOR ELECTROLYTE ADJUSTMENT OR OTHER CORRECTIVE
 ACTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

OLW ROCK POINT (BWR) * BATTERIES & CHARGERS * SYSTEM CAPACITY * TEST, SYSTEM OPERABILITY * FAILURE,
 EQUIPMENT * EMERGENCY POWER, ELECTRIC

120400

DIESEL GENERATOR FAILS TO START AT BIG ROCK POINT

CONSUMERS POWER CO., JACKSON, MI

2 PGS, LTR WFO-30-70 TO U.S. NRC, REGION III, DEC. 17, 1970, DUCREF 50-155, TYPE--DNR, WFO--WFO, AC--DECONTEL

120060 CONTINUED

CAUSE - DURING STARTUP IN STARTER BENCH, WHILE OPERATING AT 85% POWER, THE EMERGENCY DIESEL GENERATOR FAILED TO START DURING THE HEELY TEST. THE CHANNING MOTOR DID NOT ENGAGE THE ENGINE. A CHANNING SPRING WAS FOUND IN THE BENCH MECHANISM OF THE STARTING MOTOR UNIT. THE STARTING MOTOR UNIT WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OLU AUKA POINT (BMR) - GENERATION, DIESEL - ENGINES, INTERNAL COMBUSTION - TEST, SYSTEM OPERABILITY - FAILURE, EQUIPMENT - FAILURE, INCIDENT - EMERGENCY POWER, ELECTRIC

120074

NDS TEST PROCEDURES INADEQUATE TO COVER TECH SPECS AT OLU AUKA POINT

WASUMERS POWER CO., JACKSON, MI

2 PGS, LTR W/RO-92-76 TO NRC OFFICE OF I & E, REGION III, DEC. 22, 1970, DUKET 50-155, TYPE--BMR, NPG--WUE, AE--DECTEL

CAUSE - INSUFFICIENT KNOWLEDGE OF SYSTEM. DURING A REVIEW OF TEST PROCEDURES AS A RESULT OF A MINOR TEST MALFUNCTION, IT WAS REALIZED THAT THE MONTHLY ON-LINE TESTS WERE NOT ADEQUATE TO COVER TECH SPEC TEST REQUIREMENTS FOR THE REACTOR DEPRESSURIZING SYSTEM. SUBSEQUENT REVIEW INDICATES THAT MINIMUM HEELY VERIFICATION OF THE CONTINUOUS AUTOMATIC TEST CIRCUITRY AND ADDITIONAL TESTING DURING REFUELLING SHUTDOWNS, ADEQUATE TESTING CAN BE ACCOMPLISHED. PROCEDURE DEVELOPMENT WAS INADEQUATE DUE TO INSUFFICIENT KNOWLEDGE OF DETAILS OF THE ACTUATION SYSTEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OLU AUKA POINT (BMR) - PROCEDURES AND MANUALS - TESTING - PRESSURE RELIEF - CONTROL SYSTEM - FAILURE, ADMINISTRATIVE CONTROL - REVIEW

120075

NDS TEST PROCEDURES SUBJECT SYSTEM TO VIOLATION OF DESIGN CRITERIA AT OLU AUKA POINT

WASUMERS POWER CO., JACKSON, MI

2 PGS, LTR W/RO-92-76 TO NRC OFFICE OF I & E, REGION III, DEC. 22, 1970, DUKET 50-155, TYPE--BMR, NPG--WUE, AE--DECTEL

CAUSE - INSUFFICIENT KNOWLEDGE OF SYSTEM. DURING A REVIEW OF SURVEILLANCE TEST PROCEDURES AS A RESULT OF A MINOR TEST MALFUNCTION, IT WAS REALIZED THAT THE MONTHLY ON-LINE TEST METHOD FOR THE REACTOR DEPRESSURIZING SYSTEM WAS SUBJECTING THE SYSTEM TO VIOLATION OF THE SINGLE FAILURE DESIGN CRITERIA FOR INADEQUATE GENERATION. PROCEDURE DEVELOPMENT WAS INADEQUATE DUE TO INSUFFICIENT KNOWLEDGE OF THE DETAILS OF THE ACTUATION SYSTEM. REVISED PROCEDURES HAVE BEEN APPROVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OLU AUKA POINT (BMR) - PROCEDURES AND MANUALS - DESIGN CRITERIA - SINGLE FAILURE CRITERION - FAILURE, ADMINISTRATIVE CONTROL - PRESSURE RELIEF - CONTROL SYSTEM - TESTING

120076

CONDENSATE RADIATION MONITOR FLUX INADEQUATE AT OLU AUKA POINT

WASUMERS POWER CO., JACKSON, MI

2 PGS, LTR W/RO-92-76 TO NRC, REGION III, DEC. 30, 1970, DUKET 50-155, TYPE--BMR, NPG--WUE, AE--DECTEL

CAUSE - INADEQUATE SURVEILLANCE. DURING INVESTIGATION OF A CONDENSATE STORAGE WATER TRANSFER PROBLEM WHILE OPERATING AT 85% POWER, THE CONDENSATE RADIATION MONITOR WAS OBSERVED TO HAVE INADEQUATE FLUX. THIS CONDITION MAY HAVE EXISTED SINCE THE JAN. 1970 SHUTDOWN. IT WAS CAUSED BY INADEQUATE SURVEILLANCE OF MONITOR FLUXES. PROCEDURES ARE BEING DEVELOPED TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OLU AUKA POINT (BMR) - FLUX - SAMPLING - RADIATION MONITORS - FEEDWATER - COOLING SYSTEM, SECONDARY - FAILURE, ADMINISTRATIVE CONTROL - PROCEDURES AND MANUALS

120077

DIESEL GENERATOR FAILS TO START WITHIN SPECIFIED TIME AT OLU AUKA POINT

WASUMERS POWER CO., JACKSON, MI

2 PGS, LTR W/RO-92-76 TO NRC, REGION III, DEC. 30, 1970, DUKET 50-155, TYPE--BMR, NPG--WUE, AE--DECTEL

CAUSE - UNKNOWN. WITH THE REACTOR AT 85% POWER, THE EMERGENCY DIESEL GENERATOR FAILED TO START WITHIN THE TIME SPECIFIED DURING THE HEELY TEST. THE START WAS 17 SECONDS. TEST CRITERIA IS 10 SECONDS. A SUBSEQUENT TEST START WAS 9.5 SECONDS. EXACT CAUSE REMAINS UNKNOWN. HOWEVER, THE FUEL GOVERNOR WAS REPLACED AND OTHER MODIFICATIONS RELATED TO FUEL CONTROL ARE BEING CONSIDERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OLU AUKA POINT (BMR) - PRESPARE TIME - GENERATION, DIESEL - ENGINES, INTERNAL COMBUSTION - TEST, SYSTEM

120677 *CONTINUED*
 OPERABILITY * FAILURE, DESIGN ERROR * FAILURE, EQUIPMENT * MODIFICATION * EMERGENCY POWER, ELECTRICAL

120676
 LIQUID PUSHA CIRCUIT TEST NOT PERFORMED AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR W/RO-37-76 TO U.S. NRC, REGION III, DEC. 30, 1970, DUCRET 50-155, TYPE--BWR, RFU--GUL, AE--DECHTEL

CAUSE - INCORRECT SCHEDULING. DURING A REVIEW OF TESTING REQUIREMENTS, A BI-MONTHLY LIQUID PUSHA CIRCUIT TEST WAS IDENTIFIED AS HAVING BEEN OMITTED FOR JUNE, AUGUST, AND OCTOBER 1970. THE TEST HAD BEEN INADVERTENTLY CODED AS A REFUELING OUTAGE TEST IN ANTICIPATION OF TREC SPEC CHANGES WHICH HAVE NOT BEEN APPROVED. THE TEST WAS COMPLETED SATISFACTORILY 11/30/70.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * TEST INTERVAL * TESTING * *COMPUTATION SYSTEM, SECURITY * FAILURE, ADMINISTRATIVE CONTROL * POISON, SURVIVAL * REVIEW

120679
 AHS BATTERY PILOT CELL SPECIFIC GRAVITY LOW AT BIG ROCK POINT
 CONSUMERS POWER CO., JACKSON, MI
 2 PGS, LTR W/RO-39-76 TO U.S. NRC, REGION III, DEC. 30, 1970, DUCRET 50-155, TYPE--BWR, RFU--GUL, AE--DECHTEL

CAUSE - NOT STATED. DURING THE WEEKLY CHECK OF REACTOR DEPRESSURIZATION SYSTEM BATTERY, PILOT CELL 27 SPECIFIC GRAVITY WAS 1.190. ALL OTHER CELLS WERE ABOVE 1.200. A SUBSEQUENT CHECK OF CELL 27 THE SAME DAY INDICATED 1.203. THE BATTERY HAD BEEN ON A SPECIAL 72-HOUR EQUALIZING CHARGE AS PART OF AN INVESTIGATION OF PREVIOUS SPECIFIC GRAVITY PROBLEMS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BIG ROCK POINT (BWR) * SYSTEM CAPACITY * BATTERIES & CHARGERS * PRESSURE RELIEF * TEST, SYSTEM OPERABILITY

110370
 DESIGN DEFICIENCY FOUND IN LPCI LOOP SELECTION LOGIC AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PGS, LTR W/BAU-50-259/7020 TO U.S. NRC, REGION II, FEB. 17, 1970, DUCRET 50-259, TYPE--BWR, RFU--GUL, AE--TVA

CAUSE - DESIGN ERROR. DURING AN INVESTIGATION OF THE LPCI LOOP SELECTION LOGIC OF THE RRM SYSTEM WHILE THE UNIT WAS IN COLD SHUTDOWN, A DESIGN DEFICIENCY WAS FOUND. A SINGLE COMPONENT FAILURE IN THE LOGIC COULD POSSIBLY RESULT IN 4 RRM PUMPS FLOWING TO A BROKEN LINE CAUSING RUN OUT OF THE PUMPS. THIS WOULD BE A THREAT TO LOW TEMPERATURE CONTAINMENT COOLING. THIS IS ALSO APPLICABLE TO UNIT 2.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT * CONTROL SYSTEM * FAILURE, DESIGN ERROR * SHUTDOWN COOLING SYSTEM * SINGLE FAILURE CRITERION * BROWNS FERRY 1 (BWR) * LPCI

113100
 RRIC SYSTEM VALVE FAILS TO OPERATE AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 7 PGS, LTR W/BAU-50-259/7020 TO U.S. NRC, REGION II, APRIL 20, 1970, DUCRET 50-259, TYPE--BWR, RFU--GUL, AE--TVA

CAUSE - SWITCH FAILURE. DURING A RRIC SYSTEM RETEST WHILE THE REACTOR WAS SHUT DOWN FOR REPAIR, THE RRIC PUMP DISCHARGE VALVE WOULD NOT OPERATE. A GE TYPE SSM MODEL 205A077400 SWITCH HAD FAILED. THE SWITCH WAS REPLACED. AN INSPECTION OF SWITCHES OF THIS MODEL INSTALLED THROUGHOUT THE PLANT REVEALED A LARGE NUMBER OF CAM FOLLOWERS WITH A CRAZED APPEARANCE. THIS WAS FOUND IN EACH OF THE 3 UNITS. THE INVESTIGATION CONTINUES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * FAILURE, DESIGN ERROR * BROWNS FERRY 1 (BWR) * RRIC * FAILURE, COMMON REAR * VALVES

113954
 SMALL FIBE OCCURS IN WATHELL AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 4 PGS, LTR W/BAU-50-259/7020 TO U.S. NRC, REGION II, MAY 10, 1970, DUCRET 50-259, TYPE--BWR, RFU--GUL, AE--TVA

CAUSE - INADEQUATE OBSERVATION DURING WELDING. DURING MODIFICATION OF EXISTING WATINGS IN THE

115554 PLANTINERG

WYRELL TO ADAPT TO MODIFICATIONS. SLAG FELL DOWN AND IGNITED 4 LENGTHS OF BREATHING AIR HOSE IN A PLASTIC WRAPPER AND A LENGTH OF ELECTRICAL EXTENSION CORD. APPARENTLY, SLAG FELL ONTO AN I-BEAM AND RAN DOWN THE BEAM TO THE MATERIAL. THE CRAFTSMEN LEFT THE WYRELL AT 11:45 AM. THE FIRE WAS REPORTED AT 12:00 AM. THE FIRE WAS EXTINGUISHED USING DRY CHEMICALS AND VEMINERIALIZED WATER. THE CAUSE WAS INADEQUATE OBSERVATION BY FOREMAN OF ESTABLISHED PROCEDURE FOR CONTROL OF CUTTING AND MELTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PLANTINERG • OF LINE • INCLUDING • FAILURE, ADMINISTRATIVE CONTROL • BROWN FERRY 1 (BWR)

110075

SUPPLEMENTAL REPORT ON GE TYPE SON SWITCHES AT BROWN FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PAGES, LTR W/BRU-259/7024 TO NRC OFFICE OF 1 & 2, REGION II, JULY 30, 1970, DUCRET 50-259, TYPE--BWR, NRU--GE, AC--TVA

CASE - CLEANING WITH HYDROCARBON SOLVENTS. ALL GE TYPE SON SWITCHES ON UNITS 1, 2, AND 3 WERE INSPECTED. THERE WERE 130 FOUND TO HAVE BEEN MANUFACTURED DURING THE PERIOD WHEN THE LEAK CAN FOLLOWERS WERE EXPOSED TO HYDROCARBONS. IN ADDITION, 237 WERE FOUND CONTAINING CRACKED CAN FOLLOWERS AND 12 WITH CRACKED CAN FOLLOWERS. AS A PRECAUTION, 33 ADDITIONAL SWITCHES THAT WERE INSTALLED WITHIN THE FIRE RESISTIVE SPREAD AREA WERE IDENTIFIED. THERE WERE 420 INSTALLED SWITCHES REPLACED. INSTRUCTIONS WERE ISSUED DURING USE OF CLEANING SOLVENTS CONTAINING HYDROCARBONS ON SON SWITCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • INSTRUMENT, SWITCH • OF FAILURE, FABRICATION ERROR • BROWN FERRY 1 (BWR)

110527

CABLE TRAY MOUNT DETECTOR DAMAGED AT BROWN FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PAGES, LTR W/BRU-50-259/7024 TO NRC, REGION II, AUG. 10, 1970, DUCRET 50-259, TYPE--BWR, NRU--GE, AC--TVA

CASE - PERSONNEL ERROR. A CABLE TRAY KIDDE FIRE AND OVERHEAT DETECTOR, PART NUMBER 87090, LOCATED IN THE REACTOR BUILDING WAS DAMAGED BY PERSONNEL WORKING IN THE AREA. IT WAS REPLACED WITH A NEW DETECTOR. THE UNIT WAS IN SHUTDOWN AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OF LINE • INSTRUMENT, SURVEILLANCE • FAILURE, MAINTENANCE ERROR • DAMAGE • SUPPORT STRUCTURE • CABLES AND CONNECTORS • BROWN FERRY 1 (BWR) • FIRE PROTECTION

117059

LEAD WIRE TO THERMOCOUPLE BROKE AT BROWN FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PAGES, LTR W/BRU-50-259/7024 TO NRC, REGION II, AUG. 11, 1970, DUCRET 50-259, TYPE--BWR, NRU--GE, AC--TVA

CASE - CRIMP CONNECTION. LEAD WIRE TO THERMOCOUPLE BROKE, MAKING 11-04-55A IMPERABLE (TURNS WATER TEMPERATURE). FUEL LOADING WAS IN PROGRESS. THE LEAD BROKE AT A POINT WHERE THE WIRE TERMINATES AT A CRIMP CONNECTION. THE CABLE IS 2 CONDUCTOR NO. 10 TVA TYPE WUB. IT WAS RE-TERMINATED WITHOUT A CRIMP CONNECTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • REFUELING • FAILURE, INSTALLATION ERROR • THERMOCOUPLE • PLATES AND CONNECTORS • BROWN FERRY 1 (BWR)

110520

RAM SERVICE WATER TANK LEVEL SWITCH STICKS AT BROWN FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PAGES, LTR W/BRU-50-259/7024 TO NRC, REGION II, AUG. 11, 1970, DUCRET 50-259, TYPE--BWR, NRU--GE, AC--TVA

CASE - SLIGHT SHIFT OF OPERATING MECHANISM. WITH THE UNIT IN COLD SHUTDOWN, A RAM SERVICE WATER TANK LEVEL SWITCH BECAME STUCK AND PREVENTED THE START UP OF A RAM SERVICE WATER PUMP. THIS CAUSED THE TANK TO DRAIN BELOW THE TECH SPEC MINIMUM LEVEL AND REQUIRED STARTING UP A FIRE PUMP. THE REACTOR, TYPE 251-CPP-342-340, LEVEL SWITCH STUCK DUE TO A SLIGHT SHIFTING OF THE OPERATING MECHANISM. THE MECHANISM WAS ADJUSTED TO PREVENT BINDING AND THE SWITCH RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

116526 *CONTINUUM
FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * STORAGE CONTAINER * BROWN'S FERRY 1 (BRN) * FAILURE, INHERENT * SERVICE WATER SYSTEM * OXYGEN GAS, LEVEL

117003
CONTROL ROOM ANNUNCIATOR FOR FIRE PROTECTION SYSTEM FAILS AT BROWN'S FERRY 1
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR N/DFAD-50-259/7013 TO W.S. NRC, REGION II, SEPT. 2, 1970, WUCRET 50-259, TYPE--BOM, MFU--GEC, AE--TVA

CAUSE - POWER SUPPLY TRANSFORMER FAILS. DURING REFUELING, A CONTROL ROOM ANNUNCIATOR FOR THE FIRE PROTECTION SYSTEM SMOKE AND HEAT ALARMS FAILED. A POWER SUPPLY TRANSFORMER FAILED IN THE LONGELL CONTROLS PART NO. 310940 POWER SUPPLY CARU FOR THE STATALARM ANNUNCIATOR. THE OPERATOR SMELLED THE HOT TRANSFORMER. THE CARU WAS REPLACED AND THE ANNUNCIATOR RETURNED TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT * REFUELING * BROWN'S FERRY 1 (BRN) * FIRE PROTECTION * FAILURE, INHERENT * ELECTRONIC FUNCTION UNITS * ANNUNCIATORS

110201
FIRE PROTECTION SYSTEM SMOKE AND HEAT ALARMS FAIL AT BROWN'S FERRY 1
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR N/DFAD-50-259/7013 TO W.S. NRC, REGION II, SEPT. 2, 1970, WUCRET 50-259, TYPE--BOM, MFU--GEC, AE--TVA

CAUSE - POWER SUPPLY TRANSFORMER FAILS. WHILE THE REACTOR WAS IN COOL SHUTDOWN, THE CONTROL ROOM ANNUNCIATOR FOR THE FIRE PROTECTION SYSTEM SMOKE AND HEAT ALARMS FAILED. A POWER SUPPLY TRANSFORMER FAILED IN THE LONGELL CONTROLS PART NO. 310940 POWER SUPPLY CARU FOR THE STATALARM ANNUNCIATOR. THE CARU WAS REPLACED AND THE ANNUNCIATOR RETURNED TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT * FAILURE, INSTRUMENT * FUNCTION * REFUELING * SMOKE * BROWN'S FERRY 1 (BRN) * FIRE PROTECTION * FAILURE, INHERENT * ELECTRONIC FUNCTION UNITS * ANNUNCIATORS * TRANSFORMERS

110202
SEISMIC SET POINTS FOR ACCELEROMETERS NOT SET PROPERLY AT BROWN'S FERRY 1
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 PGS, LTR N/DFAD-50-259-7014 TO NRC OFFICE OF I & E, REGION II, SEPT. 21, 1970, WUCRET 50-259, TYPE--BOM, MFU--GEC, AE--TVA

CAUSE - SET POINTS INADVERTENTLY REVERSED. WITH UNITS 1 AND 2 IN REFUEL MODE AND UNIT 3 IN STARTUP, SEISMIC SET POINTS FOR SMA ACCELEROMETERS WERE FOUND AT 0.1u AND NOT 0.01u AS REQUIRED. SEISMIC SET POINTS WERE INADVERTENTLY REVERSED IN SURVEILLANCE INSTRUCTIONS FOR 3 SMA ACCELEROMETERS AND 3 ALARM TRIGGERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS * REFUELING * FAILURE, ADMINISTRATIVE CONTROL * INSTRUMENT, EARTHQUAKE * SET POINT * BROWN'S FERRY 1 (BRN)

110420
REACTOR HEATUP RATE EXCEEDED AT BROWN'S FERRY 1
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 PGS, LTR N/DFAD-50-259/7017 TO NRC OFFICE OF I & E, REGION II, SEPT. 30, 1970, WUCRET 50-259, TYPE--BOM, MFU--GEC, AE--TVA

CAUSE - OPERATOR ERROR. WHILE BRINGING THE REACTOR TO NATED PRESSURE AND TEMPERATURE WITH THE REACTOR AT 16 POWER, THE HEATUP RATE OF 100 F/PM WAS EXCEEDED. AS CONTROL RODS WERE BEING PULLED AND BYPASS VALVES WERE OPENING, THE OPERATOR NOTICED THE PRESSURE WAS REACHING A POINT WHERE THE CONDENSATE BOOSTER PUMPS COULD NOT SUPPLY WATER TO THE VESSEL. REACTOR PRESSURE WAS NOT HIGH ENOUGH TO GET REACTOR FLOW PUMP IN SERVICE. THE OPERATOR INCREASED THE PRESSURE REGULATION SET POINT TO INCREASE STEAM FLOW AND MAINTAIN PROPER WATER LEVEL. THIS RESULTED IN THE HEATUP RATE BEING EXCEEDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR * CHAIN CEILING SYSTEM * RATE * OTHERMAL TRANSIENT * BROWN'S FERRY 1 (BRN)

110800
MPC1 TRIPS AND ACIC FAILS TO OPERATE PROPERLY AT BROWN'S FERRY 1
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

110000 ACQUITTANCE
 2 Pgs. LTR NUBRU-50-259/7015 TO NRC OFFICE OF I & E, REGION II, SEPT. 30, 1970, DUCRET 50-259, TYPE--DMA, NRC--
 WACO, AC--TVA

CAUSE - LEAKING RUPTURE DISC/SLOWDOWN OVERHEAD. WITH THE REACTOR AT 44 POWER, IT TRIPPED DURING TESTING DUE TO A LEAKING RUPTURE DISC ON THE STEAM DISCHARGE LINE. FOLLOWING THIS, NCIC FAILED THE REACTOR SURVEILLANCE TEST DUE TO A SLOWDOWN OVERHEAD. THE REACTOR WAS PLACED IN COLD SHUTDOWN. THE RUPTURE DISC LACED AS A RESULT OF ALTERNATING PRESSURE AND VACUUM. A NEW RUPTURE DISC WITH A VACUUM SUPPORT WAS INSTALLED. THE DEFECTIVE OVERHEAD OVERHEAD E-4 WAS REPLACED WITH A NEW ONE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + INSTRUMENT, PROTECTIVE + STEAM + CONTROL + PRESSURE RELIEF + TEST, SYSTEM OPERABILITY + FAILURE, SIMULTANEOUS + REACTOR SHUTDOWN + BROWNS FERRY 1 (DMR) + FAILURE, INCIDENT + NCIC + ONPCI

110027
 NEW NORTH MINIMIZER LATCHES IN FIRST ALL OF GROUP 5 AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs. LTR NUBRU-50-259/7016 TO NRC OFFICE OF I & E, REGION II, OCT. 4, 1970, DUCRET 50-259, TYPE--DMA, NRC--
 WACO, AC--TVA

CAUSE - UNKNOWN. WITH THE REACTOR AT 46 POWER, THE NEW NORTH MINIMIZER LATCHES IN THE FIRST AND OF GROUP 5 FOLLOWING PROPER OPERATION DURING STARTUP AND WITHDRAWAL OF THE PREVIOUS 4 NEW GROUPS. BEFORE WITHDRAWING THE FIRST GROUP 5 ROD, A SHUTDOWN WAS INITIATED DUE TO OTHER PROBLEMS. THE SHUTDOWN PROCEDURE THROUGH NEW GROUP 5 AND UPON SELECTION OF THE FIRST ROD IN GROUP 5, THE ROD WAS WITHHELD STILL LATCHED IN GROUP 5. NO CAUSE WAS FOUND FOR THE ROD PROBLEM. FAILURE DURING SURVEILLANCE DATA TRANSFER TO THE ROD IS SUSPECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

PLANTAL SYSTEM + INSTRUMENT, PROTECTIVE + REACTOR CONTROL + FAILURE, INSTRUMENT + BROWNS FERRY 1 (DMR) + PLANTAL AGO DRIVES

110007
 FALSE ALARM RECEIVED FROM SMOKE DETECTOR AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs. LTR NUBRU-50-259/7015 TO NRC OFFICE OF I & E, REGION II, OCT. 20, 1970, DUCRET 50-259, TYPE--DMA, NRC--
 WACO, AC--TVA

CAUSE - INCREASED SENSITIVITY. WHILE THE UNIT WAS AT ZERO POWER, A FALSE ALARM WHICH WOULD NOT CLEAR WAS RECEIVED FROM A SMOKE DETECTOR IN THE CABLE TUNNEL TO THE INTAKE. THE ALARM WAS DUE TO INCREASED DETECTOR SENSITIVITY. THE SMOKE DETECTOR WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, INSTRUMENT + MONITOR + SMOKE + INSTRUMENT, ABNORMAL INDICATION + BROWNS FERRY 1 (DMR) + FAILURE, INCIDENT

110006
 FALSE ALARM RECEIVED FROM SMOKE DETECTOR AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs. LTR NUBRU-50-259/7015 TO NRC OFFICE OF I & E, REGION II, OCT. 20, 1970, DUCRET 50-259, TYPE--DMA, NRC--
 WACO, AC--TVA

CAUSE - INCREASED DETECTOR SENSITIVITY. WHILE THE UNIT WAS SHUT DOWN, A FALSE ALARM WHICH WOULD NOT CLEAR WAS RECEIVED FROM A SMOKE DETECTOR IN THE CABLE TUNNEL TO THE INTAKE. THE ALARM WAS DUE TO INCREASED DETECTOR SENSITIVITY. THE SMOKE DETECTOR WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, INSTRUMENT + MONITOR + SMOKE + INSTRUMENT, ABNORMAL INDICATION + BROWNS FERRY 1 (DMR) + FAILURE, INCIDENT

110004
 COKE SPRAY SPARGER VESSEL UP SWITCH FOUND VALVED OUT AT BROWNS FERRY 1
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs. LTR NUBRU-50-259/7020 TO NRC OFFICE OF I & E, REGION II, OCT. 20, 1970, DUCRET 50-259, TYPE--DMA, NRC--
 WACO, AC--TVA

CAUSE - PERSONNEL ERROR. DURING AN INVESTIGATION OF ALARMS WHILE OPERATING AT 46 POWER, THE COKE SPRAY SPARGER VESSEL UP SWITCH WAS FOUND VALVED OUT. IT WAS APPARENTLY LEFT VALVED OUT FOLLOWING REMOVAL OF TEMPORARY TYPING TUNING CONNECTIONS USED FOR MONITORING THE REACTOR VESSEL WATER LEVEL DURING A RECENT OUTAGE. THE SWITCH WAS VALVED INTO SERVICE AND THE ALARM CLEARED.

119006 ALUMINUM

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WIRE SPRAY • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • FAILURE, MAINTENANCE ERROR • EMERGENCY LOCKING SYSTEM • BRUNN'S FERRY 1 (UNIT) • SEASONS, PRESSURE

119150

RAM PUMP PRESSURE SWITCH FAILS TO OPERATE AT BRUNN'S FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS. LTR W/BRF-30-259/7041 TO NRC OFFICE OF I & E, REGION II, DEC. 26, 1970, SUBJECT 30-259, TYPE--DM, MW--W.E., AE--TVA

CAUSE - BINDING PLUMBER. DURING STARTUP TESTING AT 350 PPM, 1 OF THE 4 RAM PUMP DISCHARGE PRESSURE SWITCHES WAS FOUND INOPERATIVE. THE STATIC-DRIVING MODEL 30-643-0120 P.S. PRESSURE SWITCH FAILED DUE TO A BINDING PLUMBER. THE ENTIRE SWITCH WAS REPLACED AND TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SIMULATED LOCKING SYSTEM • BRUNN'S FERRY 1 (UNIT) • SEASONS, PRESSURE

119752

DIESEL GENERATOR HAS ERRATIC SPEED BEHAVIOR AT BRUNN'S FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS. LTR W/BRF-30-259/7042 TO NRC OFFICE OF I & E, REGION II, NOV. 26, 1970, SUBJECT 30-259, TYPE--DM, MW--W.E., AE--TVA

CAUSE - DIRT U/L IN GOVERNOR ACTUATOR. DURING TESTING WITH THE REACTOR AT 350 PPM, DIESEL GENERATOR HAD ERRATIC SPEED BEHAVIOR UNDER LOAD. THE APPARENT CAUSE WAS DIRT U/L IN THE GOVERNOR GOVERNOR MODEL 80-010 ACTUATOR. THE U/L WAS CHANGED AND THE DIESEL TESTED SATISFACTORILY AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNN'S FERRY 1 (UNIT) • GENERATOR, DIESEL • ENGINES, INTERNAL COMBUSTION • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • FAILURE, MAINTENANCE ERROR • CRUD • OIL CONTAMINATION • OIL FILLS SYSTEM

120274

TORUS OXYGEN SENSOR FAILS TO RESPOND PROPERLY AT BRUNN'S FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS. LTR W/BRF-30-259/7043 TO NRC OFFICE OF I & E, REGION II, DEC. 30, 1970, SUBJECT 30-259, TYPE--DM, MW--W.E., AE--TVA

CAUSE - CALIBRATION CYLINDER IN ZLE PLUGGED. DURING STARTUP TESTING WITH THE UNIT AT 350 PPM, THE TORUS OXYGEN SENSOR FAILED TO RESPOND PROPERLY TO CALIBRATION GAS WHILE PERFORMING STABILITY TEST. THE MILLER ON THE CALIBRATION CYLINDER WAS INSPECTED DURING A COLD SIMULATED AND FOUND TO BE PLUGGED. IT WAS REPLACED. THE SENSOR WAS ALSO REPLACED TO IMPROVE RESPONSE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNN'S FERRY 1 (UNIT) • MONITOR, AIR • OXYGEN/ATMOSPHERE • TORUS • MONITOR • TEST, SYSTEM OPERABILITY • RESPONSE TIME • INSTRUMENT, ABNORMAL INDICATION • FAILURE, INSTRUMENT • CYLINDER • WELLS • INSTRUMENT CALIBRATION

120403

START CIRCUIT BREAKER ON DIESEL GENERATOR FOUND INOPERABLE AT BRUNN'S FERRY 1

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS. LTR W/BRF-30-259/7043 TO NRC OFFICE OF I & E, REGION II, DEC. 30, 1970, SUBJECT 30-259, TYPE--DM, MW--W.E., AE--TVA

CAUSE - BROKEN STUD NUTTER IN CONNECTION. DURING TESTING WITH THE REACTOR AT 350 PPM, ONE START CIRCUIT BREAKER ON DIESEL GENERATOR WAS FOUND INOPERABLE. THE SQUARE D C-30 AMP BREAKER NO. 1254909 FAILED TO SUPPLY POWER BECAUSE OF A BROKEN STUD NUTTER IN CONNECTION AS THE BREAKER WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNN'S FERRY 1 (UNIT) • BREAKER • GENERATOR, DIESEL • ENGINES, INTERNAL COMBUSTION • TEST, SYSTEM OPERABILITY • FAILURE, COMPONENT • PARTNER • FAILURE, INHERENT • EMERGENCY POWER, ELECTRIC

120731

REPORTED INPUT ERRORS TO ECCS ANALYSIS IS LESS THAN 16 AT BRUNN'S FERRY 1 AND 2

120731 CONTINUED
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR N/AFR-50-259/7020 AND BFR-50-200/7010 TO NRC OFFICE OF I & E, REGION II, DEC. 21, 1970, DUCKETS
 50-259/200, TYPE--BWR, NRU--UOL, AE--TVA

CAUSE - REVISOR ANALYSIS. REVISOR ANALYSIS BY GE SHOW THAT THE RESULTS OF THE PREVIOUSLY REPORTED
 INPUT ERRORS TO THE ECCS ANALYSIS IS LESS THAN 1%. BASED ON THESE RESULTS, UNITS 1 AND 2
 OPERATION HAS BEEN DETERMINED TO BE UNIMPAIRED BY THE PREVIOUSLY REPORTED INPUT ERRORS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

DRUMS FERRY 1 (BWR) + DRUMS FERRY 2 (BWR) + ACCIDENT ANALYSIS + ACCIDENT, LOSS OF COOLANT + MATHEMATICAL
 TREATMENT + FAILURE, DESIGN ERROR + EMERGENCY COOLING CONSIDERATIONS

110319
 DIESEL GENERATOR FAILS TO START AT BROWNS FERRY 1 AND 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR N/AFR-50-259/7020 AND BFR-50-200/7020 TO NRC DIRECTOR OF NUCLEAR REACTOR REGULATION, JAN. 23,
 1970, DUCKETS 50-259/200, TYPE--BWR, NRU--UOL, AE--TVA

CAUSE - HYDRAULIC ACTUATOR MALFUNCTION. DURING A TEST, DIESEL GENERATOR 3 FAILED TO START. THE
 HYDRAULIC ACTUATOR DID NOT RESPOND PROPERLY TO SIGNALS FROM THE ELECTRIC GOVERNOR. OIL WAS ADDED
 TO THE HYDRAULIC ACTUATOR AND ADJUSTMENTS MADE. THE DIESEL THEN STARTED SUCCESSFULLY. FUEL FOR
 BOTH UNITS WAS REMOVED FROM THE VESSEL AND STORED IN THE SPENT FUEL POOL AT THIS TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

FAILURE, EQUIPMENT + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + DRUMS FERRY 2 (BWR) + DRUMS
 FERRY 1 (BWR) + HYDRAULIC SYSTEM + ENGINES, INTERNAL COMBUSTION + GENERATION, DIESEL

114201
 RPV STABILIZER BEARING BLOCKS INSTALLED IMPROPERLY AT BROWNS FERRY 1 AND 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR N/AFR-50-259/7020 AND BFR-50-200/7020 TO NRC OFFICE OF I & E, REGION II, MAY 25, 1970, DUCKETS 50-
 259/200, TYPE--BWR, NRU--UOL, AE--TVA

CAUSE - INSTALLATION ERROR. RPV STABILIZER BEARING BLOCKS WERE FOUND TO BE INSTALLED 90 DEGREES
 FROM THE INTENDED ORIENTATION FOR UNITS 1 AND 2. INCORRECT INSTALLATION RESULTED FROM PERSONNEL
 ERROR DURING CONSTRUCTION. CORRECTIVE ACTION WILL BE TO INSTALL NEW SHIMS WITH INCREASED CONTACT
 SURFACE THUS RESTORING THE INTENT OF THE ORIGINAL DESIGN. THIS WILL BE COMPLETED PRIOR TO STARTUP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

FAILURE, INSTALLATION ERROR + MAIN COOLING SYSTEM + DRUMS FERRY 2 (BWR) + BREAKING + DRUMS FERRY 1 (BWR) +
 OVERPRESSURE VESSELS

114039
 NOTICE OF VIOLATION AS RELATED TO SMALL FIRE AT BROWNS FERRY 1 AND 2
 U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC
 3 PWS, LTR N/AFR-50-259/7020 AND BFR-50-200/7020 TO TENNESSEE VALLEY AUTHORITY, JUNE 8, 1970, DUCKETS 50-259/200, TYPE--BWR, NRU--UOL, AE--TVA

CAUSE - FAILURE TO FOLLOW PROCEDURES. BASED UPON THE RESULTS OF AN INSPECTION WHICH INCLUDED THE
 CIRCUMSTANCES WITH RESPECT TO A SMALL FIRE THAT OCCURRED IN UNIT 1 WAT WELL ON 5/4/70, IT APPEARS
 THAT CERTAIN ACTIVITIES WERE NOT IN FULL COMPLIANCE WITH NRC REQUIREMENTS. ITEMS INVOLVED
 FAILURE TO FOLLOW PROCEDURES RELATED TO AN AREA SURVEY, REMOVING OR PROTECTING COMBUSTIBLE
 MATERIALS, POSTING A FIRE WATCH, AND DOCUMENTATION OF ENTRY INTO THE EAST FROM UNIT 1 WAT WELL.
 FOREMAN AND CRAFT DO NOT HAVE ADEQUATE TRAINING IN OR FAMILIARITY WITH CUTTING, WELDING, AND OPEN
 FLAME PERMIT PROCEDURES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00)

CONTAINMENT + FIRE + MAINTENANCE AND REPAIR + COMPLIANCE + WELDING + FAILURE, ADMINISTRATIVE CONTROL + DRUMS
 FERRY 2 (BWR) + DRUMS FERRY 1 (BWR) + LEGALISTICS + AGENCY, NRC

117050
 CAM FOLLOWERS IN TYPE SBM SWITCHES FOUND TO BE DEFECTIVE AT BROWNS FERRY 1, 2, AND 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 7 PWS, LTR N/AFR-50-259/7020 AND BFR-50-200/7020 TO NRC OFFICE OF I & E, REGION II, AUG. 11, 1970, DUCKETS 50-259/200/190, TYPE--BWR, NRU--
 UOL, AE--TVA

CAUSE - EXPOSURE TO HYDROCARBONS. DURING PREOPERATIONAL TESTING ON UNIT 1 RCIC SYSTEM, A GE TYPE
 SBM SWITCH FAILED BY FRACTURE OF A LEAKY CAM FOLLOWER INSIDE THE SWITCH. INSPECTION REVEALED A
 LARGE NUMBER OF CAM FOLLOWERS WITH A CRACKED OR CRACKED APPEARANCE. FAILURE WAS ATTRIBUTED TO
 EXPOSURE OF THE CAM FOLLOWERS TO HYDROCARBONS. THIS CONTRIBUTES TO DEGRADATION OF THE LEAKY. A
 TOTAL OF 420 SWITCHES WERE REPLACED IN ALL 3 UNITS, INCLUDING THE COOLING TOWER AREA. ALSO, 10

117658 CONTINUOUS
SWITCHES WERE REMOVED FROM STORAGE AND DISPOSED OF.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM + INSTRUMENT, SWITCH + FAILURE, FABRICATION ERROR + TEST, PREOPERATIONAL + TEST, SYSTEM OPERABILITY + BROWNS FERRY 2 (BWR) + ENGINEERED SAFETY FEATURE + BROWNS FERRY 3 (BWR) + CONSTRUCTION + BROWNS FERRY 1 (BWR) + FAILURE, COMMON MODE

119318
THREE DESIGN DEFICIENCIES FOUND AT BROWNS FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DAF-50-260/703 TO NRC DIRECTOR OF NUCLEAR REACTOR REGULATION, JAN 23, 1970, WCAET 50-260, TYPE--BWR, RFG--G.E., AE--TVA

CASE - DESIGN ERRORS. THREE DEFICIENCIES WERE DISCOVERED ON UNIT 3 WHICH ALSO APPLY TO UNITS 1 AND 2. 1) THE INBOARD ISOLATION VALVE FOR THE DEMINERALIZED WATER SYSTEM PIPING TO THE DRYWELL AS CLASS M. THIS IS AN IMPROPER CLASS FOR CONTAINMENT ISOLATION. A CLASS D MAIN VALVE WILL BE ADDED OUTBOARD OF THE CHECK VALVE. 2) STRESS LEVELS IN MAIN STEAM RELIEF VALVE DISCHARGE LINES WOULD EXCEED LIMITS DURING OPERATION OF THE VALVES. STAINLESS WILL BE ADDED. 3) REVISION TO THE STANDBY LIQUID CONTROL PUMP DISCHARGE RELIEF VALVE PIPING INADVERTENTLY SPECIFIED SCH 40 PIPE INSTEAD OF SCH 80 PIPE. THE ERROR WILL BE CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STRESS + CONTAINMENT INTEGRITY + FAILURE, DESIGN ERROR + BROWNS FERRY 2 (BWR) + SEISMIC DESIGN + FAILURE, COMMON MODE + VALVES + PIPES AND PIPE FITTINGS

113783
FIVE REED RELAYS FAIL AT BROWNS FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 PGS, LTR W/DAF-50-260/703 TO NRC, REGION 11, MAY 12, 1970, WCAET 50-260, TYPE--BWR, RFG--G.E., AE--TVA

CASE - CONTACTS FAIL. DURING REACTOR MANUAL CONTROL SYSTEM RETESTING WITH THE REACTOR IN COLD SHUTDOWN, 5 REED RELAY FAILURES WERE DISCOVERED, 4 OF WHICH WOULD PERMIT THE SEQUENTIAL SELECTION AND WITHDRAWAL OF ADJACENT CONTROL RODS IN THE REVERSE MODE, AND 1 OF WHICH WOULD ALLOW 2 CONTROL RODS TO BE WITHDRAWN SIMULTANEOUSLY. THE CONTACTS ON THE C.O.P. CLARK REED RELAYS, MODEL MMRC-1023, HAD FAILED. THE RELAYS WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + BROWNS FERRY 2 (BWR) + RELAYS + CONTROL ROD DRIVES

115724
HYDRAULIC CONTROL UNIT FOUND INCAPABLE OF BEING SCRAMMED AT BROWNS FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DAF-50-260/705 TO NRC OFFICE OF I & E, REGION 11, JULY 2, 1970, WCAET 50-260, TYPE--BWR, RFG--G.E., AE--TVA

CASE - PERSONNEL ERROR. HYDRAULIC CONTROL UNIT 3U-3 WAS FOUND INCAPABLE OF BEING SCRAMMED DUE TO 2 VALVES BEING IN THE CLOSED POSITION. THE CAUSE WAS INCORRECT VERIFICATION OF REQUIRED VALVE POSITION CAUSED BY PERSONNEL ERROR. THE UNIT WAS BEING REFUELED AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + PROCEDURES AND MANUALS + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, SCRAM MECHANISM + BROWNS FERRY 2 (BWR) + CONTROL ROD DRIVES

115891
WATER LEAKS BY ACCUMULATOR PISTONS ON 3 HYDRAULIC CONTROL UNITS AT BROWNS FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DAF-50-260/707 TO NRC OFFICE OF I & E, REGION 11, JULY 16, 1970, WCAET 50-260, TYPE--BWR, RFG--G.E., AE--TVA

CASE - NORMAL WEAR. WHILE THE UNIT WAS IN COLD SHUTDOWN WITH ALL RODS INSERTED, ALARM LIGHTS INDICATED WATER LEAKAGE BY THE ACCUMULATOR PISTONS ON 3 HYDRAULIC CONTROL UNITS. EACH WAS REMOVED FROM SERVICE AND THE O-RINGS REPLACED. FAILURE RESULTED FROM NORMAL WEAR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + SEAL + BROWNS FERRY 2 (BWR) + O-RING + FAILURE, INHERENT + WEAR + HYDRAULIC SYSTEM + CONTROL ROD DRIVES + ACCUMULATORS

110203
 WATER LEAKS PAST TWO ACCUMULATION PISTONS AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs, LHM W/DPNU-50-200/7076 TO NRC OFFICE OF I & E, REGION II, JULY 10, 1970, DUCJET 50-200, TYPE--DMA, NRC--
 W-000, AC--TVA

CAUSE - NORMAL WEAR OF O-RINGS. WHILE THE REACTOR WAS IN COLD SHUTDOWN WITH ALL RODS INSERTED, ALARM LIGHTS INDICATED WATER LEAKAGE BY THE ACCUMULATION PISTONS ON 3 HYDRAULIC CONTROL UNITS. EACH UNIT WAS REMOVED FROM SERVICE AND THE O-RINGS REPLACED. THE CAUSE OF FAILURE WAS NORMAL WEAR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FAILURE, EQUIPMENT + SEAL + BROWNS FERRY 2 (DMA) LEAK + FAILURE, INHERENT + WEAR + HYDRAULIC SYSTEM +
 PLANTALL ROD UNITS + ACCUMULATORS

110890
 NEUTRON MONITORING BATTERY IMPERABLE AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs, LHM W/DPNU-50-200/7000 TO NRC OFFICE OF I & E, REGION II, JULY 20, 1970, DUCJET 50-200, TYPE--DMA, NRC--
 W-000, AC--TVA

CAUSE - CELL POST BROKE OFF. DURING A ROUTINE CLEANING UP THE NEUTRON MONITORING BATTERIES, A BATTERY WAS MADE IMPERABLE WHEN A CONNECTOR WAS ACCIDENTALLY BROKEN OFF A CELL POST. ALTHOUGH ALL RODS WERE ALREADY FULLY INSERTED, THIS RESULTED IN A LOSS OF 2 SAM CHANNELS AND INITIATED A REACTOR SCRAM SIGNAL. THE BATTERY WAS RECONNECTED TEMPORARILY AND LATER REPLACED WITH A NEW BATTERY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FAILURE, EQUIPMENT + FAILURE, MAINTENANCE ERROR + BROWNS FERRY 2 (DMA) + BATTERIES & CHARGERS

110204
 NEUTRON MONITORING BATTERY MADE IMPERABLE AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs, LHM W/DPNU-50-200/7000 TO NRC OFFICE OF I & E, REGION II, JULY 20, 1970, DUCJET 50-200, TYPE--DMA, NRC--
 W-000, AC--TVA

CAUSE - CONNECTOR BROKE OFF CELL POST. DURING A ROUTINE CLEANING UP NEUTRON MONITORING BATTERY 2A WHILE THE REACTOR WAS SHUT DOWN, THE BATTERY WAS MADE IMPERABLE WHEN A CONNECTOR WAS ACCIDENTALLY BROKEN OFF A CELL POST. THIS RESULTED IN A LOSS OF 2 SAM CHANNELS AND INITIATED A REACTOR SCRAM SIGNAL. THE BATTERY WAS RECONNECTED TEMPORARILY AND REPLACED WITH A NEW BATTERY 4 DAYS LATER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FAILURE, MAINTENANCE ERROR + INSTRUMENT, STARTUP RANGE + BROWNS FERRY 2 (DMA) + CABLES AND CONNECTORS +
 BATTERIES & CHARGERS

110525
 ALARM RECEIVED FROM CONTROL ROOM SMOKE DETECTOR AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs, LHM W/DPNU-50-200/709 TO NRC OFFICE OF I & E, REGION II, AUG. 13, 1970, DUCJET 50-200, TYPE--DMA, NRC--
 W-000, AC--TVA

CAUSE - INCREASED SENSITIVITY. WHILE THE UNIT WAS IN COLD SHUTDOWN, AN ALARM WAS RECEIVED FROM A ROOM SMOKE DETECTOR IN THE CONTROL ROOM. A GRADUAL ACCUMULATION OF DUST CAUSED AN INCREASED SENSITIVITY. THE DETECTOR WAS CLEANED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FIREF + CAUSE + INSTRUMENT, SURVEILLANCE + FAILURE, MAINTENANCE ERROR + INSTRUMENT, ABNORMAL INDICATION +
 BROWNS FERRY 2 (DMA) + CONTROL PANEL/ROOM + FIRE PROTECTION

117907
 OPERATOR PULLED CUT-OF-SEQUENCE CONTROL ROD DURING TESTING AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 Pgs, LHM W/DPNU-50-200/7010 TO NRC OFFICE OF I & E, REGION II, SEPT. 17, 1970, DUCJET 50-200, TYPE--DMA, NRC--
 W-000, AC--TVA

CAUSE - OPERATOR ERROR. DURING SCRAM TIME TESTING WITH ALL SEQUENCE A RODS IN POSITION 40 AND 2 GROUPS OF B RODS IN GROUP BUTCH CONTROL WITHDRAWN TO MAINTAIN RATE PRESSURE, THE OPERATOR AT THE SCRAM TEST PANEL PLACED A SCRAM SIGNAL ON AN OUT-OF-SEQUENCE, FULLY INSERTED ROD IN ERROR. THE CONTROL ROOM OPERATOR FAILED TO CORRECTLY IDENTIFY THIS ROD AS OUT-OF-SEQUENCE AND PROCEEDED TO WITHDRAW IT TO POSITION 40 ASSUMING THAT POSITION WAS REQUIRED. THE ROD WAS IMPERABLE AT THIS

117907 *CONTINUED*

TIME AND THE SECOND OPERATOR, WHO WAS BEING USED TO VERIFY CONTROL ROOM PROGRAMS, FAILED TO CHECK THE ADD PROGRAM. SPECIAL TRAINING WILL BE HELD FOR ALL OPERATORS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTIVITY, EXCESS • FAILURE, OPERATOR ERROR • PROCEDURES AND MANUALS • REACTIVITY EFFECT • TEST, SYSTEM OPERABILITY • BROWN, FERRY 2 (BMB) • *CONTROL ROOMS

118291

SMOKE DETECTOR SENSITIVITY INCREASES AT BROWN'S FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS, LTR W/BFRU-50-200/7012 TO NRC OFFICE OF I & E, REGION II, SEPT. 29, 1970, SUBJECT SU-200, TYPE--DM, MW--G-E, AE--TVA

CAUSE - DETECTOR FAILURE. WHILE THE REACTOR WAS SHUT DOWN, 2 ALARMS WERE RECEIVED FROM A SMOKE DETECTOR IN THE CONTROL ROOM DUE TO INCREASED DETECTOR SENSITIVITY. THE DETECTOR WAS CLEANED AFTER THE FIRST ALARM AND THEN REPLACED AFTER THE SECOND ALARM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • *MONITOR • *SMOKE • BROWN'S FERRY 2 (BMB) • CONTROL PANEL/ROOM • FIRE PROTECTION • FAILURE, INHERENT

118724

RGIC TURBINE GOVERNOR SPEED CONTROL FAILS TO RESPOND AT BROWN'S FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS, LTR W/BFRU-50-200/7013 TO NRC OFFICE OF I & E, REGION II, SEPT. 30, 1970, SUBJECT SU-200, TYPE--DM, MW--G-E, AE--TVA

CAUSE - POWER SUPPLY FAILS. DURING A RGIC STARTUP TEST WITH THE REACTOR AT 14 POWER, THE TURBINE GOVERNOR SPEED CONTROL FAILED TO RESPOND. THE WARDHARD GOVERNOR CO. POWER SUPPLY ASSEMBLY, PART NO. 8270-282 FAILED DUE TO AN OPEN RESISTOR ON THE POWER SUPPLY. A NEW POWER SUPPLY WAS INSTALLED AND RGIC TESTED SATISFACTORILY. THE EFFECT OF INCREASING THE RATIO OF THE RESISTOR IN THE POWER SUPPLY IS BEING EVALUATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • INSTRUMENT, PROTECTIVE • ELECTRIC POWER • TEST, SYSTEM OPERABILITY • BROWN'S FERRY 2 (BMB) • TURBINE • FAILURE, INHERENT • *RGIC • ELECTRONIC FUNCTION UNITS

119723

CONTROL ROOM ANNUNCIATOR FAILS AT BROWN'S FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS, LTR W/BFRU-50-200/7014 TO NRC OFFICE OF I & E, REGION II, NOV. 10, 1970, SUBJECT SU-200, TYPE--DM, MW--G-E, AE--TVA

CAUSE - POWER SUPPLY CARD FAILS. CONTROL ROOM ANNUNCIATOR 2-RA-55-02 FAILED. IT IS FOR SMOKE AND HEAT ALARMS IN THE FIRE PROTECTION SYSTEM. THE POWER SUPPLY CARD, LUNELL CUSTODIAL, PART NO. 310940, IN THE STATALARM ANNUNCIATOR FAILED. IT WAS REPLACED AND THE ANNUNCIATOR RETURNED TO NORMAL. THE REACTOR WAS AT 5% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BROWN'S FERRY 2 (BMB) • ANNUNCIATORS • *FIRE PROTECTION • FAILURE, INSTRUMENT • ELECTRIC POWER • FAILURE, INHERENT

119724

OFF GAS MONITOR SUCTION AND DISCHARGE SAMPLE LINES REVERSED AT BROWN'S FERRY 2
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS, LTR W/BFRU-50-200/7015 TO NRC OFFICE OF I & E, REGION II, NOV. 11, 1970, SUBJECT SU-200, TYPE--DM, MW--G-E, AE--TVA

CAUSE - INSTALLATION ERROR. DURING STARTUP TESTING WITH THE REACTOR AT 5% POWER, THE OFF GAS POST-TREATMENT MONITOR (2-RA-90-203) SUCTION AND DISCHARGE SAMPLE LINES WERE FOUND TO BE REVERSED. SINCE STARTUP, THE MONITOR HAS BEEN INDICATING THE ACTIVITY UPSTREAM OF THE CHARCOAL BEDS RATHER THAN DOWNSTREAM. THIS WAS AN INSTALLATION ERROR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BROWN'S FERRY 2 (BMB) • RADIATION MONITORS • OFF GAS • PIPES AND PIPE FITTINGS • INSTRUMENT, ABNORMAL INDICATION • FAILURE, INSTALLATION ERROR

120424
 ENE LOSS-OF-FLUID PRESSURE SWITCH FAILS TO GIVE HALF SCRAM AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PGS, LTR W/AFM-50-200/70 TO NRC OFFICE OF I & E, REGION II, DEC. 8, 1970, LOCKET 50-200, TYPE--BI, RFL--
 WOL, AE--TVA

CAUSE - PLUGGED WITH TEFLON TAPE. DURING STARTUP TESTING WITH THE REACTOR AT 40% POWER, ENE LOSS
 OF FLUID PRESSURE SWITCH PS-47-142 FAILED TO GIVE A HALF SCRAM WHEN TESTED. THE OBSOLETE MODEL
 TC9022-3 PRESSURE SWITCH WAS FOUND TO BE PLUGGED WITH TEFLON TAPE WHICH PREVENTED OPERATION. IT
 WAS CLEANED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

BROWNS FERRY 2 (BWR) • INSTRUMENT, SWITCH • SENSORS, PRESSURE • CAUSE • TEST, SYSTEM OPERABILITY • FAILURE,
 INSTRUMENT • FAILURE, INSTALLATION ERROR • REACTOR PROTECTION SYSTEM

120478
 NPCL TURBINE STEAM SUPPLY VALVE FAILS TO OPEN AT BROWNS FERRY 2
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PGS, LTR W/AFM-50-200/70 TO NRC OFFICE OF I & E, REGION II, DEC. 13, 1970, LOCKET 50-200, TYPE--BWR, RFL--
 WOL, AE--TVA

CAUSE - TURBINE SWITCH WEAR PIN SHEARED. DURING TESTING WITH THE REACTOR AT 50% POWER, NPCL
 TURBINE STEAM SUPPLY VALVE 2-FCV-73-10 FAILED TO OPEN. THE BREAKER OVERLOADS WERE FOUND TRIPPED.
 THEY WERE RESET AND THE VALVE OPENED. THE TURBINE SWITCH WEAR ASSEMBLY PIN PIN THE LIMITING
 SIZE 5MM-2 VALVE OPERATOR SHEARED PREVENTING THE TURBINE SWITCH FROM STOPPING THE MOTOR WHEN THE
 VALVE CLOSED CAUSING THE OVERLOADS TO TRIP. THE PIN WAS REPLACED AND THE VALVE OPERATED
 SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

BROWNS FERRY 2 (BWR) • VALVES • NPCL • TURBINE • STEAM • TEST, SYSTEM OPERABILITY • FAILURE, COMPONENT •
 VALVE OPERATORS • INSTRUMENT, SWITCH • FAILURE, INHERENT

111355
 IMPROPER SCHEDULED PIPE USED IN STANDBY LIQUID CONTROL SYSTEM AT BROWNS FERRY 2 AND 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PGS, LTR W/AFM-50-200/70 TO NRC OFFICE OF I & E, REGION II, FEB. 11, 1970, LOCKETS 50-200/290, TYPE--BWR, RFL--WOL, AE--TVA

CAUSE - DESIGN ERROR. WHILE EXAMINING DOCUMENTS ASSOCIATED WITH A CHANGE IN THE STANDBY LIQUID
 CONTROL SYSTEM, AN ENGINEER DISCOVERED THAT SCHEDULE 40 PIPE WAS REFERENCED FOR THE PUMP
 DISCHARGE RELIEF VALVE PIPING INSTEAD OF SCHEDULE 80 PIPE. NO OTHER ERRORS WERE FOUND. THE
 SCHEDULE 40 PIPE WILL BE REPLACED WITH SCHEDULE 80 PIPE. DRAWINGS WERE CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

DESIGN CRITERIA • MODIFICATION • FAILURE, DESIGN ERROR • SHUTDOWN SYSTEM, SLOWDOWN • BROWNS FERRY 2 (BWR) •
 BROWNS FERRY 3 (BWR) • CONSTRUCTION • PIPES AND PIPE FITTINGS

113295
 INTERIM REPORT ON VALVE Yoke TO RETURN MOUNT WELD AT BROWNS FERRY 2 AND 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 52 PGS, LTR W/ENCLOSURE TO NRC OFFICE OF I & E, MARCH 30, 1970, LOCKET 50-259, TYPE--BWR, RFL--WOL, AE--TVA

CAUSE - DESIGN DEFICIENCY. ON MAY 14, 1970, THE WELD BETWEEN THE Yoke AND MOTOR MOUNTING PLATE
 OF A 4-INCH GLOBE VALVE IN THE AIR TEST RETURN LINE TORUS SPRAY CONDENSATION FAILED IN UNIT 1. AN
 INVESTIGATION OF THE PROBLEM WAS MADE SINCE SIMILAR TYPES OF FAILURES COULD OCCUR ON ALL 3
 UNITS. VIBRATION RESULTED FROM CAVITATION IN HIGH VELOCITY AREAS DOWNSTREAM OF VALVES. IN THE
 CORE SPRAY SYSTEM, AN ORIFICE WAS INSTALLED IN THE PIPING INSIDE THE TORUS INCREASING
 BACKPRESSURE ON THE VALVE. IN THE AIR SYSTEM, PUMP FLOW REQUIREMENTS WERE REDUCED AND AN
 ORIFICE INSTALLED IN THE PIPING IN THE TORUS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CORE SPRAY • WELDS • MODIFICATION • FAILURE, FATIGUE • FAILURE, DESIGN ERROR • VIBRATION • SHUTDOWN COOLING
 SYSTEM • FLOW • BROWNS FERRY 1 (BWR) • VALVE OPERATORS • VALVES

117057
 INTERIM REPORT ON POTENTIAL FOR VALVE Yoke WELD FAILURE AT BROWNS FERRY 2 AND 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PGS, LTR W/AFM-50-200/70 TO NRC OFFICE OF I & E, REGION II, AUG. 3, 1970, LOCKETS 50-200/290, TYPE--BWR, RFL--WOL, AE--
 TVA

CAUSE - FLOW INDUCED VIBRATION. THE ADDITION OF ORIFICES TO REDUCE CAVITATION DOWNSTREAM OF THE

117657 *CONTINUED*

12-INCH GLOBE VALVE IN THE NMR SYSTEM REDUCED FLOW TO THE MINIMUM REQUIREMENT. SHALL BE RECOMMENDED REPLACING THE GLOBE VALVE WITH A GLOBE-TYPE VALVE (OR EQUIVALENT) OF APPROPRIATE SIZE. AFTER INSTALLATION OF THE NEW VALVES, FLOW AND VIBRATION MEASUREMENTS WILL BE TAKEN TO VERIFY THE FINAL CONFIGURATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WELLS • MODIFICATION • FAILURE, DESIGN ERROR • VIBRATION • SHUTDOWN COOLING SYSTEM • BROWNS FERRY 2 (BWR) • FLOW • BROWNS FERRY 3 (BWR) • CONSTRUCTION • CRACK • VALVE OPERATORS • VALVES

118295

OXYGEN AND HYDROGEN SENSORS IMPROPERLY CALIBRATED AT BROWNS FERRY 2 AND 3

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

3 PGS, LTR W/WRPT TO NRC OFFICE OF I & E, REGION II, SEPT. 22, 1976, Docket 50-200/761 and 50-200/764 TO NRC OFFICE OF I & E, REGION II, SEPT. 22, 1976, Docket 50-200/760, TYPE--BWR, NRC--G.E., AE--TVA

CAUSE - PROCEDURAL DEFICIENCIES. OXYGEN SENSORS IN THE CAN SYSTEM ON UNITS 2 AND 3 WERE CALIBRATED USING SERVICE AIR AND H₂-H₂ MIXTURE WAS INSTEAD OF 24 O₂ MIXTURE WAS AS SPECIFIED IN TECH SPECS. HYDROGEN SENSORS WERE CALIBRATED USING 4% H₂ MIXTURE AND NOT THE 3% H₂ MIXTURE AS STATED. CAN CALIBRATION INSTRUCTION WAS WRITTEN AND PERFORMED PRIOR TO ISSUANCE OF OPERATION LICENSE AND REFLECTED PROPOSED TECH SPEC CHANGES. THE OPERATION LICENSE, WHEN ISSUED, DID NOT INCLUDE THE PROPOSED CHANGES; THEREFORE, THE INSTRUCTION WAS IN ERROR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HYDROGEN • OXYGEN • PROCEDURES AND MANUALS • MONITOR, AIR • INSTRUMENT CALIBRATION • MONITOR • FAILURE, ADMINISTRATIVE CONTROL • CONTAINMENT ATMOSPHERE • BROWNS FERRY 2 (BWR) • BROWNS FERRY 3 (BWR)

118245

POTENTIAL FOR NMR PUMP OPERATION BEYOND RUNOUT CONDITION AT BROWNS FERRY 3

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

3 PGS, LTR W/WRPT TO NRC OFFICE OF I & E, MARCH 4, 1976, Docket 50-296, TYPE--BWR, NRC--G.E., AE--TVA

CAUSE - DESIGN DEFICIENCY. SIMULATED FAILURE ANALYSIS OF PROPOSED MODIFICATIONS TO NMR SYSTEM FOR UNITS 1 AND 2 IDENTIFIED A POTENTIAL FAILURE. DURING A LOCA, LPCI LOGIC CALLS FOR INJECTION FROM 4 NMR PUMPS. CERTAIN POSTULATED FAILURES COULD RESULT IN FLOWS THAT EXCEED THE RUNOUT CAPACITY OF THE PUMPS. AN ORIFICE WILL BE INSTALLED IN THE DISCHARGE PIPING OF EACH NMR PUMP. THEY WILL BE SIZED SO THAT 3 PUMPS WILL SUPPLY ADEQUATE FLOW AND WILL PREVENT THE 4 PUMPS FROM EXCEEDING THEIR DESIGN RUNOUT FLOW CAPABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ACCIDENT ANALYSIS • MODIFICATION • FAILURE, DESIGN ERROR • ORIFICE • SHUTDOWN COOLING SYSTEM • SIMULATED FAILURE CRITERION • FLOW • SYSTEM CAPABILITY • BROWNS FERRY 3 (BWR) • CONSTRUCTION • PUMPS • LPCI

114396

FINAL REPORT ON RELIEF VALVE SUPPORT STRUCTURE DESIGN AT BROWNS FERRY 3

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

3 PGS, LTR W/WRPT TO NRC OFFICE OF I & E, REGION II, MAY 17, 1976, Docket 50-296, TYPE--BWR, NRC--G.E., AE--TVA

CAUSE - INSUFFICIENT DESIGN CRITERIA. AN ANALYSIS OF THE MAIN STEAM LINES AND RELIEF VALVE DISCHARGE PIPING, WHICH WAS DONE IN CONNECTION WITH THE PROPOSED CHANGE IN RELIEF VALVES, REVEALED THAT THE EXISTING PIPING SUPPORT OF THESE LINES WAS NOT ADEQUATE TO PREVENT STRESSES FROM EXCEEDING THOSE IN THE FSAR. DURING THE ORIGINAL DESIGN, THE CODE USED DID NOT ADDRESS THE TRANSIENT RELIEF VALVE DISCHARGE LOADING CONDITION AND MATHEMATICAL MODEL OF THESE FORCES WERE NOT AVAILABLE. A NEW STRESS ANALYSIS HAS BEEN PERFORMED. ADDITIONAL STRAIN ARRESTORS AND RESTRAINTS HAVE BEEN ADDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STRESS • MODIFICATION • PRESSURE RELIEF • FAILURE, DESIGN ERROR • SUPPORT STRUCTURE • MAIN COOLING SYSTEM • BROWNS FERRY 3 (BWR) • CONSTRUCTION • VALVES • PIPES AND PIPE FITTINGS

114417

DEFECTIVE CAN FOLLOWERS FOUND IN SWITCHES AT BROWNS FERRY 3

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

3 PGS, LTR W/WRPT TO NRC OFFICE OF I & E, REGION II, MAY 19, 1976, Docket 50-296, TYPE--BWR, NRC--G.E., AE--TVA

CAUSE - UNKNOWN. AS A RESULT OF A GE TYPE SSM SWITCH FAILURE DURING PREOPERATIONAL TESTS ON UNIT 1, SWITCHES OF THE SAME TYPE HAVE BEEN INSPECTED THROUGHOUT THE PLANT. THE INSPECTION REVEALED A LARGE NUMBER OF CAN FOLLOWERS WITH A CRAZED APPEARANCE SIMILAR TO THE CONDITION DESCRIBED IN VE INFORMATION LETTER SLS NO. 155. THE CONDITION WAS FOUND ON SWITCHES MANUFACTURED OUTSIDE THE SPECIFIED DATES. INTERIM PLANS INCLUDE REPLACEMENT OF ALL CRAZED SWITCHES INSTALLED IN SAFEGUARDS SYSTEMS AND ALL SWITCHES MANUFACTURED DURING THE SPECIFIED PERIOD. THE INVESTIGATION

114417 CONTINUOUS
IS CONTINUING

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT - OPLA - INSTRUMENT, SWITCH - BRUNN'S FERRY 3 (BNN) - CONSTRUCTION - FAILURE, COMMON MODE

114704

JOINING WATER LINES TO NMR AND CORE SPRAY PUMP CANNERS PLUGGED AT BRUNN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 Pgs, LTR W/PT TO NRC OFFICE OF I & E, REGION II, MAY 24, 1970, JACKET SU-290, TYPE--BMR, NRU--JUL, AE--TVA

CAUSE - MUD IN WATER. DURING PREOPERATIONAL TESTS, THE ACTUAL FLOW RATES IN THE EMERGENCY EQUIPMENT COOLING WATER LINES TO THE NMR AND CORE SPRAY PUMP MOTOR BEARING CANNERS WERE FOUND TO BE BELOW THOSE REQUIRED. THESE 3/8-INCH AND 1-INCH LINES WERE CANNED WITH MUD AND SCALED. THE SYSTEM IS USED ONLY DURING TESTS OR WHEN THE EQUIPMENT IS OPERATED SUSPENDED SUCH AS IN THE STANBART RAM WATER SETTLERS AND LOGS SECTIONS OF THE LINES AT LOWER ELEVATIONS. A FEW LINES CONTAINED ELASTIC CLAMS WHICH WERE ALL ABOUT THE SAME SIZE. THE LINES WERE BACKFLUSHED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OSURFACE WATER, SEDIMENT - TEST, PREOPERATIONAL - TEST, SYSTEM OPERABILITY - FAILURE, DESIGN ERROR - OPLA - BRUNN'S FERRY 3 (BNN) - CONSTRUCTION - ANIMAL, INADEQUATE - OSERVICE WATER SYSTEM - PIPES AND PIPE FITTINGS

115403

SPV STABILIZER PLATES INSTALLED INCORRECTLY AT BRUNN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 Pgs, LTR W/PT TO NRC OFFICE OF I & E, REGION II, JUNE 14, 1970, JACKET SU-290, TYPE--BMR, NRU--JUL, AE--TVA

CAUSE - CONSTRUCTION DEFICIENCY. DURING AN INSPECTION OF THE REACTOR PRESSURE VESSEL SEISMIC STABILIZERS MADE AT THE REQUEST OF W&E, IT WAS DISCOVERED THAT THE BEARING PLATES AT EACH END OF THE STABILIZER ASSEMBLY HAD BEEN INSTALLED 90 DEGREES FROM THE INTENDED ORIENTATION. THESE PLATES MAKE CONTACT DURING A SEISMIC EVENT WITH THE BUMPER BRACKETS MOUNTED ON TOP OF THE BIOLOGICAL SHIELD WALL. SINCE THE STABILIZERS ARE LOCATED IN AN AREA WITH LIMITED ACCESS, ROTATION OF THE PLATES WOULD BE DIFFICULT. THEREFORE, NEW SHIM PLATES HAVE BEEN FABRICATED AND WILL BE INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MODIFICATION - FAILURE, INSTALLATION ERROR - SURVEILLANCE PROGRAM - BRUNN'S FERRY 3 (BNN) - BEARING - SEISMIC DESIGN - CONSTRUCTION - OPRESSURE VESSELS

115847

BLADE GUIDE ASSEMBLY DRIPPED DURING HANDLING AT BRUNN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 Pgs, LTR W/PT TO NRC OFFICE OF I & E, REGION II, JULY 10, 1970, JACKET SU-290, TYPE--BMR, NRU--JUL, AE--TVA

CAUSE - TELESCOPING GRAPPLE HOOM FAILURE. A BLADE GUIDE ASSEMBLY WAS BEING REMOVED FROM THE REACTOR AS PART OF FUEL LOADING. WHEN THE BOTTOM OF THE ASSEMBLY WAS 3 FT. ABOVE THE UPPER CORE PLATE, A SECTION OF THE TELESCOPING GRAPPLE HOOM SLIPPED FORWARD. WHEN IT REACHED ITS EXTENDED POSITION, THE IMPACT AGAINST THE LUNER SECTIONS BROKE THE ASSEMBLY HANDLE. THE ASSEMBLY FELL BACK INTO ITS INCORE POSITION. INTERFERENCE BETWEEN 2 ADJACENT SECTIONS OF THE HOOM AS THE GRAPPLE WAS LIFTED CAUSED ONE SECTION TO STOP BEFORE IT WAS FULLY EXTENDED. IT THEN FELL TO ITS FULL-EXTENDED POSITION. ALL PIECES WERE ACCOUNTED FOR. NO EVIDENCE OF DAMAGE WAS SEEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WIVE - REACTOR STARTUP EXPERIENCE - OFAILURE, FABRICATION ERROR - OFUEL HANDLING MACHINE - DAMAGE - CORE COMPONENTS - BRUNN'S FERRY 3 (BNN) - FUEL LOADING - CONTROL ROOM

110235

ESS SEPARATION CRITERIA IN THE NMR SYSTEMS VIOLATED AT BRUNN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 Pgs, LTR W/PT TO NRC OFFICE OF I & E, REGION II, JULY 23, 1970, JACKET SU-290, TYPE--BMR, NRU--JUL, AE--TVA

CAUSE - DESIGN ERROR. DURING A DRAWING REVIEW, AN ENGINEER DISCOVERED THAT THE ELECTRICAL DIVISIONAL SEPARATIONS CRITERIA HAD BEEN VIOLATED IN THE NMR SYSTEM LOGIC. IN ALL 3 UNITS, A CABLE DESIGNATED AND ACUTED FOR DIVISION II NMR LOGIC CONTROL POWER CONNECTED INTO DIVISION I NMR LOGIC CONTROL POWER. IN ADDITION, IN UNIT 3 A CABLE FOR DIVISION I NMR LOGIC CONTROL ALSO CONNECTED INTO DIVISION II NMR LOGIC CONTROL POWER. CABLES WERE INCORRECTLY DESIGNATED BY THE RESPONSIBLE DESIGN PERSONNEL AND WERE NOT DETECTED BY SITE PERSONNEL. THE INCORRECT WIRES WERE DISCONNECTED, REMOVED, AND REPLACED WITH WIRES FROM THE CORRECT ELECTRICAL DIVISION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

110235 *CONTINUED*
CHARGE \$2.00

UNITARY SYSTEM * PURIFICATION * FAILURE, DESIGN ERROR * UNITARY COOLING SYSTEM * PERFORMANCE * BROWN FERRY 3 (BRI) * CONSTRUCTION * CABLES AND CONNECTORS

110236
RESTRAINTS FOR SAGT SYSTEM DUCTS INADEQUATE AT BROWN FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 PGS, LTR W/PT TO NRC OFFICE OF I & E, REGION II, JULY 23, 1970, Docket 50-29, TYPE--BWR, MFU--G.E., AC--TVA

CAUSE - MISINTERPRETATION OF DRAWINGS. DURING A FIELD INSPECTION OF SEISMIC RESTRAINTS ON STANBY GAS TREATMENT SYSTEM DUCTS, AN ENGINEER FOUND 2 INSTANCES WHERE THE ACTUAL INSTALLATION DID NOT CONFORM TO DESIGN CRITERIA. IN UNIT 3 REACTOR BUILDING, A RESTRAINT WAS NOT INSTALLED DUE TO A MISINTERPRETATION OF THE DESIGN DRAWING. IN UNIT 1 REACTOR BUILDING A MISSING RESTRAINT RESULTED FROM DRAWINGS NOT BEING UPDATED TO REFLECT MODIFICATIONS. THE MISSING RESTRAINTS WERE ADDED. DRAWINGS WERE MODIFIED TO SHOW THE AS-BUILT INSTALLATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*SHOCK ABSORBER * SUPPORT STRUCTURE * FAILURE, INSTALLATION ERROR * BROWN FERRY 3 (BRI) * SEISMIC DESIGN * CONSTRUCTION * COMMUNICATION * STANBY GAS TREATMENT * PIPES AND PIPE FITTINGS

110073
FINAL REPORT ON RPV STABILIZER PLATE INSTALLATION ERROR AT BROWN FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
3 PGS, LTR W/PT TO NRC OFFICE OF I & E, REGION II, AUG. 5, 1970, Docket 50-290, TYPE--BWR, MFU--G.E., AC--TVA

CAUSE - INSTALLATION ERROR. DURING AN INSPECTION OF CLEARANCES BETWEEN THE REACTOR PRESSURE VESSEL SEISMIC STABILIZERS AND THE SHIELD WALL, IT WAS DISCOVERED THAT PART OF THE STABILIZER ASSEMBLY HAD BEEN INCORRECTLY INSTALLED. BEARING PLATES HAD BEEN INSTALLED TO DECREASE FROM THEIR INTENDED ORIENTATION. SINCE THE STABILIZERS ARE FULLY ASSEMBLED AND ARE LOCATED IN AN AREA WITH LIMITED ACCESS, ROTATION OF THE BEARING PLATES WOULD HAVE BEEN VERY DIFFICULT. INSTEAD, NEW SHIM PLATES WERE FABRICATED AND INSTALLED. AT THE TIME OF THE INITIAL INSTALLATION THERE WAS NOT A PERMANENT QA PROGRAM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*MODIFICATION * *SHOCK ABSORBER * FAILURE, INSTALLATION ERROR * BROWN FERRY 3 (BRI) * SEISMIC DESIGN * CONSTRUCTION * *PRESSURE VESSELS

110234
CONTROL ROD ACCUMULATORS FOUND TO BE IMPERABLE AT BROWN FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/PT 50-290/702 TO NRC OFFICE OF I & E, REGION II, AUG. 6, 1970, Docket 50-290, TYPE--BWR, MFU--G.E., AC--TVA

CAUSE - OPERATOR OVERSIGHT. DURING INITIAL FUEL LOADING, THE CONTROL ROD DRIVE PUMP WAS REMOVED FROM SERVICE TO PERMIT INSTALLATION OF STRAIN GAUGE INSTRUMENTATION ON SELECTED FUEL CHANNELS. TESTS 3 DAYS LATER DETERMINED THE CONTROL ROD ACCUMULATORS TO BE IMPERABLE DUE TO LOW PRESSURE WITHOUT THE REQUIREMENTS OF LCO332B BEING MET. THE REQUIREMENT WAS OVERLOOKED BY PERSONNEL WHEN THE WORK WAS APPROVED.

AVAILABILITY - NUCLEAR INSURANCE, INC., P.O. BOX 3522 OAK RIDGE, TENN. 37830

FAILURE, OPERATOR ERROR * PROCEDURES AND MANUALS * REACTOR STARTUP EXPERIENCE * TEST, SYSTEM OPERABILITY * BROWN FERRY 3 (BRI) * FUEL LOADING * CONTROL RODS * CONTROL ROD DRIVES * ACCUMULATORS

110510
EIGHT ALARMS RECEIVED FROM SMOKE DETECTORS AT BROWN FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/PT 50-290/703 TO NRC, REGION II, AUG. 11, 1970, Docket 50-290, TYPE--BWR, MFU--G.E., AC--TVA

CAUSE - INCREASE IN SENSITIVITY. IN AN 18 DAY PERIOD, 8 ALARMS WERE RECEIVED FROM SMOKE DETECTORS IN SPREADING ROOM B DUE TO INCREASED SENSITIVITY. LARGE AMOUNTS OF FLAMMABLE SPRAYING WAS IN PROGRESS IN THE SPREADING ROOM. THE DETECTORS INVOLVED WERE CLEANED OR REPLACED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*FIRE * FAILURE, INSTRUMENT * CAUSE * REACTOR STARTUP EXPERIENCE * FAILURE, INSTALLATION ERROR * BROWN FERRY 3 (BRI) * INSTRUMENT, ALARM * CABLES AND CONNECTORS * COMPARTMENT * FIRE PROTECTION

117033
 COOKING WATER LINES TO CORE SPRAY PUMP MOTOR BEARING COULERS CLOGGED AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 3 PAGES, LTR W/DPW-50-290/700 TO NRC OFFICE OF I & E, REGION II, AUG. 23, 1970, DUCRET 50-290, TYPE--BWR, NRC--NRC, AE--TVA

CAUSE - CORROSION AND MUDDY IN LINES. DURING PREOPERATIONAL TESTS, ACTUAL FLOW RATES IN THE PREHEATED EQUIPMENT COOKING WATER LINES TO 11 OF THE 12 CORE SPRAY PUMP MOTOR BEARING COULERS WERE FOUND TO BE LESS THAN REQUIRED. A HEAVY DEPOSIT OF MUDDY AND SCALE WAS FOUND ENCAUSTED ON THE ENTIRE INNER CIRCUMFERENCE OF THE PIPING. EVALUATION OF THE SYSTEM SHOWED THE PIPING TO BE MINORLY EVEN IF CLEAN. ALL THE 1 INCH PIPING TO THE COULERS WILL BE REPLACED. IF FLOW IS STILL LOW, THE COMMON DISCHARGE LINE WILL BE REPLACED WITH LARGER PIPE. THE CAUSE OF CORROSION AND DEPOSIT BUILDUP IS UNDER INVESTIGATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOKING SPRAY - CORROSION - MUDDY - TEST, PREOPERATIONAL - TEST, SYSTEM OPERABILITY - FAILURE, DESIGN ERROR - PIPING DAMAGE - BROWNS FERRY 3 (BWR) - PREHEATING - CONSTRUCTION - SERVICE WATER SYSTEM - MOTORS - PUMPS - PIPES AND PIPE FITTINGS - HEAT EXCHANGERS

117500
 SPILLAGE ALARMS RECEIVED FROM SPILLAGE DETECTORS AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PAGES, LTR W/DPW-50-290/700 TO NRC OFFICE OF I & E, REGION II, SEPT. 15, 1970, DUCRET 50-290, TYPE--BWR, NRC--NRC, AE--TVA

CAUSE - INCREASED DETECTOR SENSITIVITY. DURING THE PERIOD 8/16-30/70, 5 ALARMS WERE RECEIVED FROM SPILLAGE DETECTORS IN SPREADING MUD DUE TO INCREASED DETECTOR SENSITIVITY. GRADUAL ACCUMULATION OF FLUXION MATERIAL CAUSED INCREASED SENSITIVITY. THREE OF THE ALARMS WERE FROM ONE DETECTOR WHICH WAS FINALLY REPLACED. THE OTHERS WHICH WERE INVOLVED WERE CLEANED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT - CHU - MONITOR - REACTOR STARTUP EXPERIENCE - OSUM - FAILURE, MAINTENANCE ERROR - BROWNS FERRY 3 (BWR) - FIRE PROTECTION

117557
 MPCI TURBINE FAILS TO OPERATE PROPERLY AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PAGES, LTR W/DPW-50-290/703 TO NRC OFFICE OF I & E, REGION II, SEPT. 17, 1970, DUCRET 50-290, TYPE--BWR, NRC--NRC, AE--TVA

CAUSE - UNKNOWN CONNECTOR ON GOVERNOR. DURING A MPCI STARTUP TEST WITH THE REACTOR AT 88 POWER, THE TURBINE CYCLED BETWEEN ITS OVERSPEED TRIP AND THE TRIP RESET AND RESTART POINT. A DOWNWARD GOVERNOR LG, EUM BOX, PART NO. 0270-011, FAILED DUE TO A UNKNOWN CONNECTOR ON THE GOVERNOR. THE CONNECTOR GROUND WAS CLEARED BY REASSEMBLY OF THE CONNECTOR AND A NEW EUM BOX WAS INSTALLED AND CALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT - REACTOR STARTUP EXPERIENCE - TEST, SYSTEM OPERABILITY - FAILURE, INSTALLATION ERROR - TURBINE - BROWNS FERRY 3 (BWR) - CABLES AND CONNECTORS - MPCI

118234
 MPCI TURBINE STEAM DISCHARGE LINE RUPTURE DISE RUPTURES AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PAGES, LTR W/DPW-50-290/707 TO NRC OFFICE OF I & E, REGION II, SEPT. 22, 1970, DUCRET 50-290, TYPE--BWR, NRC--NRC, AE--TVA

CAUSE - CHECK VALVE BLEWING. DURING A STARTUP TEST ON THE MPCI TURBINE WITH THE REACTOR AT 38 POWER, THE RUPTURE DISE LOCATED ON THE STEAM DISCHARGE LINE RUPTURED. HIGH EXHAUST PRESSURE TURBINE TRIPS OCCURRED ON SUBSEQUENT RUNS. A SWING/CHECK AND/OR A STOP CHECK VALVE IN THE EXHAUST LINE WERE BLEWING WHICH CAUSED A PRESSURE BUILDUP IN THE EXHAUST LINE. MPCI WAS RUN SATISFACTORILY AFTER REPAIRS OF THE VALVES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT - INSTRUMENT, PROTECTIVE - STEAM - OVERPRESSURE RELIEF - REACTOR STARTUP EXPERIENCE - TEST, SYSTEM OPERABILITY - TURBINE - BROWNS FERRY 3 (BWR) - VALVE, CHECK - DISCHARGE - MPCI

118739
 MPCI SHAFT OIL PUMP FAILS TO MAINTAIN PRESSURE AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PAGES, LTR W/DPW-50-290-700 TO NRC OFFICE OF I & E, REGION II, OCT. 7, 1970, DUCRET 50-290, TYPE--BWR, NRC--NRC, AE--TVA

118739 *CONTINUED*

CAUSE - LOOSE UNION IN SUCTION LINE. DURING A TEST WITH THE REACTOR AT 104 POWER, THE NPCL SHAFT OIL PUMP WOULD NOT MAINTAIN PRESSURE. THIS CAUSED ERRATIC OPERATION OF THE NPCL AND CAUSED THE AUXILIARY OIL PUMP TO CYCLE ON AND OFF. A LOOSE UNION ON THE SUCTION SIDE OF THE SHAFT OIL PUMP PERMITTED THE PUMP TO SUCK AIR AND THEREBY REDUCED THE OIL PRESSURE. THE LEAKING UNION WAS TIGHTENED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT • REACTOR STARTUP EXPERIENCE • TEST, SYSTEM OPERABILITY • FAILURE, INSTALLATION ERROR • LUBRICATION • BROWN'S FERRY 3 (BWR) • PUMPS • PIPES AND PIPE FITTINGS • NPCL

118740

NRN PUMP FAILS TO START AT BROWN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DFR-50-296/709 TO NRC OFFICE OF I & E, REGION II, OCT. 7, 1970, JACKET 50-296, TYPE--BWR, NRU--
U.E., AE--TVA

CAUSE - OPEN CABLE IN LOGIC. DURING A TEST WITH THE UNIT AT 258 POWER, NRN PUMP 50 FAILED TO START ON NORMAL POWER. IT WOULD HAVE OPERATED ON EMERGENCY POWER. A CABLE IN THE NRN LOGIC WAS FOUND OPEN. IT WAS REPLACED AND THE TEST PERFORMED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT • REACTOR STARTUP EXPERIENCE • TEST, SYSTEM OPERABILITY • FAILURE, INSTALLATION ERROR • SHUTDOWN COOLING SYSTEM • BROWN'S FERRY 3 (BWR) • CABLES AND CONNECTORS • PUMPS

118783

ALARMS RECEIVED FROM SMOKE DETECTORS AT BROWN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DFR-50-296/7010 TO NRC OFFICE OF I & E, REGION II, OCT. 20, 1970, JACKET 50-296, TYPE--BWR, NRU--
U.E., AE--TVA

CAUSE - DIRT ON DETECTORS. TWICE, WHILE OPERATING AT 104 POWER, ALARMS WERE RECEIVED FROM SMOKE DETECTORS IN SPREADING RUGH D DUE TO INCREASED DETECTOR SENSITIVITY. THE ABOVE SMOKE DETECTORS REQUIRED CLEANING OR REPLACEMENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, INSTRUMENT • MONITOR • REACTOR STARTUP EXPERIENCE • SMOKE • INSTRUMENT, ABNORMAL INDICATION • BROWN'S FERRY 3 (BWR) • FIRE PROTECTION • FAILURE, INHERENT

118984

JAYWELL AIR SAMPLING SYSTEM INOPERABLE TWICE AT BROWN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DFR-50-296/7014 TO NRC OFFICE OF I & E, REGION II, OCT. 19, 1970, JACKET 50-296, TYPE--BWR, NRU--
U.E., AE--TVA

CAUSE - DETECTOR FAILURE. WHILE OPERATING AT 104 POWER, THE JAYWELL AIR SAMPLING SYSTEM TWICE REMAINED INOPERABLE FOR PERIODS GREATER THAN 24 HOURS. CONDENSATION FROM AIR SAMPLE COLLECTED IN THE RADIATION MONITOR CAUSING DETECTOR FAILURE. ANALYSES OF UNAB SAMPLES WERE NOT PERFORMED AS REQUIRED. THE TEMPERATURE OF SYSTEMS HEAT TRACING HAS BEEN INCREASED TO HELP ELIMINATE CONDENSATION. SIGNS WILL BE PLACED ON MONITORS STATING WHEN TO INITIATE SAMPLING PROGRAM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT • FAILURE, OPERATOR ERROR • CONDENSATION • SAMPLING • MONITOR • REACTOR STARTUP EXPERIENCE • CONTAINMENT ATMOSPHERE • TEST INTERVAL • BROWN'S FERRY 3 (BWR) • RADIATION MONITORS

118997

JAYWELL THERMOCOUPLE WIRING FOUND OPEN AT BROWN'S FERRY 3
TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
2 PGS, LTR W/DFR-50-296/7014 TO NRC OFFICE OF I & E, REGION II, OCT. 13, 1970, JACKET 50-296, TYPE--BWR, NRU--
U.E., AE--TVA

CAUSE - PENETRATION CONNECTOR LOOSE. DURING STARTUP TESTING WITH THE UNIT SUBCRITICAL, WIRING FOR A JAYWELL TEMPERATURE THERMOCOUPLE WAS FOUND OPEN INSIDE THE JAYWELL. THERMAL EXPANSION DURING STARTUP APPARENTLY CAUSED THE LOSS OF SIGNAL AS A RESULT OF THE PENETRATION CONNECTOR NOT BEING FULLY TIGHTENED. THE CONNECTOR WAS TIGHTENED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT • REACTOR STARTUP EXPERIENCE • FAILURE, INSTALLATION ERROR • CONTAINMENT PENETRATION, ELECTRICAL • BROWN'S FERRY 3 (BWR) • THERMOCOUPLE • CABLES AND CONNECTORS • SIGNALS, TEMPERATURE

110902
 RELIC FAILED TO CONTROL SPEED AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR W/BPAU-50-290/7011 TO NRC OFFICE OF I & E, REGION II, OCT. 10, 1970, DUCRET 50-290, TYPE--BWR, RFU--
 W.E., AE--TVA

CAUSE - BROKEN CONTROL CABLE. DURING A SURVEILLANCE TEST WITH THE REACTOR AT 100 POWER, RELIC FAILED TO CONTROL SPEED BECAUSE OF A BROKEN WIRE TO THE MAGNETIC SPEED SENSOR IN THE GOVERNOR CONTROL CIRCUIT. THE FLEXIBLE CONDUIT CONNECTION TO THE SPEED SENSOR HAD BEEN STRESSED SUFFICIENTLY TO BREAK THE CONDUIT LOOSE AND BREAK A WIRE LOOSE AT THE CONNECTION. REPAIRS WERE MADE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • STRESS • OCCURRENCE • REACTOR STARTUP EXPERIENCE • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • BROWNS FERRY 3 (BWR) • CABLES AND CONNECTIONS • RELIC

110990
 MAIN STEAMLINE FLOW INSTRUMENTS UNRESPONSIVE TO FLOW AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR W/BPAU-50-290/7011 TO NRC OFFICE OF I & E, REGION II, OCT. 19, 1970, DUCRET 50-290, TYPE--BWR, RFU--
 W.E., AE--TVA

CAUSE - SENSING LINES INSTALLED INCORRECTLY. DURING STARTUP TESTING AT 200 POWER, MAIN STEAM LINE & FLOW INDICATION AND A DIFFERENTIAL PRESSURE INDICATING SWITCHES WERE FOUND UNRESPONSIVE TO STEAM FLOW. THE STEAM LINE WAS THEN ISOLATED. LOW PRESSURE SENSING LINE ON WAS SWITCHED IN THE UNWELL PENETRATION WITH THE RECIRCULATION JET PUMP WIDER LOW PRESSURE SENSING LINE ON. THE SENSING LINES WERE REVERSE AT PANEL 25-50 TO RESOLVE THE PROBLEM. PROPER RESPONSE TO STEAM FLOW WAS CONFIRMED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STEAM • REACTOR STARTUP EXPERIENCE • FAILURE, INSTALLATION ERROR • INSTRUMENT, ABNORMAL INDICATION • MAIN COOLING SYSTEM • BROWNS FERRY 3 (BWR) • SENSORS, PRESSURE • PIPES AND PIPE FITTINGS • SENSORS, FLOW

111317
 MPC1 STEAM FLOW INDICATORS READ LOW AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR W/BPAU-50-290/7015 TO NRC OFFICE OF I & E, REGION II, OCT. 27, 1970, DUCRET 50-290, TYPE--BWR, RFU--
 W.E., AE--TVA

CAUSE - EQUALIZER VALVE OPEN. DURING STARTUP TESTING WITH THE REACTOR AT 500 POWER, 2 MPC1 STEAM FLOW INDICATORS WERE READING LOW. THE EQUALIZER VALVE ON ONE WAS FOUND OPEN. THE ABNORMAL INSTRUMENT WAS AFFECTED DUE TO COMMON SENSING LINES. WHEN THE VALVE WAS CLOSED, PROPER READINGS WERE CONFIRMED. THE REASON FOR THE VALVE BEING OPEN COULD NOT BE SPECIFICALLY ESTABLISHED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • STEAM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • REACTOR STARTUP EXPERIENCE • TEST, SYSTEM OPERABILITY • BROWNS FERRY 3 (BWR) • VALVES • SENSORS, FLOW • MPC1

111741
 FALSE ALARM RECEIVED FROM SMOKE DETECTOR AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR W/BPAU-50-290/7010 TO NRC OFFICE OF I & E, REGION II, NOV. 10, 1970, DUCRET 50-290, TYPE--BWR, RFU--
 W.E., AE--TVA

CAUSE - INCREASED DETECTOR SENSITIVITY. WHILE OPERATING AT 50 POWER, A FALSE ALARM WAS RECEIVED FROM A SMOKE DETECTOR IN SPREADING ROOM B DUE TO INCREASED DETECTION SENSITIVITY. THE DETECTOR WAS CLEANED AND RETURNED TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BROWNS FERRY 3 (BWR) • REACTOR STARTUP EXPERIENCE • SMOKE • FAILURE, INSTRUMENT • FAILURE, INHERENT • MONITOR • INSTALLATIONS, MISC. • FIRE PROTECTION

111909
 RECIRCULATION PUMP TRIPS AT BROWNS FERRY 3
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR W/BPAU-50-290/7017 TO NRC OFFICE OF I & E, REGION II, NOV. 23, 1970, DUCRET 50-290, TYPE--BWR, RFU--
 W.E., AE--TVA

CAUSE - BURNED COLLECTOR RING ON EXCITER. WHILE OPERATING AT 400 POWER, RECIRCULATION PUMP 30 TRIPPED DUE TO A BURNED COLLECTOR RING ON RECIRC-NG JET 30 EXCITER. THE RING WAS DAMAGED BECAUSE

119029 (CONTINUED)

A GE MODEL 201A0000 CARBON BRUSH WORE TOO SHORT, LOSING TENSION, AND CAUSING ARCING. THE PUMP COULD NOT BE RETURNED TO SERVICE WITHIN 24 HOURS AND THE UNIT WAS PLACED IN HOT SHUTDOWN. BRUSH INSPECTION WILL BE INCREASED TO WEEKLY. GE RECOMMENDED HARDER GRADE BRUSH HAS BEEN INSTALLED ON BOTH MC SETS.

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BRUNN'S FERRY 3 (BWR) • REACTOR STARTUP EXPERIENCE • GENERATION, DIESEL • ENGINES, INTERNAL COMBUSTION • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • FAILURE, COMPONENT • MATERIAL • MODIFICATION • REACTOR SHUTDOWN

120200

STARTING CIRCUIT OF DIESEL GENERATOR INOPERABLE AT BRUNN'S FERRY 3

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS, LTR W/AFD-50-290-7019 TO NRC OFFICE OF I & E, REGION II, DEC. 19, 1970, DOKLET 50-290, TYPE--BWR, MFU--WV, AE--TVA

CAUSE - SPEED SENSING CIRCUIT RELAY FAILS. DURING A MAINTENANCE TEST WITH THE REACTOR AT 95% POWER, START CIRCUIT 1 OF DIESEL GENERATOR 30 WAS FOUND INOPERABLE. AN ELECTROMOTIVE W/VE, MODEL 0327203 RELAY FAILED IN THE SPEED SENSING CIRCUIT PREVENTING THE CIRCUIT FROM SENSING DIESEL SPEED. THE RELAY WAS REPLACED AND THE TEST COMPLETED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNN'S FERRY 3 (BWR) • REACTOR STARTUP EXPERIENCE • GENERATION, DIESEL • ENGINES, INTERNAL COMBUSTION • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • RELAYS • FAILURE, INHERENT • CONTROL SYSTEM • EMERGENCY PURGE, ELECTRIC

120542

TJROS GAYGEN SENSOR FAILS TO RESPOND PROPERLY AT BRUNN'S FERRY 3

TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN

2 PGS, LTR W/AFD-50-290-7010 TO NRC OFFICE OF I & E, REGION II, DEC. 10, 1970, DOKLET 50-290, TYPE--BWR, MFU--WV, AE--TVA

CAUSE - NOT YET DETERMINED. DURING STARTUP TESTING WITH THE REACTOR AT 71% POWER, THE TJROS GAYGEN SENSOR FAILED TO RESPOND PROPERLY TO CALIBRATION WAS. INSPECTION OF THE SENSOR AND CALIBRATION PISTON REQUIRES SHUTDOWN WITHIN 30 DAYS TO DETERMINE CAUSE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNN'S FERRY 3 (BWR) • REACTOR STARTUP EXPERIENCE • PROMITON • PLUTON • CONTAINMENT ATMOSPHERE • TEST, SYSTEM OPERABILITY • TJROS • INSTRUMENT CALIBRATION • MONITOR, GAS

110200

AIR SAMPLING SYSTEM NOT TESTED DURING INITIAL PLANT STARTUP AT BRUNSWICK 1

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/AFD-70-4 TO U.S. NRC, REGION II, JAN. 29, 1970, DOKLET 50-320, TYPE--BWR, MFU--WV, AE--WV

CAUSE - INADVERTENTLY OMITTED. DURING THE CONTINUING QA-PT REVIEW, IT WAS FOUND THAT THE TEST FOR THE AIR SAMPLING SYSTEM WAS NOT RUN AT THE TIME OF ORIGINAL PLANT STARTUP IN MARCH 1970. IT WAS INADVERTENTLY OMITTED. AN IMPROVED SYSTEM OF PT MONITORING HAS BEEN INITIATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING • SAMPLING • AIR • REVIEW • FAILURE, ADMINISTRATIVE CONTROL • EQUIPMENT • BRUNSWICK 2 (BWR)

117709

NEUTRON RADIATION MONITORING SYSTEM SOLDER CONNECTORS DEFECTIVE AT BRUNSWICK 1

CAROLINA POWER & LIGHT CO., RALEIGH, NC

7 PGS, LTR W/AFD-70-4 TO U.S. NRC, REGION II, NOV. 23, 1970, DOKLET 50-320, TYPE--BWR, MFU--WV, AE--WV

CAUSE - POOR WORKMANSHIP. DURING PREOPERATIONAL TESTING OF THE NEUTRON RADIATION MONITORING SYSTEM, EXCESSIVE CIRCUITRY NOISE WAS DETECTED BY ERRATIC MOVEMENT OF PANEL INDICATORS. VISUAL INSPECTION OF THE CABLE PIA-TYPE CONNECTORS REVEALED LOOSE CONNECTOR COMPONENTS AND UNSATISFACTORY SOLDER CONNECTIONS BETWEEN CONDUCTORS AND PINS. OF THE 300 SOLDERED CONNECTORS INSPECTED, 300 WERE REPAIRED OR REPLACED. ALL WERE TESTED AND FOUND ACCEPTABLE. THE MAJORITY OF THE DEFICIENCIES APPEARED TO BE WORKMANSHIP ERRORS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NOISE • FAILURE, FABRICATION ERROR • TEST, PREOPERATIONAL • TEST, SYSTEM OPERABILITY • NEUTRON • MONITORING SYSTEM, RADIATION • BRUNSWICK 1 (BWR) • CONSTRUCTION • CABLES AND CONNECTORS

119942
 LPLI VALVE MOTOR BREAKER TRIP, LA THERMAL OVERLOAD AT BRUNSWICK 1
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 3 PWS, LTR N/LEN 1-75-1 TO U.S. NRC, REGION II, DEC. 30, 1970, DUCRET 50-325, TYPE--BAR, NRC--U.S., AE--UECL

CAUSE - MANUAL BREAKER SIZE WITH THE REACTOR AT 58 PWS IN STARTUP MODE, AIR LUM PRESSURE
 LOCAL INJECTION VALVE CBI-FOUR MOTOR BREAKER TRIPPED SEVERAL TIMES ON THERMAL OVERLOAD.
 INVESTIGATION DETERMINED THAT THE MOTOR BREAKER SIZE FOR CBI-FOUR WAS INSUFFICIENT. THE MOTOR
 NAME PLATE RATING IS 30S LACED MOTOR AMPS AND THE MOTOR NAME PLATE RATING WAS 30-100 AMPS. THE
 BREAKERS WERE SET AT 50 AMPS BUT CURRENT IS 450. A UNIT STOPPING WAS INITIATED AND THE SE
 BREAKERS WERE REPLACED WITH HIGHER AMPERE BREAKERS. UNIT 2 BREAKERS WERE ALSO REPLACED.

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 CHARGE \$2.00

BRUNSWICK 1 (BAR) - REACTOR STARTUP EXPERIENCE - BREAKER - VALVES - LPLI - FAILURE, EQUIPMENT - FAILURE,
 DESIGN ERROR - SYSTEM CAPACITY - MODIFICATION - REACTOR STOPPING

120003
 CONTAINMENT ATMOSPHERIC MONITOR SWITCH FLICKERS INTERMITTENTLY AT BRUNSWICK 1
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 4 PWS, LTR N/LEN 70-3 TO U.S. NRC, REGION II, DEC. 10, 1970, DUCRET 50-325, TYPE--BAR, NRC--U.S., AE--UECL

CAUSE - FLUX DOW TRANSISTORS WITH THE REACTOR IN STARTUP MODE, CONTAINMENT ATMOSPHERIC MONITOR
 LACAT-1234 WAS FOUND USING PANEL CHECKS TO HAVE THE LUM FLUX INTERLOCK SWITCH FLICKERING ONLY
 INTERMITTENTLY. FOUR TRANSISTORS WERE FOUND TO BE BAD TO THE FLUX SWITCH AND WERE REPLACED.

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BRUNSWICK 1 (BAR) - REACTOR STARTUP EXPERIENCE - INSTRUMENT, SWITCH - SENSORS, LUM - RADIATION MONITORS -
 CONTAINMENT ATMOSPHERE - TEST, SYSTEM OPERABILITY - FAILURE, INSTRUMENT - FAILURE, INHERENT

120004
 MPLI STEAM SUPPLY VALVE FAILS TO OPEN AT BRUNSWICK 1
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 4 PWS, LTR N/LEN 70-3 TO U.S. NRC, REGION II, DEC. 21, 1970, DUCRET 50-325, TYPE--BAR, NRC--U.S., AE--UECL

CAUSE - VALVE MOTOR BRUSHES STICKING WITH THE REACTOR AT 58 PWS - IN STARTUP MODE, MPLI STEAM
 SUPPLY VALVE CBI-FOUR WOULD NOT OPEN DURING INITIAL TESTING. THE VALVE MOTOR WOULD NOT TURN.
 THE MOTOR ON THE VALVE OPERATOR WAS FOUND TO HAVE THE BRUSHES STICKING. BRUSH MOUNTING WAS
 REMOVED, COMBUSTION TURNED DOWN, AND BRUSHES WERE RESEATED.

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BRUNSWICK 1 (BAR) - REACTOR STARTUP EXPERIENCE - VALVES - MPLI - STEAM - TEST, SYSTEM OPERABILITY - VALVE
 OPERATIONS - FAILURE, EQUIPMENT - FAILURE, INHERENT

120005
 TURUS LEVEL EXCEEDS THE MAXIMUM LIMIT AT BRUNSWICK 1
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 3 PWS, LTR N/LEN 70-3 TO U.S. NRC, REGION II, DEC. 27, 1970, DUCRET 50-325, TYPE--BAR, NRC--U.S., AE--UECL

CAUSE - PRESSURE SWITCH OUT OF CALIBRATION. DURING INITIAL TESTS ON MPLI WITH THE REACTOR AT 58
 PWS IN STARTUP MODE, THE TURUS LEVEL EXCEEDED THE MAXIMUM LIMIT OF -2.25 FEET. THIS WAS CAUSED
 BY MINIMUM FLUX VALVE CBI-FOUR NOT CLOSING FULLY. WHILE IN JUBLE-SHOOTING THE VALVE MOTOR
 CIRCUIT, PRESSURE SWITCH CBI-PSM-027 WAS FOUND OUT OF CALIBRATION. IT WAS RECALIBRATED AND THE
 VALVE OPERATED PROPERLY.

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BRUNSWICK 1 (BAR) - REACTOR STARTUP EXPERIENCE - SYSTEM CAPACITY - TURUS - FAILURE, EQUIPMENT - MPLI -
 INSTRUMENT, SWITCH - INSTRUMENT CALIBRATION - FAILURE, INHERENT - VALVES

120006
 NCIC STEAM VALVE FAILS TO OPEN AT BRUNSWICK 1
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/LEN 70-3 TO U.S. NRC, REGION II, DEC. 29, 1970, DUCRET 50-325, TYPE--BAR, NRC--U.S., AE--UECL

CAUSE - LOOSE WIRE. WHILE PERFORMING A TEST ON NCIC WIRE TO LCU ON MPLI WITH THE REACTOR AT 124
 PWS, NCIC STEAM ISOLATION VALVE CBI-FOUR FAILED TO OPEN. A LOOSE WIRE WAS FOUND ON THE VALVE
 MOTOR OPEN CONTACTOR. IT WAS TIGHTENED.

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120002 *CONTINUED*

BRUNSWICK 1 (0001) * REACTOR STARTUP EXPERIENCE * VALVES * PNEU. * CONTAINMENT ISOLATION * TEST, SYSTEM
 OPERABILITY * FAILURE, EQUIPMENT * VALVE OPERATORS * CABLES AND CONNECTIONS

119527

CESIUM-137 CONCENTRATION IN MILK SAMPLE EXCEEDS LIMIT AT BRUNSWICK 1 AND 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

3 PGS, LTR W/ENCL. RPT. TO U.S. NRC, REGION II, OCT. 19, 1970, DUKLET 50-324, TYPE--BWR, NEW--WORLD, AC--WELL

CAUSE - SEASONAL CYCLING. RESULTS OF ANALYSIS OF THE COMPOSITE SEPTEMBER MILK SAMPLE FROM STATION 35 INDICATES A CS-137 CONCENTRATION OF 210 ± 7 PICOCURIES/LITER. THIS IS 10 TIMES THE CONTROL STATION CONCENTRATION AND THE MINIMUM DETECTABLE CONCENTRATION. THIS HIGH CS-137 CONCENTRATION FOR THIS TIME OF THE YEAR IS CONSISTENT WITH DATA FROM THIS SAMPLING STATION AS FAR BACK AS 1970, PRIOR TO OPERATION OF EITHER UNIT. IT CANNOT BE ATTRIBUTED TO THE OPERATION OF THE PLANT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CESIUM * SAMPLING * MILK * MONITORING PROGRAM, ENVIRONMENTAL * BRUNSWICK 1 (0001) * BRUNSWICK 2 (0001) * CONCENTRATION * FOOD CHAIN * PERIODICITY, SEASONAL * FAILURE, INHERENT

119032

CESIUM-137 CONCENTRATION IN MILK SAMPLE HIGH AT BRUNSWICK 1 AND 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

3 PGS, LTR W/ENCL. RPT. TO U.S. NRC, REGION II, OCT. 19, 1970, DUKLET 50-324, TYPE--BWR, NEW--WORLD, AC--WELL

CAUSE - SEASONAL CYCLE. RESULTS OF ANALYSIS OF THE COMPOSITE SEPTEMBER MILK SAMPLE FROM STATION 35 INDICATES A Cesium-137 CONCENTRATION OF 210 ± 7 PICOCURIES/L. THIS CONCENTRATION IS 10 TIMES THE CONTROL STATION CONCENTRATION. THIS IS AN ANNUAL PEAK CS-137 ANOMALY FOR AUGUST-SEPTEMBER WHICH HAS OCCURRED SINCE BEFORE THE STATION STARTED TO OPERATE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 1 (0001) * BRUNSWICK 2 (0001) * CONCENTRATION * Cesium * MILK * FOOD CHAIN * PERIODICITY, SEASONAL * FAILURE, INHERENT * MONITORING PROGRAM, ENVIRONMENTAL

119042

IODINE-131 CONCENTRATION IN MILK SAMPLE HIGH AT BRUNSWICK 1 AND 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/ENCL. RPT. TO U.S. NRC, REGION II, NOV. 17, 1970, DUKLET 50-324/325, TYPE--BWR, NEW--WORLD, AC--WELL

CAUSE - CHINESE WEAPONS TEST. RESULTS OF ANALYSIS OF THE MILK SAMPLE FROM ENVIRONMENTAL SAMPLING STATION 35 ON 10/20/70 INDICATED AN I-131 CONCENTRATION OF 130 ± 10 PICOCURIES/L. THIS HAS PROVED TO BE 10 TIMES THE CONTROL STATION CONCENTRATION. HIGH I-131 CONCENTRATIONS RESULTED FROM RADIOACTIVITY FALLOUT FROM THE CHINESE NUCLEAR TEST OF 9/20/70.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 1 (0001) * BRUNSWICK 2 (0001) * CONCENTRATION * IODINE * MILK * FOOD CHAIN * TEST, WEAPONS * FAILURE, INHERENT * MONITORING PROGRAM, ENVIRONMENTAL

109204

DIESEL GENERATOR FAILS TO START AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PGS, LTR W/ENCL. RPT. TO U.S. NRC, REGION II, JAN. 9, 1970, DUKLET 50-324, TYPE--BWR, NEW--WORLD, AC--WELL

CAUSE - CHECK VALVES STUCK CLOSED. WITH THE REACTOR AT 458 POWER, DIESEL GENERATOR 4 FAILED TO AUTO-START. TWO CHECK VALVES WHICH SUPPLY CONTROL AIR PRESSURE FROM THE STARTING AIR TANKS WERE STUCK CLOSED. THE VALVES WERE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * FAILURE, MAINTENANCE ERROR * FAILURE, SIMULTANEOUS * PNEUMATIC SYSTEM * BRUNSWICK 2 (0001) * VALVE, CHECK * ENGINES, INTERNAL COMBUSTION * GENERATOR, DIESEL

109203

DAYWELL ATMOSPHERE RECORDER FAILS UPSCALE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/ENCL. RPT. TO U.S. NRC, REGION II, JAN. 9, 1970, DUKLET 50-324, TYPE--BWR, NEW--WORLD, AC--WELL

CAUSE - BAD DETECTOR. WITH THE REACTOR AT 18 POWER AND SHUTTING DOWN, A DAYWELL ATMOSPHERE RECORDER PLUGGED UPSCALE. THE DETECTOR IN THE INSTRUMENT WAS FOUND TO BE BAD. IT WAS REPLACED.

169265 PLCONTINGUO
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + FAILURE, INSTRUMENT + MONITOR + CONTAINMENT ATMOSPHERE + BRUNSWICK 2 (BWR) + RECORDERS

169263
 MPLI ISOLATES FROM HIGH VENT TEMPERATURE DIFFERENTIAL AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PUS, LTR N/AU 75-148 TO U.S. NRC, REGION II, JAN. 5, 1976, DUCRET 50-324, TYPE--BWR, NRC--G.E., AE--UELL

CAUSE - OUTSIDE TEMPERATURE DROPPED 20 F. WHILE THE REACTOR WAS SHUT DOWN, MPLI ISOLATED DUE TO HIGH VENT TEMPERATURE DIFFERENTIAL. NO LEAKS WERE FOUND DURING THE NEXT 2 HOURS, MPLI ISOLATED AND WAS RESET 3 TIMES. THE PROBABLE CAUSE WAS DUE TO OUTSIDE TEMPERATURE DROPPING 20 F DURING FIRST HALF OF SHIFT CAUSING HIGH DELTA T IN VENT SYSTEM WHEN SYSTEM TEMPERATURE STABILIZED, ISOLATIONS STOPPED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + VENTILATION SYSTEM + TEMPERATURE GRADIENT + WEATHER, SEVERE + BRUNSWICK 2 (BWR) + MPLI

169268
 JAYGEN RECORDER FOUND TO BE READING DOWNSCALE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PUS, LTR N/AU 75-151 TO U.S. NRC, REGION II, JAN. 5, 1976, DUCRET 50-324, TYPE--BWR, NRC--G.E., AE--UELL

CAUSE - BAD TRANSISTOR AND LEAKS. DURING TESTING WITH THE REACTOR AT 67% POWER, JAYGEN RECORDER WAS FOUND READING 0% ON ATG. THE LOCAL METER WAS READING 21%. TWO DIODES AND A TRANSISTOR IN THE TRANSMITTER OUTPUT WERE BAD AND WERE REPLACED. THE UNIT WAS CALIBRATED AND RETURNED TO SERVICE IN 22 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + OXYGEN + SOLID STATE DEVICE + MONITOR + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (BWR) + RECORDERS

169267
 JAYGEN/HYDROGEN INDICATORS READING LOW AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PUS, LTR N/AU 75-152 TO U.S. NRC, REGION II, JAN. 5, 1976, DUCRET 50-324, TYPE--BWR, NRC--G.E., AE--UELL

CAUSE - WATER IN LINES AND CYCLES. WHILE OPERATING AT 79% POWER, THE JAYGEN AND HYDROGEN INDICATORS ON ONE INSTRUMENT WERE READING LOW. WATER WAS FOUND IN THE WATER AND ALL LINES. THE WATER WAS PURGED. A PUMP AND 2 FLOW Meters WERE REPLACED. THE SYSTEM WAS INOPERABLE FOR 3 DAYS, 5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HYDROGEN + OXYGEN + WATER + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + BRUNSWICK 2 (BWR) + INDICATORS + RECORDERS

169268
 MCIC ISOLATED FROM HIGH TEMPERATURE DIFFERENTIAL AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PUS, LTR N/AU 75-153 TO U.S. NRC, REGION II, JAN. 5, 1976, DUCRET 50-324, TYPE--BWR, NRC--G.E., AE--UELL

CAUSE - IMPROPER CALIBRATION. WHILE OPERATING AT 83% POWER, MCIC ISOLATED FROM HIGH TEMPERATURE DIFFERENTIAL. NO TEMPERATURE PROBLEM WAS FOUND. THE INSTRUMENTS HAD BEEN CALIBRATED 30 F TOO CONSERVATIVELY DUE TO A MISINTERPRETATION OF CALIBRATION SPECS BY THE TECHNICIAN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + PROCEDURES AND MANUALS + INSTRUMENT CALIBRATION + TEMPERATURE GRADIENT + FAILURE, MAINTENANCE ERROR + BRUNSWICK 2 (BWR) + MCIC

169265
 MPLI SYSTEM ISOLATED AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PUS, LTR N/AU 75-157 TO U.S. NRC, REGION II, JAN. 9, 1976, DUCRET 50-324, TYPE--BWR, NRC--G.E., AE--UELL

CAUSE - BREAKER SWITCHED OFF INADVERTENTLY. WHILE OPERATING AT 84% POWER, THE MPLI SYSTEM ISOLATED AT A TIME WHEN AMP LOOP B WAS INOPERABLE. THE POWER SUPPLY CIRCUIT BREAKER TO THE STEAM

109243 *CONTINUED*

DETECTION CIRCUIT WAS INADVERTENTLY SWITCHED OFF CAUSING THE ISOLATION. THE BREAKER WAS IMMEDIATELY SWITCHED ON AND THE SYSTEM REACTIVATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM * FAILURE, OPERATOR ERROR * CONTAINMENT ISOLATION * BRUNSWICK 2 (BWR) * OPERATOR * OPRCL

109244

PERIODIC TESTS NOT PERFORMED AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/RO 75-156 TO U.S. NRC, REGION II, JAN. 9, 1976, DUCRET 50-324, TYPE--BWR, RPU--UOEO, AE--UECL

CAUSE - ADMINISTRATIVE CONTROL. DURING AN AUDIT OF PERIODIC TEST SCHEDULING AND PERFORMANCE, IT WAS FOUND THAT 7 DIFFERENT TESTS HAD NOT BEEN PERFORMED DURING THE PERIOD OF MAY THROUGH NOVEMBER 1975. AN IMPROVED SYSTEM OF ADMINISTRATIVE CONTROL FOR SCHEDULING AND RECORDING COMPLETION OF PTS HAS BEEN IMPLEMENTED. SOME OF THESE TESTS CAN ONLY BE DONE WHEN THE PLANT IS SHUT DOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION * TESTING * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * FAILURE, ADMINISTRATIVE CONTROL * TEST INTERVAL * FLOW * RATE * BRUNSWICK 2 (BWR) * CONTROL ROOM * PUMPS

109245

REACTOR WATER CONDUCTIVITY EXCEEDS LIMIT AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/RO 75-156 TO U.S. NRC, REGION II, JAN. 9, 1976, DUCRET 50-324, TYPE--BWR, RPU--UOEO, AE--UECL

CAUSE - FIRST STAGE HSA'S SHUT DOWN. WHILE OPERATING AT 84% POWER WITH THE FIRST STAGE MISTONE SEPARATOR REHEATERS SHUT DOWN, REACTOR WATER CONDUCTIVITY INCREASED TO GREATER THAN 2 MICROMHO/CM. WITH THE HSA'S VALVED OUT, LOW PRESSURE STEAM BECAME SATURATED CAUSING WASH OUT OF IMPURITIES FROM THE TURBINE. THE HSA'S WERE PLACED BACK IN SERVICE AND CONDUCTIVITY RETURNED TO WITHIN LIMITS IN 4 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR * STEAM * COOLANT QUALITY * TURBINE * STEAM QUALITY * BRUNSWICK 2 (BWR) * REHEATERS

109246

REACTOR WATER CONDUCTIVITY EXCEEDS LIMIT AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/RO 75-156 TO U.S. NRC, REGION II, JAN. 9, 1976, DUCRET 50-324, TYPE--BWR, RPU--UOEO, AE--UECL

CAUSE - WASH OUT OF IMPURITIES DUE TO MAINTENANCE. WITH THE REACTOR RUNNING AT 75% POWER, REACTOR CONDUCTIVITY SPIKE ABOVE 2 MICROMHO/CM FOR 12 HOURS AFTER PLACING A FILTER/DEMINERALIZER IN SERVICE. WHEN THE F/D WAS STARTED UP, IMPURITIES WERE PROBABLY WASHED OUT AFTER HAVING BEEN OBTAINED FOR MAINTENANCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR * COOLANT PURIFICATION SYSTEM * COOLANT QUALITY * BRUNSWICK 2 (BWR) * DEMINERALIZERS

109247

SET POINT DRIFT IN PRESSURE INTERLOCK SWITCH AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/RO 75-156 TO U.S. NRC, REGION II, JAN. 9, 1976, DUCRET 50-324, TYPE--BWR, RPU--UOEO, AE--UECL

CAUSE - UNKNOWN. DURING A TEST WITH THE REACTOR AT 85% POWER, LPCI PUMP DISCHARGE PRESSURE INTERLOCK WAS FOUND TO BE 7 PSI BELOW THE 93 PSIG LOWER LIMIT. THE CAUSE IS UNKNOWN. THE INSTRUMENT WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, INTERLOCK * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * BRUNSWICK 2 (BWR) * EMERGENCY COOLING SYSTEM * PURIFI * SENSORS, PRESSURE * LPCI

109248

SET POINT DRIFT IN VARIOUS SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/RO 75-156 TO U.S. NRC, REGION II, JAN. 9, 1976, DUCRET 50-324, TYPE--BWR, RPU--UOEO, AE--UECL

169243 *CONTINUED*

CAUSE - INSTRUMENT SHIFT. AS A RESULT OF RECENT REPORTS OF INSTRUMENTS FUND OUT OF CALIBRATION AT SCHEDULED CALIBRATION TIMES, AN INVESTIGATION WAS PERFORMED TO IDENTIFY OTHER INSTRUMENTS WHICH MAY SHIFT OUT OF LIMITS AS DETERMINED DURING TESTING. A TABLE LISTS 86 INSTANCES WHERE INSTRUMENTS WERE FOUND TO HAVE SHIFTED OUT OF CALIBRATION DURING THE PERIOD OF APRIL 6 TO DECEMBER 13, 1975. INSTRUMENTS WERE RECALIBRATED IMMEDIATELY. ADMINISTRATIVE PROCEDURES HAVE BEEN IMPLEMENTED TO PREVENT FUTURE NONCOMPLIANCE IN REPORTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * FAILURE, ADMINISTRATIVE CONTROL * RESET POINT * BRUNSWICK 2 (BWR) * PURIFY

169230

MPCI SYSTEM ISOLATED ON STEAM LEAK DETECTION AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/NU 75-102 TO W.S. NRC, REGION II, JAN. 13, 1976, DUCRET 50-324, TYPE--BWR, MFW--G.E., AE--UECL

CAUSE - PERSONNEL ERROR. WHILE OPERATING AT 87% POWER, MPCI ISOLATED ON STEAM LEAK DETECTION. TWO STEAM LEAK DETECTION ALARM SWITCHES WERE PLACED IN THE REAR POSITION AT THE SAME TIME. THE SYSTEM WAS RESTORED TO STANDBY STATUS IN MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * BRUNSWICK 2 (BWR) * MPCI

169229

NITROGEN ACCUMULATOR CHARGING VALVE LEAKS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/NU 75-103 TO W.S. NRC, REGION II, JAN. 13, 1976, DUCRET 50-324, TYPE--BWR, MFW--G.E., AE--UECL

CAUSE - DIRT. WHILE OPERATING AT 88% POWER, THE CHARGING SCHRAEDER VALVE ON A NITROGEN ACCUMULATOR WAS FOUND TO BE LEAKING. THE ACCUMULATOR WAS DISCHARGED AND THE VALVE CLEANED. THE ACCUMULATOR WAS RECHARGED AND RETURNED TO SERVICE IN ABOUT 25 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * CONTROL * NITROGEN * CROW * TEST, SYSTEM OPERABILITY * PRESSURE, INTERNAL * LEAK * BRUNSWICK 2 (BWR) * VALVES * ACCUMULATORS

169237

REACTION WATER CONDUCTIVITY EXCEEDS LIMIT AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/NU 75-101 TO W.S. NRC, REGION II, JAN. 13, 1976, DUCRET 50-324, TYPE--BWR, MFW--G.E., AE--UECL

CAUSE - WASH-OUT OF IMPURITIES FROM RWCV. WHILE OPERATING AT 88% POWER, THE REACTOR WATER CONDUCTIVITY WENT ABOVE 2 MICROMM/CM AFTER STARTING REACTOR WATER CLEANUP PUMPS 2A AND 2B TO THE REACTOR VESSEL. THE SYSTEM HAD BEEN DRAINED TO REPLACE THE OUTWARD SEAL ON PUMP 2B. PROBABLY, IMPURITIES WERE WASHED OUT AFTER THE SYSTEM WAS DRAINED AND REFILLED. P/OPS WERE PRELATERED AND CONDUCTIVITY STARTED TO COME DOWN. THE CONDUCTIVITY WAS OUT OF LIMITS FOR 7.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR * COOLANT PURIFICATION SYSTEM * COOLANT QUALITY * BRUNSWICK 2 (BWR) * PUMPS

169042

ARM SYSTEM LOOPS OUT OF SERVICE FOR SHORT PERIODS OF TIME AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/NU 75-104 TO W.S. NRC, REGION II, JAN. 14, 1976, DUCRET 50-324, TYPE--BWR, MFW--G.E., AE--UECL

CAUSE - FLUX TESTING. WITH THE REACTOR AT ABOUT 84% POWER, THE ARM SYSTEM LOOPS WERE FLUX TESTED FOR 11 DAYS. DURING THIS TIME, THE 3 LOOPS WERE PLACED UNDER CLEARANCE SEPARATELY FOR SHORT PERIODS OF TIME TO INSTALL AND REMOVE INSTRUMENTATION. TOTAL DOWNTIME WAS ABOUT 4.33 DAYS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING * TEST, SYSTEM OPERABILITY * SHUTDOWN COOLING SYSTEM * FLUX * BRUNSWICK 2 (BWR) * FAILURE, INHERENT

169043

SET POINT SHIFT IN DIFFERENTIAL PRESSURE SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

109043 CONTINUUM
2 PGS, LTR WFO-75-100 TO U.S. NRC, REGION II, JAN. 14, 1976, DUCRET 50-324, TYPE--DNR, MFU--UCL, AE--UCL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 646 POWER, 13 NO DIFFERENTIAL PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THEY WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • RESET POINT • BRUNSWICK 2 (DNR) • DRIFT • SENSORS, PRESSURE

109044
SET POINT DRIFT IN RRM PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-75-100 TO U.S. NRC, REGION II, JAN. 14, 1976, DUCRET 50-324, TYPE--DNR, MFU--UCL, AE--UCL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 746 POWER, 4 RRM PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THEY WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SENSORS, CONTROLLING SYSTEM • RESET POINT • BRUNSWICK 2 (DNR) • DRIFT • SENSORS, PRESSURE

109047
MPCI ISOLATED ON STEAM LEAK DETECTION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-75-100 TO U.S. NRC, REGION II, JAN. 20, 1976, DUCRET 50-324, TYPE--DNR, MFU--UCL, AE--UCL

CAUSE - ADJACENT ROOM SUBCOOLED. WHILE OPERATING AT 808 POWER, MPCI ISOLATED ON STEAM LEAK DETECTION (HIGH DELTA T IN MPCI ROOM VENTILATION). THE RRM ROOM HAD BEEN SUBCOOLED WHEN THE RRM PUMPS WERE RUN, CAUSING THE HIGH DELTA T. THE MPCI ROOM DOOR WAS OPENED TO ALLOW TEMPERATURE TO EQUALIZE BETWEEN THE RRM AND MPCI ROOMS. MPCI ISOLATION LASTED FOR 1.75 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION • VENTILATION SYSTEM • TEMPERATURE GRADIENT • BRUNSWICK 2 (DNR) • FAILURE, IMMINENT • MPCI

109048
MPCI ISOLATED ON STEAM LEAK DETECTION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-75-100 TO U.S. NRC, REGION II, JAN. 20, 1976, DUCRET 50-324, TYPE--DNR, MFU--UCL, AE--UCL

CAUSE - HIGH RRM ROOM TEMPERATURE. WITH THE REACTOR AT 798 POWER, MPCI ISOLATED ON STEAM LEAK DETECTION. NO LEAKS WERE FOUND. RRM ROOM COOLERS WERE RUN FOR 30 MINUTES. MPCI WAS RETURNED TO STANDBY AFTER 54 MINUTES OF ISOLATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION • VENTILATION SYSTEM • TEMPERATURE GRADIENT • BRUNSWICK 2 (DNR) • FAILURE, IMMINENT • MPCI

109049
MPCI ISOLATED ON STEAM LEAK DETECTION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-75-100 TO U.S. NRC, REGION II, JAN. 20, 1976, DUCRET 50-324, TYPE--DNR, MFU--UCL, AE--UCL

CAUSE - ADJACENT ROOM TEMPERATURE HIGH. WITH THE REACTOR AT 308 POWER, MPCI ISOLATED ON STEAM LEAK DETECTION. NO LEAKS WERE FOUND. RRM ROOM COOLERS WERE RUN FOR 3 MINUTES AND MPCI RETURNED TO STANDBY. MPCI WAS ISOLATED FOR 6 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION • VENTILATION SYSTEM • TEMPERATURE GRADIENT • BRUNSWICK 2 (DNR) • FAILURE, IMMINENT • MPCI

109050
MPCI ISOLATED ON STEAM LEAK DETECTION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-75-100 TO U.S. NRC, REGION II, JAN. 20, 1976, DUCRET 50-324, TYPE--DNR, MFU--UCL, AE--UCL

100510 CONTINUOUS

CAUSE - UNKNOWN. WHILE OPERATING AT 878 POWER, HPCI ISOLATED ON STEAM LEAK DETECTION. THE TEMPERATURE DIFFERENTIAL INSTRUMENT CALIBRATIONS WERE CHECKED. NO PROBLEM FOUND. THE ISOLATION PROBLEM STOUT IS CONTINUING. HPCI WAS ISOLATED FOR 2 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • TEMPERATURE GRABBER • BRUNSWICK 2 (BRN) • FAILURE, INHERENT • HPCI

100501

DET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 POS, LTR NRC-70-2 TO USS. NRC, REVIEW II, JAN. 20, 1976, DUCRET 50-324, TYPE--BRN, NFO--GEE, AE--UELC

CAUSE - UNKNOWN. DURING A TEST WITH THE REACTOR AT 548 POWER, ALL 6 MPS HIGH DRYWELL PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. NO CAUSE WAS FOUND. THE INSTRUMENTS WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • REACTOR PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • ST. SYSTEM OPERABILITY • DET POINT • BRUNSWICK 2 (BRN) • DRIFT • SENSORS, PRESSURE

100500

HPCI ISOLATED DUE TO STEAM LEAK AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 POS, LTR NRC-75-176 TO USS. NRC, REVIEW II, JAN. 21, 1976, DUCRET 50-324, TYPE--BRN, NFO--GEE, AE--UELC

CAUSE - VALVE PACKING LEAKAGE. WITH THE REACTOR AT 798 POWER, HPCI WAS ISOLATED FOR 5045 MINUTES DUE TO A STEAM LEAK AT A VALVE. THE VALVE PACKING MAY BEEN STEAM CHANNELLED AND WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR • CONTAINMENT ISOLATION • SEAL • LEAK • BRUNSWICK 2 (BRN) • FAILURE, INHERENT • HPCI • VALVES

100507

HPCI ISOLATED FOR MAINTENANCE ACTIVITY AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 POS, LTR NRC-75-189 TO USS. NRC, REVIEW II, JAN. 21, 1976, DUCRET 50-324, TYPE--BRN, NFO--GEE, AE--UELC

CAUSE - VALVE PACKING LEAKAGE. WHILE THE REACTOR WAS OPERATING AT 758 POWER, HPCI WAS ISOLATED FOR 6 HOURS TO REPLACE VALVE PACKING THAT MAY BEEN STEAM CHANNELLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • MAINTENANCE AND REPAIR • SEAL • LEAK • BRUNSWICK 2 (BRN) • FAILURE, INHERENT • HPCI • VALVES

100502

TEST ON MAIN STACK MONITOR NOT PERFORMED AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 POS, LTR NRC-70-3 TO USS. NRC, REVIEW II, JAN. 22, 1976, DUCRET 50-324, TYPE--BRN, NFO--GEE, AE--UELC

CAUSE - INADVERTENTLY OMITTED. DURING THE CONTINUING QA-PT REVIEW, IT WAS FOUND THAT THE MAY 1975 TEST FOR MAIN STACK MONITORING WAS NOT RUN. IT WAS INADVERTENTLY OMITTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MONITOR, STACK • TESTING • REVIEW • FAILURE, ADMINISTRATIVE CONTROL • MONITORING SYSTEM, NAVIGATION • BRUNSWICK 2 (BRN) • NAVIGATION PLANNERS

100500

TESTING OF THE MAIN STACK MONITOR NOT PERFORMED AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 POS, LTR NRC-75-3 TO USS. NRC, REVIEW II, JAN. 22, 1976, DUCRET 50-324, TYPE--BRN, NFO--GEE, AE--UELC

CAUSE - INADVERTENTLY OMITTED. AS A RESULT OF CONTINUING QA-PT REVIEW, IT WAS FOUND THAT THE TEST FOR MAIN STACK MONITORING (MONTHLY) WAS NOT RUN IN MAY 1975. IT WAS INADVERTENTLY OMITTED. AN IMPROVED SYSTEM OF PT SCHEDULE MONITORING HAS BEEN INITIATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

109040 CONTINUOUS
FAILURE, OPERATOR ERROR • PRIMARY, STAFF • TESTING • MONITORING SYSTEM, RADIATION • TEST INTERVAL •
BRUNSWICK 2 (NMR) • RADIATION MONITORS

109039
DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-70-5 TO U.S. NRC, REGION II, JAN. 29, 1970, DCKET 50-324, TYPE--DM, RFO--UC, AC--UC

CAUSE - BROKEN LOG WIRE. WHILE OPERATING AT 498 POWER, AN APPARENT UNDERVOLTAGE OCCURRED ON
EMERGENCY BUS E-1. DIESEL 1 STARTED BUT ITS OUTPUT BREAKER FAILED TO CLOSE AND RE-ENERGIZED BUS
E-1. THE FALSE UNDERVOLTAGE CONDITION WAS DUE TO A BLOWN PT FUSE CAUSED BY AN ACCIDENTAL
UNLOADING. INVESTIGATION OF THE BREAKER REVEALED THAT A LOG WIRE BROKE OFF ITS WIRE AT THE
TERMINAL BLOCK CAUSING AN OPEN CIRCUIT IN THE FIELD FLASHING CIRCUIT. WIRE BOWDER MOVEMENT
OCCURRED WHEN THE COMPARTMENT WIRE WAS CLOSED. THIS STRESS BROKE THE WIRE. THE BROKEN
LOG WIRE WAS REPAIRED. THE WIRE BUNDLE WAS RETIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • STRESS • FAILURE, INSTALLATION ERROR • BRUNSWICK 2 (NMR) • CABLES AND CONNECTIONS
• BREAKER • GENERATOR, DIESEL

110270
CONTAINMENT RADIATION RECORDER FAILS TO RESPOND AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-70-9 TO U.S. NRC, REGION II, JAN. 29, 1970, DCKET 50-324, TYPE--DM, RFO--UC, AC--UC

CAUSE - BROKEN RECORDER DRIVE COIL. WITH THE REACTION AT 456 POWER, A CONTAINMENT RADIATION
RECORDER WOULD NOT RESPOND TO INPUT SIGNAL. THE RECORDER DRIVE COIL HAD BURNED OUT AND OPENED. THE
COIL WAS REPLACED. THE INSTRUMENT WAS REPAIRED IN 50 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, COMPONENT • CONTAINMENT • TEST, SYSTEM OPERABILITY • BRUNSWICK 2 (NMR) • FAILURE, ELEMENT •
RADIATION MONITORS • PRELIMINARS

110265
NP-1 DECLARED IMPERABLE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-70-171 TO U.S. NRC, REGION II, JAN. 29, 1970, DCKET 50-324, TYPE--DM, RFO--UC, AC--UC

CAUSE - VALVE STEM PACKING LEAK. WHILE THE REACTION WAS OPERATING AT 706 POWER, NP-1 WAS DECLARED
IMPERABLE TO ISOLATE STEAM FROM THE ARA SYSTEM SO THAT A RRM VALVE COULD BE REPAIRED. THE STEM
PACKING HAD BEEN STEAM CHANNELLED. IT WAS REPLACED WITH JUMP CHANE TEFLO PACKING. NP-1 WAS
RETURNED TO SERVICE WITHIN 3.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT • MATERIAL • MODIFICATION • FAILURE, DESIGN ERROR • SEAL • LEAK • BRUNSWICK 2 (NMR) •
VALVES • NP-1

110265
IRM AND SRM TESTS NOT RUN ON TIME AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR WFO-70-172 TO U.S. NRC, REGION II, JAN. 29, 1970, DCKET 50-324, TYPE--DM, RFO--UC, AC--UC

CAUSE - IMPROPER INTERPRETATION OF TECH SPECS. DURING THE CONTINUOUS JUMP REVIEW, IT WAS FOUND
THAT, SINCE INITIAL STARTUP, TESTS FOR IRM AND SRM RUN BLOCKS HAVE NOT BEEN RUN WITHIN 1 WEEK
BEFORE EACH STARTUP EXCEPT ONE. TECH SPEC REQUIREMENTS WERE NOT PROPERLY INTERPRETED. AN
IMPROVED ADMINISTRATIVE CONTROL SYSTEM HAS BEEN INITIATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

TESTING • REVIEW • FAILURE, ADMINISTRATIVE CONTROL • INSTRUMENT, INTERMEDIATE RANGE • INSTRUMENT, STARTUP
RANGE • TEST INTERVAL • BRUNSWICK 2 (NMR)

110260
OFF GAS RADIATION MONITOR SAMPLE VALVE FOUND CLOSED AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
4 PGS, LTR WFO-70-12 TO U.S. NRC, REGION II, JAN. 29, 1970, DCKET 50-324, TYPE--DM, RFO--UC, AC--UC

CAUSE - PROBABLE MAINTENANCE ERROR. WHILE OPERATING AT 894 POWER, THE OFF GAS RADIATION MONITOR
SAMPLE VALVE WAS FOUND TO BE SHUT. IT WAS IMMEDIATELY OPENED. THE VALVE WAS PROBABLY LEFT SHUT

110200 CONTINUOUS

INADEQUATELY DURING A SEARCH FOR A CONDENSER VACUUM LEAK ON DEC. 27.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT, GAS + MONITOR + FAILURE, MAINTENANCE ERROR + PUFF GAS + BRUNSWICK 2 (BWR) + RADIATION MONITORS

110208

ACIC ISOLATES ON HIGH TEMPERATURE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PUS, LTR N/RD-70-7 TO U.S. NRC, REGION II, JAN. 29, 1970, DUCRET 50-324, TYPE--BWR, NRU--UOEO, AE--UECC

CAUSE - UNKNOWN. WHILE THE REACTOR WAS AT 738 POWER, ACIC ISOLATED ON HIGH AMBIENT TEMPERATURE ISOLATION ON STEAM LEAK DETECTION. THE CAUSE OF ISOLATION IS UNKNOWN. THE SYSTEM WAS RESET WITHIN 1 MINUTE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + BRUNSWICK 2 (BWR) + FAILURE, INCIDENT + PACIC + SENSORS, TEMPERATURE

110209

SET POINT SHIFT IN PRESSURE SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PUS, LTR N/RD-70-8 TO U.S. NRC, REGION II, JAN. 29, 1970, DUCRET 50-324, TYPE--BWR, NRU--UOEO, AE--UECC

CAUSE - UNKNOWN. DURING A TEST WITH THE REACTOR AT 498 POWER, 2 PRESSURE SWITCHES (PRIMARY CONTAINMENT ISOLATION SYSTEM, LOW CONDENSER VACUUM) WERE FOUND OUT OF CALIBRATION LIMS. NO CAUSE WAS FOUND. THEY WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (BWR) + DRIFT + SENSORS, PRESSURE

110207

SET POINT SHIFT IN TEMPERATURE SWITCH AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PUS, LTR N/RD-70-6 TO U.S. NRC, REGION II, JAN. 29, 1970, DUCRET 50-324, TYPE--BWR, NRU--UOEO, AE--UECC

CAUSE - UNKNOWN. DURING TESTING WITH THE REACTOR AT 738 POWER, NRC SPARE HIGH TEMPERATURE SWITCH WAS FOUND 25 F HIGH OUT OF CALIBRATION. THE CAUSE IS UNKNOWN. THE INSTRUMENT WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (BWR) + DRIFT + SENSORS, TEMPERATURE

110259

EXPLOSION OCCURS IN STEAM FILTER HOUSE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PUS, LTR N/RD-70-13 TO U.S. NRC, REGION II, FEB. 2, 1970, DUCRET 50-324, TYPE--BWR, NRU--UOEO, AE--UECC

CAUSE - OFF GAS VENTED TO FILTER HOUSE. WHILE THE UNIT WAS OPERATING AT 858 POWER, THE RADIATION LEVEL WAS NOTED TO BE INCREASING IN THE FILTER HOUSE. LOOP SEALS IN THE OFF GAS SYSTEM WERE REFILED. LATER, AN EXPLOSION AND MINOR FIRE OCCURRED IN THE FILTER HOUSE. THE REACTOR WAS IMMEDIATELY SHUT DOWN. LEAK WEATHER CAUSED HIGHER THAN NORMAL CONDENSATION IN THE OFF GAS SYSTEM. THE VENTILATOR WAS IMPROPERLY INSTALLED. THESE 2 EVENTS RESULTED IN EXCESS WATER IN THE NEPA FILTER AND HIGH PRESSURE DROP. THE INCREASE IN PRESSURE OPENED THE LOOP SEALS RELEASING HYDROGEN AND RADIOACTIVITY. OPERATION OF A RELAY PRODUCED THE SPARK THAT CAUSED THE EXPLOSION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

AIRBORNE RELEASE + EXPLOSION + HYDROGEN + FILTER, HIGH EFFICIENCY + PUFF GAS + SEAL + FAILURE, INSTALLATION ERROR + BRUNSWICK 2 (BWR) + REACTOR SHUTDOWN + COMPARTMENT

110201

SMOKE TRAIN INOPERABLE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PUS, LTR N/RD-70-10 TO U.S. NRC, REGION II, FEB. 7, 1970, DUCRET 50-324, TYPE--BWR, NRU--UOEO, AE--UECC

CAUSE - WIRING IN CABINET BURNED. WHILE OPERATING AT 498 POWER, SMOKE TRAIN 2ND HEAT DETECTION

110201 *CONTINUED*

RESET AND WATER SPRAY EN LIGHTS ILLUMINATED. DELUGE SYSTEM 20 WAS INITIATED. WATER HAD LEAKED INTO THE CONTROL CABINET FROM AN HVAC OVERFLOW CAUSING THE WIRING TO BURN OUT. WIRES WERE REPLACED ALONG WITH NET FILTERS. THE SYSTEM WAS CHECKED OUT AND RETURNED TO SERVICE IN 5 DAYS 13.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * FIRE * VENTILATION SYSTEM * CONTROL PANEL/ROOM * LEAK * BRUNSWICK 2 (0HR) * CABLES AND CONNECTORS * FAILURE, INHERENT * *FACILITY WAS TREATMENT

110250

SET POINT DRIFT IN PRESSURE SWITCH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-14 TO U.S. NRC, REGION II, FEB. 7, 1970, DOCKET 50-324, TYPE--BWR, MFU--UOEO, AE--UELC

CAUSE - UNKNOWN. DURING A TEST WHILE OPERATING AT 50% POWER, A PRIMARY CONTAINMENT ISOLATION, LOW STEAM LINE PRESSURE SWITCH WAS FOUND OUT OF CALIBRATION (LOW). THE CAUSE IS UNKNOWN. IT WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * BRUNSWICK 2 (0HR) * *DRIFT * SENSORS, PRESSURE

111013

SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., SOUTHPORT, NC

1 PG, LTR N/AU-70-14 TO U.S. NRC, REGION II, FEB. 9, 1970, DOCKET 50-324, TYPE--BWR, MFU--UOEO, AE--UELC

CAUSE - INSTRUMENT DRIFT. FOUR MPCI TURBINE EXHAUST DIAPHRAGM HIGH PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THEY WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * BRUNSWICK 2 (0HR) * DRIFT * SENSORS, PRESSURE * MPCI

111913

SET POINT DRIFT IN REACTOR LOW WATER LEVEL SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., SOUTHPORT, NC

1 PG, LTR NPT TO U.S. NRC, REGION II, FEB. 9, 1970, DOCKET 50-324, TYPE--BWR, MFU--UOEO, AE--UELC

CAUSE - INSTRUMENT DRIFT. CALIBRATION TESTS SHOWED 4 REACTOR LOW WATER LEVEL SCRAM SWITCHES TO BE OUT OF CALIBRATION. THEY WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * BRUNSWICK 2 (0HR) * DRIFT * SENSORS, LEVEL

110903

SET POINT DRIFT IN DRYWELL PRESSURE SWITCH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-18 TO U.S. NRC, REGION II, FEB. 12, 1970, DOCKET 50-324, TYPE--BWR, MFU--UOEO, AE--UELC

CAUSE - UNKNOWN. WITH THE REACTOR AT 71% POWER, TESTS FOUND A HIGH DRYWELL PRESSURE SWITCH TO BE OUT OF CALIBRATION. THE CAUSE IS UNKNOWN. THE INSTRUMENT WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * BRUNSWICK 2 (0HR) * DRIFT * SENSORS, PRESSURE

110904

SET POINT DRIFT IN RHR PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-19 TO U.S. NRC, REGION II, FEB. 12, 1970, DOCKET 50-324, TYPE--BWR, MFU--UOEO, AE--UELC

CAUSE - UNKNOWN. DURING TESTING WITH THE REACTOR AT 30% POWER, 2 RHR HIGH DRYWELL PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THE CAUSE IS UNKNOWN. THEY WERE IMMEDIATELY RECALIBRATED.

110904 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SHUTDOWN COOLING SYSTEM + SET POINT + BRUNSWICK 2 (BOR) + QUALITY + SENSORS, PRESSURE

110907
 NPCL ISOLATES ON STEAM LEAK DETECTION AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/AU-70-22 TO U.S. NRC, REGION II, FEB. 13, 1970, DUCRET 50-324, TYPE--BOR, MFU--UCL, AE--UECL

CAUSE - NOT STATED. WITH THE REACTOR AT TCR POWER, NPCL ISOLATED ON STEAM LEAK DETECTION THROUGH A DIFFERENTIAL TEMPERATURE SWITCH. NO RECESSIVE STEAM LEAKS WERE FOUND. RRM RUM COLLECTS WERE RUN AND ISOLATION CLEARED AFTER 20 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + TEMPERATURE GRADIENT + BRUNSWICK 2 (BOR) + NPCL

110905
 LOW FLOW INDICATION ON RADIATION MONITOR AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/AU-70-20 TO U.S. NRC, REGION II, FEB. 13, 1970, DUCRET 50-324, TYPE--BOR, MFU--UCL, AE--UECL

CAUSE - BURDEN DRIVE BELT BROKE. WITH THE REACTOR AT 67% POWER, A LOW FLOW INDICATION WAS FOUND ON 2-CLC-AR-1400. THE BURDEN DRIVE BELT HAD BROKEN. IT WAS REPLACED. THE INSTRUMENT WAS INOPERABLE FOR 10.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, COMPONENT + CONTAINMENT FILTERING SYSTEM + FLOW + BRUNSWICK 2 (BOR) + FAILURE, INSTRUMENT + RADIATION MONITORS + BLOWERS

110906
 VALVE OPENING PERMISSIVE SWITCH FOUND ISOLATED AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/AU-70-21 TO U.S. NRC, REGION II, FEB. 13, 1970, DUCRET 50-324, TYPE--BOR, MFU--UCL, AE--UECL

CAUSE - OPERATOR ERROR. WITH THE REACTOR AT 75% POWER, CS AND RRM VALVE OPENING PERMISSIVE PRESSURE SWITCH WAS FOUND ISOLATED. IT APPARENTLY HAD BEEN LEFT ISOLATED AFTER THE LAST TEST. THE SWITCH WAS RESET IMMEDIATELY. IT WAS ISOLATED FOR 11 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATOR ERROR + CONTAINMENT ISOLATION + TESTING + INSTRUMENT, SWITCH + BRUNSWICK 2 (BOR) + EMERGENCY COOLING SYSTEM + SENSORS, PRESSURE

110909
 DRYWELL ISOLATION VALVE OPENED WHEN REQUIRED TO BE CLOSED AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 3 PWS, LTR N/AU-70-23 TO U.S. NRC, REGION II, FEB. 10, 1970, DUCRET 50-324, TYPE--BOR, MFU--UCL, AE--UECL

CAUSE - OPERATOR ERROR. WHILE A REACTOR COOLDOWN WAS IN PROGRESS DUE TO UNIDENTIFIED DRYWELL LEAKAGE, THE DRYWELL DRYWELL HEAD VENTILATION ISOLATION VALVE WAS OPENED PER PROCEDURES TO VENTILATE THE DRYWELL PRIOR TO ENTRY. HOWEVER, THIS VALVE WAS REQUIRED TO BE SHUT BY TECH SPECS DUE TO FAILURE OF THE INBOARD ISOLATION VALVE TO CLOSE DURING TESTING A WEEK EARLIER. THE OPERATOR FAILED TO REMEMBER THAT THE VALVE HE OPENED WAS UNDER AN LCU CONDITION. THE INCIDENT WILL BE REVIEWED WITH ALL OPERATORS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT + FAILURE, OPERATOR ERROR + CONTAINMENT ISOLATION + VENTILATION SYSTEM + CONTAINMENT INTEGRITY + BRUNSWICK 2 (BOR) + VALVES

111978
 ORDER IMPOSING CIVIL PENALTIES AT BRUNSWICK 2
 NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC
 2 PWS, LTR TO CAROLINA POWER & LIGHT CO., FEB. 10, 1970, DUCRET 50-324, TYPE--BOR, MFU--UCL, AE--UECL

CAUSE - ADMINISTRATIVE DEFICIENCIES. BASED ON REPLY TO THE NOTICE OF VIOLATION, NRC CONCLUDED THAT 4 ITEMS OF NONCOMPLIANCE DID OCCUR. PENALTIES ON 2 OTHER ITEMS WERE ADMITTED IN THEIR ENTIRETY. AN ORDER IMPOSING CIVIL PENALTIES OF \$2000 IS ISSUED.

111478 (CONTINUED)
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

OECONOMICS • FAILURE, ADMINISTRATIVE CONTROL • BRUNSWICK 2 (1000) • MECHANISTICS • AGENCY, NRC

111486
 SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/RW-70-24 TO U.S. NRC, REGION II, FEB. 20, 1970, DUCRET 50-324, TYPE--BWR, MW--1000, AT--UELL

CAUSE - UNKNOWN. DURING TESTING WITH THE REACTOR AT 90% POWER, 4 MPCL TURBINE CARBON DIAPHRAGM HIGH PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THE CAUSE IS UNKNOWN. INSTRUMENTS WERE IMMEDIATELY RECALIBRATED AS EACH WAS DISCOVERED OUT OF CALIBRATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • BRUNSWICK 2 (1000) • MURPHY • SENSORS, PRESSURE • MPCL

111411
 DRYWELL GYGEN ANALYZER READS HIGH AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/RW-70-24 TO U.S. NRC, REGION II, FEB. 29, 1970, DUCRET 50-324, TYPE--BWR, MW--1000, AT--UELL

CAUSE - SAMPLING PUMP MOTOR SWITCH OFF. WHILE OPERATING AT 80% POWER, THE DRYWELL GYGEN MONITOR WAS FOUND TO BE INDICATING HIGH. THE SAMPLING PUMP MOTOR SWITCH WAS FOUND TURNED OFF. IT WAS IMMEDIATELY TURNED ON AND THE INDICATION RETURNED TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT • FAILURE, OPERATOR ERROR • POWER • ELECTRIC POWER • MONITOR • TEST, SYSTEM OPERABILITY • CONTAINMENT ATN (P/PE) • BRUNSWICK 2 (1000)

111407
 SET POINT DRIFT IN FOUR LEVEL SWITCHES AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/RW-70-24 TO U.S. NRC, REGION II, FEB. 29, 1970, DUCRET 50-324, TYPE--BWR, MW--1000, AT--UELL

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF REACTOR LOW LEVEL SWITCHES WHILE OPERATING AT 80% POWER, 4 SCRAM SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THE SWITCHES WERE IMMEDIATELY RECALIBRATED. THE APPARENT CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • BRUNSWICK 2 (1000) • DRIFT • SENSORS, LEVEL

111410
 SET POINT DRIFT IN PRESSURE SWITCH AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/RW-70-24 TO U.S. NRC, REGION II, FEB. 29, 1970, DUCRET 50-324, TYPE--BWR, MW--1000, AT--UELL

CAUSE - INSTRUMENT DRIFT. DURING A TEST WITH THE REACTOR AT 25% POWER, A HIGH DRYWELL PRESSURE SWITCH WAS FOUND OUT OF CALIBRATION (HIGH). THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE INSTRUMENT WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION • PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • BRUNSWICK 2 (1000) • DRIFT • SENSORS, PRESSURE

111399
 DRYWELL LEAKAGE EXCESSIVE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 3 PGS, LTR W/RW-70-24 TO U.S. NRC, REGION II, FEB. 29, 1970, DUCRET 50-324, TYPE--BWR, MW--1000, AT--UELL

CAUSE - CONTAINMENT PURGE VALVE LEAKAGE. DURING THE INITIAL CHECKOUT OF THE CONTAINMENT ATMOSPHERIC CONTROL SYSTEM CONTAINMENT HEATING FUNCTION WITH THE REACTOR AT 87% POWER, THE DRYWELL AND TUBES WERE PRESSURIZED TO 1 PSI. AFTER PRESSURIZING, A STEADY PRESSURE DECREASE WAS NOTED. TESTS INDICATED THAT 4 CONTAINMENT PURGE SYSTEM VALVES WERE LEAKING. THE REACTOR WAS SHUT DOWN. CORROSION PRODUCTS WERE FOUND ON THE DISC OF THE CARBON STEEL BUTTERFLY VALVES. ALSO, IT IS BELIEVED THAT SPRING TENSION IS NOT SUFFICIENT TO CLOSE THE VALVES. THE SEALS WERE

111344 CONTINUED

CLEARANCE. AN AIR ASSIST WAS ADDED. LEAK RATES WERE THEN WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + CONTAINMENT PURGE + LEAK + TEST, SYSTEM OPERABILITY + FAILURE, DESIGN ERROR + CLEAR + BRUNSWICK 2 (ION) + REACTOR SHUTDOWN + VALVES

111414

PERIODIC TESTS NOT PERFORMED ON TIME AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PWS, LTR N/AU-70-15 TO U.S. NRC, REGION II, FEB. 25, 1970, WCAPET 50-324, TYPE--BNA, N/AU--UCL, AE--UECL

CAUSE - MANY AND VARIOUS. DUE TO FAILURE TO PERFORM CERTAIN SCHEDULED PERIODIC TESTS, A LOSS OF ASSET HAS BEEN PERFORMED. CERTAIN OTHER TESTS, NOT PREVIOUSLY REPORTED, HAVE BEEN FOUND. MISSED TESTS ARE ISOLATED. CAUSES WERE MANY AND VARIOUS. SEVERAL TESTS WERE PROBABLY RUN BUT DOCUMENTATION MISPLACED. IMPROVED ADMINISTRATIVE CONTROL WILL MINIMIZE RECURRENT PROBABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING + FAILURE, ADMINISTRATIVE CONTROL + TEST INTERVAL + ENGINEERED SAFETY FEATURE + BRUNSWICK 2 (ION)

111444

ATMOSPHERE MONITORS HAVE LOW FLOW AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PWS, LTR N/AU-70-25 TO U.S. NRC, REGION II, FEB. 27, 1970, WCAPET 50-324, TYPE--BNA, N/AU--UCL, AE--UECL

CAUSE - STOP VALVES CLOSED DUE TO WATER IN LINES. WITH THE REACTOR OPERATING AT 558 POWER, 4 ATMOSPHERE MONITORS WERE RECEIVING LOW FLOW. STOP VALVES WHICH SUPPLY SAMPLING AIR TO THE MONITORS WERE CLOSED. INSTRUMENT AIR LINES TO THE VALVES WERE CLOGGED WITH MOISTURE, NOT PERMITTING THE VALVES TO OPEN. THE AIR LINES WERE CLEARED. MONITORS WERE INOPERABLE FOR 20 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WATER + OPERATION, AIR + FAILURE, INSTRUMENT + MONITOR + TUBING + PNEUMATIC SYSTEM + BRUNSWICK 2 (ION) + VALVES

111446

CONTAINMENT RADIATION MONITOR HAS LOW FLOW AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PWS, LTR N/AU-70-37 TO U.S. NRC, REGION II, FEB. 27, 1970, WCAPET 50-324, TYPE--BNA, N/AU--UCL, AE--UECL

CAUSE - CONTROL VALVE STUCK CLOSED. WITH THE REACTOR AT 42 POWER, A CONTAINMENT RADIATION MONITOR SHOWED LOW-FLOW INDICATION. THE AUTOMATIC FLOW CONTROL VALVE WITHIN THE MODULE WAS STUCK CLOSED. THE VALVE BALL WAS OUT-OF-ROUND. THE VALVE WILL BE OPERATED MANUALLY, WHEN REQUIRED, UNTIL REPAIR PARTS ARE RECEIVED AND INSTALLED. THE MONITOR WAS INOPERABLE FOR 7 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FLOW BLOCKAGE + BRUNSWICK 2 (ION) + FAILURE, INSTRUMENT + VALVES + RADIATION MONITOR

111451

WYTHELL PENETRATION ISOLATION VALVE FAILS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PWS, LTR N/AU-70-32 TO U.S. NRC, REGION II, FEB. 27, 1970, WCAPET 50-324, TYPE--BNA, N/AU--UCL, AE--UECL

CAUSE - MOISTURE IN AIR LINE. WITH THE REACTOR IN HOT STANDBY IN SU MODE, THE AVAILABLE LOW ISOLATION VALVE FOR A REACTOR LEVEL INDICATOR WAS FOUND TO BE ISOLATED. THE VALVE WAS FOUND TO BE STUCK AND MOISTURE WAS FOUND IN THE INSTRUMENT AIR LINES. MOISTURE WAS PURGED FROM THE LINES. THE VALVE STEM WAS MARKED SO THAT ITS POSITION COULD BE DETERMINED. THE VALVE WAS CYCLED SEVERAL TIMES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + REACTOR PROTECTION SYSTEM + WATER + TUBING + PNEUMATIC SYSTEM + BRUNSWICK 2 (ION) + FAILURE, INSTRUMENT + VALVES + SENSORS, LEVEL

111458

MPC1 ISOLATION ON STEAM LEAK DETECTION AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PWS, LTR N/AU-70-27 TO U.S. NRC, REGION II, FEB. 27, 1970, WCAPET 50-324, TYPE--BNA, N/AU--UCL, AE--UECL

CAUSE - WARNING. WHILE OPERATING AT 746 POWER, MPC1 ISOLATED ON STEAM LEAK DETECTION. ONLY MINOR

111398 CONTINUED

LEAKS WERE FOUND. ROOM AIRM COUNTERS WERE RUN AND THE ISOLATION CLEARED WITHIN 10 MINUTES. NOCL
AIRM VENTILATION IS SUSPECTED TO BE INADEQUATE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.001

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + VENTILATION SYSTEM + FAILURE, DESIGN ERROR + BRUNSWICK 2 (RM) +
MPC1

111405

ACIC TURBINE TRIPS ON HIGH EXHAUST PRESSURE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-34 TO U.S. NRC, REGION II, FEB. 27, 1970, DUCRET 50-324, TYPE--RM, MWU--UCL, AE--UCL

CAUSE - BROKEN CHECK VALVE. WITH THE REACTOR IN HOT STANDBY IN 30 MIN, THE ACIC TURBINE TRIPPED
REPEATEDLY ON HIGH EXHAUST PRESSURE. THE TURBINE DISAPARGE CHECK VALVE FLAPPED W/STW BRUKE
AND THE DISC BLOCKED FLOW. THE DISC WAS REPLACED. THIS IS A REPEAT PROBLEM. ACIC WAS OUT OF
SERVICE FOR 30.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.001

FAILURE, EQUIPMENT + FLOW BLOCKAGE + TURBINE + BRUNSWICK 2 (RM) + VALVE, CHECK + FAILURE, INHERENT + PAUC

111403

SOFT BLOWER NOISY AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-34 TO U.S. NRC, REGION II, FEB. 27, 1970, DUCRET 50-324, TYPE--RM, MWU--UCL, AE--UCL

CAUSE - IMPELLER SET SCREWS LOOSE. WITH THE REACTOR IN HOT STANDBY IN 30 MIN, STANDBY WAS
TREATMENT SYSTEM 2A BLOWER WAS MAKING A LOUD NOISE. THE IMPELLER SET SCREWS HAD COME LOOSE. THE
IMPELLER WAS RE-ALIGNED AND SET SCREWS TIGHTENED. THIS HAS HAPPENED BEFORE. THE BLOWER WAS DOWN
FOR 2 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.001

FAILURE, EQUIPMENT + FASTENER + BRUNSWICK 2 (RM) + FAILURE, INHERENT + STANDBY WAS TREATMENT + VOLUMENS

111404

SET POINT SHIFT IN TWO PRESSURE SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-34 TO U.S. NRC, REGION II, FEB. 27, 1970, DUCRET 50-324, TYPE--RM, MWU--UCL, AE--UCL

CAUSE - INSTRUMENT SHIFT. DURING TESTING WITH THE REACTOR AT 924 PWR, 2 HIGH DAYWELL PRESSURE
SWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THE APPARENT CAUSE WAS INSTRUMENT SHIFT. THE
INSTRUMENTS WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.001

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM
OPERABILITY + SET POINT + BRUNSWICK 2 (RM) + DRIFT + SENSOR, PRESSURE

111402

SET POINT SHIFT IN THREE DIFFERENTIAL PRESSURE SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU-70-33 TO U.S. NRC, REGION II, FEB. 27, 1970, DUCRET 50-324, TYPE--RM, MWU--UCL, AE--UCL

CAUSE - INSTRUMENT SHIFT. DURING A PRIMARY CONTAINMENT ISOLATION SYSTEM, STEADY-STATE HIGH FLOW TEST
WITH THE REACTOR SHUT DOWN, 3 DIFFERENTIAL PRESSURE SWITCHES WERE FOUND TO BE OUT OF CALIBRATION.
THE INSTRUMENTS WERE IMMEDIATELY RECALIBRATED. THE APPARENT CAUSE WAS SET POINT SHIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.001

INSTRUMENT CALIBRATION + PROTECTION SYSTEM + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM
OPERABILITY + SET POINT + BRUNSWICK 2 (RM) + DRIFT + SENSOR, PRESSURE

111409

UNIDENTIFIED DAYWELL LEAKAGE EXCEEDS LIMIT AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR N/AU 70-30 TO U.S. NRC, REGION II, FEB. 27, 1970, DUCRET 50-324, TYPE--RM, MWU--UCL, AE--UCL

CAUSE - VALVE PACKING BLEW OUT. WHILE THE UNIT WAS OPERATING AT 714 PWR, THE UNIDENTIFIED
DAYWELL LEAKAGE WAS DETERMINED TO EXCEED THE 5 GPM LIMIT. THE REACTOR WAS SHUT DOWN IN 4 HOURS.

111049

PACKING ON A AIR VALVE HAS BEEN PUT. THE PACKING WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + SEAL + OPERATE + BRUNSWICK 2 (BRN) + RADIATION MONITORING + FAILURE, INCIDENT + VALUES

111049

CONTAINMENT RADIATION MONITOR HAS LOW FLOW AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PAGES LTR N/AU 70-43 TO U.S. NRC, REGION II, MARCH 8, 1970, Docket 50-324, TYPE--BWR, NPU--U.S., AE--UELL

CAUSE - INLET VALVE CLOSED. WITH REACTOR TEMPERATURE AT 500 F AND COOLING, A CONTAINMENT RADIATION MONITOR RECORDER SHOWED LOW FLOW. THE TRANSMITTER INLET VALVE WAS FOUND CLOSED. IT WAS PROBABLY LEFT CLOSED INADEQUATELY DURING A VALVE LINEUP. THE VALVE WAS OPENED. EQUIPMENT WAS INSPECTIONED FOR 8 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + PROCEDURES AND MANUALS + CONTAINMENT ATMOSPHERE + FLOW + BRUNSWICK 2 (BRN) + RADIATION MONITORING

111075

MPCI ISOLATES ON STEAM LEAK DETECTION AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PAGES LTR N/AU 70-30 TO U.S. NRC, REGION II, MARCH 8, 1970, Docket 50-324, TYPE--BWR, NPU--U.S., AE--UELL

CAUSE - UNKNOWN. WHILE THE REACTOR WAS AT 18 POWER IN THE STARTUP MODE, MPCI ISOLATED ON STEAM LEAK DETECTION. WHEN THE SYSTEM WAS CHECKED, NO LEAKS WERE FOUND. AIR ALUM COOLERS WERE RUN FOR 5 MINUTES AND THE ISOLATION CLEARED. STUDY OF THIS REPEAT PROBLEM IS CONTINUING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + INSTRUMENT, PROTECTIVE + CONTAINMENT ISOLATION + LEAK + BRUNSWICK 2 (BRN) + MPCI

111078

MONTHLY BATTERY TEST PERFORMED INSTEAD OF QUARTERLY TEST AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

3 PAGES LTR N/AU 70-41 TO U.S. NRC, REGION II, MARCH 8, 1970, Docket 50-324, TYPE--BWR, NPU--U.S., AE--UELL

CAUSE - SCHEDULING ERROR. DURING TEST COMPLETION REVIEW, IT WAS FOUND THAT THE MONTHLY BATTERY TEST WAS SCHEDULED AND PERFORMED ON 1-11-70 INSTEAD OF THE QUARTERLY TEST. THE TECHNICIAN WHO NORMALLY SCHEDULES TESTS WAS ABSENT. THE INDIVIDUAL WHO PREPARED THE SCHEDULE MISTAKENLY SCHEDULED THE MONTHLY TEST. A COMPUTER PROGRAM THAT SCHEDULES TESTS HAS BEEN PLACED IN USE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, ADMINISTRATIVE CONTROL + TEST INTERVAL + BRUNSWICK 2 (BRN) + BATTERIES & CHARGERS

111079

RADIATION MONITOR FOUND WITH NO FLOW INDICATION AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PAGES LTR N/AU 70-34 TO U.S. NRC, REGION II, MARCH 8, 1970, Docket 50-324, TYPE--BWR, NPU--U.S., AE--UELL

CAUSE - BLUEN DRIVE BELT BROKEN. WITH THE REACTOR AT 18 POWER IN THE STARTUP MODE, A LOW FLOW INDICATION WAS DISCOVERED IN A CONTAINMENT AIR RADIATION MONITOR. THE BLUEN DRIVE BELT WAS FOUND TO BE BROKEN AND WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00 (3P)

FAILURE, EQUIPMENT + TEST, SYSTEM, OPERABILITY + CONTAINMENT ATMOSPHERE + FLOW + BRUNSWICK 2 (BRN) + FAILURE, INCIDENT + RADIATION MONITORING + BLUENS

111097

ALIC INVERTER TRIPS ON HIGH VOLTAGE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PAGES LTR N/AU 70-35 TO U.S. NRC, REGION II, MARCH 8, 1970, Docket 50-324, TYPE--BWR, NPU--U.S., AE--UELL

CAUSE - INVERTER SET POINT LOW. WITH THE REACTOR AT 500 POWER, ALIC INVERTER A TRIPPED ON HIGH VOLTAGE WHEN THE BATTERY CHARGERS WERE PLACED INTO EQUALIZER. THE INVERTER VOLTAGE SET POINT WAS LOWER THAN THE EQUALIZING CHARGE VOLTAGE CAUSING THE TRIP. VOLTAGE ON THE CHARGERS WAS LOWERED

111097 "CONTINUED"
AND THE INVENTER WAS RESET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE + FAILURE, ADMINISTRATIVE CONTROL + SET POINT + BRUNSWICK 2 (1000) + RELIC + BATTERIES + CHARGERS + GENERATORS

111098
RRR SERVICE WATER PUMP FAILS TO START AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR N/RO 70-44 TO W.S. NRC, REGION II, MARCH 8, 1970, DUCRET 50-324, TYPE--BRR, NPU--U-EE, AC--UELL

CAUSE - DIRTY RELAY CONTACTS. WITH THE REACTOR AT 934 POWER, RRR SERVICE WATER PUMP 2B COULD NOT BE STARTED FROM THE CONTROL ROOM. DIRTY CONTACTS WERE FOUND IN THE RRR-2B SUPPLY MEASUR PRESSURE RELAY. CONTACTS WERE CLEANED AND THE PUMP OPERATED PROPERLY. IT WAS INOPERABLE FOR 0.75 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT + CRUD + AUXILIARY COOLING + SHUTDOWN COOLING SYSTEM + BRUNSWICK 2 (1000) + FAILURE, INHERENT + PUMPS + DELAYS

111077
RRR TQALC SECTION VALVE FOUND CLOSED AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR N/RO 70-40 TO W.S. NRC, REGION II, MARCH 8, 1970, DUCRET 50-324, TYPE--BRR, NPU--U-EE, AC--UELL

CAUSE - PROBABLY OPERATOR ERROR. WITH THE REACTOR AT 504 POWER AND JMW NO PREPARATION FOR MAINTENANCE ON RRR PUMP 2B, RRR TQALC SECTION VALVE WAS FOUND CLOSED. ON 8-20-75, THE VALVE WAS BURNED DURING REPAIR. A REPLACEMENT IS ON ORDER BUT NOT RECEIVED. WITHOUT THE ACTION, POSITION INDICATION IS NOT AVAILABLE IN THE CONTROL ROOM. THE VALVE WAS PROBABLY MISPOSITIONED DURING A PREVIOUS VALVE LINE-UP. IT WAS IMMEDIATELY OPENED MANUALLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + TEST, SYSTEM OPERABILITY + SHUTDOWN COOLING SYSTEM + BRUNSWICK 2 (1000) + VALVES + TQALC

111079
STEAM LEAK DETECTION ISOLATES MPC1 AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR N/RO 70-42 TO W.S. NRC, REGION II, MARCH 8, 1970, DUCRET 50-324, TYPE--BRR, NPU--U-EE, AC--UELL

CAUSE - NONE FOUND. WITH THE REACTOR AT 64 POWER IN THE STARTUP MODE, MPC1 ISOLATED ON STEAM LEAK DETECTION. A CHECK OF THE SYSTEM FOUND NO LEAKS. RRR ADUM COOLERS WERE RUN FOR 10 MINUTES AND THE ISOLATION CLEARED. A POSSIBLE CAUSE MAY BE TOO CONSERVATIVE DELTA T REQUIREMENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + INSTRUMENT, PROTECTIVE + CONTAINMENT ISOLATION + LEAK + BRUNSWICK 2 (1000) + MPC1

112150
RADIOACTIVITY RELEASE DURING FILTER HOUSE EXPLOSION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
3 PGS, LTR N/RO 70-13 TO W.S. NRC, REGION II, MARCH 10, 1970, DUCRET 50-324, TYPE--BRR, NPU--U-EE, AC--UELL

CAUSE - EXPLOSIVE ATMOSPHERE. WHILE THE REACTOR WAS OPERATING AT 834 POWER, AN EXPLOSION OCCURRED IN THE STACK FILTER HOUSE AS REPORTED EARLIER. THE TOTAL AMOUNT OF RADIOACTIVITY RELEASED IN THIS INCIDENT WAS CALCULATED TO BE 300.07 MICRAU OF WHICH 2.4 MICRAU HAD HALF-LIVES GREATER THAN 8 DAYS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PAIRHOUSE RELEASE + EXPLOSION + FAILURE, DESIGN ERROR + OFF GAS + MATHEMATICAL TREATMENT + BRUNSWICK 2 (1000) + FILTERS

111914
EXCESS MOISTURE FOUND ON FIRED PAPER FILTER AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR N/RO 70-40 TO W.S. NRC, REGION II, MARCH 10, 1970, DUCRET 50-324, TYPE--BRR, NPU--U-EE, AC--UELL

CAUSE - HEAT TRACE DISCONNECTED. WITH THE REACTOR AT 704 POWER AND SAMPLING LINE HEAT TRACE

112914 (CONTINUED)

MODIFICATION IN PROCESS FOR A DRYWELL SAMPLING SYSTEM. THE FIRED PAPER FILTER WAS FOUND WET AND TEAR DURING CHANGE OUT. EXCESSIVE MOISTURE RESULTED FROM THE HEAT TRACING BEING DISCONNECTED DURING MODIFICATION. THE SYSTEM WAS INOPERABLE FOR 11 DAYS, 13.75 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WATER + MODIFICATION + FAILURE, MAINTENANCE ERROR + CONTAINMENT ATMOSPHERE + BRUNSWICK 2 (IDNR) + RADIATION MONITORS + HEATERS + FILTERS

112308

WATERS REACTOR FOUND WITH NO FLOW AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PWS, LTR W/NO TO-49 TO U.S. NRC, REGION II, MARCH 29, 1970, DUCRET 50-324, TYPE--DNR, NFO--GEE, AE--UEEC

CAUSE - MOTOR CONTROLLER GEARS STRIPPED. WITH THE REACTOR AT 544 POWER AND WITH 2-CAC-AT-1200 INOPERABLE FOR HEAT TRAIL MODIFICATIONS, 2-CAL-1201-5 (OXYGEN MONITOR) WAS DECLARED INOPERABLE DUE TO NO INDICATION OF OXYGEN FLOW. THE ORIFICE MOTOR CONTROLLER GEARS WERE FOUND TO BE STRIPPED. THE ORIFICE VALVE, INCLUDING CONTROLLER WERE REPLACED. THE OLD UNIT WILL BE REPAIRED. REACTOR SHUT DOWN WAS CANCELLED WHEN THE MONITOR WAS REPAIRED. THE MONITOR WAS INOPERABLE FOR 0 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WATERS + FAILURE, INSTRUMENT + MONITOR + FLOW SLOTTAGE + BRUNSWICK 2 (IDNR) + FAILURE, INHERENT + MOTORS

112309

SET POINT DRIFT IN DRYWELL PRESSURE SWITCH AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PWS, LTR W/NO TO-49 TO U.S. NRC, REGION II, MARCH 29, 1970, DUCRET 50-324, TYPE--DNR, NFO--GEE, AE--UEEC

CAUSE - INSTRUMENT DRIFT. WITH THE REACTOR AT 544 POWER, TESTING FOUND A KPS HIGH DRYWELL PRESSURE SWITCH OUT OF CALIBRATION (HIGH AT 2.00 PSIG). THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE SWITCH WAS RESET TO 1.40 PSIG TO PRECLUDE DRIFT-OUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (IDNR) + DRIFT + SENSORS, PRESSURE

112237

TIME REQUIRED PRE-STARTUP TESTS NOT PERFORMED ON TIME AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PWS, LTR W/NO TO-47 TO U.S. NRC, REGION II, MARCH 30, 1970, DUCRET 50-324, TYPE--DNR, NFO--GEE, AE--UEEC

CAUSE - CONTROL OPERATOR ERROR. THE REACTOR WAS IN THE PROCESS OF STARTUP WITH 25 RODS PULLED WHEN IT WAS FOUND THAT 4 REQUIRED PRE-STARTUP TESTS HAD NOT BEEN RUN. THE CONTROL OPERATOR HAD ASSUMED THEY HAD BEEN COMPLETED BECAUSE A SUBSEQUENT TEST HAD BEEN PERFORMED. STARTUP WAS TEMPORARILY STOPPED AND THE TESTS RUN IMMEDIATELY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + TESTING + REACTOR STARTUP TESTING + TEST INTERVAL + BRUNSWICK 2 (IDNR)

112321

CONTAINMENT INTEGRITY VIOLATED AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PWS, LTR W/NO TO-50 TO U.S. NRC, REGION II, MARCH 31, 1970, DUCRET 50-324, TYPE--DNR, NFO--GEE, AE--UEEC

CAUSE - INSTRUCTIONS MISINTERPRETED. WITH THE REACTOR AT 544 POWER, BRUNSWICK 2 ROOT CONSTRUCTION PERSONNEL OPENED BOTH AIR-LOCK DOORS BETWEEN THE TURBINE BUILDING AND REACTOR BUILDING TO TRANSPORT CONSTRUCTION MATERIAL. DOOR INTERLOCKS WERE DEFEATED WITHOUT PERMISSION. INSTRUCTION HAD BEEN MISINTERPRETED. PERSONNEL WARNED THAT DOOR INTERLOCKS MUST NEVER BE DEFEATED WITHOUT PERMISSION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT AIR LOCK + CONTAINMENT INTEGRITY + FAILURE, INSTALLATION ERROR + BRUNSWICK 2 (IDNR) + COMMUNICATION

112322

CONTAINMENT TEMPERATURE RECORDER NOT PRINTING ALL POINTS AT BRUNSWICK 2

112322 *CONTINUED*
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-51 TO U.S. NRC, REGION II, MARCH 31, 1970, Docket 50-324, TYPE--DNR, NRC--UCL, AE--UCL

CAUSE - STEPPING RELAY CONTACTS STICKING. WITH THE REACTOR AT 424 POWER, THE PRIMARY CONTAINMENT TEMPERATURE MONITOR RECORDER WAS FOUND TO BE NOT PRINTING ALL POINTS. WHEN THE UNIT WAS LIGHTLY JARRED, IT READ NORMALLY. THE STEPPING RELAY CONTACTS WERE STICKING. THEY WERE CLEANED AND THE UNIT RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT + FAILURE, INSTRUMENT + CLOG + BRUNSWICK 2 (DNR) + FAILURE, AMPLIFIER + SENSORS, TEMPERATURE + RELAYS + RECORDERS

112323
TWO HYDRAULIC SHROUDERS FOUND INOPERABLE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-52 TO U.S. NRC, REGION II, MARCH 31, 1970, Docket 50-324, TYPE--DNR, NRC--UCL, AE--UCL

CAUSE - SEALS OILED AND CRACKED. WITH THE REACTOR AT 348 POWER AND DURING ROUTINE INSPECTION, 2 HYDRAULIC SEISMIC PIPE SHROUDERS WERE FOUND UNABLE OF FLUID. THEY WERE REPLACED. NEW SEALS ON THE FAILED UNITS HAD OILED AND CRACKED PERMITTING FLUID LEAKAGE. REPLACEMENT OF THE SHROUDERS REQUIRED 7 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + OSNOLK ABSORBER + OSEAL + SUPPORT STRUCTURE + SURVEILLANCE PROBAB + PLERA + BRUNSWICK 2 (DNR) + PIPES AND PIPE FITTINGS

112391
SET POINT DRIFT IN CONDENSER VACUUM SWITCH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-54 TO U.S. NRC, REGION II, APRIL 2, 1970, Docket 50-324, TYPE--DNR, NRC--UCL, AE--UCL

CAUSE - INSTRUMENT DRIFT. DURING A PRIMARY CONTAINMENT ISOLATION TEST WITH THE REACTOR AT 348 POWER, A LOW CONDENSER VACUUM PRESSURE SWITCH WAS FOUND OUT OF CALIBRATION (LOW AT 10.9 INCHES OF HG). THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE SWITCH WAS IMMEDIATELY RECALIBRATED TO 10.3 INCHES HG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION + INSTRUMENT CALIBRATION + PROTECTION SYSTEM + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + CONDENSER + OSET POINT + BRUNSWICK 2 (DNR) + DRIFT + SENSORS, PRESSURE

112392
SET POINT DRIFT IN MAIN STEAM LINE PRESSURE SWITCH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-55 TO U.S. NRC, REGION II, APRIL 2, 1970, Docket 50-324, TYPE--DNR, NRC--UCL, AE--UCL

CAUSE - INSTRUMENT DRIFT. DURING A PRIMARY CONTAINMENT ISOLATION SYSTEM TEST WITH THE REACTOR AT 348 POWER, A MAIN STEAM LINE LOW PRESSURE SWITCH WAS FOUND OUT OF CALIBRATION (LOW AT 825 PSIG). THE CAUSE WAS INSTRUMENT DRIFT. IT WAS RECALIBRATED TO 850 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION + INSTRUMENT CALIBRATION + PROTECTION SYSTEM + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + OSET POINT + BRUNSWICK 2 (DNR) + DRIFT + SENSORS, PRESSURE

112390
SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-53 TO U.S. NRC, REGION II, APRIL 2, 1970, Docket 50-324, TYPE--DNR, NRC--UCL, AE--UCL

CAUSE - INSTRUMENT DRIFT. DURING LPCI PUMP DISCHARGE PRESSURE INTERLOCK TESTING WITH THE REACTOR AT 348 POWER, 2 PRESSURE SWITCHES WERE FOUND OUT OF CALIBRATION (HIGH AT 115 PSIG). THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THEY WERE RESET TO 102 AND 98 PSIG RESPECTIVELY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT, INTERLOCK + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + OSET POINT + BRUNSWICK 2 (DNR) + DRIFT + SENSORS, PRESSURE + LPCI

112676
 LINEAR INDICATION FOUND ON RECIRC LOOP VALVE BYPASS LINES AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR N/ER 70-59 TO U.S. NRC, REGION II, APRIL 6, 1970, DOCKET 50-324, TYPE--BWR, NRC--GCE, AE--UEEC

CAUSE - UNKNOWN AT THIS TIME. DURING INSERVICE INSPECTION WITH THE REACTOR SHUT DOWN, UNACCEPTABLE LINEAR INDICATIONS WERE FOUND IN RECIRCULATION LOOPS A AND B BYPASS LINES FOR DISCHARGE VALVES IN THE BASE METAL OF PIPES ADJACENT TO MELT HEAT AFFECTED ZONES. THE CAUSE AND CORRECTIVE ACTION IS UNDER INVESTIGATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PHYSICS + NEUT TREATMENT + PWR CYCLING SYSTEM + FLUID RECIRCULATION + OFLOW + BYPASS + BRUNSWICK 2 (BWR) + ULTRASONICS + PIPES AND PIPE FITTINGS + INSERVICE INSPECTION

113106
 PRIMARY CONTAINMENT TEMPERATURE MONITOR FAILS AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR N/ER 70-59 TO U.S. NRC, REGION II, APRIL 6, 1970, DOCKET 50-324, TYPE--BWR, NRC--GCE, AE--UEEC

CAUSE - RELAY CONTACTS STICKING WITH THE REACTOR OPERATING AT 50% POWER. THE PRIMARY CONTAINMENT TEMPERATURE MONITOR RECORDER WAS OBSERVED TO BE FALLING DOWNSCALE, INTERMITTENTLY. THIS IS A REPEAT OF 2 DAYS PREVIOUS. RELAY CONTACTS WERE STICKING AGAIN. THE RELAY WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, INSTRUMENT + BRUNSWICK 2 (BWR) + FAILURE, INHERENT + SENSORS, TEMPERATURE + RELAYS + RECORDERS

113107
 AWM SERVICE WATER PUMP FAILS TO START AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR N/ER 70-59 TO U.S. NRC, REGION II, APRIL 6, 1970, DOCKET 50-324, TYPE--BWR, NRC--GCE, AE--UEEC

CAUSE - PRESSURE SENSING LINE PLUGGED. DURING AWM-SW PUMP FLOW RATE TESTS WITH THE REACTOR AT 55% POWER, PUMP 20 FAILED TO START. THE SENSING LINE FOR A PRESSURE SWITCH WHICH ENERGIZES A CONTROL CIRCUIT RELAY IS A SEAWATER LINE. IT WAS PLUGGED. THE LINE WAS BLOWN DOWN INTO THE SYSTEM AND CLEANED USING 150 LB. AIR. CONTACTS ON THE RELAY WERE CLEANED AS AN ADDED PRECAUTION. THE PUMP WAS OPERABLE FOR 6.1 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CAUSE + TEST, SYSTEM OPERABILITY + SHUTDOWN COOLING SYSTEM + BRUNSWICK 2 (BWR) + FAILURE, INHERENT + SERVICE WATER SYSTEM + PUMPS + SENSORS, PRESSURE + PIPES AND PIPE FITTINGS

112676
 LEVEL INSTRUMENT VALVE FAILS TO INDICATE OPEN AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR N/ER 70-04 TO U.S. NRC, REGION II, APRIL 6, 1970, DOCKET 50-324, TYPE--BWR, NRC--GCE, AE--UEEC

CAUSE - LIMIT SWITCH OUT OF ADJUSTMENT. DURING PRIMARY CONTAINMENT ISOLATION VALVE CYCLING TESTS WITH THE REACTOR AT 83% POWER, A VALVE FOR SUPPRESSION CHAMBER HIGH LEVEL INSTRUMENT FAILED TO INDICATE A REOPENED POSITION. THE VALVE LIMIT SWITCH WAS FOUND TO BE OUT OF ADJUSTMENT. IT WAS PROPERLY ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + INSTRUMENT, POSITION + BRUNSWICK 2 (BWR) + VALVES + INDICATORS + SENSORS, LEVEL + TUBES

112001
 LOW FLOW ANNUNCIATED FOR CONTAINMENT ATMOSPHERE ANALYZER AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR N/ER 70-01 TO U.S. NRC, REGION II, APRIL 6, 1970, DOCKET 50-324, TYPE--BWR, NRC--GCE, AE--UEEC

CAUSE - SUCTION LINE BLOCKED WITH WATER. WITH THE REACTOR AT 67% POWER, CONTAINMENT DISUB 21 AND DISUB 21 ANALYZER ALARMED ON LOW FLOW. THE HUMIDIFIER WAS FOUND TO BE FULL OF WATER CAUSING SUCTION LINE BLOCKAGE. FIXING ON THE HUMIDIFIER RESERVOIR DRAIN RELAY WAS INSTALLED IMMEDIATELY. THE ERROR OCCURRED DURING RE-MOORING OF CONSTRUCTION PERSONNEL AT COMPLETION OF HEAT TRACE MODIFICATION. THE ANALYZER WAS INOPERABLE FOR 7.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

112601 *CONTINUED*
HYDROGEN + OXYGEN + FAILURE, INSTRUMENT + MONITOR + FLOW MEASUREMENT + CONTAINMENT ATMOSPHERE + FAILURE,
INSTALLATION ERROR + BRUNSWICK 2 (00A)

112600
PRIMARY CONTAINMENT ISOLATION VALVE FAILS TO CLOSE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LETR 70-02 TO U.S. NRC, REGION II, APRIL 8, 1970, DUKET 50-324, TYPE--DNR, RFU--U.S., AC--U.S.

CAUSE - APPEARED TO BE BINDING. DURING PRIMARY CONTAINMENT ISOLATION VALVE CYCLING TESTS WITH THE REACTOR AT 72% POWER, VALVE 2-CAEPV-1200 WOULD NOT INDICATE CLOSED ON RTWO THOUGH IT APPEARED TO OPERATE PROPERLY. THE AIA SUPPLY AND ELECTRICAL CHECKED ALRIGHT. THE OPERATOR WAS REMOVED AND SEALS REPLACED AND THE VALVE PLUG WAS RESIZED AS THE VALVE APPEARED TO BE BINDING. THE SYSTEM WAS INOPERABLE FOR 1 DAY, 2.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (00A) + OVALVES

112679
PRIMARY CONTAINMENT PENETRATION VALVE FAILS TO OPEN AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LETR 70-58 TO U.S. NRC, REGION II, APRIL 8, 1970, DUKET 50-324, TYPE--DNR, RFU--U.S., AC--U.S.

CAUSE - PUSH BUTTON SWITCH MUNG UP. DURING PRIMARY CONTAINMENT ISOLATION VALVE CYCLING TESTS WITH THE REACTOR AT 60% POWER, A PENETRATION VALVE WAS CYCLED CLOSED FROM RTWO BUT THEN COULD NOT BE OPENED. THE PUSH BUTTON SWITCH ON RTWO HAD MUNG UP. IT WAS FREED AND ADJUSTED. THE VALVE WAS CLOSED FOR 4.25 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + BRUNSWICK 2 (00A) + OVALVES + CONTAINMENT PENETRATION

112602
RECIRCULATION SYSTEM SAMPLE VALVE CLOSING TIME TOO LONG AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LETR 70-02 TO U.S. NRC, REGION II, APRIL 8, 1970, DUKET 50-324, TYPE--DNR, RFU--U.S., AC--U.S.

CAUSE - OPENING AIR PRESSURE TOO HIGH. DURING PRIMARY CONTAINMENT ISOLATION VALVE TESTING WITH THE REACTOR AT 82% POWER, A RECIRCULATION SYSTEM WATER SAMPLE VALVE CLOSING TIME WAS 7 SECONDS WHICH IS 2 SECONDS OVER THE LIMIT. OPENING AIR PRESSURE TO THE VALVE OPERATOR HAD VARIATED TOO HIGH (AT 50 PSIG). PRESSURE WAS REDUCED TO 70 PSIG AND THE VALVE STAMPED 6 TIMES WITH A CLOSING TIME OF 4 SECONDS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + REACTOR COOLANT + SAMPLING + RESPONSE TIME + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + FLOW, RECIRCULATION + PNEUMATIC SYSTEM + BRUNSWICK 2 (00A) + OVALVES

112675
TURUS LEVEL INSTRUMENT LINE VALVE FAILS TO INDICATE OPEN AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LETR 70-03 TO U.S. NRC, REGION II, APRIL 8, 1970, DUKET 50-324, TYPE--DNR, RFU--U.S., AC--U.S.

CAUSE - LIMIT SWITCH OUT OF ADJUSTMENT. DURING PRIMARY CONTAINMENT ISOLATION VALVE CYCLING TESTS WITH THE REACTOR AT 83% POWER, A VALVE FOR THE SUPPRESSION CHAMBER WATER LEVEL RECORDER FAILED TO INDICATE OPEN ON RTWO. THE VALVE LIMIT SWITCH WAS FOUND TO BE OUT OF ADJUSTMENT. IT WAS PROPERLY ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + INSTRUMENT, POSITION + BRUNSWICK 2 (00A) + OVALVES + INDICATIONS + SENSORS, LEVEL + TURUS

112730
CONTAINMENT PURGE VALVE FAILS TO CLOSE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LETR 70-05 TO U.S. NRC, REGION II, APRIL 12, 1970, DUKET 50-324, TYPE--DNR, RFU--U.S., AC--U.S.

CAUSE - TORQUE SWITCH INOPERABLE. WITH THE REACTOR AT 84% POWER, A CONTAINMENT PURGE PRIMARY ISOLATION VALVE WAS OPENED FROM RTWO BUT COULD NOT BE CLOSED REMOTELY. IT WAS MANUALLY CLOSED. THE TORQUE SWITCH WAS FOUND INOPERABLE AND WAS REPLACED.

112730 (CONTINUED)
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT PLUGS • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • BRUNSWICK 2 (DWR) • FAILURE, INHERENT • VALVES • CONTAINMENT PENETRATION

112741
 MPC1 STEAM VALVE FAILS TO OPEN AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/NO 70-00 TO U.S. NRC, REGION 11, APRIL 12, 1970, DUCRET 50-324, TYPE--DWR, NPG--G.E., AE--UE66

CAUSE - TURBINE SWITCH FAILURE. WHILE OPERATING AT 90% POWER, THE OPERATOR, WHILE DUSTING MPC1 CENTRAL MANU, LIGHTLY BRUSHED THE REMOTE SWITCH FOR MPC1 INDIAN STEAM VALVE AND THE VALVE WENT SHUT BUT COULD NOT BE REOPENED. THE OPERATOR TURBINE SWITCH HAD FAILED PERMITTING THE MOTOR TO CONTINUE RUNNING AFTER THE VALVE WAS FULLY CLOSED UNTIL THE MOTOR SHUTTED OUT. A REACTION SOLUTION WAS STARTED IN 20 HOURS. THE TURBINE SWITCH AND MOTOR WERE REPLACED, AS WAS THE REMOTE SWITCH ON RIG0.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • STEAM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • BRUNSWICK 2 (DWR) • REACTION SOLUTION • VALVE OPERATORS • VALVES • MPC1

112746
 SET POINT DRIFT IN CONDENSATE TANK LEVEL SWITCH AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/NO 70-07 TO U.S. NRC, REGION 11, APRIL 12, 1970, DUCRET 50-324, TYPE--DWR, NPG--G.E., AE--UE66

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE CONDENSATE STORAGE TANK LOW LEVEL SWITCHES WITH THE REACTOR AT 92% POWER, A SWITCH ACTUATED AT 22 FT 0 IN. IT WAS IMMEDIATELY RECALIBRATED TO 23 FT 4 IN. THE APPARENT CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONDENSATION • INSTRUMENT CALIBRATION • PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • STORAGE CONTAINER • TEST, SYSTEM OPERABILITY • SET POINT • BRUNSWICK 2 (DWR) • DRIFT • SENSORS, LEVEL

112739
 SET POINT DRIFT IN LEVEL SWITCH AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/NO 70-00 TO U.S. NRC, REGION 11, APRIL 12, 1970, DUCRET 50-324, TYPE--DWR, NPG--G.E., AE--UE66

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE CONDENSATE STORAGE TANK LOW WATER LEVEL LIMIT SWITCH WHILE OPERATING AT 90% POWER, THE SWITCH ACTUATED AT 23 FEET. IT WAS IMMEDIATELY RECALIBRATED TO 23 FEET 4 INCHES. THE APPARENT CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONDENSATION • INSTRUMENT CALIBRATION • PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • STORAGE CONTAINER • TEST, SYSTEM OPERABILITY • SET POINT • BRUNSWICK 2 (DWR) • DRIFT • SENSORS, LEVEL

113106
 DIESEL GENERATOR CYCLES UNDER LOAD AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/NO 70-09 TO U.S. NRC, REGION 11, APRIL 13, 1970, DUCRET 50-324, TYPE--DWR, NPG--G.E., AE--UE66

CAUSE - FUEL OIL VALVE LEAK. DURING THE MONTHLY LOAD TEST WITH THE REACTOR AT 90% POWER, DIESEL GENERATOR 2 BEGAN CYCLING UNDER LOAD IN LOCAL-MANUAL MODE. THE FUEL OIL SHIFTING VALVE WAS LEAKING A PENCIL SIZED STREAM AT THE GASKET. THE GASKET WAS RETIGHTENED, LEAK STOPPED, AND ENGINE CYCLING CEASED. THE VALVE WAS REPAIRED IN 11 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • LEAK • BRUNSWICK 2 (DWR) • FUEL, FOSSIL • FAILURE, INHERENT • VALVES • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL

113236
 FUEL BUNDLE FALLS OUT OF FUEL PREPARATION MACHINE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR W/NO 70-11 TO U.S. NRC, REGION 11, APRIL 10, 1970, DUCRET 50-324, TYPE--DWR, NPG--G.E., AE--UE66

CAUSE - IMPROPER SEATING OF BUNDLE. FUEL BUNDLE 444 WAS REMOVED FROM THE SPENT FUEL POOL STORAGE

113234 *CONTINUED*

LOCATION TO THE FUEL PREP MACHINE. LIGHT INDICATION GAVE THE OPERATOR THE POSITION THE FUEL BUNDLE WAS SEATED IN THE CARRIAGE. THE GRAPPLE WAS OPENED AND MOVED AWAY. WHEN THE FUEL PREP MACHINE WAS MOVED, THE BUNDLE FELL OUT OF IT TO A HORIZONTAL POSITION ACROSS THE TOP OF THE FUEL POD STORAGE RACKS. EXAMINATION INDICATED NO DAMAGE EXCEPT A SLIGHT DEFORMATION OF A BAIL UP ONE BUNDLE IN THE RACK. THE BUNDLE HAD NOT BEEN SEATED PROPERLY. PROCEDURES WERE REVISED TO REQUIRE 2 INDEPENDENT VISUAL VERIFICATIONS DURING FUEL HANDLING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FUEL HANDLING + FAILURE, OPERATOR ERROR + FUEL STORAGE + STORAGE CONTAINER + BRUNSWICK 2 (IDNR) + FUEL ELEMENTS

112045

NCIC STEAMLINE HIGH TEMPERATURE TRIP FAILS TO ACTUATE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/LEN 70-70 TO U.S. NRC, REGION II, APRIL 10, 1970, UOJRET 50-324, TYPE--BWR, NPB--GCE, AC--UECL

CAUSE - RELAYS HANGING UP. DURING AN UNPLANNED SHUT DOWN, TESTS ON EQUIPMENT SHOW MAIN NCIC STEAMLINE HIGH TEMPERATURE ISOLATION TRIP FOUND THAT NEITHER CHANNEL WOULD ISOLATE EXCEPT ON THE 30-MINUTE TIMER ISOLATION SIGNAL. THE RELAYS WHICH ACTUATE THE MAIN NCIC INBOARD AND OUTBOARD STEAM LINE VALVES TO ISOLATE WERE HANGING UP AND WOULD NOT DROP OUT UNLESS TAPPED. NEW RELAYS WERE INSTALLED. THE RELAY MANUFACTURER (GE) IS INVESTIGATING THE PROBLEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*CONTAINMENT ISOLATION + STEAM + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (IDNR) + NCIC + VALVES + RELAYS

112046

REACTOR HEAD SPRAY VALVE FAILS TO CLOSE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/LEN 70-71 TO U.S. NRC, REGION II, APRIL 10, 1970, UOJRET 50-324, TYPE--BWR, NPB--GCE, AC--UECL

CAUSE - INTERLOCK CONTACTS CLOSED. WITH THE REACTOR COOLING DOWN IN THE 50 MJR AND DURING PRIMARY CONTAINMENT ISOLATION VALVE CYCLING TESTS, INBOARD AND REACTOR HEAD SPRAY LINE VALVE FAILED TO CLOSE. IN THE MOTOR CONTROLLER, AUXILIARY CONTACTS FOR ELECTRICAL INTERLOCK FOR THE VALVE VALVE ACTUATING CIRCUITS WERE STUCK. THE AUXILIARY CONTACT UNIT WAS REPLACED. THE VALVE WAS CYCLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + COMBUSTION COOLING SYSTEM + BRUNSWICK 2 (IDNR) + VALVE OPERATORS + VALVES

112047

CRACKS FOUND IN THE MOVABLE ARC CONTACTS OF 480V CIRCUIT BREAKERS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/LEN 70-73 TO U.S. NRC, REGION II, APRIL 19, 1970, UOJRET 50-324, TYPE--BWR, NPB--GCE, AC--UECL

CAUSE - UNKNOWN. WITH THE REACTOR SHUT DOWN AND DURING CHECK OF EMERGENCY BUSES, 7 480V CIRCUIT BREAKERS WERE FOUND TO HAVE CRACKS IN THE MOVABLE ARC CONTACTS. NEW CONTACTS WERE INSTALLED IMMEDIATELY TO PRECLUDE CIRCUIT BREAKER FAILURE. THE MANUFACTURER IS INVESTIGATING THE CAUSE. THESE BREAKERS WERE 1-TE C/O TYPE 5MM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + EMERGENCY POWER, ELECTRIC + TEST, SYSTEM OPERABILITY + COMPONENTS + BRUNSWICK 2 (IDNR) + BREAKER + CRACK + FAILURE, COMMON MODE

113233

PRIMARY CONTAINMENT PENETRATION INDICATIONS FOUND AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

3 PGS, LTR W/LEN 70-72 TO U.S. NRC, REGION II, APRIL 23, 1970, UOJRET 50-324, TYPE--BWR, NPB--GCE, AC--UECL

CAUSE - MISUNDERSTANDING. DURING A QA REVIEW OF NOT IN T; CONSTRUCTION RECORDS, 7 PRIMARY CONTAINMENT ELECTRICAL PENETRATIONS WERE FOUND TO HAVE UNACCEPTABLE INDICATIONS BUT NO REPAIR DOCUMENTATION EXISTED. REEVALUATION INDICATED THAT ONLY 6 WERE UNACCEPTABLE. BECAUSE OF A MISUNDERSTANDING BETWEEN THE SUBCONTRACTOR AND THE PRIME CONTRACTOR CONCERNING RESPONSIBILITY FOR FINAL EVALUATION OF THE DATA, ALL OF THE DATA WAS NOT COMPLETELY EVALUATED. NECESSARY REPAIRS ARE BEING MADE DURING THE PRESENT OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR + DEFECT + PLAN + TEST, SYSTEM OPERABILITY + FAILURE, INSTALLATION ERROR + QUALITY

113253 CONTINUED
 AVAILABLE • CONTAINMENT PENETRATION, ELECTRICAL • BRUNSWICK 2 (DNR) • COMMUNICATION

113254
 SHUT TRAIN A/T TESTED ON SCHEDULE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/RD 76-79 TO U.S. NRC, REGION 11, APRIL 23, 1976, DUCRET 50-324, TYPE--DNR, NPL--G.E., AE--UELC

CAUSE - SHIFT FOREMAN ERROR. WITH THE REACTOR S/D IN REFUEL MODE, DIESEL GENERATOR 3 WAS PLACED UNDER CLEARANCE FOR MAINTENANCE. THIS COULD DISABLE SHUT TRAIN A. THE SHIFT FOREMAN FAILED TO GIVE INSTRUCTIONS TO TEST TRAIN B IMMEDIATELY AND DAILY WHEN FULL MAINTENANCE IS IN PROGRESS. THE ERROR WAS DISCOVERED 4 DAYS LATER. THE NEWLY APPOINTED FOREMAN MISINTERPRETED THE TECH SPECS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING • FAILURE, ADMINISTRATIVE CONTROL • TEST INTERVAL • BRUNSWICK 2 (DNR) • COMMUNICATION • STANDBY WAS TREATMENT

113255
 SECONDARY CONTAINMENT LEAKAGE EXCESSIVE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/RD 76-79 TO U.S. NRC, REGION 11, APRIL 23, 1976, DUCRET 50-324, TYPE--DNR, NPL--G.E., AE--UELC

CAUSE - RAILROAD DOORS LEAKING. WITH THE REACTOR S/D AND DURING FUEL MOVEMENT, SECONDARY CONTAINMENT INTEGRITY TEST FAILED WITH 6200 SCFM AIR LEAKAGE INTO THE BUILDING. VARIOUS PENETRATIONS AND RAILROAD DOORS WERE LEAKING. PENETRATIONS LEAKED DUE TO OUTAGE WORK. RAILROAD DOOR SEALS WERE REPLACING. THE DOORS WERE TEMPORARILY SEALED. THE TEST PASSED AT LESS THAN 3000 SCFM. FUEL MOVEMENT WAS STOPPED DURING THIS TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TEST, LEAK RATE • CONTAINMENT INTEGRITY • TEST, SYSTEM OPERABILITY • LEAK RATE • BRUNSWICK 2 (DNR) • FAILURE, INCIDENT • DEAN • CONTAINMENT PENETRATION

113275
 A/S VALVES REMAIN OPEN DURING TEST AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/RD 76-79 TO U.S. NRC, REGION 11, APRIL 28, 1976, DUCRET 50-324, TYPE--DNR, NPL--G.E., AE--UELC

CAUSE - TRICKLE CURRENT THROUGH LIGHTS. DURING A PREOPERATIONAL CHECK OF AUTOMATIC DEPRESSURIZATION SYSTEM ON 2/27/75, IT WAS DISCOVERED THAT A/S VALVES, ONCE OPENED, WOULD REMAIN OPEN DUE TO TRICKLE CURRENT BEING FEED TO THE VALVE SOLENOID COILS THROUGH THE RELAY INDICATING LIGHTS. TEMPORARILY, INDICATION LIGHTS WERE REMOVED, EXCEPT FOR LOGIC CHECKS. A PLANT MODIFICATION HAS BEEN MADE TO ELIMINATE THE PROBLEM. INDICATING LIGHTS WERE CHANGED TO FLUORESCENT TYPE AND THE RESISTOR BASES FOR THE LIGHTS WERE CHANGED. THESE CHANGES DECREASED THE TRICKLE CURRENT TO THE COILS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM • MODIFICATION • PRESSURE RELIEF • REACTOR STARTUP EXPERIENCE • TEST, PREOPERATIONAL • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • MAIN COOLING SYSTEM • BRUNSWICK 2 (DNR) • FAILURE, COMMON MODE • VALVES

114400
 HYDRAULIC PIPE SMOOTHERS FOUND IMPERABLE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR N/RD 76-79 TO U.S. NRC, REGION 11, JUNE 3, 1976, DUCRET 50-324, TYPE--DNR, NPL--G.E., AE--UELC

CAUSE - LEAKING SEALS AND FITTINGS. WITH THE REACTOR SHUT DOWN FOR LOCAL POWER RANGE MAINTENANCE OUTAGE, A DETAILED INSPECTION WAS PERFORMED ON HYDRAULIC PIPE SMOOTHERS IN THE DAYTILL, ON A/HEAD PIPING, IN THE MAIN STEAM TUNNEL, AND IN THE SOUTH PERIMETER MEXIES ROOM. ABOUT 75 WERE FOUND TO BE LEAKING BUT OPERABLE AND 10 WERE COMPLETELY DISCHARGED AND IMPERABLE. SEALS HAD DRIED OUT AND HARDENED WHICH PERMITTED LEAKAGE. THE DEGRADATION WAS DUE TO AGE AND EXPOSURE TO HEAT AND RADIATION. SOME FILL FITTINGS WERE ALSO LEAKING. THE CAUSE IS UNKNOWN. LEAKING SEAL, O-RINGS, AND FITTINGS WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • RADIATION DAMAGE • PSNICK ABSORBER • SEAL • SUPPORT STRUCTURE • SURVEILLANCE PROGRAM • OPERA • BRUNSWICK 2 (DNR) • EFFECT, AGE • PIPES AND PIPE FITTINGS

114732
 CONTROL A/C DRIVES TESTED WITH SOLC SYSTEM UNDER CLEARANCE AT BRUNSWICK 2

115132 (CONTINUED)
CAROLINA POWER & LIGHT CO., RALEIGH, NC
3 PGS, LTR W/ER 70-70 TO W.S. NRC, REGION 11, JUNE 7, 1970, DOCKET 50-24, TYPE--DMR, MFL--WUE, AE--UECL

CAUSE - GUIDELINES NOT FOLLOWED. WHILE THE REACTOR WAS SHUT DOWN FOR A MAINTENANCE OUTAGE, INDIVIDUAL CONTROL RODS WERE STRUCK TO VERIFY INSERT AND WITHDRAW TIMES. DURING TESTING, IT WAS FOUND THAT BOTH STANDBY LEAK CONTROL RODS WERE TAGGED OUT FOR REMOVAL AND DEXEN TESTING OF RELIEF VALVES. ROD TESTING WAS STOPPED AND RODS VERIFIED AND INSERTED. THE SDC SYSTEM WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (10 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATOR ERROR + MAINTENANCE AND REPAIR + PROCEDURES AND MANUALS + TESTING + SHUTDOWN SYSTEM, SECONDARY + BRUNSWICK 2 (DMR) + CENTRAL ROD DRIVES

115409
CLOSING TIME OF MSIV TOO FAST AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/ER 70-81 TO W.S. NRC, REGION 11, JUNE 22, 1970, DOCKET 50-24, TYPE--DMR, MFL--WUE, AE--UECL

CAUSE - LEAKING VENT PLUG AND CHECK VALVE. DURING TESTING OF MSIV CLOSING TIMES WITH THE REACTOR AT LOW POWER IN S/O MODE, AN OUTBOARD MSIV STROKE TOO FAST AT 2.2 SECONDS. THE NITROGEN PRESSURE AND HYDRAULIC FLUID WERE LOW IN THE VALVE CYLINDER DUE TO LEAKING VENT PLUG AND CHECKING BLOCK BALL CHECK NOT SEATING. THE VENT PLUG SEAL WAS REPLACED AND A NEW CHARGING BLOCK BALL CHECK INSTALLED. FLUID WAS REPLENISHED AND THE CYLINDER CHARGED TO 100 PSIG. CLOSING TIME WAS ADJUSTED TO 3.0 SEC.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (10 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + STEAM + RESPONSE TIME + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + BRUNSWICK 2 (DMR) + FAILURE, INHERENT + VALVES

115470
RADIOIODINE RATEMETER FAILS AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/ER 70-80 TO W.S. NRC, REGION 11, JUNE 22, 1970, DOCKET 50-24, TYPE--DMR, MFL--WUE, AE--UECL

CAUSE - PHOTOMULTIPLIER TUBE FAILURE. WITH THE REACTOR AT LOW POWER IN S/O MODE, IT WAS DISCOVERED THAT A RADIOIODINE RATEMETER WOULD NOT RESPOND TO A ROUTINE CALIBRATION CHECK USING A BARIUM SOURCE. THE PHOTOMULTIPLIER TUBE HAD LOST ITS EFFICIENCY AND WAS REPLACED. THE UNIT WAS CHECKED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (10 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, COMPONENT + IODINE + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (DMR) + ORADIATION MONITORS

115131
RESPONSE TIME OF MSIV TOO RAPID AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/ER 70-81 TO W.S. NRC, REGION 11, JUNE 22, 1970, DOCKET 50-24, TYPE--DMR, MFL--WUE, AE--UECL

CAUSE - LOW HYDRAULIC FLUID. DURING PERFORMANCE OF MSIV CLOSING TIME TESTS WITH THE REACTOR AT 74 POWER, AN OUTBOARD VALVE STROKE TOO FAST AT 2.2 SECONDS. NITROGEN PRESSURE AND HYDRAULIC FLUID WERE LOW IN THE VALVE CYLINDER DUE TO A LEAKING VENT PLUG AND THE CHARGING BLOCK BALL CHECK NOT SEATING. THE VENT PLUG SEAL WAS REPLACED AND A NEW CHARGING BLOCK BALL CHECK INSTALLED. FLUID WAS REPLENISHED AND THE CYLINDER CHARGED TO 100 PSIG. CLOSING TIME WAS ADJUSTED TO 3.0 SECONDS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (10 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + STEAM + RESPONSE TIME + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + BRUNSWICK 2 (DMR) + VALVES

115130
SET POINT DRIFT IN DRYWELL PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/ER 70-83 TO W.S. NRC, REGION 11, JUNE 23, 1970, DOCKET 50-24, TYPE--DMR, MFL--WUE, AE--UECL

CAUSE - INSTRUMENT DRIFT. DURING HIGH DRYWELL PRESSURE TESTS WITH THE REACTOR AT 558 POWER, 3 PRESSURE SWITCHES WERE FOUND OUT OF CALIBRATION (HIGH) AT 20.5, 20.1, AND 20.3 PSIG, RESPECTIVELY. ALL WERE IMMEDIATELY RESET AT 1.9 PSIG. THESE ARE NEW INSTRUMENTS WHICH WERE INSTALLED BECAUSE OF A DRIFT PROBLEM WITH PAKSABLE SWITCHES. THE CAUSE OF DRIFT IS UNDER INVESTIGATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (10 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

115406 CONTINUOUS
CONTAINMENT + REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH +
TEST, SYSTEM OPERABILITY + RESET POINT + BRUNSWICK 2 (000) + DRIFT + SENSORS, PRESSURE

115407
SET POINT SHIFT IN DRYWELL PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
4 PGS, LTR W/LEN 70-03 TO W30 NRC, REGION 11, JUNE 23, 1970, DOCKET 50-324, TYPE--BWR, NRC--GEC, AE--UECC

CAUSE - UNKNOWN. DURING HIGH DRYWELL PRESSURE TESTS WITH THE REACTOR AT 55% POWER, 3 PRESSURE
SWITCHES WERE FOUND OUT OF CALIBRATION (HIGH) AT 2.05, 2.1, AND 2.1 PSIG, RESPECTIVELY. THEY
WERE IMMEDIATELY RESET TO 2.0 PSIG. THESE ARE NEW INSTRUMENTS WHICH WERE INSTALLED BECAUSE OF A
MAJOR PROBLEM WITH BRUNSWICK SWITCHES. THE CAUSE OF THE NEW INSTRUMENT SHIFT IS UNDER
INVESTIGATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONTAINMENT + REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH +
TEST, SYSTEM OPERABILITY + RESET POINT + BRUNSWICK 2 (000) + DRIFT + SENSORS, PRESSURE

115408
REACTOR WATER CONDUCTIVITY EXCEEDS LIMIT AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
4 PGS, LTR W/LEN 70-02 TO W30 NRC, REGION 11, JUNE 24, 1970, DOCKET 50-324, TYPE--BWR, NRC--GEC, AE--UECC

CAUSE - CROWD WASHOUT DUE TO OUTAGE. WITH THE REACTOR AT LOW POWER IN S/U MODE, REACTOR WATER
CONDUCTIVITY ROSE SLIGHTLY ABOVE 2 MICROMH/CM AND DROPPED TO WITHIN SPECS IN 24 HRS. THE CAUSE
WAS THE EXPECTED RADIOACTIVE CROWD WASHOUT WHICH OCCURRED DUE TO THE RECENT OUTAGE. CONDENSATE
LEAKED DRAINAGE LINES WERE TEMPORARILY OUT OF SERVICE TO REPAIR A LEAK AGGRAVATING THE PROBLEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

MAINTENANCE AND REPAIR + SAMPLING + CLEAN + TEST, SYSTEM OPERABILITY + CONTAMINANT QUALITY + BRUNSWICK 2 (000) +
FAILURE, INHERENT

115409
MENTARY LOSS OF AUXILIARY POWER FOLLOWING REACTOR SCRAM AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
4 PGS, LTR W/LEN 70-00 TO W30 NRC, REGION 11, JUNE 25, 1970, DOCKET 50-324, TYPE--BWR, NRC--GEC, AE--UECC

CAUSE - OPERATOR ERROR. DURING A TURBINE CONTROL VALVE CLOSURE TEST WITH THE REACTOR AT 30%
POWER, THE REACTOR SCRAMMED ON LOW OIL PRESSURE SIGNAL RESULTING FROM THE TEST. THE MAIN
TURBINE WAS FOUND NOT RUNNING. BOTH GENERATOR OUTPUT BREAKERS WERE MANUALLY OPENED. THE REACTOR
CIRCULATION PUMPS TRIPPED ON LOW LUBE OIL PRESSURE AND PUMP 20 SEALS FAILED. PERSONNEL FAILED
TO FOLLOW EMERGENCY PROCEDURES. WHEN GENERATOR BREAKERS WERE OPENED BUT THE TURBINE NOT TRIPPED,
AUTO TRANSFER OF POWER DID NOT OCCUR. PUMP 20 WAS ISOLATED AND THE PLANT PLACED IN COLD SHUTDOWN
FOR SEAL REPLACEMENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, OPERATOR ERROR + ACCIDENT, LOSS OF POWER + PROCEDURES AND MANUALS + SCRAM, REACTOR + ELECTRICAL POWER,
AUXILIARY + TEST, SYSTEM OPERABILITY + SEAL + TURBINE + BRUNSWICK 2 (000) + REACTOR SHUTDOWN + BREAKER + PUMPS

115410
SHORT POWER SUPPLY CIRCUIT BREAKER TRIPS AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEN 70-00 TO W30 NRC, REGION 11, JUNE 25, 1970, DOCKET 50-324, TYPE--BWR, NRC--GEC, AE--UECC

CAUSE - SHORTED POWER SUPPLY CABLE. WITH THE REACTOR AT LOW POWER IN S/U MODE, STANDBY GAS
TREATMENT TRAILER 2A POWER SUPPLY CIRCUIT BREAKER WAS FOUND TRIPPED. IT WAS RESET AND IMMEDIATELY
TRIPPED. THE POWER SUPPLY CABLE BETWEEN THE MOTOR CONTROL CENTER AND A JUNCTION BOX HAD SHORTED.
A TEMPORARY REPLACEMENT CABLE WAS INSTALLED AND THE UNIT RETURNED TO SERVICE THE NEXT DAY. NEW
PERMANENT CABLE INSTALLATION IS IN PROGRESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, SYSTEM OPERABILITY + ENGINEERED SAFETY FEATURE + BRUNSWICK 2 (000) + CABLES AND
CONNECTORS + FAILURE, INHERENT + BREAKER + STANDBY GAS TREATMENT

115411
SET POINT SHIFT IN REACTOR WATER LEVEL SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEN 70-04 TO W30 NRC, REGION 11, JUNE 25, 1970, DOCKET 50-324, TYPE--BWR, NRC--GEC, AE--UECC

115404 "CONTINUED"

CAUSE - CIRCUIT DESIGN DEFICIENCY. DURING REACTOR LOW WATER LEVEL TESTING WITH THE REACTOR AT 74% POWER, 3 LOW LEVEL INDICATOR SWITCHES ACTUATED BELOW THEIR LIMITS AT -44, -52, AND -80 INCHES RESPECTIVELY ON FIRST TRY. UPON IMMEDIATE RETEST THEY RESPONDED NORMALLY AT -32 INCHES. THE EXISTING CIRCUIT DESIGN USES HIGH LEVEL SWITCH FOR LOW LEVEL FUNCTIONS AND VICE-VERSA. THIS CAUSES THE SWITCH TO OPERATE OUTSIDE ITS INTENDED RANGE REDUCING SET POINT REPEATABILITY. THE DESIGN HAS BEEN CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • SET POINT • BRUNSWICK 2 (04A) • PURIFT • PRESSURE VESSELS • SENSORS, LEVEL

115445

REACTOR RECIRC PUMP NO SET TRIPS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/NO 70-07 TO U.S. NRC, REGION II, JUNE 29, 1970, DOCKET 50-324, TYPE--04A, NRC--04E, AE--UELL

CAUSE - FAULTY OVERCURRENT RELAY. WITH THE REACTOR AT 48 POWER, REACTOR RECIRCULATION PUMP NO SET 20 TRIPPED OUT ON AN APPARENT OVERCURRENT. THREE RESTART ATTEMPTS FAILED. OVERCURRENT RELAY SUB WAS AT FAULT AND WAS REPLACED. RESTART WAS SATISFACTORY. THE INSTANTANEOUS OVERLOAD TRIP SETTING OF THE OLD RELAY HAD DRIFTED DOWN CAUSING THE TRIP-OUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • INSTRUMENT, PROTECTIVE • MAIN COOLING SYSTEM • FLOW, RECIRCULATION • BRUNSWICK 2 (04A) • DRIFT • FAILURE, INHERENT • PUMPS • GENERATOR, DIESEL

115407

DRYWELL NITROGEN INLET VALVE FAILS TO CLOSE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/NO 70-08 TO U.S. NRC, REGION II, JUNE 30, 1970, DOCKET 50-324, TYPE--04A, NRC--04E, AE--UELL

CAUSE - SOLENOID VALVE FAILURE. WITH THE REACTOR AT 15% POWER, A DRYWELL NITROGEN INLET VALVE WOULD NOT CLOSE DUE TO THE VENT LOCK NOT RELIEVING. AIR WAS FOUND BLEEDING FROM ALL 4 PORTS OF THE 4-WAY SOLENOID VALVE. THE SOLENOID VALVE WAS REBUILT AND NEW SEALS INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • FAILURE, EQUIPMENT • CONTAINMENT PURGE • PHITROGEN • TEST, SYSTEM OPERABILITY • SEAL • BRUNSWICK 2 (04A) • FAILURE, INHERENT • SOLENOID • VALVE OPERATIONS • VALVES

115408

INSTRUMENTS FAILS FROM INTERNAL LEAK AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/NO 70-09 TO U.S. NRC, REGION II, JUNE 30, 1970, DOCKET 50-324, TYPE--04A, NRC--04E, AE--UELL

CAUSE - PIPE CROSS-THREADED. WITH THE REACTOR AT 28 POWER IN THE S/V MODE, 2-021-L13-M240 MALFUNCTIONED DUE TO AN INTERNAL LEAK. THE ASSOCIATED INSTRUMENT CHANNEL WAS MANUALLY TRIPPED. A THREADED PIPE INSIDE THE INSTRUMENT HOUSING WAS LEAKING BECAUSE OF A CROSSED THREAD. THE THREADS WERE CHASED AND THE PIPE REINSTALLED WITH NO LEAK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, INSTALLATION ERROR • PLEAK • BRUNSWICK 2 (04A) • SENSORS, LEVEL

115405

LOW FLOW INDICATION FOUND ON OXYGEN ANALYZER AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/NO 70-03 TO U.S. NRC, REGION II, JULY 2, 1970, DOCKET 50-324, TYPE--04A, NRC--04E, AE--UELL

CAUSE - BLOWER DRIVE BELT FAILURE. WITH THE REACTOR AT 64% POWER, A LOW FLOW INDICATION WAS DISCOVERED ON AN OXYGEN ANALYZER. THE BLOWER DRIVE BELT WAS BARELY WORN AND HAD COME OFF THE PULLEY. THE BELT WAS REPLACED AND THE INSTRUMENT RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OXYGEN • MONITOR, GAS • FAILURE, INSTRUMENT • MONITOR • TEST, SYSTEM OPERABILITY • CONTAINMENT ATMOSPHERE • FLOW • BRUNSWICK 2 (04A) • FAILURE, INHERENT • WEAR • BLOWERS

115004
NUCLEAR SERVICE WATER PUMP DEVELOPS A FITTING LEAK AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/W/ 70-92 TO US, NRC, REGION II, JULY 2, 1970, DDCRET 50-324, TYPE--BWR, APU--UOE, AE--UECC

CAUSE - CHACKS IN SS PIPE FITTING. WITH THE REACTOR AT 554 POWER AND WITH CONVENTIONAL SERVICE WATER PUMP 20 INOPERABLE, NUCLEAR SERVICE WATER PUMP 2A DEVELOPED A FITTING LEAK ADJACENT TO THE CYCLONE SEPARATION FLUME WATER SUPPLY SLEEVES. CHACKS WERE FOUND IN THE STAINLESS STEEL FITTING. THE FITTING WAS REPLACED AND THE LEAK WAS STOPPED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE + PLEAK + BRUNSWICK 2 (BWR) + CHACK + SERVICE WATER SYSTEM + PUMPS + PIPES AND PIPE FITTINGS

115003
NUCLEAR SERVICE WATER PUMP DEVELOPS A FLANGE LEAK AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/W/ 70-92 TO US, NRC, REGION II, JULY 2, 1970, DDCRET 50-324, TYPE--BWR, APU--UOE, AE--UECC

CAUSE - TIMED WIPER NIPPLE CRACKED. WITH THE REACTOR AT 554 POWER AND WITH CONVENTIONAL SERVICE WATER PUMP 20 OUT OF SERVICE, NUCLEAR SERVICE WATER PUMP 2A DEVELOPED A LEAK IN THE MOTOR COOLER FLANGE PLUMBING. THE TIMED WIPER NIPPLE AT THE OUTLET FLANGE HAD CRACKED. IT WAS REPLACED AND THE LEAK STOPPED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE + PLEAK + BRUNSWICK 2 (BWR) + CHACK + SERVICE WATER SYSTEM + PUMPS + PIPES AND PIPE FITTINGS

115096
SET POINT DRIFT IN WATHELL HIGH PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/W/ 70-94 TO US, NRC, REGION II, JULY 2, 1970

CAUSE - UNKNOWN. DURING A TEST WHILE OPERATING AT 908 POWER, 4 AUTO INITIATING WATHELL HIGH PRESSURE SWITCHES WERE OUT OF CALIBRATION (HIGH) AT 201, 200, 201 AND 201 PSIG RESPECTIVELY. ALL WERE IMMEDIATELY RESET TO 209 PSIG. THESE ARE NEW INSTRUMENTS WHICH WERE INSTALLED DUE TO A DRIFT PROBLEM WITH DOWNSHAFT SWITCHES. DRIFT INVESTIGATION IS IN PROGRESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (BWR) + DRIFT + SENSORS, PRESSURE

115443
SET POINT DRIFT IN REACTOR HIGH PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/W/ 70-95 TO US, NRC, REGION II, JULY 2, 1970, DDCRET 50-324, TYPE--BWR, APU--UOE, AE--UECC

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE OPERATING AT 978 POWER, 4 REACTOR HIGH PRESSURE SWITCHES WERE OUT OF CALIBRATION (HIGH) AT 1090, 1000, 1090, AND 1070 PSIG RESPECTIVELY. ALL WERE RESET IMMEDIATELY TO 1055 PSIG. SWITCH SET POINTS HAD DRIFTED. THE PROBLEM IS UNDER STUDY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + SET POINT + BRUNSWICK 2 (BWR) + DRIFT + SENSORS, PRESSURE

115001
PRIMARY CONTAINMENT PRESSURE RECORDER OPERATES INTERMITTENTLY AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/W/ 70-97 TO US, NRC, REGION II, JULY 7, 1970, DDCRET 50-324, TYPE--BWR, APU--UOE, AE--UECC

CAUSE - WORN CHART DRIVE GEAR. WITH THE REACTOR AT 528 POWER, A PRIMARY CONTAINMENT PRESSURE RECORDER WAS FOUND OPERATING INTERMITTENTLY. THE CHART DRIVE GEAR (INLOW) WAS BADLY WORN DUE TO OFF-CENTER SHAFT. THE SHAFT AND GEAR WERE REPLACED AND THE SHAFT RE-ALIGNED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + CONTAINMENT + FAILURE, MAINTENANCE ERROR + BRUNSWICK 2 (BWR) + GEAR + SENSORS, PRESSURE + RECORDERS

115002

NO VENTILATION MONITOR AIR VALVE FAILS TO OPEN AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., ALEXANDRIA, VA
2 PGS, LTR WFO 70-90 TO W.S. NRC, REGION II, JULY 7, 1970, UJACKET 50-320, TYPE--DNR, MFU--UCL, AC--UCL

CAUSE - SCLENDID COIL HAD SLIPPED OFF. WITH THE REACTOR AT 50% POWER AND DURING REACTOR BUILDING VENTILATION EXHAUST HEATING TESTING, AN AIR SUPPLY VALVE FAILED TO OPEN. THIS DISABLED 4 RADIATION MONITORS. THE SCLENDID COIL ON THE VALVE OPERATOR HAD SLIPPED OFF BECAUSE ITS RETAINING RING HAD WORN. THE COIL WAS REPOSITIONED AND A NEW RETAINING RING INSTALLED. THE SCLENDID OPERATED PROPERLY AND THE VALVE OPENED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + VENTILATION SYSTEM + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (DNR) + FAILURE, INCIDENT + VALVES + RADIATION MONITORS

115000

SET POINT DRIFT IN DRYWELL PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., ALEXANDRIA, VA
2 PGS, LTR WFO 70-90 TO W.S. NRC, REGION II, JULY 7, 1970, UJACKET 50-320, TYPE--DNR, MFU--UCL, AC--UCL

CAUSE - INSTRUMENT DRIFT. DURING HIGH DRYWELL PRESSURE TESTING, 4 APS PRESSURE SWITCHES WERE FOUND OUT OF CALIBRATION AT 2.3 AND 2.2 PSIG RESPECTIVELY. WITH WERE IMMEDIATELY RECALIBRATED TO 1.9 PSIG. THESE ARE NEW INSTRUMENTS WHICH WERE INSTALLED BECAUSE OF A SHIFT PROBLEM WITH BAKESCALE SWITCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (DNR) + SHIFT + SENSORS, PRESSURE

115070

SET POINT DRIFT IN MPC1 DIFFERENTIAL PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., ALEXANDRIA, VA
4 PGS, LTR WFO 70-90 TO W.S. NRC, REGION II, JULY 7, 1970, UJACKET 50-320, TYPE--DNR, MFU--UCL, AC--UCL

CAUSE - INSTRUMENT DRIFT. DURING MPC1 STEAM LINE HIGH DIFFERENTIAL PRESSURE TESTING WITH THE REACTOR AT 27% POWER, 2 SWITCHES WERE FOUND OUT OF CALIBRATION (HIGH) AT 209 AND 310 INCHES OF WATER, RESPECTIVELY. THE SHIFT FOREMAN FAILED TO DECLARE AN LLO. THEREFORE, THE REQUIRED ISOLATION WAS NOT DONE. ONE SWITCH HAD DRIFTED OUT OF CALIBRATION. THE OTHER HAD BEEN MISCALIBRATED BEFORE USING A PLUS INSTEAD OF A MINUS MEASUREMENT FACTOR. WITH WERE IMMEDIATELY RECALIBRATED TO 219 AND 292 INCHES OF WATER RESPECTIVELY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SET POINT + BRUNSWICK 2 (DNR) + SHIFT + SENSORS, PRESSURE + MPC1

115090

CHANNEL A POWER FAILS TO VARY AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., ALEXANDRIA, VA
2 PGS, LTR WFO 70-101 TO W.S. NRC, REGION II, JULY 12, 1970, UJACKET 50-320, TYPE--DNR, MFU--UCL, AC--UCL

CAUSE - RELAY FAILURE. DURING THE RBM TEST WITH THE REACTOR AT 0% POWER, CHANNEL A POWER WOULD NOT BE VARIED WITH THE SWITCH IN POWER AND FLUX TEST POSITION. RELAY R9 ON AVERAGING CARD 230 WAS MALFUNCTIONING AND WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + CONTROL SYSTEM + ELECTRIC POWER + TEST, SYSTEM OPERABILITY + ENGINEERED SAFETY FEATURE + BRUNSWICK 2 (DNR) + RELAYS

115009

CONTAINMENT RADIATION RECORDER FAILS TO TRACK PROPERLY AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., ALEXANDRIA, VA
2 PGS, LTR WFO 70-100 TO W.S. NRC, REGION II, JULY 12, 1970, UJACKET 50-320, TYPE--DNR, MFU--UCL, AC--UCL

CAUSE - DRIVE COIL WORN OUT. WITH THE REACTOR AT 71% POWER, A CONTAINMENT RADIATION RECORDER WOULD NOT TRACK PROPERLY. THE RECORDER DRIVE COIL WAS WORN OUT AND WAS REPLACED. THIS IS A REPEAT PROBLEM. A STUDY IS UNDERWAY TO DETERMINE THE CAUSE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

115669 CONTAINMENT + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (BWR) + FAILURE, INHERENT + WEAR + RADIATION MONITORS + RECORDERS

115668
DIESEL GENERATOR FAILS TO OPERATE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-85 TO U.S. NRC, REGION II, JULY 12, 1970, DCKET 50-324, TYPE--BWR, NRC--G.E., AE--UELC

CAUSE - WATER IN FUEL SADDLE TANK. DURING A DIESEL GENERATOR LOAD TEST WITH THE REACTOR AT 598 POWER, DG 1 FAILED TO TIE INTO E-BUS AND STALLED. WATER WAS FOUND IN THE FUEL SADDLE TANK. THE TANKS WERE PUMPED OUT AND FRESH FUEL ADDED. THE VENT LINE TO THE 4-DAY STORAGE TANK HAD BEEN CUT BELOW GAUGING LEVEL AND THEN LEFT. RAIN FILLED THE HOLE IN THE WALL AND ENTERED THE TANK THROUGH THE VENT LINE. A FULL INVESTIGATION IS IN PROGRESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + WATER + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + BRUNSWICK 2 (BWR) + FUEL, FUSSIL + ENGINES, INTERNAL COMBUSTION + GENERATION, DIESEL

115670
SET POINT DRIFT IN MPC1 TURBINE PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-102 TO U.S. NRC, REGION II, JULY 12, 1970, DCKET 50-324, TYPE--BWR, NRC--G.E., AE--UELC

CAUSE - INSTRUMENT DRIFT. DURING MPC1 TESTING WITH THE REACTOR AT 956 POWER, 3 TURBINE EXHAUST DIAPHRAGM HIGH PRESSURE SWITCHES WERE FOUND OUT OF CALIBRATION (LOW) AT 8.5, 8.5, AND 8.2 PSI, RESPECTIVELY. THEY WERE IMMEDIATELY RECALIBRATED TO 10.0, 10.0, AND 10.5 PSI. THE INSTRUMENTS HAD DRIFTED OUT OF CALIBRATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + TURBINE + SET POINT + BRUNSWICK 2 (BWR) + DRIFT + SENSORS, PRESSURE + MPC1

115671
CONTAINMENT GAYLEN RECORDER/INDICATOR PENS HIGH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-103 TO U.S. NRC, REGION II, JULY 13, 1970, DCKET 50-324, TYPE--BWR, NRC--G.E., AE--UELC

CAUSE - UNKNOWN. WITH THE REACTOR AT 786 POWER, A CONTAINMENT GAYLEN RECORDER/INDICATOR WAS FOUND BY THE OPERATOR TO BE PEGGED HIGH. WHEN THE TECHNICIAN CHECKED IT 4 HOURS LATER, IT WAS READING 25%. THE INSTRUMENT WAS CHECKED THOROUGHLY AND NO MALFUNCTION FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + GAYLEN + FAILURE, INSTRUMENT + CONTAINMENT ATMOSPHERE + INSTRUMENT, ABNORMAL INDICATION + BRUNSWICK 2 (BWR) + RECORDERS

115672
CONTROL BUILDING AIR TREATMENT SYSTEM FAN FAILS TO OPERATE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 70-105 OF U.S. NRC, REGION II, JULY 13, 1970, DCKET 50-324, TYPE--BWR, NRC--G.E., AE--UELC

CAUSE - BLOWN FUSE. DURING TESTING OF THE CONTROL BUILDING AIR TREATMENT SYSTEM WITH THE REACTOR AT 948 POWER, THE SUPPLY FAN WAS FOUND NOT RUNNING. A BLOWN 5 AMP FUSE WAS FOUND IN PANEL JR2. IT WAS REPLACED. THE SYSTEM THEN OPERATED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

AIR CLEANING + INSTRUMENT, PROTECTIVE + CONTROL + BUILDING + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (BWR) + FAILURE, INHERENT + BLOWERS

115673
HYDRAULIC SEISMIC PIPE SNUBBER FOUND OUT OF FLUID AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/NO 700194 TO U.S. NRC, REGION II, JULY 13, 1970, DCKET 50-324, TYPE--BWR, NRC--G.E., AE--UELC

CAUSE - DETERIORATED SEALS. DURING AN INSPECTION WHILE OPERATING AT 926 POWER, AN HYDRAULIC SEISMIC PIPE SNUBBER ON AMR SERVICE WATER SYSTEM PIPING WAS FOUND TO BE OUT OF FLUID. IT WAS REPLACED. THE FAILED SNUBBER WAS REBUILT WITH NEW SEALS. OLD SEALS HAD DRIED AND CRACKED WHICH PERMITTED LEAKAGE. SNUBBERS WHICH HAVE BEEN REPAIRED HAVE NOT FAILED AGAIN.

115075 CONTINUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • OSMUCK ABSORBER • OSEAL • SUPPORT STRUCTURE • SMUTTER COOLING SYSTEM • SURVEILLANCE PROGRAM • OLEAK • BRUNSWICK 2 (BWR) • EFFECT, AGE • PIPES AND PIPE FITTINGS

115004

CONTAINMENT RADIATION MONITOR ERRATIC AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/RO 70-107 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, MFW--UOL, AL--UEL

CASE - UNKNOWN. WITH THE REACTOR AT 97% POWER, A CONTAINMENT RADIATION MONITOR WAS FOUND TO BE ERRATIC AND WAS TAKEN OUT OF SERVICE. WHEN IT WAS ACTIVATED FOR TROUBLESHOOTING, IT OPERATED PROPERLY. A CLOSE WATCH WAS KEPT FOR 40 HOURS WITH NO PROBLEMS RESULTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • FAILURE, INSTRUMENT • MONITORING SYSTEM, RADIATION • BRUNSWICK 2 (BWR) • RADIATION MONITORS

115008

OXYGEN/HYDROGEN RECORDER/INDICATOR NOT PRINTING PROPERLY AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/RO 70-111 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, MFW--UOL, AL--UEL

CASE - BRAKEN DRIVE CORD. WITH THE REACTOR AT 77% POWER, THE CONTAINMENT OXYGEN/HYDROGEN RECORDER/INDICATOR WAS FOUND NOT PRINTING PROPERLY ON THE CHART. THE RECORDER DRIVE CORD WAS FOUND TO BE BROKEN. IT WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • CONTAINMENT • HYDROGEN • OXYGEN • MONITOR • BRUNSWICK 2 (BWR) • OLEAK • PRECORDERS

115009

OXYGEN/HYDROGEN RECORDER/INDICATOR PRINTING ERRATICALLY AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/RO 70-112 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, MFW--UOL, AL--UEL

CASE - DRIVE CORD IMPROPERLY INSTALLED. WITH THE REACTOR AT 83% POWER, A CONTAINMENT OXYGEN/HYDROGEN RECORDER/INDICATOR WAS OBSERVED TO BE PRINTING ERRATICALLY ON THE CHART. THE NEW RECORDER DRIVE CORD HAD BEEN INSTALLED TOO TIGHT AND HAD COME OFF ITS PULLEYS. THE CORD WAS REINSTALLED AND RETENSIOED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • CONTAINMENT • HYDROGEN • OXYGEN • MONITOR • FAILURE, MAINTENANCE ERROR • BRUNSWICK 2 (BWR) • PRECORDERS

115007

RADIATION MONITOR RECORDER PRINTING ON ONLY ONE POINT AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/RO 70-110 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, MFW--UOL, AL--UEL

CASE - DRIVE CORD BROKEN. WITH THE REACTOR AT 84% POWER, CONTAINMENT RADIATION MONITOR RECORDER WAS FOUND TO BE PRINTING AT ONLY ONE POINT ON THE CHART. THE INSTRUMENT WAS FOUND TO BE BROKEN. IT WAS REPLACED. A STUDY OF DRIVE CORD WEAR AND BREAKAGE IS CONTINUING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • CONTAINMENT • BRUNSWICK 2 (BWR) • OLEAK • RADIATION MONITORS • PRECORDERS

115005

RADIATION MONITOR SAMPLE VALVE FOUND CLOSED AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/RO 70-108 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, MFW--UOL, AL--UEL

CASE - DAMAGED SOLENOID VALVE. AFTER A SCRAM AND WITH THE REACTOR COOLING DOWN, AN EFFLUENT VALVE FOR 2 CONTAINMENT RADIATION MONITORS WAS FOUND CLOSED DUE TO A POST SCRAM ISOLATION AND HAD NOT RE-OPEN. THE VALVE SOLENOID WAS FOUND TO BE STICKING BECAUSE OF PREVIOUSLY UNNOTICED CAPPING INCURRED DURING THE LAST OUTAGE. A NEW SOLENOID WAS INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

115905 *CONTINUED*
CONTAINMENT + EFFLUENT + SAMPLING + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + DAMAGE + BRUNSWICK 2 (BRN) + SOLENOID + VALVES + RADIATION MONITORS

115906
RADIATION MONITOR SAMPLE VALVE FOUND CLOSED AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/EN 70-109 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, NRG--G.E., AE--UEGL

CAUSE - STICKING VALVE SOLENOID. AFTER A SCRAM AND WITH THE REACTOR COOLING AN EFFLUENT VALVE FOR 2 CONTAINMENT RADIATION MONITORS WAS FOUND CLOSED DUE TO A POST-SCRAM ISOLATION AND WOULD NOT RESPOND. THE VALVE SOLENOID WAS FOUND TO BE STICKING AND SEALS WERE LEAKING WHEN DE-ENERGIZED. THE SOLENOID WAS REWILT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + SAMPLING + TEST, SYSTEM OPERABILITY + LEAK + BRUNSWICK 2 (BRN) + FAILURE, INHERENT + SOLENOID + VALVES + RADIATION MONITORS

115903
ACIC ISOLATES ON STEAM LEAK DETECTION ALARM AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/EN 70-109 TO U.S. NRC, REGION II, JULY 19, 1970, DUCRET 50-324, TYPE--BWR, NRG--G.E., AE--UEGL

CAUSE - TEMPERATURE SWITCH MALFUNCTION. WITH THE REACTOR AT 75% POWER, ACIC ISOLATED 7 TIMES IN A 17 DAY PERIOD ON STEAM LEAK DETECTION ALARMS. EACH ISOLATION WAS RESET IN LESS THAN 1 MINUTE AND THE SYSTEM FUNCTIONED PROPERLY. A TEMPERATURE SWITCH WAS DETERMINED TO BE MALFUNCTIONING. THE CAUSE HAS NOT YET BEEN FOUND. THE SWITCH WAS RECALIBRATED AFTER THE 514TH OCCURRENCE BUT ISOLATION OCCURRED AGAIN 2 DAYS LATER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + BRUNSWICK 2 (BRN) + ACIC + SENSORS, TEMPERATURE

115902
SET POINT DRIFT IN MPC1 LCM PRESSURE SWITCHES AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/EN 70-113 TO U.S. NRC, REGION II, JULY 27, 1970, DUCRET 50-324, TYPE--BWR, NRG--G.E., AE--UEGL

CAUSE - INSTRUMENT DRIFT. WITH THE REACTOR AT 95% POWER, A TEST FOUND 2 MPC1 TURBINE STEAMLINE LCM PRESSURE SWITCHES OUT OF CALIBRATION (HIGH) ON THE CONSERVATIVE SIDE AT 112 PSIG. THE CAUSE WAS INSTRUMENT DRIFT. THEY WERE IMMEDIATELY RECALIBRATED TO 102 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + TURBINE + SET POINT + BRUNSWICK 2 (BRN) + DRIFT + FAILURE, INHERENT + SENSORS, PRESSURE + MPC1

110225
CONTAINMENT RADIATION MONITOR RECORDER NOT TRACKING AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/EN 70-115 TO U.S. NRC, REGION II, JULY 29, 1970, DUCRET 50-324, TYPE--BWR, NRG--G.E., AE--UEGL

CAUSE - DRIVE CLUTCH WORN OUT. WITH THE REACTOR AT 61% POWER, A CONTAINMENT RADIATION MONITOR RECORDER WAS FOUND TO BE NOT TRACKING. THE RECORDER DRIVE CLUTCH WAS FOUND TO BE WORN OUT AND WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT + BRUNSWICK 2 (BRN) + FAILURE, INHERENT + RADIATION MONITORS + RECORDERS

110224
CORE SPRAY PUMP FLOW RATE NOT TESTED AS REQUIRED AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
3 PGS, LTR W/EN 70-114 TO U.S. NRC, REGION II, JULY 29, 1970, DUCRET 50-324, TYPE--BWR, NRG--G.E., AE--UEGL

CAUSE - CHANGE NOT INCORPORATED INTO SCHEDULE. WHILE CHECKING COMPLETED CORE SPRAY PUMP FLOW RATE PERIODIC TESTS, IT WAS NOTICED THAT THE FREQUENCY RATE ON THE TEST ITSELF WAS ONCE EVERY 3 MONTHS WHILE SCHEDULING HAD ONCE EVERY OPERATING CYCLE. TECH SPECS AND FREQUENCY RATE WAS CHANGED IN MARCH 1975, BUT THE SCHEDULE AND MASTER INDEX WAS NOT. THE MASTER SCHEDULE WAS CORRECTED. FOUR TESTS HAD BEEN MISSED.

110220 *CONTINUED*
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*CORE SPRAY * TESTING * FAILURE, ADMINISTRATIVE CONTROL * TEST INTERVAL * FLUX * BRUNSWICK 2 (BWR)

110221
 SAFETY RELIEF VALVE LIFTS CAUSING A SCRAM AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR NUMBER TO-119 TO U.S. NRC, REGION II, JULY 29, 1970, UNCLAS 50-324, TYPE--BWR, RPU--WRE, AE--UCL

CAUSE - STEAM CUTTING UP POPPET AND SEAT. WITH THE REACTOR AT 204 POWER AND 933 PSI, A SAFETY RELIEF VALVE LIFTED CAUSING A SCRAM. IT RESEATED AT 400 PSI. THE VALVE PILT VALVE HAD ITS POPPET AND SEAT STEAM CUT WHICH CAUSED THE SPURIOUS LIFT. THREE OTHER VALVES WERE FOUND UNSATISFACTORY. ALL 4 WERE OVERHAULED. STEAM CUTTING IS NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * SCRAM, REAL * *PRESSURE RELIEF * *OLC-DOWN * MAIN COOLING SYSTEM * PRESSURE TRANSIENT * BRUNSWICK 2 (BWR) * REACTOR SHUTDOWN * FAILURE, INHERENT * *VALVES

110224
 AHR VALVE NOT OPERABLE FROM CONTROL ROOM AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR NUMBER TO-119 TO U.S. NRC, REGION II, AUG. 2, 1970, UNCLAS 50-324, TYPE--BWR, RPU--WRE, AE--UCL

CAUSE - VALVE OPERATOR NOT AVAILABLE. WITH THE REACTOR AT LOW POWER AND DURING LINE-UP OF AHR LOOP A INTO STEAM CONDENSING MODE IN PREPARATION FOR SCHEDULED TUNING TRIP SCRAM TEST, A AHR VALVE HAD TO BE MANUALLY CLOSED BECAUSE THE VALVE OPERATOR NOT AVAILABLE FOR REPAIR. SINCE THE VALVE COULD NOT BE OPERATED FROM THE CONTROL ROOM, AN LCU EXISTED WHEN IT WAS CLOSED. WHEN THE VALVE WAS OPENED 29 HOURS LATER, THE LCU NO LONGER EXISTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR * TESTING * FAILURE, ADMINISTRATIVE CONTROL * *MAIN COOLING SYSTEM * BRUNSWICK 2 (BWR) * *VALVE OPERATORS * VALVES

110221
 CONTROLLED RELEASE OF WASTE SAMPLE TANK IMPROPER AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 3 PGS, LTR NUMBER TO-120 TO U.S. NRC, REGION II, AUG. 4, 1970, UNCLAS 50-324, TYPE--BWR, RPU--WRE, AE--UCL

CAUSE - OPERATOR ERROR. DURING A REACTOR STARTUP, RADIOACTIVE OPERATOR WAS AWAITING APPROVAL TO RELEASE DETERGENT URINE TANK A AND WASTE SAMPLE TANK A. THE RELEASE FORM FOR DETERGENT URINE TANK A WAS SUBMITTED TO THE OPERATOR. HE FAILED TO IMMEDIATELY REVIEW THE RELEASE FORM AND PROCEEDED TO RELEASE WASTE SAMPLE TANK A. THE ERROR WAS NOT DETECTED UNTIL THE RELEASE WAS COMPLETE. SUBSEQUENTLY, RELEASE APPROVAL WAS OBTAINED FOR THE WASTE SAMPLE TANK. NO RELEASE LIMITS WERE EXCEEDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR * WASTE DISPOSAL * WASTE HANDLING * *WASTE DISPOSAL, LIQUID * RADIOACTIVITY RELEASE * BRUNSWICK 2 (BWR) * COMMUNICATION

110217
 HIGH CONDUCTIVITY NOTED IN REACTOR WATER AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR NUMBER TO-122 TO U.S. NRC, REGION II, AUG. 4, 1970, UNCLAS 50-324, TYPE--BWR, RPU--WRE, AE--UCL

CAUSE - CRUD FROM SWITCHING DEMINERALIZERS. WITH THE REACTOR AT 476 POWER, HIGH CONDUCTIVITY WAS NOTED IN CONDENSER 20-S MUTHILL. CONDENSATE FILTER DEMINERALIZERS WERE SWITCHED TO POST-FILTER AND 20-S WAS ISOLATED TO INVESTIGATE. DURING SWITCHING, ALL LPU'S AND CUU'S ARE MOMENTARILY BYPASSED. THIS CAUSED A SLUG OF CRUD TO REACH REACTOR FEED WATER. REACTOR WATER CONDUCTIVITY PEAKED AT 4.0 MICROHM/CM IN 12 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * *CRUD * COOLANT PURIFICATION SYSTEM * *COOLANT QUALITY * BRUNSWICK 2 (BWR) * FAILURE, INHERENT

110218
 PRIMARY CONTAINMENT ISOLATION VALVES FAIL TO OPEN AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC

110210 *CONTINUED*
2 Pgs, LTR N/LEA 70-143 TC U.S. NRC, REGION II, AUG. 4, 1970, DUCRET 50-324, TYPE--GMR, NRC--GEO., AE--UELL

CAUSE - STICKING PUSHBUTTON SWITCHES. WITH THE REACTOR AT 54% POWER, AND DURING PRIMARY CONTAINMENT ISOLATION VALVE CYCLING TESTS, VALVE FUM Z PENETRATIONS WERE CYCLED CLOSED FROM RTUB BUT WOULD NOT REOPEN. TWO PUSHBUTTON SWITCHES (MASTER SPECIALIST) ON RTUB WERE FOUND TO BE STICKING AND WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + BRUNSWICK 2 (GMR) + VALVES + CONTAINMENT PENETRATION

110216
ACIC ISOLATES ON STEAM LINE BREAK SIGNAL AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/LEA 70-121 TC U.S. NRC, REGION II, AUG. 4, 1970, DUCRET 50-324, TYPE--GMR, NRC--GEO., AE--UELL

CAUSE - FUS RELIEF VALVE INSTANTANEOUSLY LIFTED. WITH THE REACTOR AT 20% POWER, ACIC TRIPPED ON STEAM LINE BREAK SIGNAL AND ISOLATED. ISOLATION WAS IMMEDIATELY RESET. AN ADS SAFETY RELIEF VALVE INSTANTANEOUSLY LIFTED CAUSING THE ISOLATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + MAIN COOLING SYSTEM + PRESSURE TRANSIENT + BRUNSWICK 2 (GMR) + ORLIC

110495
TEST TAPS IN RHR SYSTEM BLEW OUT AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/LEA 70-117 TC U.S. NRC, REGION II, AUG. 4, 1970, DUCRET 50-324, TYPE--GMR, NRC--GEO., AE--UELL

CAUSE - HEAT DETEGRATED THE PLASTIC PLUGS. WITH THE REACTOR SHUT DOWN AND COOLING, RHR LOOP B IN STEAM CONDENSING MODE, AND LOOP A IN THE NORMAL COOLING MODE FOR MAKE-UP FOR SHUTDOWN COOLING, PLASTIC PLUGS ON 2 TEST TAPS (HEAT SYSTEM FLOW UNIFICE) BLEW OUT. LOOP A WAS DEPRESSURIZED TO STOP THE LEAK. AT THE COMPLETION OF RHR FLOW TESTING BY THE CONTRACTOR IN DEC. 1975, INSTALLATION TAPS WERE LEFT IN PLACE AND PLUGGED. THE PLASTIC PLUGS HEAT DETEGRATED AND FAILED. PLASTIC PLUGS WERE REPLACED WITH PIPE PLUGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

DAMAGE + FAILURE, INSTALLATION ERROR + SHUTDOWN COOLING SYSTEM + LEAK + PLASTICS + BRUNSWICK 2 (GMR) + TEMPERATURE + PIPES AND PIPE FITTINGS

110223
TURNS WATER LEVEL EXCEEDS LIMIT AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/LEA 70-110 TC U.S. NRC, REGION II, AUG. 4, 1970, DUCRET 50-324, TYPE--GMR, NRC--GEO., AE--UELL

CAUSE - RHR LOOP DRAINED TO TORUS. WITH THE REACTOR SHUTDOWN AND COOLING, THE TORUS LEVEL INDICATOR ON RTUB SHOWED THAT WATER LEVEL WAS HIGH AT -25.25 INCHES. THIS WAS DUE TO RHR LOOP A HAVING BEEN DRAINED TO THE TORUS TO ENABLE TEST TAP PIPE PLUGS TO BE REPLACED. THE REACTOR WAS VENTED 5 MINUTES LATER CANCELLING THE LCO. THE TORUS WAS THEN PUMPED OUT TO -30 INCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

MAINTENANCE AND REPAIR + FAILURE, ADMINISTRATIVE CONTROL + SHUTDOWN COOLING SYSTEM + SYSTEM CAPACITY + BRUNSWICK 2 (GMR) + TORUS

110494
ACIC ISOLATES TWICE IN ONE HOUR AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 Pgs, LTR N/LEA 70-120 TC U.S. NRC, REGION II, AUG. 9, 1970, DUCRET 50-324, TYPE--GMR, NRC--GEO., AE--UELL

CAUSE - UNKNOWN. WITH THE REACTOR AT 0.2% POWER, ACIC ISOLATED TWICE IN ONE HOUR. ISOLATIONS WERE IMMEDIATELY RESET. THE CAUSE HAS NOT YET BEEN DETERMINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + BRUNSWICK 2 (GMR) + ORLIC

110492

110492 UNTIMED

SET POINT DRIFT IN NPCI TURBINE PRESSURE SWITCH AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR D/LER 70-124 TC U.S. NRC, REGION 11, AUG. 9, 1970, DUCRET 50-324, TYPE--DNR, NFO--UCC, AF--UCC

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE NPCI TURBINE EXHAUST DIAGNOSTIC HIGH PRESSURE SWITCHES WHILE OPERATING AT 70% POWER, ONE SWITCH WAS FOUND OUT OF CALIBRATION (HIGH AT 30 PSIG). IT WAS IMMEDIATELY RECALIBRATED TO 10 PSIG. THE INSTRUMENT HAD DRIFTED SINCE THE LAST MONTHLY TEST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + TURBINE + SET POINT + BRUNSWICK 2 (DNR) + DRIFT + FAILURE, INHERENT + SENSORS, PRESSURE + NPCI

110493

SET POINT DRIFT IN LPCI PRESSURE SWITCHES AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR D/LER 70-124 TC U.S. NRC, REGION 11, AUG. 9, 1970, DUCRET 50-324, TYPE--DNR, NFO--UCC, AF--UCC

CAUSE - INSTRUMENT DRIFT. DURING LPCI PUMP DISCHARGE INTERLOCK TESTS WITH THE REACTOR AT 80% POWER, 2 PRESSURE SWITCHES WERE OUT OF CALIBRATION (HIGH AT 140 PSIG AND 110 PSIG). THE CAUSE WAS INSTRUMENT DRIFT. THEY WERE IMMEDIATELY RECALIBRATED TO 100 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (DNR) + DRIFT + FAILURE, INHERENT + SENSORS, PRESSURE + LPCI

110491

SET POINT DRIFT IN REACTOR PRESSURE SWITCH AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR D/LER 70-120 TC U.S. NRC, REGION 11, AUG. 14, 1970, DUCRET 50-324, TYPE--DNR, NFO--UCC, AF--UCC

CAUSE - INSTRUMENT DRIFT. DURING CORE SPRAY COOLING/REACTOR LOW PRESSURE TESTING WHILE OPERATING AT 40% POWER, A LOW REACTOR PRESSURE SWITCH WAS FOUND OUT OF CALIBRATION (LOW BY 0 PSIG). IT WAS IMMEDIATELY RECALIBRATED. THE SWITCH HAD DRIFTED SINCE LAST CALIBRATION CHECK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + BRUNSWICK 2 (DNR) + DRIFT + FAILURE, INHERENT + SENSORS, PRESSURE

117009

HYDRAULIC PIPE SHROUDER FOUND INOPERABLE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR D/LER 70-129 TC U.S. NRC, REGION 11, AUG. 17, 1970, DUCRET 50-324, TYPE--DNR, NFO--UCC, AF--UCC

CAUSE - LEAK THROUGH LOOSE SCREWS. DURING AN INSPECTION OF HYDRAULIC SEISMIC PIPE SHROUDERS WHILE THE REACTOR WAS SHUT DOWN FOR ADS VALVE MAINTENANCE, ONE SHROUDER WAS FOUND INOPERABLE DUE TO LOW FILL LEVEL. WHEN DISASSEMBLED, INDICATOR HOUSING SCREWS WERE FOUND LOOSE AND SHROUDER WAS REBUILT, RECHARGED, AND REINSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FASTENER + SHOCK ABSORBER + FAILURE, MAINTENANCE ERROR + SUPPORT STRUCTURE + SURVEILLANCE PROGRAM + CLEAN + BRUNSWICK 2 (DNR) + PIPES AND PIPE FITTINGS

117070

IMPROPER VALVE LINEUP CAUSES HIGH DRYWELL LEAKAGE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR D/LER 70-127 TC U.S. NRC, REGION 11, AUG. 17, 1970, DUCRET 50-324, TYPE--DNR, NFO--UCC, AF--UCC

CAUSE - UNAUTHORIZED OPERATION OF VALVES. WITH THE REACTOR AT 80% POWER, A RAPID INCREASE IN DRYWELL PRESSURE WAS INDICATED. THE DRYWELL FLOW DRAIN LEAK RATE HAD INCREASED FROM 1000 GPM TO 5000 GPM. THE REACTOR WAS SHUT DOWN. EARLIER, WHILE REPAIRING A RECIRCULATING SYSTEM VALVE, MECHANICS OPENED 2 BONNET VENT VALVES TO RELIEVE PRESSURE FROM THE PACKING OF THE VALVE BEING REPAIRED. WHEN THE JOB WAS COMPLETED, THE VALVES WERE NOT RECLOSED. NORMALLY, OPERATORS OPERATE THE VALVES. THIS TIME MAINTENANCE POSITIONED THEM WITHOUT PROPER AUTHORITY OR DOCUMENTATION. THE VALVES WERE CLOSED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE + MAINTENANCE AND REPAIR + PROCEDURES AND MANUALS + FAILURE, MAINTENANCE ERROR + CLEAN RATE +

117370 CONTINUED
BRUNSWICK 2 (DMR) • REACTOR SHUTDOWN • VALVES

117000
AEC ISOLATED ON STEAM LEAK DETECTION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/LET 70-130 TC U.S. NRC, REGION II, AUG. 20, 1970, DCKET 50-324, TYPE--DMR, RPL--GEC, AE--UELC
CAUSE - NOT YET DETERMINED. WITH THE REACTOR AT 676 POWER, AEC ISOLATED ON STEAM LEAK DETECTION FROM DELTA T. THE SYSTEM WAS IMMEDIATELY RESET AND RETURNED TO STANDBY. THE CAUSE HAS NOT YET BEEN DETERMINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • TEMPERATURE GRADIENT • BRUNSWICK 2 (DMR) • AEC

117400
CONTAINMENT RADIATION RE ORNER SAMPLE BLUNDER FAILS AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/LET 70-130 TC U.S. NRC, REGION II, AUG. 23, 1970, DCKET 50-324, TYPE--DMR, RPL--GEC, AE--UELC
CAUSE - LARGEDU BEARING. WITH THE REACTOR AT 578 POWER, CONTAINMENT RADIATION RECORDER WAS FOUND TO HAVE A FAILED SAMPLE BLUNDER. THE BEARINGS IN THE BLUNDER WERE DAMAGED. A NEW BLUNDER WAS INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT • SAMPLING • TEST, SYSTEM OPERABILITY • MONITORING SYSTEM, RADIATION • BEARING • BRUNSWICK 2 (DMR) • FAILURE, INHERENT • RADIATION MONITOR • BLUNDERS

117407
SET POINT OF CORE SPRAY SPARGER DELTA P SWITCH NOT CONSERVATIVE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/LET 70-130 TC U.S. NRC, REGION II, AUG. 23, 1970, DCKET 50-324, TYPE--DMR, RPL--GEC, AE--UELC
CAUSE - NOT STATED. WITH THE REACTOR AT 558 POWER, IT WAS DETERMINED THAT 2 CORE SPRAY SPARGER DELTA P SWITCHES WERE SET LESS CONSERVATIVELY THAN NECESSARY TO POSITIVELY ASSURE ACTUATION (NORMAL READINGS OF -3 AND -3.5 PSID). THEY WERE WITHIN LIMITS. THE SWITCHES WERE RESET AT 5 PSI ABOVE THE NORMAL READING TO ZERO AND 1.5 PSID. A MODIFICATION WAS INITIATED TO REPLACE THE PRESENT 0 TO 5 PSID INSTRUMENTS WITH ONES OF +/- 7 PSID.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • SET POINT • BRUNSWICK 2 (DMR) • DRIFT • SENSORS, PRESSURE

117755
MAIN STEAM LINE FLOW INDICATION LCM AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/LET 70-130 TC U.S. NRC, REGION II, AUG. 30, 1970, DCKET 50-324, TYPE--DMR, RPL--GEC, AE--UELC
CAUSE - MSIV'S SUSPECTED. WHILE OPERATING AT 358 POWER, MAIN STEAM LINE D HAD A LOW FLOW INDICATION. BOTH MAIN STEAM ISOLATION VALVES WERE CYCLED BUT THE FLOW RATE DID NOT CHANGE. THE MSIV'S WERE THEN ISOLATED. THEY WILL BE INSPECTED DURING THE NEXT SCHEDULED SHUT-TURN OUTAGE AND REPAIRS ACCOMPLISHED IF TIME PERMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • STEAM • MAIN COOLING SYSTEM • FLOW • RATE • BRUNSWICK 2 (DMR) • VALVES

117400
RADIATION MONITOR BLUNDER DRIVE BELT FOUND BROKEN AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PWS, LTR W/LET 70-130 TC U.S. NRC, REGION II, SEPT. 1, 1970, DCKET 50-324, TYPE--DMR, RPL--GEC, AE--UELC
CAUSE - BROKEN LAP JOINT. DURING ROUTINE CHECKS OF BACK PANELS WHILE OPERATING AT 508 POWER, A RADIATION MONITOR BLUNDER DRIVE BELT WAS FOUND BROKEN. IT HAD BROKEN AT THE LAP JOINT. THE BELT WAS REPLACED AND THE INSTRUMENT RETURNED TO SERVICE IN 0.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT • TEST, SYSTEM OPERABILITY • MONITORING SYSTEM, RADIATION • BRUNSWICK 2 (DMR)

117400 *CONTINUOUS
* FAILURE, INHERENT * RADIATION MONITORS * PROBERS

117704

NPCL ROOM COOL SYSTEM INITIATED AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEA 70-130 TO U.S. NRC, REGION 11, SEPT. 7, 1970, DUCRET 50-324, TYPE--DNR, RPU--JCE, AC--UECL

CAUSE - INADVERTENT ACTION OR MISCHIEF. WITH THE REACTOR AT 594 POWER AND UNDER LOAD OPERATIONS WAS TROUBLESHOOTING A PROBLEM WITH NORTH AND SOUTH VENTILATION SYSTEM WHEN THE CO2 FINE SYSTEM IN THE NPCL PUMP ROOM INITIATED CAUSING NORTH VENTILATION ISOLATION. THIS KEEPS NPCL INOPERABLE. NO FIRE WAS FOUND. DURING THE INVESTIGATION THE NPCL AUXILIARY OIL PUMP CIRCUIT BREAKER WAS FOUND IN THE OFF POSITION, NOT TRIPPED. IT WAS TURNED ON. AFTER AN INTENSIVE STUDY, IT WAS DETERMINED THAT THE CAUSE OF THE NPCL CO2 LUMP AND THE BREAKER BEING OFF WAS DUE TO INADVERTENT ACTIONS OR MISCHIEF BY PERSON OR PERSONS UNKNOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * CARBON DIOXIDE * BRUNSWICK 2 (DNR) * SABOTAGE * COMPARTMENT * OIL PROTECTION * BREAKER * NPCL

117700

NORTH PUMP ROOM COOLER BLOWER FAILS TO RUN AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEA 70-135 TO U.S. NRC, REGION 11, SEPT. 7, 1970, DUCRET 50-324, TYPE--DNR, RPU--JCE, AC--UECL

CAUSE - SWITCH OUT OF ADJUSTMENT. DURING AFR UNIT OPERABILITY TESTING WITH THE REACTOR AT 606 POWER, COOLER A BLOWER WOULD RUN FOR ABOUT 20 SECONDS AND THEN SHUT DOWN. THIS BLOWER SERVES NORTH UNIT VENTILATION COOLERS FOR THE NORTH AND PUMP ROOM. THE BLOWER SWITCH ACTUATING ARM UP THE LAMPER MAY BECOME LOOSE AND OUT OF ADJUSTMENT CAUSING THE FAN TO TURN ON WITH THE LAMPER PARTWAY OPEN AND TO DROP OUT WHEN FULLY OPEN. THE ACTUATING ARM WAS PROPERLY ADJUSTED AND SECURELY TIGHTENED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * VENTILATION SYSTEM * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * SHUTDOWN COOLING SYSTEM * COOLING * BRUNSWICK 2 (DNR) * COMPARTMENT * PROBERS

117700

CONTAINMENT GYGEN HYDROGEN RECORDER/INDICATOR NOT PRINTING AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEA 70-130 TO U.S. NRC, REGION 11, SEPT. 10, 1970, DUCRET 50-324, TYPE--DNR, RPU--JCE, AC--UECL

CAUSE - BROKEN DRIVE CUMUL WITH THE REACTOR AT 776 POWER, THE CONTAINMENT GYGEN/HYDROGEN RECORDER/INDICATOR WAS FOUND NOT PRINTING. THE DRIVE CUMUL WAS FOUND BROKEN AND WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT * TEST, SYSTEM OPERABILITY * CONTAINMENT ATMOSPHERE * BRUNSWICK 2 (DNR) * FAILURE, INHERENT * NEAR * RECORDERS

117705

ISOLATION VALVE TO DAYTON RECORDER FAILS TO CLOSE COMPLETELY AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEA 70-137 TO U.S. NRC, REGION 11, SEPT. 10, 1970, DUCRET 50-324, TYPE--DNR, RPU--JCE, AC--UECL

CAUSE - CLOSING SPRING TOO WEAK. WITH THE REACTOR AT 636 POWER, IT WAS FOUND THAT AN ISOLATION VALVE IN THE SENSING LINE TO THE CONTAINMENT GYGEN RECORDER WOULD NOT CLOSE FULLY. THE 60 POUND CLOSING SPRING IN THE BETTIS PNEUMATIC VALVE ACTUATOR WAS NOT STRONG ENOUGH TO FULLY CLOSE THE VALVE. IT WAS REPLACED WITH ONE OF 100 POUNDS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * CONTAINMENT ISOLATION * SAMPLING * MULTIPLICATION * TEST, SYSTEM OPERABILITY * FAILURE, DESIGN ERROR * CONTAINMENT ATMOSPHERE * BRUNSWICK 2 (DNR) * VALVE OPERATORS * VALVES

117703

CONTAINMENT ISOLATION VALVE FAILS TO OPEN AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LEA 70-139 TO U.S. NRC, REGION 11, SEPT. 13, 1970, DUCRET 50-324, TYPE--DNR, RPU--JCE, AC--UECL

CAUSE - FAULTY PUSH BUTTON SWITCH. DURING A PRIMARY CONTAINMENT ISOLATION TEST WITH THE REACTOR

117702 CONTINUED

AT 738 POWER, A PENETRATION VALVE WAS CYCLED CLOSED BUT HADNOT RE-OPEN. THIS RESETTED THE FLUXION OF A DRYWELL PRESSURE INDICATOR. THE PUSH BUTTON SWITCH (MASTER SPECIALIST) WAS FAULTY. A SPARE SWITCH WHICH WAS ALREADY INSTALLED IN THE PANEL WAS USED AS A REPLACEMENT. DURING THE NEXT MAJOR WITHE THE CLO SWITCH WILL BE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • BRUNSWICK 2 (BOR) • VALVES • SENSORS, PRESSURE

117953

NPIC TURBINE EXHAUST WATER HADDER OCCURS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/ENR 70-140 TC U.S. NRC, REGION II, SEPT. 10, 1970, DUCRET 50-324, TYPE--BOR, NRC--U.S., AE--UELL

CAUSE - DRAIN VALVE AND SWITCH FAIL. WITH THE REACTOR IN COLD SHUTDOWN, AN AUXILIARY OPERATOR FOUND SEVERAL NPIC TURBINE EXHAUST LINE SHUTTERS WERE SHUT. EARLIER, DURING A TRANSIENT RESULTING FROM A REACTOR SCRAM, NPIC HAD AUTO INITIATED ON LOW LEVEL. WHEN IT INITIATED, A SLUG OF WATER WAS PLACED OUT OF THE TURBINE CAUSING EXCESSIVE EXHAUST LINE MOVEMENT IN THE NPIC ROOM, RESULTING IN SHUTTER AND HADDER DAMAGE. THE EXHAUST PIPING HAD NOT DRAINED DUE TO FAILURE OF THE SILENCER DRAIN VALVE AND THE DRAIN LEVEL SWITCH. REPAIRS WERE MADE. THE SWITCH WILL BE ADDED TO THE PREVENTATIVE MAINTENANCE PROGRAM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HYDRAULIC EFFECT • PROCEDURES AND MANUALS • FAILURE, INSTRUMENT • SIGNAL ABANDON • FAILURE, ADMINISTRATIVE CONTROL • DAMAGE • SUPPORT STRUCTURE • TURBINE • BRUNSWICK 2 (BOR) • VALVES • PIPES AND PIPE FITTINGS • SENSORS, LEVEL • NPIC

118277

PRIMARY CONTAINMENT TEMPERATURE RECORDER DRIVES DOWNSCALE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/ENR 70-141 TC U.S. NRC, REGION II, SEPT. 30, 1970, DUCRET 50-324, TYPE--BOR, NRC--U.S., AE--UELL

CAUSE - DIRTY SLIDE WIRE/STICKING RELAY. WHILE OPERATING AT 938 POWER, THE PRIMARY CONTAINMENT TEMPERATURE MONITOR RECORDER WAS FOUND DRIVING DOWNSCALE AND HANGING UP BETWEEN POINTS 14 AND 15. THE RECORDER SLIDE WIRE WAS FOUND TO BE DIRTY AND THE TIMING RELAY CONTACTS STICKING. THE SLIDE WIRE WAS CLEANED AND THE RELAY REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • FAILURE, INSTRUMENT • CRUD • FAILURE, MAINTENANCE ERROR • BRUNSWICK 2 (BOR) • TEMPERATURE • RELAYS • RECORDERS

118278

TURUS WATER LEVEL EXCEEDS LIMIT AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

2 PGS, LTR W/ENR 70-142 TC U.S. NRC, REGION II, OCT. 1, 1970, DUCRET 50-324, TYPE--BOR, NRC--U.S., AE--UELL

CAUSE - AUXILIARY SURGE TANK FULL. FOLLOWING A SCRAM AND A WUP 1 ISOLATION AND WITH THE REACTOR IN S/D MODE AND CUCKING, NPIC AND ACIC WERE INITIATED CAUSING TURUS WATER LEVEL TO EXCEED ITS LIMIT (INITIAL) AT MINUS 24 INCHES. THE TANK WAS NOT PUMPED DOWN TO MAINTAIN LEVEL DUE TO A FULL AUXILIARY SURGE TANK. IN S/D MODES THE REACTOR WAS IN COLD SHUTDOWN. ADMINISTRATIVE CHANGES HAVE BEEN MADE TO ASSURE THAT AUXILIARY SURGE TANK ALWAYS HAS SUFFICIENT RESERVE VOLUME FOR NECESSARY TURUS PUMPING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STORAGE CONTAINER • FAILURE, ADMINISTRATIVE CONTROL • SYSTEM CAPACITY • BRUNSWICK 2 (BOR) • TURUS

118279

POSSIBLE HIGH TEMPERATURE PROBLEM WITH DRYWELL MONITORS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., RALEIGH, NC

4 PGS, LTR W/ENR 70-143 TC U.S. NRC, REGION II, OCT. 6, 1970, DUCRET 50-324, TYPE--BOR, NRC--U.S., AE--UELL

CAUSE - SENSING LINES TOO SHORT. AN ENGINEERING STUDY OF PAST ACCIDENT MONITORING REVEALED A POSSIBLE HIGH TEMPERATURE PROBLEM IN THE H2/O2 DRYWELL MONITORS. THE MONITORS HAVE A PROCESS TEMPERATURE LIMITATION (1120 F IDEALLY). THERE IS A COOLER/DEHUMIDIFIER IN LINE WITH EACH MONITOR WHICH DISCHARGES THE PROCESS GAS AT ABOUT 60 F INTO THE MONITOR. FOLLOWING A LOCA, THE AMBIENT TEMPERATURE AT THE MONITOR IS 130 F. SINCE THE 10 LINES FEEDING THE MONITORS ARE TOO SHORT TO REDUCE THE PROCESS TEMPERATURE TO THE MAXIMUM PERMISSIBLE TEMPERATURE OF 130 F, THESE LINES WILL BE MODIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM

110275 *CONTINUED*
CHARGE \$2.00

ACCIDENT ANALYSIS • CONTAINMENT • ACCIDENT, LOSS OF COOLANT • MODIFICATION • PERMIT • FAILURE, DESIGN ERROR
• CONTAINMENT ATMOSPHERE • COOLING • BRUNSWICK 2 (DNR) • PIPES AND PIPE FITTINGS

120302
SUPPLEMENTAL INFORMATION ON NCIC ISOLATIONS AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
1 PG, LTR W/SUPPL. RPT. TO BUS 75-143, 70-7, 70-10, 70-100 AND 70-130 TO U.S. NRC, REGION II, OCT. 8, 1970.
DOCKET 50-324, TYPE--DNR, MFU--GEC, AE--UELC

CAUSE - BAD ELECTRICAL CONNECTION. FROM NOV. 1975 UNTIL JULY 1976, NUMEROUS NCIC ISOLATION VALVE CLOSURES WERE EXPERIENCED DUE TO SPURIOUS SIGNALS. ON 8/3/76 WHILE CONTINUING TO TROUBLE SHOOT THE ISOLATIONS, A BAD ELECTRICAL CONNECTION WAS FOUND ON VENTILATION SYSTEM AIR INLET THERMOCOUPLE 2851-1E-M021A. THE CONNECTION WAS FIRMLY TIGHTENED. NO NCIC ISOLATIONS HAVE BEEN EXPERIENCED SINCE THIS ACTION WAS TAKEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 2 (DNR) • NCIC • OCCUPANT ISOLATION • CABLES AND CONNECTIONS • THERMOCOUPLE • VENTILATION SYSTEM • FAILURE, INSTALLATION ERROR • SENSORS, TEMPERATURE

119777
CESIUM-137 CONCENTRATION IN MILK SAMPLE EXCEEDS CONTROL LEVEL AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
1 PG, LTR W/ENV. RPT TO U.S. NRC, REGION II, OCT. 8, 1970. DOCKET 50-324, TYPE--DNR, MFU--GEC, AE--UELC

CAUSE - NORMAL SEASONAL CYCLE. THE AUGUST MONTHLY COMPOSITE MILK SAMPLE FROM STATION 35 CONTAINED 109 PICOGRAYS/L OF CS-137. THE CONTROL STATION WAS BELOW MINIMUM DETECTABLE LEVEL. THERE IS AN ANNUAL CS-137 PEAK THAT OCCURS AT THIS MILK STATION IN AUGUST-SEPTEMBER OF EACH YEAR. THIS WAS DETECTED PRIOR TO INITIAL CRITICALITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 2 (DNR) • CONCENTRATION • CESIUM • MILK • FOOD CHAIN • MONITORING PROGRAM, ENVIRONMENTAL • PERIODICITY, SEASONAL

110274
NCIC TURBINE ISOLATES ON HIGH TEMPERATURE DIFFERENTIAL AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
3 PGS, LTR W/LER 70-146 TO U.S. NRC, REGION II, OCT. 11, 1970. DOCKET 50-324, TYPE--DNR, MFU--GEC, AE--UELC

CAUSE - LOOSE THERMOCOUPLE LEAD. WITH THE REACTOR AT 408 POWER, NCIC TURBINE TRIPPED AND ISOLATED ON HIGH TEMPERATURE DIFFERENTIAL. RESET WAS ACCOMPLISHED IN 25 MINUTES AFTER IT WAS DETERMINED THAT NO STEAM LEAK EXISTED. A LEAD FOR A THERMOCOUPLE WAS FOUND TO BE LOOSE IN ITS LUG AT THE TERMINAL STRIP. (THERMOCOUPLE LEADS SHOULD BE DIRECT WIRED WITHOUT THE USE OF CLAMP-ON TERMINAL LUGS TO AVOID DISSIPATING METAL JUNCTIONS.) ALL 4 TC LEADS WERE FOUND TO BE CLAMP LUGGED. LUGS WERE REMOVED AND TERMINALS WERE DIRECT WIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTALLATION ERROR • TURBINE • BRUNSWICK 2 (DNR) • THERMOCOUPLE • CABLES AND CONNECTIONS • NCIC

119324
SET POINT DRIFT IN RMCU TEMPERATURE SWITCH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
3 PGS, LTR W/LER 70-146 TO U.S. NRC, REGION II, OCT. 13, 1970. DOCKET 50-324, TYPE--DNR, MFU--GEC, AE--UELC

CAUSE - ADJUSTMENT KNOB SET HIGH. DURING RMCU HIGH TEMPERATURE TESTING, TEMPERATURE INDICATOR SWITCH 2-031-TIS-M000 WAS FOUND READING ABOVE 150 F. TECH SPEC LIMIT IS 140 F. THE ADJUSTMENT KNOB WAS FOUND SET HIGH. THE INSTRUMENT WAS IMMEDIATELY RESET TO WITHIN PROPER LIMITS AT 135 F. A COVER WAS THEN FABRICATED AND INSTALLED OVER THE KNOB TO PREVENT INADVERTENT MOVEMENT. THE REACTOR WAS AT 458 POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • COOLANT PURIFICATION SYSTEM • SET POINT • BRUNSWICK 2 (DNR) • INSTRUMENT • SENSORS, TEMPERATURE

120303
SUPPLEMENTAL INFORMATION ON INSTRUMENT SET POINT DRIFT AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC

120303 PLGATINUC0
 2 PWS, LTR W/30PPL API. TO NLS 75-140, 76-1, 76-2, 76-8, 76-1, 76-20, 76-34, 76-83, 76-94 AND 76-96 TO W-30
 NAC, NEWARK 11, JLT. 14, 1970, DOLACT 50-324, TYPE--BDR, RFG--W-60, AE--JG4C

CAUSE - ADMINISTRATIVE CONTROL. TWELVE OF 16 INSTRUMENTS MONITORING JAYWELL PRESSURE HAD PRODUCED
 10 REPORTABLE OCCURRENCES DUE TO SET POINT DRIFT OVER A PERIOD OF SEVERAL MONTHS. AN
 INVESTIGATION WAS MADE TO MINIMIZE DRIFTS. THREE ACTIONS WERE TAKEN. 1. SET POINTS WERE REDUCED
 FROM 2 TO 1.5 PSIG. 2. TESTING FREQUENCY WAS INCREASED FROM MONTHLY TO WEEKLY ON AN INTERIM
 BASIS. 3. THE ORIGINAL INSTRUMENTS WERE REPLACED WITH ONES BETTER SUITED TO THE APPLICATION.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

BRUNSWICK 2 (BDR) - INSTRUMENT, SWITCH - SENSORS, PRESSURE - CONTAINMENT - SET POINT - DRIFT - FAILURE,
 ADMINISTRATIVE CONTROL

118702
 JAYWELL ANALYZER HEADS HIGH AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR W/14R 76-145 TO W-30 NAC, REGION 11, OCT. 20, 1970, DOLACT 50-324, TYPE--BDR, RFG--W-60, AE--W-60C

CAUSE - LOGIC AMPLIFIER TUBE. DURING DAILY INSTRUMENT CHECKS WITH THE REACTOR AT 90% POWER, THE
 LOGIC JAYWELL MONITOR WAS READING GREATER THAN 25% AND THE RECORDER IN THE CONTROL ROOM WAS
 PRINTING AT 24%. THE AMPLIFIER TUBE IN THE W-2 ANALYZER WAS NOT PLUGGED INTO ITS SOCKET ALL THE
 WAY, RESULTING IN POOR ELECTRICAL CONNECTION. CONTACTS WERE CLEANED AND THE TUBE REINSERTED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

JAYWELL - FAILURE, INSTRUMENT - OPERATOR - FAILURE, MAINTENANCE ERROR - CONTAINMENT ATMOSPHERE - INSTRUMENT,
 ABNORMAL INDICATION - BRUNSWICK 2 (BDR) - ELECTRICAL FUNCTION UNITS

119325
 CONTAINMENT GAYWELL/HYDROGEN ANALYZER DRIFTS DOWNSCALE AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR W/14R 76-147 TO W-30 NAC, REGION 11, OCT. 23, 1970, DOLACT 50-324, TYPE--BDR, RFG--W-60, AE--W-60C

CAUSE - AIR DRYER MALFUNCTION. WITH THE REACTOR AT 90% POWER, CONTAINMENT GAYWELL/HYDROGEN
 ANALYZER 2-CAL-AR-1450 WAS OBSERVED TO DRIFT DOWNSCALE DUE TO LOW FLOW IN 4 WAYS. LOW FLOW WAS
 CAUSED BY SAMPLE LINE FREEZING DUE TO MANNING AIR DRYER OPERATING AT TOO LOW A FRESH 12
 PRESSURE OF 30 PSIG (32 F) CAUSED BY THE PRESSURE REGULATING VALVE SPRING WEAKENING. THE VALVE
 WAS RESET TO MAINTAIN 33 PSIG (36 F).

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT - FAILURE, EQUIPMENT - HYDROGEN - GAYWELL - CONTROL - DRIFTING, AIR - MONITOR - PRESSURE, INTERNAL
 - FLOW BLOCKAGE - BRUNSWICK 2 (BDR) - FAILURE, IMMINENT - VALVES - PAIR WATER

119326
 ACIC STEAM LINE DRAIN PUT LEVEL SWITCH STICKS AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR W/14R 76-148 TO W-30 NAC, REGION 11, OCT. 23, 1970, DOLACT 50-324, TYPE--BDR, RFG--W-60, AE--W-60C

CAUSE - TEMPERATURE COMPENSATION SET INCORRECTLY. WITH THE REACTOR AT 92% POWER, HIGH LEVEL WAS
 RECEIVED ON ACIC STEAM LINE DRAIN POT WHICH CAUSED THE BYPASS VALVE TO OPEN AND JUMP STEAM TO THE
 REACTOR BUILDUP EQUIPMENT DRAIN TANK. FAILURE OF THE DRAIN POT HIGH LEVEL SWITCH TO RESET ON
 LOW LEVEL WAS CAUSED BY AN INCORRECTLY SET TEMPERATURE COMPENSATION. THIS ALLOWED DISTORTION OF
 THE LEVEL SWITCH ACTUATING ARM DUE TO HEATING FROM THE STEAM AND SEALED IN THE HIGH LEVEL
 CONTACTS. THE COMPENSATION WAS RESET FROM COLD OPERATING CONDITIONS TO HOT OPERATING CONDITIONS.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, INSTRUMENT - INSTRUMENT, SWITCH - FAILURE, MAINTENANCE ERROR - SET POINT - BRUNSWICK 2 (BDR) - EFFECT
 - TEMPERATURE - ACIC - SENSORS, LEVEL

119327
 PRIMARY CONTAINMENT PRESSURE RECORDER FAILS TO ADVANCE PAPER AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PWS, LTR W/14R 76-149 TO W-30 NAC, REGION 11, OCT. 20, 1970, DOLACT 50-324, TYPE--BDR, RFG--W-60, AE--W-60C

CAUSE - CHART DRIVE MOTOR FAILURE. WITH THE REACTOR AT 92% POWER, PRIMARY CONTAINMENT PRESSURE
 RECORDER 2-CAL-PR-1237 WAS DISCOVERED NOT ADVANCING THE CHART PAPER. THE CHART DRIVE MOTOR WAS
 NOT. IT WAS REPLACED AND THE RECORDER RETURNED TO SERVICE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

119327 *CONTINUED*

FAILURE, EQUIPMENT * CONTAINMENT * BRUNSWICK 2 (BOR) * FAILURE, IMMINENT * ORIGIN * SECURITY, PRESSURE * RECORDERS

119328

SET POINT DRIFT IN REACTOR LOW WATER LEVEL SWITCH AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LET 70-150 TC U.S. NRC, REGION II, OCT. 20, 1970, DUCRET 50-324, TYPE--BOR, RFU--UCLL, AC--UCLL

CAUSE - UNKNOWN. WITH THE REACTOR AT 92% POWER AND DURING REACTOR LOW WATER LEVEL TESTING, LEVEL SWITCH B21-LIS-NO170 WAS FOUND TO HAVE A HIGH SET POINT. THE CAUSE IS UNKNOWN. THE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * BRUNSWICK 2 (BOR) * DRIFT * FAILURE, IMMINENT * SECURITY, LEVEL

120004

SUPPLEMENTAL INFORMATION ON CENTRAL ROD DRIVE DRIFT AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LET 70-152 TO U.S. NRC, REGION II, NOV. 2, 1970, DUCRET 50-324, TYPE--BOR, RFU--UCLL, AC--UCLL

CAUSE - UNKNOWN. THIS IS A SUPPLEMENTAL REPORT FOR RU 75-720. THE LRU WAS REMOVED DURING THE LPAR OUTAGE IN SPRING 1970. IT WAS DISASSEMBLED AND EXAMINED. THE FILTERS WERE DIRTY BUT THE DRIVE PARTS THEMSELVES WERE CLEAN AND FREE OF ANY WEAR PRODUCTS WHICH COULD IMPAIR DRIVE FUNCTIONS. ALL OTHER PARTS APPEAR TO FUNCTION AS DESIGNED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 2 (BOR) * DRIFT * CENTRAL ROD DRIVES * EXAMINATION * FILTERS * CAUSE

119524

MPCI STEAM LINE EXHAUST CHECK VALVE DISC FOUND MISSING AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
3 PGS, LTR W/LET 70-152 TO U.S. NRC, REGION II, NOV. 2, 1970, DUCRET 50-324, TYPE--BOR, RFU--UCLL, AC--UCLL

CAUSE - DESIGN DEFICIENCY. DURING LOCAL LEAK RATE TESTING OF WYBELL PENETRATIONS WITH THE REACTOR IN COLD SHUTDOWN, IT WAS DISCOVERED THAT MPCI STEAM LINE EXHAUST CHECK VALVE ENA-PUMP DISC WAS MISSING. THE DISC WAS FOUND LOOSED AT MPCI EXHAUST LINE STOP CHECK VALVE ENL-P221. THE DETAINING STUD ON THE DISC HAD BROKEN OFF. UNIT 1 CHECK VALVE DISC WAS DISCOVERED TO HAVE FAILED IDENTICALLY EXCEPT THE DISC WAS STILL IN PLACE. FAILURE APPEARS TO HAVE BEEN CAUSED BY THE DETAINING NUT BACKING OFF, ALLOWING THE STUD TO CARRY THE DISC WEIGHT. THE VALVE HAS BEEN MODIFIED TO PREVENT REOCCURENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * STEAM * TEST, LEAK RATE * MODIFICATION * TEST, SYSTEM OPERABILITY * FAILURE, DESIGN ERROR * BRUNSWICK 2 (BOR) * VALVE, CHECK * FAILURE, COMMON MODE * MPCI * CONTAINMENT PENETRATION

119525

ISOLATION SIGNAL RECEIVED BY ACIC STEAM SUPPLY VALVE AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LET 70-151 TO U.S. NRC, REGION II, NOV. 2, 1970, DUCRET 50-324, TYPE--BOR, RFU--UCLL, AC--UCLL

CAUSE - UNKNOWN. WITH THE REACTOR OPERATING AT 80% POWER, AN ISOLATION SIGNAL WAS RECEIVED BY ACIC STEAM SUPPLY VALVE B51-P007. THE ISOLATION SIGNAL CLEARED INSTANTANEOUSLY BUT THE VALVE REMAINED CLOSED. THE CAUSE HAS NOT BEEN DETERMINED. THERE WERE NO ASSOCIATED ALARMS OR ABNORMAL CONDITIONS AT THE TIME. TERMINAL AND JUNCTION INTEGRITY ASSOCIATED WITH TERMINAL BOXES, SWITCHES, AND THERMOCOUPLES WERE VERIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM * FAILURE, EQUIPMENT * CONTAINMENT ISOLATION * STEAM * BRUNSWICK 2 (BOR) * FAIL * VALVE

120008

UPDATE REPORT ON MAIN STEAM LINE LOW FLOW INDICATION AT BRUNSWICK 2
CAROLINA POWER & LIGHT CO., RALEIGH, NC
2 PGS, LTR W/LET 70-134 TO U.S. NRC, REGION II, NOV. 2, 1970, DUCRET 50-324, TYPE--BOR, RFU--UCLL, AC--UCLL

CAUSE - MAIN DISC LOOSE. ON 7/30/70, MAIN STEAM LINE LF WAS DISCOVERED TO HAVE A LOW FLOW INDICATION. BOTH ISOLATION VALVES WERE CLOSED. INVESTIGATION REVEALED THAT THE MAIN STEAM LINE DISC WAS LOOSE. IT WAS TIGHTENED AND THE INDICATION CLEARED.

120000 CONTINUOUS

STEAM ISOLATION VALVE 041-FOZZO HAD FAILED CLOSED. DURING THE OUTAGER OUTAGE, THE MAIN DISC WAS FOUND UNSCREWED FROM THE PISTON ASSEMBLY. THE INITIAL ASSEMBLY WAS IMPROPER. AFTER THE DISC IS SCREWED ON THE PISTON ASSEMBLY DURING ASSEMBLY, A HOLE IS DRILLED THROUGH THE MAIN DISC INTO THE PISTON ASSEMBLY AND A PIN IS INSERTED AND PLUG WELDED. THE HOLE HAD NOT BEEN DRILLED DEEP ENOUGH. IT WAS REWELDED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE \$2.00

BRUNSWICK 2 (BWR) * VALVES * CONTAINMENT ISOLATION * MAIN COOLING SYSTEM * FAILURE, EQUIPMENT * FAILURE, FACILITATION ERROR * FLOW * STEAM

120000

SUPPLEMENTAL INFORMATION ON RCIC ISOLATION AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., WALEIGH, NC

2 PWS, LTR N/LEA 70-121 TO U.S. NRC, REGION II, NOV. 11, 1970, Docket 50-324, TYPE--BWR, NRC--GCE, AE--UELL

CASE - PRESSURE TRANSIENT. RCIC ISOLATION OCCURRED WHEN A RELIEF VALVE LIFTED AS REPORTED IN RW 70-121. DIFFERENTIAL PRESSURE TAP FOR THE RCIC STEAM LINE ARE NEAR AND PENETRATION FOR THE SAFETY/RELIEF VALVE THAT LIFTED. WHEN THE VALVE LIFTED AND THE MAIN STEAM LINE PRESSURE DECREASED, THERE WAS A MOMENTARY BACKFLOW OF STEAM FROM THE RCIC TURBINE STEAM ADMISSION LINE. SET POINTS FOR THE RCIC DELTA P SWITCHES WERE EXCEEDED CAUSING THE ISOLATION. THE SET POINTS HAVE BEEN INCREASED TO PREVENT RECURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE \$2.00

BRUNSWICK 2 (BWR) * RCIC * CONTAINMENT ISOLATION * PRESSURE TRANSIENT * SET POINT * INSTRUMENT, SWITCH * SENSORS, PRESSURE * FAILURE, MAINTENANCE ERROR

119770

SPENT FUEL POOL WATER LEVEL INADVERTENTLY LOWERED AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., WALEIGH, NC

5 PWS, LTR N/LEA 70-153 TO U.S. NRC, REGION II, NOV. 12, 1970, Docket 50-324, TYPE--BWR, NRC--GCE, AE--UELL

CASE - L R GR POOL WATER BELLOWS WITH THE REACTOR IN COOLD SHUTDOWN AND STARTUP TRANSFORMER VOLTAGE APS BEING SHIFTED, THE SPENT FUEL POOL WATER LEVEL WAS INADVERTENTLY LOWERED TO 30 FT 4 IN, WHICH IS 5 INCHES BELOW MINIMUM REQUIRED LEVEL. AN AIR LEAK ON THE SPENT FUEL POOL INNER WATER BELLOWS ALLOWED LEAKAGE TO ENTER A DRAIN. THE DRAIN VALVE WAS SHUT AND THE BELLOWS REPRESSURIZED. THE BELLOWS IS TO BE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE \$2.00

BRUNSWICK 2 (BWR) * SYSTEM CAPACITY * SPENT FUEL POOL * LEAK * SEAL * VALVES * MAINTENANCE AND REPAIR * FAILURE, EQUIPMENT * FAILURE, INHERENT

119831

RCIC FLOW INOPERABLE DUE TO SHUT EXHAUST VALVE AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., WALEIGH, NC

3 PWS, LTR N/LEA 70-154 TO U.S. NRC, REGION II, NOV. 24, 1970, Docket 50-324, TYPE--BWR, NRC--GCE, AE--UELL

CASE - OPERATOR ERROR. DURING A REACTOR STARTUP WITH THE UNIT AT 0% POWER, CONDENSATE AND PRESSURE FLUX OSCILLATIONS WERE NOTED DUE TO BOOSTER PUMPS TRIPPING AND RESTARTING ON LOW SECTION PRESSURE. RCIC WAS STARTED TO ALLOW FLOW WATER ISOLATION BUT THE RCIC TURBINE TRIPPED ON HIGH EXHAUST PRESSURE. RCIC TURBINE EXHAUST STOP-CHECK VALVE 251-POW HAD NOT BEEN OPENED DURING VALVE LINEUP AFTER LEAK-RATE TESTING. RCIC WAS THEN STARTED AND VESSEL LEVEL RESTORED. HOWEVER, THE LCU PRESSURE CAUSED A FLUX SPIKE AND REACTOR SCRAM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE \$2.00

BRUNSWICK 2 (BWR) * RCIC * VALVES * FAILURE, OPERATOR ERROR * REACTOR SHUTDOWN

120294

DOWELL CONTAINMENT ATMOSPHERE REACTOR SAMPLE PUMP TRIPS AT BRUNSWICK 2

CAROLINA POWER & LIGHT CO., WALEIGH, NC

3 PWS, LTR N/LEA 70-157 TO U.S. NRC, REGION II, NOV. 30, 1970, Docket 50-324, TYPE--BWR, NRC--GCE, AE--UELL

CASE - MODIFICATION INSTALLATION ERROR. WHILE OPERATING AT 95% POWER, DOWELL CONTAINMENT ATMOSPHERE MONITOR CAL-AR-1203 SAMPLE PUMP WAS OBSERVED TO BE TRIPPED. CAL-AR-1259 EXHIBITED SIMILAR PROBLEMS. DURING THE OUTAGER OUTAGE, 2 LARGE CAPACITY INSTRUMENT DRIVERS WERE INSTALLED ON THESE MONITORS. THE DRAIN PUT INLET SOLENOID VALVES ON EACH UNIT WERE DISCONNECTED TO ALLOW INSTALLATION OF THE NEW UNITS AND WERE NOT RECONNECTED. ALSO, ONE NEW UNIT HAD SOME GAT IN THE TUBING AND REQUIRED TUBING REPLACEMENT. THE SOLENOID VALVES WERE REWIRED AND UNITS RETURNED TO SERVICE.

12029 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CAUSE - (2 (b)(1) + CONTAINMENT + CLIMATE + AIR + CONTAINMENT + AVOIDANCE + EQUIPMENT + FAILURE, EQUIPMENT + FAILURE, INSTALLATION ERROR + MODIFICATION + AIR + UNDESIRABLE

12059
 RECIRCULATION PUMP SEALS FAIL AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 3 PGS, LTR N/SLR 70-150 TC 663, NRC, REGION II, DEC. 7, 1970, DUCREF 50-324, TYPE--BOM, NFO--U.S., AE--U.S.

CAUSE - IMPROPER INSTALLATION. WITH THE REACTOR AT 594 POWER, SEAL STUFFING BOX HIGH ALARM WAS RECEIVED. THIS COINCIDED WITH AN OSCILLATING WATER SEAL CAVITY PRESSURE AND AN INCREASE IN WATER EQUIPMENT DRAIN PUMPAGE INDICATED FAILURE OF RECIRC PUMP 20 SEALS. WATER LEAKAGE WAS 27 GPM. THE PUMP WAS ISOLATED AND LEAKAGE RETURNED TO NORMAL. THE REACTOR SCRAMMED ON HIGH WATER PRESSURE OF 1.05 PSIG WHICH WAS THE MAXIMUM. SEAL FAILURE WAS DUE TO THERMAL STRESS, OCCURRING WHEN THE THERMAL BARRIER SEPARATED FROM THE STUFFING BOX. DURING A SEAL CHANGE OUT IN APRIL 1970, THE LOWER SEAL WAS IMPROPERLY POSITIONED. SEAL REPLACED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 2 (b)(1) + SEAL + PUMPS + MAIN COOLING SYSTEM + FLOW, RECIRCULATION + SCRAM, SEAL + REACTION SHUTDOWN + FAILURE, COMPONENT + FAILURE, MAINTENANCE ERROR + LEAK

12064
 DIESEL GENERATOR FAILS AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 2 PGS, LTR N/SLR 70-150 TC 663, NRC, REGION II, DEC. 8, 1970, DUCREF 50-324, TYPE--BOM, NFO--U.S., AE--U.S.

CAUSE - CONTROL AIR CHECK VALVE STUCK CLOSED. WITH THE REACTOR IN LOW STATION, DIESEL GENERATOR 2 FAILED DURING TESTING ON AIR RECEIVER 2 WHEN CHECK VALVE 2-05A-070 FAILED TO OPEN AND SUPPLY CONTROL AIR PRESSURE. THE CHECK VALVE WAS FOUND TO BE STUCK CLOSED. IT WAS CLEANED AND RETURNED TO SERVICE. A STUDY HAS BEEN INITIATED TO DETERMINE IF THE CHECK VALVES SHOULD BE REPLACED WITH A MORE SUITABLE MATERIAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 2 (b)(1) + GENERATOR, DIESEL + ENGINES, INTERNAL COMBUSTION + TEST, SYSTEM OPERABILITY + FAILURE, EQUIPMENT + VALVE, CHECK + CHARACTER + EMERGENCY POWER, ELECTRIC + FAILURE, INHERENT + PNEUMATIC SYSTEM

12791
 SUPPLEMENTAL INFORMATION LN MPC1 TURBINE WATER HAMMER AT BRUNSWICK 2
 CAROLINA POWER & LIGHT CO., RALEIGH, NC
 1 PG, LTR N/SUPPL. INFO. ON RU-2-70-140 TO J.S. NRC, REGION II, DEC. 15, 1970, DUCREF 50-324, TYPE--BOM, NFO--U.S., AE--U.S.

CAUSE - DESIGN DEFICIENCY. FOLLOWING A SCRAM, DAMAGE WAS FOUND IN THE MPC1 TURBINE EXHAUST AS A RESULT OF A WATER HAMMER AS REPORTED ON 8/10/70. TO PREVENT REOCCURRENCE, A VENT, DRAIN, AND A SECOND SET OF ISOLATION VALVES HAVE BEEN INSTALLED TO THE STEAM LINE MAIN PGTS TO ALLOW SHUT-IN CALIBRATION DURING NORMAL PLANT OPERATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

BRUNSWICK 2 (b)(1) + FAILURE, DESIGN ERROR + MODIFICATION + SENSORS, LEVEL + MPC1 + TURBINE + STEAM + PIPES AND PIPE FITTINGS + HYDRAULIC EFFECT

110970
 HYDROGEN EXPLOSION DEMOLISHED OFF GAS BUILDING AT COOPER
 NEBRASKA POWER PUBLIC UTILITY, BROWNVILLE, NE
 9 PGS, LTR N/50-290-70-1 TO NRC OFFICE OF I & E, REGION IV, JAN. 21, 1970, DUCREF 50-290, TYPE--BOM, NFO--U.S., AE--U.S.

CAUSE - ICE BLOCKAGE IN ELEVATED RELEASE POINT. WHILE THE REACTOR WAS OPERATING AT 826 POWER, A LOW FLOW ALARM FOR THE DISCHARGE OF OFF GAS DILUTION FAN A WAS RECEIVED. FAN B WAS STARTED BUT FLOW DID NOT INCREASE. THE CAUSE COULD NOT BE FOUND. THEN, AN EXPLOSION DEMOLISHED THE METAL OFF GAS BUILDING AND SEVERELY DAMAGED THE DILUTION FAN ROOM. THE REACTOR WAS SCRAMMED. AN ICE PLUG FORMED AT THE TOP OF THE 325 FT ELEVATED RELEASE POINT PIPE REDUCING THE DISCHARGE AREA FROM 153 TO 12.56 IN. THIS CREATED A BACK PRESSURE THAT REDUCED DILUTION FLOW AND ALLOWED OFF GAS AND HYDROGEN TO ESCAPE FROM THE DILUTION FAN. MODIFICATIONS WERE MADE TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NEBRASKA + HYDROGEN + SCRAM, SEAL + STACK + BUILDING + INHERENT + MODIFICATION + FAILURE, DESIGN ERROR + OFF GAS + FLOW BLOCKAGE + DAMAGE + WEATHER, SEVERE + COOPER (b)(1) + REACTION SHUTDOWN

110977

CRACK FOUND IN INSTRUMENT SENSING LINE IN DRYWELL AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

3 PGS, LTR N/RO 50-290-70-3 TO NRC OFFICE OF I & E, REGION IV, JAN. 20, 1970, WCKET 50-290, TYPE--DNR, MFU--G.E., AE--BURNS & ROE

CASE - HEAT AFFECTED ZONE FAILURE. WITH THE REACTOR IN COLD SHUTDOWN, A CRACK WAS FOUND IN A 2 INCH INST. SENSING LINE ON VESSEL PENETRATION N-11A. IT WAS INSIDE THE DRYWELL AND OUTSIDE THE SAFE END WELD IN THE HEAT AFFECTED ZONE. HISTORY SHOWS THIS WELD FAILED RADIOGRAPHICALLY. THE THIRD WELD PASSED INSPECTION. THE PIPE WAS SCH 80 ASTM-A-312 WPT-304 STAINLESS STEEL. THE LINE WAS REPLACED FROM THE FIRST STAINLESS-TO-STAINLESS WELD PAST A 2 X 2 INCH REDUCING COUPLING THIS ELIMINATING THE ENTIRE FAILED LENGTH OF PIPE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE + WELDS + STEEL, STAINLESS + HEAT TREATMENT + COOPER (DNR) + CRACK + PIPES AND PIPE FITTINGS + INSTRUMENTS, MISC.

111007

FOUR IRM CHANNELS FAIL TO MEET TECH SPECS AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR N/RO 50-290-70-3 TO NRC OFFICE OF I & E, REGION IV, JAN. 20, 1970, WCKET 50-290, TYPE--DNR, MFU--G.E., AE--BURNS & ROE

CASE - LOW GAINS. DURING A REACTOR STARTUP ON 11-1-75, 4 INTERMEDIATE RANGE NEUTRON MONITORS WERE FOUND NOT TO MEET THE TECH SPECS LIMIT OF READING 120/125 OF FULL SCALE IN RANGE 20 AT 454 PPM. GAINS OF 2 CHANNELS WERE ADJUSTED TO MEET THE LIMIT. THE OTHER 2 COULD NOT BE ADJUSTED SUFFICIENTLY TO MEET THE LIMIT. DETECTOR SENSITIVITY MAY HAVE DECREASED DUE TO DEPLETION OF THE CONTAINED URANIUM THROUGH NORMAL USE. THE GAIN OF ELECTRONICS HAS DECREASED AS A RESULT OF AGING. THE GAIN OF THE SYSTEM WILL BE INCREASED BY A MODIFICATION WHEN APPROPRIATE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

RADIATION DAMAGE + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + INSTRUMENT, INTERMEDIATE RANGE + COOPER (DNR) + RADIATION EFFECT + EFFECT, AGE

111773

SHROUDER FLUID LEAKED OF FLUID IN RESERVOIR AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

3 PGS, LTR N/RO 50-290-70-2 TO NRC OFFICE OF I & E, REGION IV, JAN. 30, 1970, WCKET 50-290, TYPE--DNR, MFU--G.E., AE--BURNS & ROE

CASE - VIBRATION LOOSENED END CAP. DURING AN INSPECTION OF THE DRYWELL WHILE THE UNIT WAS SHUT DOWN FOR REPAIR OF THE OFF GAS SYSTEM, A FIGURE 200 MODEL GRINNELL SHROUDER INSTALLED IN RMA LOOP WAS OBSERVED TO BE DEVOID OF FLUID IN THE FLUID RESERVOIR. SEEPAGE WAS OBSERVED AT THE END CAP CONNECTION ON THE RESERVOIR. THE CAP PROBABLY VIBRATED LOOSE WHILE THE LOOP WAS USED FOR SHUTDOWN COOLING. THE END CAP RETAINING NUT WAS TIGHTENED, FLUID RESERVOIR REFILLED, AND THE SHROUDER PISTON STROKED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + SHIELD ABSORBER + VIBRATION + SUPPORT STRUCTURE + SHUTDOWN COOLING SYSTEM + SURVEILLANCE PROGRAM + LEAK + COOPER (DNR) + FAILURE, IMMERENT + PIPES AND PIPE FITTINGS

111634

SERVICE WATER SYSTEM PIPE HANGER FAILS AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR N/RO 50-290-70-8 TO NRC OFFICE OF I & E, REGION IV, FEB. 2, 1970, WCKET 50-290, TYPE--DNR, MFU--G.E., AE--BURNS & ROE

CASE - VIBRATION INDUCED FATIGUE. DURING OPERATION OF THE RMA-8 SERVICE WATER SYSTEM WHILE THE REACTOR WAS SHUT DOWN, THE LOWER STRAP ON A GRINNELL FIG. 200 10-INCH PIPE HANGER FAILED AT THE BOLT HOLE. IT WAS REPAIRED BY STRENGTHENING THE LOWER STRAP BY INCREASING IT FROM 1/4 TO 1/2 INCH IN THICKNESS. FAILURE WAS CAUSED BY FATIGUE DUE TO VIBRATION OF THE LINE DURING OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MODIFICATION + FAILURE, FATIGUE + FAILURE, DESIGN ERROR + VIBRATION + SUPPORT STRUCTURE + SHUTDOWN COOLING SYSTEM + COOPER (DNR) + PIPES AND PIPE FITTINGS

111771

CONTROL VALVE ON SHROUDER RESERVOIR BROKEN OFF AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR N/RO 50-290-70-9 TO NRC OFFICE OF I & E, REGION IV, FEB. 2, 1970, WCKET 50-290, TYPE--DNR, MFU--

111771 CONTINUED
 U.S., AE--BLANS & RUE

CAUSE - PROBABLY PHYSICAL DAMAGE. DURING AN INSPECTION WITH THE REACTOR SHUT DOWN, A WINNELL MINORILLIC SHOWER WAS FOUND WITH THE RESERVOIR ENGAGED OFF OF THE CONTAIN VALVE. THE PROBABLE CAUSE WAS PHYSICAL DAMAGE TO THE UNIT FROM AN OUTSIDE SOURCE. REPAIR WAS COMPLETED BY REPLACEMENT OF THE MALLEABLE STREET COLUMN WITH STAINLESS STEEL SHOWER FITTINGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: EQUIPMENT + SMOKER ANSWER + FAILURE, MAINTENANCE ERROR + DAMAGE + SUPPORT STRUCTURE + SURVEILLANCE PROGRAM + COOPER (SMA) + PIPES AND PIPE FITTINGS

111772
 PIPE MANIFOLD FOUND DAMAGED AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PAGES, LTR N/AU 50-290-70-4 TO NRC OFFICE OF I & E, REGION IV, FEB. 20, 1970, JACKET 50-290, TYPE--DM, NRC--
 U.S., AE--BLANS & RUE

CAUSE - EXCESS LOADING. DURING INSPECTION WHILE THE REACTOR WAS OPERATING AT 84% POWER, 3 WINNELL FIG. 200 10-INCH MANIFOLDS AND SEISMIC MANIFOLD WERE FOUND DAMAGED. THE MANIFOLDS FAILED IN THE RIGHT SIDE FOR THE SUPPORT DUE TO FATIGUE. LOADING WAS CLOSE TO MANIFOLD DESIGN. ANY EXCESS LOADING WOULD CAUSE FLEXING AT THE SUPPORT JOINT. ALL WERE ON THE 50 LINE OF HIGH HEAT EXCHANGER A. THE MANIFOLDS AND SEISMIC MANIFOLD WERE REPAIRED BY STRENGTHENING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: EQUIPMENT + STRESS + FAILURE, DESIGN ERROR + DAMAGE + SUPPORT STRUCTURE + SHUTDOWN COOLING SYSTEM + COOPER (SMA) + PIPES AND PIPE FITTINGS

111833
 RCL TURBINE FAILS TO RESPOND TO CONTROL INPUT AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PAGES, LTR N/AU 50-290-70-7 TO NRC OFFICE OF I & E, REGION IV, FEB. 20, 1970, JACKET 50-290, TYPE--DM, NRC--
 U.S., AE--BLANS & RUE

CAUSE - FAILURE OF RESISTORS. DURING TESTING WITH THE REACTOR AT 75% POWER, THE RCL TURBINE WOULD NOT RESPOND TO CONTROL INPUT. PCB ASSEMBLY 5030-70A RESISTORS R-14 AND R-15 FAILED IN THE RAMP GENERATOR-SIGNAL CONVERTER DUE TO HEAT BUILDUP. THE RESISTORS WERE REPLACED AND VENT FAN WAS ADDED TO THE RCL CONTROL BOX.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: EQUIPMENT + CONTROL SYSTEM + SIGNAL STATE DEVICE + TEST, SYSTEM OPERABILITY + FAILURE, DESIGN ERROR + TURBINE + COOPER (SMA) + TEMPERATURE + RCL

112144
 REACTOR RECIRCULATORY PUMP TRIPS AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PAGES, LTR N/AU 50-290-70-9 TO NRC OFFICE OF I & E, REGION IV, FEB. 20, 1970, JACKET 50-290, TYPE--DM, NRC--
 U.S., AE--BLANS & RUE

CAUSE - UNKNOWN. ABOUT 3 MINUTES AFTER A PUMP SPEED DECREASE ADJUSTMENT WAS MADE WITH THE REACTOR OPERATING AT 81% POWER, REACTOR RECIRCULATION PUMP B TRIPPED. PUMP A WAS IMMEDIATELY DECREASED TO LESS THAN 50% SPEED. TRIP RELAYING WAS CHECKED BUT NO CAUSE HAS BEEN ESTABLISHED. NO MALFUNCTION WAS FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: EQUIPMENT + MAIN COOLING SYSTEM + FLOW, RECIRCULATION + COOPER (SMA) + PUMPS

112059
 GAYLEN ANALYZER SPIKE UPWARD AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PAGES, LTR N/AU 50-290-70-10 TO NRC OFFICE OF I & E, REGION IV, MARCH 9, 1970, JACKET 50-290, TYPE--DM, NRC--
 U.S., AE--BLANS & RUE

CAUSE - INCORRECT VALVE LINEUP. WHILE PURGING THE GAYLEN WITH THE REACTOR AT 75% POWER, 1 OF THE 4 GAYLEN ANALYZER POINTS SPIKED FROM 0.56 TO 0.58. THE REMAINING 3 WERE WITHIN LIMITS. THE OPERATOR IMMEDIATELY NOTICED THE REACTOR BUILDING VENTILATION DAMPER WAS OPEN AND CLOSED IT. AN INCORRECT VALVE LINEUP FOR PURGING RESULTED IN A FALSE SAMPLE BEING ANALYZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

112059 • CONTINUOUS
FAILURE, OPERATOR ERROR • CONTAINMENT PLUME • GATHEEN • SAMPLING • MONITOR • CONTAINMENT ATMOSPHERE •
INSTRUMENT, ABNORMAL INDICATION • COOPER (BWR)

112058
REACTOR TRIPS FOLLOWING LOCA REJECTION AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS., LTR W/NO 50-290-70-8 TO NRC OFFICE OF I & E, REGION IV, MARCH 5, 1970, Docket 50-290, TYPE--BWR, NRC--
W.E., AE--BURNS & ROE

CAUSE - LINE FAULT AND FALSE RELAYING. DURING UNUSUAL CONDITIONS OF HIGH WIND, SNOW, AND
LIGHTNING, A HIGH MAGNITUDE, CLOSE IN, PHASE A-TO-B GROUND FAULT WAS DETECTED BY RELAYS OUT OF
THEIR RESPECTIVE ZONES WHICH RESULTED IN COMPLETE LOSS OF 345 KV POWER. THE REACTOR SCRAMMED
FROM 85% POWER. ALL 345 KV CIRCUIT BREAKERS IN THE SWITCHYARD TRIPPED DUE TO THE LINE FAULT IN
COMBINATION WITH FALSE RELAYING ON THE REMAINING INCOMING LINES. CAUSE OF THE FALSE RELAYING IS
UNKNOWN AT THIS TIME. THE 345 KV SYSTEM WAS REENERGIZED AFTER INSPECTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT • ACCIDENT, LOSS OF POWER • SCRAM, REAL • ELECTRICAL POWER • WEATHER, SEVERE • COOPER (BWR)
• REACTOR SHUTDOWN • POWER TRANSMISSION • FAILURE, INHERENT • RELAYS

112060
RMR RELAY FAILS TO OPERATE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS., LTR W/NO 50-290-70-11 TO NRC OFFICE OF I & E, REGION IV, MARCH 10, 1970, Docket 50-290, TYPE--BWR, NRC--
W.E., AE--BURNS & ROE

CAUSE - DIRTY CONTACTS. DURING TESTING WITH THE REACTOR AT 80% POWER, A RMR RELAY FAILED TO
OPERATE FOLLOWING ADJUSTMENT. A GE SNAP ACTION SWITCH TYPE CR1300 FAILED TO MAKE CONTACT TO
SPILT THE MAKE-IN RESISTOR DUE TO DIRTY CONTACTS. THE SWITCH WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 101 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, INSTRUMENT • CIRCUIT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR •
SHUTDOWN COOLING SYSTEM • COOPER (BWR) • RELAYS

112061
REACTOR RECIRCULATION PUMP TRIPS TWICE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS., LTR W/NO 50-290-70-12 TO NRC OFFICE OF I & E, REGION IV, MARCH 10, 1970, Docket 50-290, TYPE--BWR, NRC--
W.E., AE--BURNS & ROE

CAUSE - TEMPERATURE SWITCH TRIPS FROM VIBRATION. DURING A POWER INCREASE, REACTOR RECIRCULATION
PUMP B DRIVE MOTOR TRIPPED TWICE. PUMP A WAS IMMEDIATELY RUN BACK TO LESS THAN 50% FLOW. TRIPS
WERE A RESULT OF VENTILATION AIR TEMPERATURE SWITCH FALSE ACTUATION DUE TO VIBRATION. AT A
CERTAIN LOAD LEVEL, THE MERCIDIO TYPE UA-430 TEMPERATURE SWITCH WAS AT RESONANCE WITH THE MOTOR
GENERATOR SET CAUSING A FALSE TRIP. THE SWITCH WAS TEMPORARILY DISCONNECTED. IT WILL BE
RELOCATED OR REMOVED FROM THE CIRCUIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INSTRUMENT, SWITCH • FAILURE, DESIGN ERROR • VIBRATION • MAIN COOLING SYSTEM • FLOW, RECIRCULATION • COOPER
(BWR) • PUMPS • SENSORS, TEMPERATURE

112062
REACTOR RECIRCULATION PUMP TRIPS ON LOW OIL PRESSURE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS., LTR W/LEN 50-290-70-13 TO NRC OFFICE OF I & E, REGION IV, MARCH 10, 1970, Docket 50-290, TYPE--BWR, NRC--
W.E., AE--BURNS & ROE

CAUSE - PRESSURE CONTROL VALVE MALFUNCTION. DURING OPERATION AT 80% POWER, REACTOR RECIRCULATION
PUMP B TRIPPED ON LOW BEARING OIL PRESSURE. PUMP A WAS DECREASED TO LESS THAN 45% SPEED PRIOR TO
RESTARTING THE LUBE PUMP. PUMP B LUBE OIL PRESSURE CONTROL VALVE WAS OSCILLATING SWINGING OIL
PRESSURE AT THE BEARING. WHEN THE OPERATOR OPENED THE ORIFICE CLEANOUT ON THE AIR SUPPLY, OIL
PRESSURE DROPPED AND THE PUMP TRIPPED. THE PCV WILL BE CLEANED AND ADJUSTED NEXT OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, OPERATOR ERROR • PRESSURE, INTERNAL • MAIN COOLING SYSTEM • PLUMBICATION • FLOW, RECIRCULATION •
COOPER (BWR) • PUMPS

112717

112717 *CONTINUED*
 NRC PUMP MOTOR BEARING FAILS AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/NO 50-290-70-15 TO NRC OFFICE OF I & E, REGION IV, MARCH 24, 1970, JUCLET 50-290, TYPE--DNR, RFU--
 G.E., AE--BURNS & ROE

CAUSE - IMPROPER ALIGNMENT. WITH THE REACTOR OPERATING AT 634 PPM, ROUTINE OIL ANALYSIS ON SHUT-
 DOWN MOTOR BEARINGS CONTAINED METAL PARTICLES. THE MOTOR THRUST BEARING HAD FAILED. FAILURE WAS
 DUE TO IMPROPER AXIAL MOTOR POSITION AND COUPLING ALIGNMENT. LOWE PUMP COUPLING, LOWE PUMP
 BEARING, AND AXIAL THRUST FROM EXCESSIVE PUMP CASE BEAR RING EROSION. THE ALCO CHALLENGE TYPE U
 1000 HP MOTOR BEARINGS WERE REPLACED, MOTOR AND PUMP REALIGNED, AND PUMP COUPLING AND PUMP
 ASSEMBLY REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * SHUTDOWN COOLING SYSTEM * COOPER (DNR) * BEARING *
 BEAR * MOTORS * PUMPS

112734
 SET POINT DRIFT IN PRESSURE SWITCH AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/NO 50-290-70-16 TO NRC OFFICE OF I & E, REGION IV, MARCH 24, 1970, JUCLET 50-290, TYPE--DNR, RFU--
 G.E., AE--BURNS & ROE

CAUSE - INCREASED JMWELL PRESSURE. DURING TESTING WITH THE REACTOR AT 796 PPM, A JMWELL
 PRESSURE PERMISSIVE SWITCH WAS FOUND TO TRIP AT 2.09 PSI, EXCEEDING THE 2.0 PSI LIMIT. THE CAUSE
 OF INSTRUMENT DRIFT IS ATTRIBUTED TO JMWELL PRESSURE BEING INCREASED BY 1.5 PSI, WHICH CAUSED
 THE SWITCH BELLOWS TO TAKE A SET. THE STATIC O RING MODEL 14N-844-N PRESSURE SWITCH WAS
 READJUSTED IMMEDIATELY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT * REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH *
 TEST, SYSTEM OPERABILITY * COOPER (DNR) * SET POINT * DRIFT * SENSORS, PRESSURE

112773
 LOGIC FUSE OPENS AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/NO 70-17 TO NRC OFFICE OF I & E, REGION IV, APRIL 20, 1970, JUCLET 50-290, TYPE--DNR, RFU--
 AE--BURNS & ROE

CAUSE - JUMPER LEADS TERMINATED INCORRECTLY. DURING NRC BREAK DETECTION TIME DELAYING LOGIC
 TESTING WITH THE REACTOR AT 818 PPM, LOGIC FUSE OPENED. INCORRECT TERMINATION OF JUMPER
 LEADS TO A RECORDER PROVIDED A CURRENT PATH THROUGH THE RECORDER AND A SUBSEQUENT CURRENT JUMP
 CAUSED THE FUSE TO OPEN. THE JUMPERS WERE RE-TERMINATED CORRECTLY. THE FUSE WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTROL SYSTEM * INSTRUMENT, PROTECTIVE * FAILURE, INSTRUMENT * TEST, SYSTEM OPERABILITY * FAILURE,
 MAINTENANCE ERROR * SHUTDOWN COOLING SYSTEM * COOPER (DNR)

112781
 EXPLOSION OCCURS IN OFF GAS SYSTEM AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/NO 70-18 TO NRC OFFICE OF I & E, REGION IV, APRIL 29, 1970, JUCLET 50-290, TYPE--DNR, RFU--
 AE--BURNS & ROE

CAUSE - PERSONNEL ERROR. WHILE PREOPERATIONAL TESTING AND WITH THE REACTOR AT 796 PPM, AN
 EXPLOSION OCCURRED IN THE OFF GAS SYSTEM DESTROYING THE FILTER MEDIA. FAILURE OF THE HYDROGEN
 ANALYZERS TO OPERATE PROPERLY AND PERSONNEL NOT BEING COMPLETELY FAMILIAR WITH OFF GAS OPERATION
 PROBABLY RESULTED IN THE EXPLOSION. PROCEDURES ARE BEING REVISITED AND CHANGES MADE TO THE
 ANALYZER INSTALLATION. THE FILTER MEDIA WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EXPLOSION * HYDROGEN * PROCEDURES AND MANUALS * FAILURE, INSTRUMENT * MONITOR * PUMP WAS * FAILURE,
 ADMINISTRATIVE CONTROL * COOPER (DNR)

112782
 HYDRAULIC SHOCK SUPPRESSORS FOUND INOPERABLE AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 3 PGS, LTR W/NO 50-290-70-21 TO NRC OFFICE OF I & E, REGION IV, MAY 27, 1970, JUCLET 50-290, TYPE--DNR, RFU--
 G.E., AE--BURNS & ROE

CAUSE - VIBRATION. DURING A SCHEDULED INSPECTION OF HYDRAULIC SHOCK SUPPRESSORS WHILE THE UNIT

114702 CONTINUED

WAS SHUT DOWN, & FIGURE 200 MELT CHANNEL SUPPRESSION RESERVOIRS INSTALLED ON SAFETY RELATED PIPING WERE DEVOID OF FLUID. THIS WAS DUE TO VIBRATION INDUCED LOOSENING OF MOUNTING BOLTS ON ONE ALLOWING IT TO ROTATE UPSIDE DOWN, LOOSENING OF ATTACHMENTS PUTS IN ANOTHER CAUSING THE TUBING TO LOOSEN, AND CATERGATION OF RESERVOIR SEALS ON 4. MOUNTING BOLTS AND TUBING FITTINGS WERE TIGHTENED. RESERVOIR SEALING SURFACES WERE RESURFACED AND NEW J-RINGS INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT & FASTENER & FAILURE, FABRICATION ERROR & PUNCTURE AND/OR SEAL & VIBRATION & SUPPORT STRUCTURE & SURVEILLANCE PROGRAM & ENGINEERED SAFETY FEATURE & LEAK & LUMPED (HWR) & PIPES AND PIPE FITTINGS

114703

INTERMEDIATE RANGE MONITORS MALFUNCTION AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR W/EA 50-290-70-19 TO NRC OFFICE OF I & E, REGION IV, MAY 20, 1970, Docket 50-290, TYPE--DNR, NRC--W.E., AE--BURNS & ROE

CAUSE - HAZARDION EFFECT. WHILE SHUTTING DOWN, 3 IAN'S COULD NOT BE SET AT 120/125% OF FULL SCALE ON RANGE 10 WITH REACTOR POWER LESS THAN 45%. SENSITIVITY OF THE IAN'S DECREASES WITH EXPOSURE. A TECH SPEC CHANGE HAS BEEN APPROVED DELETING THE RANGE 10 REQUIREMENT. THESE ARE GE TYPE 112C314400 MONITORS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HAZARDION DAMAGE & FAILURE, INSTRUMENT & INSTRUMENT, INTERMEDIATE RANGE & COOPER (HWR) & HAZARDION EFFECT & FAILURE, IMMINENT

115144

ARM VALVE FAILS TO CLOSE AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR W/EA 70-20 TO NRC OFFICE OF I & E, REGION IV, JUNE 9, 1970, Docket 50-290, TYPE--DNR, NRC--W.E., AE--BURNS & ROE

CAUSE - AUXILIARY CONTACT BLOCK BINDING. WHILE PREPARING FOR A TEST WITH THE REACTOR SHUT DOWN, A ARM VALVE WOULD NOT CLOSE USING THE CONTROL SWITCH. A W.E. HAD CAUSALION AUXILIARY CONTACT ATTACHED TO A W.E. NEMA SIZE 1 STARTER FOR A MOTOR ON A MOTOR OPERATED VALVE DEVELOPED INTERNAL PHYSICAL INTERFERENCE DISABLING THE CONTACT FUNCTION TO OPEN AND CLOSE. THE AUXILIARY CONTACT BLOCK WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT & INSTRUMENT, SWITCH & TEST, SYSTEM OPERABILITY & SHUTDOWN COOLING SYSTEM & COOPER (HWR) & FAILURE, IMMINENT & VALVE OPERATORS & VALVES

115143

MAIN STEAM SAFETY VALVE PILOT ASSEMBLY LEAKS AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR W/EA 70-22 TO NRC OFFICE OF I & E, REGION IV, JUNE 10, 1970, Docket 50-290, TYPE--DNR, NRC--W.E., AE--BURNS & ROE

CAUSE - CRACK IN BELLGUS TO BASE BELD. DURING THE INITIAL BENCH TESTING OF A PILOT ASSEMBLY FOR A MAIN STEAM SAFETY RELIEF VALVE WHICH HAD BEEN REMOVED FOR MAINTENANCE, A BELLGUS FAILURE WAS INDICATED. THE TARGET ROCK MODEL OFF SAFETY RELIEF VALVE PILOT ASSEMBLY DEVELOPED A CRACK IN THE BELLGUS TO BASE BELD. IT WAS SENT TO TARGET ROCK FOR REPAIR. AN IDENTICAL ASSEMBLY WAS TESTED AND INSTALLED. THE REACTOR WAS SHUT DOWN AT THIS TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT & BELD & PRESSURE RELIEF & TEST, SYSTEM OPERABILITY & SEAL & MAIN COOLING SYSTEM & PL & COOPER (HWR) & FAILURE, IMMINENT & VALVES

115701

BELLGUS FAILURE INDICATED FOR A SAFETY RELIEF VALVE AT COOPER

NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

2 PGS, LTR W/EA 50-290-70-23 TO NRC OFFICE OF I & E, REGION IV, JUNE 15, 1970, Docket 50-290, TYPE--DNR, NRC--W.E., AE--BURNS & ROE

CAUSE - BREAKDOWN IN ELECTRICAL INSULATION. WHILE OPERATING AT 85% POWER, A SAFETY RELIEF VALVE INDICATED A FAILED BELLGUS. THERE WAS A WARNING IN ONE OF THE BELLGUS PRESSURE SWITCH LEADS. THE CAUSE WAS DUE TO A BREAKDOWN IN INSULATION OF THE CONDUCTORS IN THE PRESSURE SWITCH ON THE CABLES TO THE SWITCH. THE CAUSE HAS NOT YET BEEN DETERMINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

115701 *CONTINUED*
FAILURE, COMPONENT • PRESSURE RELIEF • SEAL • COOPER (burr) • INSULATION • CABLES AND CONNECTIONS • VALVES • SENSORS, PRESSURE

116233
SET POINT DRIFT IN SWITCH AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LEA 50-290-70-24 TO NRC OFFICE OF I & E, NEWTON IV, JULY 6, 1970, UCCRET 50-290, TYPE--BMA, RWU--
G.E., AE--BURNS & ROE

CAUSE - DECREASE IN MAGNET FIELD STRENGTH DURING A TEST WITH THE REACTOR AT 74% POWER, VOL-CLIS 570, SWITCH 1 SET POINT WAS FOUND TO HAVE DRIFTED OUT OF LIMITS. DRIFT WAS DUE TO A SLIGHT DECREASE IN THE STRENGTH OF THE MAGNETIC FIELD. THE POSITION OF THE PERMANENT MAGNET WAS ADJUSTED TO PROVIDE A STRONGER MAGNETIC FIELD FOR OPERATION OF THE SWITCH CONTACTS. THE YAMAY, MODEL 4410C, LEVEL INDICATING SWITCH WAS THEN RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • COOPER (burr) • SET POINT • DRIFT • FAILURE, INSTRUMENT • SENSORS, LEVEL

116509
VALVE CLOSING TIME EXCEEDS LIMIT AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LEA 50-290-70-25 TO NRC OFFICE OF I & E, NEWTON IV, JULY 12, 1970, UCCRET 50-290, TYPE--BMA, RWU--
G.E., AE--BURNS & ROE

CAUSE - NOT STATED. DURING TESTING WITH THE REACTOR AT 73% POWER, CONTAINMENT ISOLATION VALVE PC-230AV WOULD NOT CLOSE IN LESS THAN THE 15 SECOND LIMIT. THE VALVE STEM WAS LUBRICATED AND THE VALVE STROKED SEVERAL TIMES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • RESPONSE TIME • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • LUBRICATION • COOPER (burr) • VALVES

116508
ALIC DIFFERENTIAL PRESSURE SWITCH SET POINT EXCEEDED AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LEA 50-290-70-26 TO NRC OFFICE OF I & E, NEWTON IV, JULY 13, 1970, UCCRET 50-290, TYPE--BMA, RWU--
G.E., AE--BURNS & ROE

CAUSE - AIR IN INSTRUMENT. DURING A TEST WHILE OPERATING AT 63% POWER, A ALIC DIFFERENTIAL PRESSURE SWITCH SET POINT WAS EXCEEDED WHEN RW-13A OPENED, CAUSING A GROUP 5 ISOLATION. AIR WAS FOUND IN THE BARTON MODEL 268A SWITCH. APPARENTLY THIS AIR ENTERED THE INSTRUMENT DURING INSTALLATION IN 1974. CALIBRATION PROCEDURES REQUIRE THE USE OF WATER PUTS TO PRELUDE THE INTRODUCTION OF AIR INTO INSTRUMENTS. AIR WAS PURGED FROM THE INSTRUMENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • AIR • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • INSTRUMENT, ABNORMAL INDICATION • COOPER (burr) • ALIC • SENSORS, PRESSURE

116507
SET POINT DRIFT AND LPCI DIFFERENTIAL PRESSURE SWITCH AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LEA 50-290-70-30 TO NRC OFFICE OF I & E, NEWTON IV, JULY 29, 1970, UCCRET 50-290, TYPE--BMA, RWU--
G.E., AE--BURNS & ROE

CAUSE - EXCESSIVE CYCLING. DURING TESTING WITH THE REACTOR AT 68% POWER, A LPCI DIFFERENTIAL PRESSURE SWITCH FAILED TO TRIP ITS RELAY. THE SET POINT OF THE BARTON, MODEL 268A, U-10 P-10, DIFFERENTIAL PRESSURE INDICATING SWITCH HAD DRIFTED OUT OF LIMITS. DRIFT IS ATTRIBUTED TO EXCESSIVE CYCLING OF THE SWITCH FROM LESS THAN ZERO TO GREATER THAN 20 PSI, DRIVING THE SWITCH INTO ITS STOPS. THIS SWITCH WILL BE REMOVED BY THE LPCI MODIFICATION DURING THE SEPT. 1970 OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • COOPER (burr) • SET POINT • CYCLING • DRIFT • SENSORS, PRESSURE • LPCI

117090
SET POINT DRIFT IN LEVEL SWITCH AT COOPER

117030 CONTINUED
NEBRASKA PUBLIC POWER DISTRICT, OMAHAVILLE, NE
2 PGS. LTR N/ER 70-29 TO NRC OFFICE OF I & E, REGION IV, AUG. 23, 1970, DCKET 50-290, TYPE--BWR, NRU--G.E.,
AE--BURNS & ROE

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 574 POWER, A LEVEL SWITCH IN THE
PERMATEX CONTROL SYSTEM FAILED TO TRIP WITHIN TECH SPEC LIMITS. THE TANKAT, MODEL 4410C, LEVEL
INDICATING SWITCH WAS RECALIBRATED. THE APPARENT CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

REACTOR COOLANT + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + PERMATEX, SWITCH + TEST, SYSTEM
OPERABILITY + COOPER (BWR) + SET POINT + DRIFT + FAILURE, IMMERENT + SENSORS, LEVEL

117032
CONE SPRAY VALVE FAILS TO OPERATE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, OMAHAVILLE, NE
2 PGS. LTR N/ER 70-32 TO NRC OFFICE OF I & E, REGION IV, AUG. 23, 1970, DCKET 50-290, TYPE--BWR, NRU--G.E.,
AE--BURNS & ROE

CAUSE - TRIPPER PIN DISLODGED. DURING TESTING WITH THE REACTOR AT 75% POWER, A CONE SPRAY VALVE
WAS NOT OPERATE. THE TRIPPER PIN OF ITS LIMITSWITCH VALVE OPERATOR (SMO-2) DISLODGED. THIS DID
NOT ALLOW THE MACHINERY TO DISCHARGE WHEN THE MOTOR STARTED CAUSING THE SLIP CLUTCH TO SLIP. THE
PIN WAS HELD IN PLACE. THE SLIP CLUTCH DOWS WERE REFORGEABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONE SPRAY + TEST, SYSTEM OPERABILITY + COOPER (BWR) + FAILURE, IMMERENT + VALVE OPERATIONS + VALVES

117031
REC PUMP MOTOR BECOMES IMPERABLE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, OMAHAVILLE, NE
2 PGS. LTR N/ER 70-32 TO NRC OFFICE OF I & E, REGION IV, AUG. 23, 1970, DCKET 50-290, TYPE--BWR, NRU--G.E.,
AE--BURNS & ROE

CAUSE - BEARING FAILURE. DURING OPERATION AT 74% POWER, REC PUMP MOTOR A STARTED MAKING AN
UNUSUAL NOISE. THE BEARINGS WERE FAILED AND WERE REPLACED. THIS IS A US ELECTRIC, SERIAL NO.
P429070, 75HP, 480 VAC, 3 PHASE, MOTOR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT + EMERGENCY COOLING + COOPER (BWR) + BEARING + FAILURE, IMMERENT + MOTORS + PUMPS

110237
SAFETY RELIEF VALVE ADJUSTED INCORRECTLY AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, OMAHAVILLE, NE
2 PGS. LTR N/ER 70-33 TO NRC OFFICE OF I & E, REGION IV, SEPT. 9, 1970, DCKET 50-290, TYPE--BWR, NRU--G.E.,
AE--BURNS & ROE

CAUSE - PERSONNEL ERROR. DURING A REVIEW OF THE MAINTENANCE HISTORY OF SAFETY RELIEF VALVES, IT
WAS DISCOVERED THAT DURING THE JANUARY 1970 OUTAGE THE SET POINT OF A MAIN STEAM SAFETY RELIEF
VALVE WAS INCORRECTLY SET TO PSI LOW. THE SET POINT WAS READJUSTED DURING THE MAY 1970 OUTAGE.
THE MAINTENANCE PROCEDURE WAS REVISED TO INSURE THE SET POINTS ARE RECHECKED AFTER MAINTENANCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

STEAM + OMPRESSURE RELIEF + FAILURE, MAINTENANCE ERROR + REVIEW + MAIN COOLING SYSTEM + COOPER (BWR) + SET
POINT + VALVES

110235
TURBO LEVEL INDICATOR AND SWITCH INDICATE INCORRECTLY AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, OMAHAVILLE, NE
2 PGS. LTR N/ER 70-33 TO NRC OFFICE OF I & E, REGION IV, SEPT. 13, 1970, DCKET 50-290, TYPE--BWR, NRU--G.E.,
AE--BURNS & ROE

CAUSE - PLUMBING SENSING LINE. DURING 74% POWER OPERATION, A TURBO LEVEL SWITCH AND TURBO LEVEL
TRANSMITTER LEVEL INDICATOR WERE PROVIDING INCORRECT INDICATIONS. THE SENSING LINE WAS FLUSHED
AND THE INSTRUMENTS RETURNED TO SERVICE. FURTHER INVESTIGATION WILL BE PERFORMED DURING THE NEXT
SHUTDOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, INSTRUMENT + CAUD + INSTRUMENT, SWITCH + INSTRUMENT, ABNORMAL INDICATION + COOPER (BWR) + PIPES AND
PIPE FITTINGS + SENSORS, LEVEL + TCGALS

110234

FUEL LINE TO INJECTOR OF DIESEL GENERATOR BURST AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LR 70-34 TO NRC OFFICE OF I & E, REGION IV, SEPT. 23, 1970, JACKET 50-240, TYPE--DM, NF--W-000,
AE--BURNS & ROE

CAUSE - NOT STATED. DURING A TEST WITH THE REACTOR AT 72% POWER, THE FUEL LINE TO AN INJECTOR OF
DIESEL GENERATOR 1 BURST. THE LINE WAS REPLACED AND TESTED. THE OTHER INJECTOR LINES ON BOTH
DIESEL GENERATORS WERE INSPECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, PIPE + TEST, SYSTEM OPERABILITY + COOPER (DM) + FUEL, FUELS + FAILURE, INHERENT + ENGINES,
INTERNAL COMBUSTION + GENERATOR, DIESEL + PIPES AND PIPE FITTINGS

110742

MINIMUM CRITICAL POWER RATIO CALCULATION IN ERROR AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
4 PGS, LTR W/LR 50-290-70-40 TO NRC OFFICE OF I & E, REGION IV, SEPT. 20, 1970, JACKET 50-290, TYPE--DM, NF--
W-000, AE--BURNS & ROE

CAUSE - PROCESS COMPUTER PROGRAMMED INCORRECTLY. WHILE PERFORMING THE INITIAL SETUP OF THE BACKUP
CORE LIMITS EVALUATION (BULLE) SOFTWARE, A DIFFERENCE BETWEEN THE MATH VALUES CALCULATED BY THE
PROCESS COMPUTER AND THE BULLE TIME SHARE WAS DISCOVERED. THE PROCESS COMPUTER WAS INITIALLY
PROGRAMMED INCORRECTLY. THE CALCULATION OF A CORRECTION FACTOR WAS INCORRECT. THE COMPUTER
PROGRAM WAS CORRECTED AND VERIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

COMPUTER PROGRAM + ANALYTICAL MODEL + POWER DISTRIBUTION + HOT CHANNEL ANALYSIS + FAILURE, ADMINISTRATIVE
CONTROL + COOPER (DM)

110811

CONTROL ROOM VENT LOUVER MECHAN FAILS DOWNSCALE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LR 50-290-70-39 TO NRC OFFICE OF I & E, REGION IV, OCT. 1, 1970, JACKET 50-290, TYPE--DM, NF--
W-000, AE--BURNS & ROE

CAUSE - POWER SUPPLY OUT OF ADJUSTMENT. DURING ORR POWER OPERATION, THE CONTROL ROOM VENT POSITION
INDICATOR CHANNEL FAILED DOWNSCALE. THE HIGH VOLTAGE POWER SUPPLY WAS FOUND OUT OF ADJUSTMENT ON
THE NUCLEAR MEASUREMENTS CORP. (MODEL I-RAA-335-1F) AIR MONITORING SYSTEM. THE HIGH VOLTAGE WAS
ADJUSTED AND THE UNIT WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INDICATOR + VENTILATION SYSTEM + ELECTRICAL POWER + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + CONTROL
PANEL/ROOM + COOPER (DM) + FAILURE, INHERENT + ELECTRONIC FUNCTION UNITS + PROVISIONS QUANTITIES

110741

CLUTCH SPRAY VALVE FAILS TO OPERATE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 PGS, LTR W/LR 50-290-70-37 TO NRC OFFICE OF I & E, REGION IV, OCT. 4, 1970, JACKET 50-290, TYPE--DM, NF--
W-000, AE--BURNS & ROE

CAUSE - CLUTCH FAILURE. DURING ORR POWER OPERATION, CLUTCH SPRAY VALVE FAILED TO OPEN WHILE
PERFORMING A TEST. THE LIMITING VALVE OPERATING MODEL 580-2 FAILED TO OPEN THE VALVE BECAUSE
THE REPAIRED CLUTCH AND ASSOCIATED COMPONENTS FAILED. THIS KEPT THE MOTOR FROM EXHAUSTING THE
CRUISE MECHANISM. THE OPERATOR WAS REQUIET AND TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CLUTCH SPRAY + FAILURE, EQUIPMENT + TEST, SYSTEM OPERABILITY + COOPER (DM) + VALVE OPERATION + VALVES

110995

BGS DIFFERENTIAL PRESSURE SWITCH FOUND INOPERABLE AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
4 PGS, LTR W/LR 70-30 TO NRC OFFICE OF I & E, REGION IV, OCT. 6, 1970, JACKET 50-290, TYPE--DM, NF--W-000,
AE--BURNS & ROE

CAUSE - EQUALIZING VALVE LEFT OPEN. DURING ORR POWER OPERATION, BGS-015 129A WAS FOUND
INOPERATIVE DUE TO A VALVING ERROR WHICH LEFT THE EQUALIZING VALVE OPEN. THE EQUALIZING VALVE OF
THE BARTON DIFFERENTIAL PRESSURE INDICATING SWITCH (MODEL 200A, ORR PS1) WAS PREVIOUSLY LEFT OPEN
AFTER THE LAST TEST. IT WAS CLOSED.

110995 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + COOPER (BWR) + EMERGENCY COOLING SYSTEM + VALVES + SENSORS, PRESSURE

116772
 STANDBY LIQUID CONTROL INJECTION FOUND INOPERABLE AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 3 PGS, LTR W/LEA 70-41 TO NRC OFFICE OF I & E, REGION IV, OCT. 22, 1970, Docket 50-290, TYPE--BWR, REF--0000, AE--BURNS & ROE

CAUSE - WIRING ERROR. DURING SURVEILLANCE TESTING WHILE SHUT DOWN FOR REFUELING STANDBY LIQUID CONTROL SYSTEM A INJECTION WAS FOUND INOPERATIVE. FUSES FOR THE CONTROL TRANSFORMER WERE SIZED IMPROPERLY. ALSO, INJECTION VALVE A WAS INOPERABLE DUE TO A WIRING ERROR CAUSED BY IMPROPER CONNECTOR COLOR CODING. THE FUSES WERE SIZED IMPROPERLY DUE TO SMALL RATING OF CONTROL TRANSFORMER. THE VALVE WIRING ERROR WAS CORRECTED AND A LARGER TRANSFORMER INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (BWR) + SHUTDOWN SYSTEM, SECONDARY + VALVES + INSTRUMENT, PROTECTIVE + TEST, SYSTEM OPERABILITY + FAILURE, INSTALLATION ERROR + CABLES AND CONNECTORS + REFUELING

119773
 SURFACE CRACKS FOUND IN MAIN STEAM LINE PIPING AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 3 PGS, LTR W/LEA 70-42 TO NRC OFFICE OF I & E, REGION IV, OCT. 22, 1970, Docket 50-290, TYPE--BWR, REF--0000, AE--BURNS & ROE

CAUSE - MANUFACTURING DEFECT. DURING INSERVICE INSPECTION WHILE THE UNIT WAS SHUT DOWN FOR REFUELING, SURFACE CRACKS WERE DISCOVERED ON MAIN STEAM LINE C. ABOUT PIPE SUPPLY CO. SUPPLIED PIPE SECTION PS-M-04, WHICH HOUSES THE FLUX ELEMENT, EXPERIENCED SURFACE CRACKS DUE TO MANUFACTURING DEFECTS. THE CRACKS WERE REMOVED BY GRINDING. MAXIAL DEPTHS OF THE 3 CIRCUMFERENTIAL INDICATIONS WERE .004, .005, AND .172 INCH AND .244 INCH FOR THE AXIAL INDICATION. MINIMUM REQUIRED WALL THICKNESS FOR THE 24 INCH OD SCHEDULE 80, A-100-WHARDENED CARBON STEEL PIPE WAS NOT VIOLATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (BWR) + PIPES AND PIPE FITTINGS + OPLAN + SURFACE + FAILURE, FABRICATION ERROR + MAIN COOLING SYSTEM + INSERVICE INSPECTION + REFUELING + ULTRASOUND + TEST, NONDESTRUCTIVE

120451
 TWO PIN HOLE LEAKS FOUND IN THE REACTOR VESSEL DRAIN LINE AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 3 PGS, LTR W/LEA 70-44 TO NRC OFFICE OF I & E, REGION IV, NOV. 13, 1970, Docket 50-290, TYPE--BWR, REF--0000, AE--BURNS & ROE

CAUSE - IMPROPER WELDING. DURING THE REFUELING OUTAGE REACTOR VESSEL HYDRASTATIC TEST, 2 PIN HOLE LEAKS WERE FOUND IN THE RD DRAIN LINE. THE LEAKS WERE IN A CARBON STEEL SOCKET WELD TO A TEE FITTING. THE WELDER FAILED TO TIE TOGETHER THE WELD COVER BEAD PROPERLY WHEN MAKING THE ORIGINAL WELD. AFTER THE DEFECTS HAD BEEN REMOVED, THE CAVITY WAS WELD REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (BWR) + OPLAN + PIPES AND PIPE FITTINGS + PRESSURE VESSELS + MAIN COOLING SYSTEM + FAILURE, PIPE + LEAK + TEST, SYSTEM OPERABILITY + REFUELING + FAILURE, INSTALLATION ERROR + INSERVICE INSPECTION

119799
 HYDRAULIC SHOCK SUPPRESSORS FOUND DEVOID OF FLUID AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 3 PGS, LTR W/LEA 70-43 TO NRC OFFICE OF I & E, REGION IV, NOV. 13, 1970, Docket 50-290, TYPE--BWR, REF--0000, AE--BURNS & ROE

CAUSE - RESERVOIR END CAP LEAKS. DURING A REFUELING OUTAGE INSPECTION OF HYDRAULIC SHOCK SUPPRESSORS, 10 SAFETY RELATED PIV. 200 AND 201 MODEL GRIMMELL SHOCKERS WERE OBSERVED TO BE DEVOID OF FLUID IN THE FLUID RESERVOIR. VIBRATION CAUSED LOOSENING OF MOUNTING BOLTS, TEE FITTINGS, AND RESERVOIR SEAL DETACHMENT. NINE WERE REPLACED WITH MECHANICAL SHOCK SUPPRESSORS. ONE WAS REPAIRED AND REFILLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (BWR) + OPLAN + SHOCK ABSORBER + SUPPORT STRUCTURE + PIPES AND PIPE FITTINGS + SURVEILLANCE PROGRAM + FAILURE, EQUIPMENT + VIBRATION + LEAK + SEAL + REFUELING + FAILURE, INHERENT + MODIFICATION

120006
DISBURSEMENT MADE WITHOUT CONTINUOUS EFFLUENT MONITORING AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 Pgs; LTR W/EN 70-40 TO NRC OFFICE OF I & E, REGION IV, NOV. 10, 1970, JACKET 50-290, TYPE--BWR, NRU--WUE.,
AE--BURNS & ROE

CAUSE - FAILURE TO FOLLOW PROCEDURES. WHILE THE REACTOR WAS SHUT DOWN, A DISBURSEMENT OF THE FLUX
CHAIN SAMPLE TANK WAS MADE WITHOUT ADEQUATE EFFLUENT MONITORING. THE OPERATOR HAD FAILED TO
SECURE THE FLUX OF THE LIQUID FLOWMETER EFFLUENT MONITOR PRIOR TO DISBURSEMENT OF THE FLUX CHAIN
SAMPLE TANK. THE OPERATOR WAS GIVEN A WRITTEN REPRIMAND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

COOPER (ENR) - OPERATING MONITORS - EFFLUENT - WASTE DISPOSAL - WASTE DISPOSAL, LIQUID - FAILURE, OPERATOR
ERROR - PROCEDURES AND MANUALS

120292
RHE VALVE FAILS TO OPEN AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 Pgs; LTR W/EN 50-290-70-31 TO NRC OFFICE OF I & E, REGION IV, NOV. 29, 1970, JACKET 50-290, TYPE--BWR, NRU--
WUE., AE--BURNS & ROE

CAUSE - BURNED RELAY COIL KEEPER. DURING PREOPERATIONAL TESTS WHILE IN COLD SHUTDOWN, RHE VALVE
(501 RV) VALVE FAILED TO OPEN. A BURNED RELAY COIL KEEPER HAD COME IN CONTACT WITH BURNING RELAY
ARM MOVEMENT. THE BURNED COIL KEEPER WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

COOPER (ENR) - VALVES - SHUTDOWN COOLING SYSTEM - FAILURE, COMPONENT - TEST, SYSTEM OPERABILITY - FAILURE,
INSTRUMENT - RELAYS

120201
BREAKER FAILS TO CLOSE AFTER DIESEL GENERATION STARTS AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 Pgs; LTR W/EN 70-47 TO NRC OFFICE OF I & E, REGION IV, NOV. 29, 1970, JACKET 50-290, TYPE--BWR, NRU--WUE.,
AE--BURNS & ROE

CAUSE - BLOWN FUSE. WHILE TESTING DURING COLD SHUTDOWN, BREAKER COIL FAILED TO CLOSE AFTER DIESEL
GENERATOR 1 HAD STARTED AND REACHED NORMAL SPEED AND VOLTAGE. THE FUSE IN THE CIRCUIT FOR RELAY
55 WAS BLOWN DUE TO DISCONNECTING ONLY ONE WIRE WHILE TESTING THE RELAY 2 DAYS EARLIER. THIS
PREVENTED THE BREAKER FROM CLOSING. THE FUSE WAS REPLACED AND TEST PROCEDURE REVISED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

COOPER (ENR) - BREAKER - GENERATOR, DIESEL - EMERGENCY POWER, ELECTRIC - TEST, SYSTEM OPERABILITY - FAILURE,
EQUIPMENT - INSTRUMENT, PROTECTIVE - FAILURE, ADMINISTRATIVE CONTROL - TESTING - PROCEDURES AND MANUALS

120711
DIESEL GENERATOR LOSES ELECTRIC COVERAGE CONTROL AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 Pgs; LTR W/EN 70-45 TO NRC OFFICE OF I & E, REGION IV, NOV. 29, 1970, JACKET 50-290, TYPE--BWR, NRU--WUE.,
AE--BURNS & ROE

CAUSE - FUSE CONTACT SURFACES WELDING. DURING COLD SHUTDOWN WHILE PERFORMING SURVEILLANCE,
DIESEL GENERATOR 2 LOST ELECTRIC COVERAGE CONTROL AND GENERATOR VOLTAGE. THE POTENTIAL
TRANSFORMER FUSE CONTACT SURFACES BECAME WELDING, RESTRICTING CURRENT FLOW, CAUSING LOSS OF
CONTROL POWER. THE CONTACT SURFACES WERE BURNISHED AND CLEANED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

COOPER (ENR) - GENERATOR, DIESEL - ENGINES, INTERNAL COMBUSTION - CONTROL SYSTEM - INSTRUMENT, PROTECTIVE -
FAILURE, MAINTENANCE ERROR - FAILURE, EQUIPMENT - EMERGENCY POWER, ELECTRIC - TEST, SYSTEM OPERABILITY

120702
FALSE OPERATION OF LEVEL SWITCH TRIPS RECLIN PUMP AT COOPER
NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
2 Pgs; LTR W/EN 70-40 TO NRC OFFICE OF I & E, REGION IV, DEC. 7, 1970, JACKET 50-290, TYPE--BWR, NRU--WUE.,
AE--BURNS & ROE

CAUSE - MOISTURE IN SWITCH. DURING TESTING AFTER REFILLING WITH THE REACTOR AT 66 POWER, REACTOR
RECLINATION PUMP - TRIPPED DUE TO FALSE OPERATION OF LEVEL SWITCH NO-113-570. MOISTURE HAD
GOTTEN INTO THE THERMISTOR MODEL 4010C SWITCH FROM A LEAKING VALVE PACKING NOT LOCATED ABOVE THE
SWITCH. THE VALVE PACKING WAS TIGHTENED AND THE SWITCH REPAIRED.

120282 *CONTINUED*
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (804) * INSTRUMENT, SWITCH * SENSORS, LEVEL * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * WATCH * LEAK * FAILURE, INHERENT * PUMPS * MAIN COOLING SYSTEM

120343
 PRESSURE SWITCH TRIPS DUE TO LOW PRESSURE AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/LEA 90-290-70-49 TO NRC OFFICE OF I & E, REGION IV, DEC. 7, 1970, JACKET 50-290, TYPE--BOM, NPU--G.E., AE--BURNS & ROE

CAUSE - ISOLATION VALVES LEFT CLOSED. DURING A STARTUP WITH THE REACTOR AT 306 POWER, PRESSURE SWITCH TGF-03/0P6-4 TRIPPED DUE TO LOW PRESSURE CAUSING APS CHANNEL 8 TRIP. POSSIBLY DURING THE LAST TEST, THE UNITED ELECTRIC TYPE J302 PRESSURE SWITCH WAS LEFT WITH ISOLATION VALVES CLOSED. THE VALVES WERE OPENED. PERSONNEL WERE GIVEN WRITTEN REPAIRMAN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (804) * INSTRUMENT, SWITCH * SENSORS, PRESSURE * REACTOR PROTECTION SYSTEM * FAILURE, MULTITERMINAL ERROR * CONTAINMENT ISOLATION * VALVES

120246
 OIL RESERVOIR BARKEN OFF SHOCK SUPPRESSOR AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/LEA 90-290-70-52 TO NRC OFFICE OF I & E, REGION IV, DEC. 8, 1970, JACKET 50-290, TYPE--BOM, NPU--G.E., AE--BURNS & ROE

CAUSE - MISSING HOLDING CLAMP. DURING BIG POWER OPERATION, SHOCK SUPPRESSOR RM-534 WAS PULSED WITH THE OIL RESERVOIR BARKEN OFF AND LAYING ON THE FLOOR. THE RESERVOIR CLAMP WAS MISSING ALLOWING THE RESERVOIR ON WAINWELL TUBE GR-200 SHOCK SUPPRESSOR TO BE BUMPED OUT OF ITS SUPPORT. THE SUPPRESSOR WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (804) * SHOCK ABSORBER * SUPPORT STRUCTURE * PIPES AND PIPE FITTINGS * FAILURE, EQUIPMENT * OF-FLINE, INSTALLATION ERROR * FASTENER * SHUTDOWN COOLING SYSTEM

120244
 CONTAINMENT ISOLATION VALVE FAILS TO CLOSE AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/LEA 90-290-70-50 TO NRC OFFICE OF I & E, REGION IV, DEC. 9, 1970, JACKET 50-290, TYPE--BOM, NPU--G.E., AE--BURNS & ROE

CAUSE - OPERATOR RELATED. DURING TESTING WITH THE REACTOR AT 046 POWER, PL-238 AV FAILED TO CLOSE FULLY ON THE FIRST ATTEMPT. THE CAUSE IS BELIEVED TO BE OPERATOR RELATED. THIS EVENT IS REPETITIVE. THE DETTIS MODEL 744A-154 OPERATOR WILL BE REPLACED WITH DETTIS MODEL T-420-342 AND THE VALVE OPERATOR WILL BE RE-EVALUATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (804) * VALVES * CONTAINMENT ISOLATION * TEST, SYSTEM OPERABILITY * FAILURE, EQUIPMENT * VALVE OPERATORS * FAILURE, DESIGN ERROR

120247
 BEARING WATER LINE TO SERVICE WATER PUMP BROKEN AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 2 PGS, LTR W/LEA 90-290-70-57 TO NRC OFFICE OF I & E, REGION IV, DEC. 9, 1970, JACKET 50-290, TYPE--BOM, NPU--G.E., AE--BURNS & ROE

CAUSE - MECHANIC BUMPED LINE. WHILE PERFORMING MAINTENANCE ON SERVICE WATER PUMP A WITH THE REACTOR AT 044 POWER, THE MECHANIC BUMPED THE BEARING WATER LINE TO SERVICE WATER PUMP C AND BROKE IT. THE NIPPLE WAS WEARED BY INTERNAL CORROSION. THE BROKEN NIPPLE WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (804) * PIPES AND PIPE FITTINGS * PUMPS * BEARING * COOLING * SERVICE WATER SYSTEM * FAILURE, PIPE * CORROSION * FAILURE, MAINTENANCE ERROR

120700
 DOWNSTREAM TEMPERATURE MONITOR FAILS AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE

120700 CONTINUED
 4 PWS, LTR N/EA 70-55 TO NRC OFFICE OF I & E, REGION IV, DEC. 20, 1970, WJNET 50-290, TYPE--BHM, RFW--WGL,
 AE--BURKS & AGE

CAUSE - DAMAGED BY ICE FLUX. DURING 90% POWER OPERATION, THE 7500 FEET DOWNSTREAM TEMPERATURE
 MONITOR FAILED. IT WAS DAMAGED BY ICE FLUX ON THE RIVER. IT WILL BE REPAIRED WHEN RIVER
 CONDITIONS PERMIT IN SPRING 1977 IF IT IS STILL REQUIRED BY TECH SPECS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

COOPER (BHM) * SENSORS, TEMPERATURE * DRIVER * DAMAGE * MEASUREMENT, SEVERAL * FAILURE, INSTRUMENT * FAILURE,
 INHERENT * MONITORING PROGRAM, ENVIRONMENTAL * MONITOR * TEMPERATURE

120700
 SET POINT UNIT IN PRESSURE SWITCH AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 4 PWS, LTR N/EA 70-55 TO NRC OFFICE OF I & E, REGION IV, DEC. 17, 1970, WJNET 50-290, TYPE--BHM, RFW--WGL,
 AE--BURKS & AGE

CAUSE - BELLUMS PRESSURE SET. DURING TESTING WITH THE REACTOR AT 57% POWER, AUS LOWWELL PRESSURE
 PERMISSIVE SWITCH PC-PS-100A WAS FOUND WITH A TRIP POINT LESS CONSERVATIVE THAN TECH SPECS. THE
 CAUSE IS ATTRIBUTED TO A BELLUMS PRESSURE SET DUE TO AN EXTREMELY LOWAGE. THE STATIC W-RING MODEL
 120-004-N PRESSURE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

COOPER (BHM) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * INSTRUMENT, INTERLOCK * SENSORS, PRESSURE *
 TEST, SYSTEM OPERABILITY * SET POINT * PURITY * FAILURE, INSTRUMENT * FAILURE, INHERENT * ENGINEERED SAFETY
 FEATURE

120705
 SET POINT UNIT IN PRESSURE INTERLOCK SWITCH AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 4 PWS, LTR N/EA 70-55 TO NRC OFFICE OF I & E, REGION IV, DEC. 17, 1970, WJNET 50-290, TYPE--BHM, RFW--WGL,
 AE--BURKS & AGE

CAUSE - BELLUMS PRESSURE SET. DURING TESTING WITH THE REACTOR AT 57% POWER, LPCI DAYWELL PRESSURE
 INTERLOCK PC-PS-100A WAS FOUND WITH A TRIP POINT LESS CONSERVATIVE THAN TECH SPECS. THE CAUSE IS
 ATTRIBUTED TO A BELLUMS PRESSURE SET DUE TO AN EXTREMELY LOWAGE. THE STATIC W-RING MODEL 120-004-
 N PRESSURE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

COOPER (BHM) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * INSTRUMENT, INTERLOCK * SENSORS, PRESSURE *
 TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * SET POINT * PURITY * ENGINEERED SAFETY FEATURE

120710
 SET POINT UNIT IN TIME DELAY RELAYS AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 4 PWS, LTR N/EA 70-55 TO NRC OFFICE OF I & E, REGION IV, DEC. 20, 1970, WJNET 50-290, TYPE--BHM, RFW--WGL,
 AE--BURKS & AGE

CAUSE - INSTRUMENT UNIT. DURING TESTING WITH THE REACTOR AT 80% POWER, AUS TIME DELAY RELAYS MS-
 TUN-25A & 50 WERE FOUND WITH A TRIP POINT LESS CONSERVATIVE THAN TECH SPECS. THE CAUSE IS
 ATTRIBUTED TO INSTRUMENT UNIT. THE WE MODEL C42020 TIME DELAY RELAYS WERE ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

COOPER (BHM) * INSTRUMENT CALIBRATION * PRELAYS * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * EMERGENCY
 COOLING SYSTEM * SET POINT * PURITY * FAILURE, INHERENT * PRESSURE RELIEF

120717
 480V VOLT BREAKER FAILS TO CLOSE AUTOMATICALLY AT COOPER
 NEBRASKA PUBLIC POWER DISTRICT, BROWNVILLE, NE
 4 PWS, LTR N/EA 70-55 TO NRC OFFICE OF I & E, REGION IV, DEC. 20, 1970, WJNET 50-290, TYPE--BHM, RFW--WGL,
 AE--BURKS & AGE

CAUSE - RELAY FAILED TO MAKE GOOD CONNECTION. WHILE OPERATING AT 70% POWER, THE 480V VOLT BREAKER
 IFC FAILED TO CLOSE AUTOMATICALLY AFTER THE 69KV LINE WAS TAKEN OUT OF SERVICE. WE TYPE
 120P451A42F RELAY 27121 CONTACT 7-30 FAILED TO MAKE GOOD ELECTRICAL CONNECTION WHEN ENERGIZED.
 THE CONTACT WAS BURNISHED AND THE CONTACT ARM ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

120707 *CONTINUED*
 COOPER (BWR) * OVERHEAT * FAILURE, EQUIPMENT * DELAYS * ELECTRIC POWER * FAILURE, MAINTENANCE ERROR

120705
 SET POINT DRIFT IN AUS TIME DELAY RELAY AT COOPER
 MEMPHAS PUBLIC POWER DISTRICT, CLARKVILLE, ME
 2 PGS, LTR W/RO 70-59 TO NRC OFFICE OF I & E, REGION 1, DEC. 29, 1970, WJAEI 50-246, TYPE--BWR, NPO--G.E.,
 AE--BWR & ROE

CAUSE - INSTRUMENT DRIFT. DURING ROUTINE TESTING WITH THE REACTOR AT 93% POWER, AUS TIME DELAY RELAY RS-TOR-A36 WAS FOUND WITH A TRIP POINT LESS CONSERVATIVE THAN TECH SPECS. THE CAUSE WAS INSTRUMENT DRIFT. THE WE MODEL CR2020 TIME DELAY RELAY WAS ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COOPER (BWR) * DELAYS * INSTRUMENT CALIBRATION * ENGINEERED SAFETY FEATURE * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * SET POINT * DRIFT * FAILURE, INSTRUMENT

109054
 MOLDUP TANK APPARENTLY OVERFILLED AT DRESDEN 1
 COMMONWEALTH EDISON CO., CHICAGO, ILLINOIS
 3 PAGES, LETTER W/RO 50-010/1975-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JANUARY 6, 1970, WJAEI 50-10, TYPE--BWR, NPO--G.E., AE--BECHTEL

CAUSE - UNKNOWN. DURING THE REFUELING OUTAGE WHILE WATER WAS BEING TRANSFERRED TO MOLDUP TANK B, THE OPERATOR NOTICED THAT THE LEVEL INDICATOR HAD STOPPED AT THE 83% LEVEL. THE INPUT WAS STOPPED. A HOT AREA WAS FOUND AT THE BASE OF THE TANK AND MOUND OF WATER WERE OBSERVED ON THE RIM OF THE TANK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 1 (BWR) * FAILURE, INSTRUMENT * REFUELING * STORAGE CONTAINER * RADIOACTIVITY RELEASE * SYSTEM CAPACITY * SENSORS, LEVEL

109057
 ADDITIONAL INFORMATION ON CONTAINMENT EXHAUST VALVE LEAKAGE AT DRESDEN 1
 COMMONWEALTH EDISON CO., CHICAGO, ILLINOIS
 2 PAGES, LETTER WITH RO 50-10/75-14 TO NRC DIVISION OF REACTOR LICENSING, JANUARY 14, 1970, WJAEI 50-10, TYPE--BWR, NPO--G.E., AE--BECHTEL

CAUSE - ABRASION. PROVIDES DATA REQUESTED BY NRC. THE ABRASIVE MATERIAL IS NORMAL AIRBORNE DUST PARTICLES. PARTICLE VELOCITY THROUGH THE VALVE IS EXTREMELY HIGH SINCE THE AIR DUCT DIAMETER REDUCES FROM 4 TO 0 FEET TO 30-INCH AT THE VALVE. NO OTHER LOCATION HAS HIGH VELOCITIES THAT COULD RESULT IN DAMAGE. THE SEATS WERE IN SERVICE FOR 23 MONTHS. SEATS FOR THE NEW VALVES ARE A TEPLOM-TYPE MATERIAL WITH A RADIATION DAMAGE THRESHOLD OF 5 TIMES 1015TH RAD.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 1 (BWR) * CONTAINMENT PURGE * CONTAINMENT ISOLATION * MODIFICATION * EXHAUST * FLUX, HIGH SPEED * LEAK RATE * RADIATION EFFECT * VALVES

110934
 MOLD-UP TANK OVERFILLED A SECOND TIME AT DRESDEN 1
 COMMONWEALTH EDISON CO., MORRIS, IL
 3 PGS, LTR W/RO 50-10/70-1 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 29, 1970, WJAEI 50-10, TYPE--BWR, NPO--G.E., AE--BECHTEL

CAUSE - LOOSE ZERO SETSCREW IN INSTRUMENT. WHILE THE WASTE COLLECTION WAS BEING PROCESSED TO MOLD-UP TANK B WITH THE REACTOR IN REFUELING MODE, LEVEL INSTRUMENT WAS READ 99% WHEN 50-100 GALLONS OF WATER OVERFLOWED FOR THE SECOND TIME. AFTER THE FIRST SPILL (REPORTED EARLIER), A NEW TRANSMITTER WAS INSTALLED IN TANK C SO THAT EACH TANK HAD A SEPARATE TRANSMITTER. FOLLOWING THE SECOND SPILL, A LOOSE ZERO SETSCREW WAS FOUND IN THE TRANSMITTER. IT WAS TIGHTENED AND THE INSTRUMENT CALIBRATED. THE LOOSE SCREW HAD CAUSED BOTH SPILLS. CALIBRATION PROCEDURES WERE MODIFIED TO INCLUDE CHECKING THE SETSCREW FOR TIGHTNESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 1 (BWR) * REACTOR CULLANT * REFUELING * STORAGE CONTAINER * RADIOACTIVITY RELEASE * FAILURE, MAINTENANCE ERROR * SET POINT * DRIFT * SENSORS, LEVEL

110935
 DEMINERALIZER HEAT EXCHANGER RETURN LINE CRACK REPORT AT DRESDEN 1
 COMMONWEALTH EDISON CO., MORRIS, IL

11053 CONTINUED
 3 PUS, LTR N/RO 50-010/1970-5 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, FEB. 24, 1970, URGENT 50-10, TYPE--BWR, RPO--G.E., AE--BELNTEL

CAUSE - THERMAL FATIGUE. A 6-INCH SECTION OF THE CLEANUP DEMINERALIZER INCLUDING HEAT EXCHANGER RETURN LINE WHICH INCLUDES THE FAILED WELD (REPORTED CRACK) WAS EXAMINED. THE 6-5/8-INCH PENETRATION WAS PART OF A 5-INCH-LONG CIRCUMFERENTIAL CRACK IN THE WELD ON THE ID OF THE PIPE. NUMEROUS LONGITUDINAL CRACKS WERE ALSO FOUND ON THE ID SURFACE, ONE OF WHICH CROSSED THE WELD. CRACKS WERE MAXIMIZING AND PRIMARILY TRANSVERSE. EVIDENCE INDICATES CRACKS PRODUCED BY FATIGUE. THE PROBABLE CAUSE IS THERMAL SHOCK WHEN COLDER CONDENSER LINE WATER IS PERIODICALLY INTRODUCED TO THE HOTTER PRIMARY CONDENSER IN THE MIDDLE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 600 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED ISSUES + FAILURE, PIPE + FAILURE, FATIGUE + EXAMINATION + CONDENSER PURIFICATION SYSTEM + LEAK + THERMAL TRANSIENT + TEMPERATURE + CYCLING + CRACK + PIPES AND PIPE FITTINGS

11054
 VALVE IN FIRE PROTECTION SYSTEM FAILS TO CLOSE AT UNRESOLVED
 COMMUNICATED EUISON CO., MAINE, IL
 3 PUS, LTR N/RO 50-010/1970-5 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, FEB. 24, 1970, URGENT 50-10, TYPE--BWR, RPO--G.E., AE--BELNTEL

CAUSE - PRESSURE SWITCH SHIFT. DURING THE DIESEL FIRE PUMP TEST WITH THE UNIT IN START-UP MODE, A VALVE FAILED TO CLOSE WHEN HEADLINE PRESSURE DROPPED BELOW 75 PSI. THE PRESSURE SWITCH WAS SHIFTED OUT OF CALIBRATION. IT WAS RECALIBRATED, TESTED, AND DETERMINED TO BE OPERABLE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 600 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED ISSUES + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + FIRE PROTECTION + SHIFT + VALUES

11055
 EMERGENCY CONDENSER CONDENSATE VALVE IMPROPER AT UNRESOLVED
 COMMUNICATED EUISON CO., MAINE, IL
 3 PUS, LTR N/RO 50-010/1970-5 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 2, 1970, URGENT 50-10, TYPE--BWR, RPO--G.E., AE--BELNTEL

CAUSE - LOOSE SETSCREW IN LINKAGE. WHILE THE REACTOR WAS AT 40% POWER, THE UNIT EMERGENCY CONDENSER CONDENSATE RETURN LINE VALVE BEGAN SPINNING A SMALL INDICATION BY THE POSITION INDICATOR LIGHTS. AS THE VALVE WAS BEING CYCLED, IT FAILED TO CLOSE COMPLETELY. THE REACTOR WAS SHUT DOWN WITHIN 40 MINUTES. A LOOSE SETSCREW WAS DISCOVERED IN THE UNIVERSAL JOINT OF THE LINKAGE BETWEEN THE ACTUATOR ARM AND THE VALVE. THE SETSCREW WAS TIGHTENED, LINKAGE ADJUSTED, AND THE VALVE CYCLED 3 TIMES.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 600 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED ISSUES + FAILURE, EQUIPMENT + PARTS + EMERGENCY CYCLING + CONDENSER + REACTOR SHUTDOWN + FAILURE, INSTRUMENT + VALUES

11056
 POST-INCIDENT SPRAY VALVES FOUND IMPROPER AT UNRESOLVED
 COMMUNICATED EUISON CO., MAINE, IL
 3 PUS, LTR N/RO 50-010/1970-5 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 3, 1970, URGENT 50-10, TYPE--BWR, RPO--G.E., AE--BELNTEL

CAUSE - WATER IN FREG BREAKER. WHILE OPERATING AT 50% POWER, THE OPERATOR DISCOVERED THAT THE POSITION INDICATOR LIGHTS FOR THE POST-INCIDENT VALVES WERE NOT ILLUMINATED. THE FREG BREAKER HAD TRIPPED. WATER FROM A LEAKING SUGARWATER ON THE SPHERE SHUT HEATING SYSTEM DROPPED UP INTO THE CONDENSER AND WATER TERMINATED AT THE PANEL. THE WATER IN THE PANEL CAUSED IT TO TRIP. THE LEAKING SUGARWATER WAS REPLACED, THE BREAKER RESET, AND THE SYSTEM RETURNED TO SERVICE. THIS LOSS DID NOT AFFECT THE OPERABILITY OF THE CURE SPRAY SYSTEM.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 600 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED SPRAY + UNRESOLVED ISSUES + FAILURE, EQUIPMENT + WATER + LEAK + FAILURE, INHERENT + BREAKER + VALUES

11057
 TRANSDUCER REMOVED FROM SERVICE AT UNRESOLVED
 COMMUNICATED EUISON CO., MAINE, IL
 3 PUS, LTR N/RO 50-010/1970-5 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 31, 1970, URGENT 50-10, TYPE--BWR, RPO--G.E., AE--BELNTEL

CAUSE - DISCONNECT CABLED. DURING OPERATION AT 75% POWER, A CIRCUIT BREAKER WAS TAKEN OUT OF SERVICE FOR ADJUSTMENT. ON THE THIS ACTIVITY, PHASE C DISCONNECT ON THE BUS SIDE WAS FOUND OUT

112307 "CONTINUED"

OF ALIGNMENT. THE BRASS BEAVE SUPPORT OF THE DISCONNECT WAS CRACKED. TO REPAIR IT, BUS SECTION 3, WHICH FEED TRANSFORMER 12, HAD TO BE DE-ENERGIZED. THE TRANSFORMER WAS OUT OF SERVICE FOR 3 WEEKS DURING THE INSTALLATION OF A NEW DISCONNECT.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.000

UNRESOLVED 1 (0001) • FAILURE, EQUIPMENT • ELECTRIC POWER • CABLES AND CONNECTORS • FAILURE, IMMINENT • TRANSFORMERS

113270

UFF GAS ACTIVITY INCREASES AT ORESSEN 1

COMMONWEALTH EUISEN CO., MORRIS, IL

3 PGS, LTH N/AU 50-010/1970-0 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 9, 1970, DOKRET 50-10, TYPE--BNA, NFG--U.C.E., AE--BECHTEL

CAUSE - PROCESSIONAL VIBRATION. DURING OPERATION AT 018 POWER, THE DAILY UFF GAS SAMPLE SHOWED AN ACTIVITY OF 45000 MICRONS/SEC. AN INCREASE OF 35000 MICRONS/SEC ABOVE THE PREVIOUS DAY'S SAMPLE. DURING A CENTRAL OOD CAMPLING VERIFICATION TEST, THE OPERATION ALLOWED CONTROL AND TIPS TO PASS EACH OTHER, APPARENTLY RESULTING IN SOME FUEL DAMAGE. A PRELIMINARY REVISION TO CLARIFY THE PROCEDURE HAS BEEN INITIATED. THE ACTIVITY DECREASED DURING SUCCEEDING DAYS.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.000

AIRBORNE RELEASE • UNRESOLVED 1 (0001) • FAILURE, FUEL ELEMENT • FAILURE, OPERATOR ERROR • PROCEDURES AND MANUALS • SAMPLING • TEST, SYSTEM OPERABILITY • UFF GAS

115743

SET POINT DRIFT IN POWER RANGE NEUTRON MONITOR AT UNRESOLVED 1

COMMONWEALTH EUISEN CO., MORRIS, IL

2 PGS, LTH N/AU 50-010/1970-0 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 8, 1970, DOKRET 50-10, TYPE--BNA, NFG--U.C.E., AE--BECHTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 026 POWER, 1 OF THE 0 POWER RANGE NEUTRON MONITOR CHANNELS WAS FOUND TO ACTUATE AT 1458 POWER, EXCEEDING THE 1458 LIMIT. THIS WAS CAUSED BY INSTRUMENT DRIFT. THE CHANNEL WAS RESET TO 1324 POWER. THESE CHANNELS ARE AILING TUBE-TYPE INSTRUMENTS THAT ARE SCHEDULED TO BE REPLACED WITH NEW ULTRASTATE WIDE RANGE MONITORS DURING THE NEXT REFUELING OUTAGE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.000

UNRESOLVED 1 (0001) • REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • INSTRUMENT, POWER RANGE • SET POINT • EFFECT, AGE • DRIFT

118432

CORE SPRAY LINE SNUBBER FOUND INOPERABLE AT UNRESOLVED 1

COMMONWEALTH EUISEN CO., MORRIS, IL

3 PGS, LTH N/AU 50-010/1970-1 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 6, 1970, DOKRET 50-10, TYPE--BNA, NFG--U.C.E., AE--BECHTEL

CAUSE - O-RING AND SEAL FAILURE. DURING AN INSPECTION WHILE THE UNIT WAS SHUT DOWN, 3 CORE SPRAY LINE SNUBBER WERE FOUND WITH EMPTY OIL ALSCRVIRS, WHICH RENDERED THE SNUBBER INOPERABLE. OIL LEAKAGE WAS CAUSED BY FAILURE OF THE ETHYLENE-PROPYLENE SEALING O-RINGS AND PISTON RINGS WHICH WERE FOUND TO BE BRITTLE AND CRACKED. HIGH ENVIRONMENTAL TEMPERATURE APPEARS TO BE A FACTOR. THE FAILED SNUBBER WERE PROMPTLY REPLACED IN KING.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.000

CORE SPRAY • UNRESOLVED 1 (0001) • FAILURE, EQUIPMENT • ENRITLEMENT • OSMER ABSORBER • SEAL • SUPPORT STRUCTURE • SURVEILLANCE PROGRAM • LEAK • TEMPERATURE • FAILURE, IMMINENT • PIPES AND PIPE FITTINGS

118791

PINNULE LEAK FOUND IN CORE SPRAY VENT LINE WELD AT UNRESOLVED 1

COMMONWEALTH EUISEN CO., MORRIS, IL

2 PGS, LTH N/AU 50-010/1970-1 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 13, 1970, DOKRET 50-10, TYPE--BNA, NFG--U.C.E., AE--BECHTEL

CAUSE - SLAG INCLUSION IN WELD. WHILE OPERATING AT 504 POWER, A PINNULE LEAK WAS FOUND IN A SOCKET WELD ON CORE SPRAY VENT LINE AT THE NORTH END OF THE EMERGENCY CONDENSER. THE CAUSE WAS A SLAG INCLUSION IN THE ORIGINAL PIPE-TO-COUPPLING SOCKET WELD. THE AFFECTED AREA WAS GRINDING OUT AND REWELDED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.000

119791 CONTINUED
CORE SPRAY + DRESDEN 1 (DNR) + FAILURE, PIPE + PHÉLOS + FAILURE, INSTALLATION ERROR + PLAM + PIPES AND PIPE FITTINGS

119443
FUEL OIL TRANSFER LINE SEVERED BY BACK-PIE AT DRESDEN 1
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-010/1970-13 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUL 28, 1970, UCR#1
50-010, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - PERSONNEL ERROR. DURING 634 POWER OPERATION, A BACK-PIE WAS USED TO UNCOVER AN UNDERGROUND STEAM LINE TO LOCATE A LEAK. A FUEL OIL TRANSFER LINE WAS INADVERTENTLY SEVERED BY THE BACK-PIE, ISOLATING THE DIESEL OIL STORAGE TANK FROM UNIT 1 DIESEL GENERATOR AND DIESEL FINE PUMP. ARRANGEMENTS WERE IMMEDIATELY MADE TO PROCURE 2 1500-GALLON TANK TRUCKS. THE TRANSFER LINE WAS PROMPTLY REPAIRED AND THE STORAGE TANK RETURNED TO SERVICE. PERSONNEL WERE INSTRUCTED TO EXERCISE EXTREME CAUTION WHEN DIGGING IN THE VICINITY OF KNOWN PIPING LOCATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 1 (DNR) + FAILURE, PIPE + FAILURE, MAINTENANCE ERROR + FUEL, FUSSEL + UNDERGROUND + ENGINE, INTERNAL COMBUSTION + GENERATOR, DIESEL + PIPES AND PIPE FITTINGS

119518
DIESEL FINE PUMP OVERHEATS AT DRESDEN 1
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-010/1970-14 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV 9, 1970, UCR#1
50-010, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - DEFECTIVE THERMOSTAT. WHILE OPERATING AT 504 POWER, UNIT 1 DIESEL FINE PUMP AUTOMATICALLY STARTED, APPARENTLY BECAUSE OF A LOW FINE HEATER PRESSURE LIMITING. SHORTLY AFTER IT STARTED, A HIGH TEMPERATURE ALARM WAS RECEIVED. THE CIRCULATING WATER HOSES ON THE DIESEL WERE LEAKING. THEY WERE REPLACED WITH FLEXIBLE STAINLESS STEEL HOSES. RETESTING FOUND A DEFECTIVE THERMOSTAT IN THE COOLING SYSTEM TO BE THE ACTUAL CAUSE OF OVERHEATING. IT WAS REPLACED. THE DIESEL WAS SUCCESSFULLY TESTED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + DRESDEN 1 (DNR) + FIRE PROTECTION + FAILURE, INHERENT + COOLING SYSTEM, SECONDARY + PUMPS + ENGINES, INTERNAL COMBUSTION

119824
EQUIPMENT MATCH FAILS TO PRESSURIZE AT DRESDEN 1
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-010/1970-15 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV 18, 1970, UCR#1
50-010, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - CRACKED COUPLING IN TEST CONNECTION. DURING 608 POWER OPERATION, LOCAL LEAK-RATE TESTING OF THE 10-FOOT BOLTED EQUIPMENT MATCH REVEALED THAT THE VOLUME COULD NOT BE PRESSURIZED. A PIPE COUPLING ON THE TEST CONNECTION WAS CRACKED. FAILURE WAS ATTRIBUTED TO FATIGUE. THE ENTIRE TEST CONNECTION WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 1 (DNR) + PIPES AND PIPE FITTINGS + CONTAINMENT EQUIPMENT MATCH + TEST, LEAK + CORROSION + LEAK + TEST, SYSTEM OPERABILITY + FAILURE, PIPE + FAILURE, INHERENT

120469
APPARENT HIGH CL CONCENTRATION IN REACTOR COOLANT AT DRESDEN 1
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-010/1970-16 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC 6, 1970, UCR#1
50-010, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - FAHRA IN ANALYSIS. DURING A REACTOR STARTUP, ANALYSIS OF REACTOR COOLANT SAMPLES TAKEN AT 4 HOUR INTERVALS INDICATED CHLORIDE CONCENTRATIONS ABOVE THE 0.1 PPM LIMIT FOR 2 CONSECUTIVE SAMPLES. REPORTED CONCENTRATIONS WERE 0.157 AND 0.154. THE RADIATION CHEMISTRY TECHNICIAN NEGLECTED TO FILTER THESE SAMPLES BEFORE PERFORMING THE CHLORIDE DETERMINATION TEST. THE SUSPENDED SOLIDS IN THE UNFILTERED SAMPLE CAUSED THE CHLORIDE CONCENTRATION TO APPEAR GREATER THAN WAS ACTUALLY THE CASE. ALSO, THE SHIFT ENGINEER FAILED TO REALIZE THAT THE CHLORIDE CONCENTRATION EXCEEDED THE LIMIT.

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DRESDEN 1 (DNR) + COOLANT QUALITY + CONCENTRATION + CHLORIDE + FAILURE, OPERATOR ERROR + PROCEDURES AND MANUALS + CHEMICAL ANALYSIS + FAILURE, ADMINISTRATIVE CONTROL

120470
 ONLY OFF GAS RATIO OF SHORT-LIVED TO LONG-LIVED ISOTOPES NOT DETERMINED AT DRESDEN 1
 COMMUNHEALTH EVIDENCE CO., MARIETTA, IL
 3 PAGES, LTR D/NU 50-010/1970-17 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 8, 1970, DUCRET
 50-010, TYPE--BMA, REF--0000, AT--DECTEL

CAUSE - CHEMIST ABSENT DUE TO ILLNESS. DURING 948 POWER OPERATION, THE ONLY OFF-GAS RATIO OF
 SHORT-LIVED TO LONG-LIVED ISOTOPES WAS NOT DETERMINED FOR ONE DAY. A HIGH-FLOW CONDITION IN THE
 OFF-GAS SYSTEM WAS NECESSITATED A CHANGE IN THE SAMPLE SCHEDULE. ON THIS DAY, THE CHEMIST WAS
 ABSENT DUE TO ILLNESS AND THE OFF-GAS SAMPLE WAS NOT COLLECTED. SUPERVISORY PERSONNEL FAILED TO
 NOTE THIS OMISSION UNTIL THE FOLLOWING DAY. THE OFF-GAS ANALYZER AND FLOW CHARTS INDICATED THAT
 THE SYSTEM REMAIN STABLE THROUGHOUT THIS PERIOD. THE HIGH FLOW CONDITION WAS BEEN CORRECTED AND
 SAMPLING RETURNED TO NORMAL.

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DRESDEN 1 (BRI) * MAGNETIC ANALYSIS * OFF GAS * SAMPLING * TEST INTERVAL * FAILURE, ADMINISTRATIVE
 CONTROL

120529
 SET POINT DRIFT IN IN-CORE NEUTRON FLUX AMPLIFIER AT DRESDEN 1
 COMMUNHEALTH EVIDENCE CO., MARIETTA, IL
 2 PAGES, LTR D/NU 50-010/1970-16 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 15, 1970, DUCRET
 50-010, TYPE--BMA, REF--0000, AT--DECTEL

CAUSE - INSTRUMENT DRIFT. DURING SURVEILLANCE TESTING WHILE OPERATING AT 488 POWER, IN-CORE
 NEUTRON FLUX MONITOR LOGIC WAS FOUND TO TRIP AT 4328 POWER (TECH SPEC LIMIT IS 4258 POWER). THE
 CAUSE WAS INSTRUMENT DRIFT. THE GE, PART NO. 09.0571, AMPLIFIER WAS ADJUSTED TO THE PROPER SET
 POINT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * INSTRUMENT, IN CORE * MONITOR * NEUTRON * SET POINT * DRIFT *
 NEUTRON PROTECTION SYSTEM * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * FAILURE, INHERENT * DRESDEN 1
 (BRI)

120825
 REACTOR SCRAMS ON LOW VACUUM AT DRESDEN 2
 COMMUNHEALTH EVIDENCE CO., MARIETTA, IL
 3 PAGES, LTR D/NU 50-257/1970-2 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 21, 1970, DUCRET
 50-257, TYPE--BMA, REF--0000, AT--SUT & LUNDY

CAUSE - MAINTENANCE ERROR. WHILE THE REACTOR WAS BEING SHUT DOWN FOR MAINTENANCE, A REACTOR
 SCRAM OCCURRED ON LOW VACUUM WHEN THE CONDENSER VACUUM WAS BROKEN. AT THE TIME, THE REACTOR WAS
 AT 101 PSIG WITH ALL KEYS INSERTED. THE RACA ISOLATION VALVE FOR 1 OF THE PRESSURE SWITCHES IN
 THE 8000 PSIG BYPASS CIRCUIT WAS INADVERTENTLY LEFT CLOSED AFTER A PREVIOUS SURVEILLANCE
 TRAPPING FULL OPERATING PRESSURE IN THE LINE. THE SWITCH WAS NOT SENSING TRUE SYSTEM PRESSURE.
 THEREFORE, THE BYPASS CIRCUITRY DID NOT OPERATE AND A FULL SCRAM OCCURRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

PROCEDURES AND MANUALS * SCRAM, REAL * TESTING * DRESDEN 2 (BRI) * FAILURE, MAINTENANCE ERROR * VALVES *
 SENSORS, PRESSURE

110943
 TIP PROBE FLUX IMPROPERLY POSITIONED AT DRESDEN 2
 COMMUNHEALTH EVIDENCE CO., MARIETTA, IL
 3 PAGES, LTR D/NU 50-257/1970-3 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 20, 1970, DUCRET
 50-257, TYPE--BMA, REF--0000, AT--SUT & LUNDY

CAUSE - LIMIT SWITCH MISALIGNED. WITH THE REACTOR AT 728 POWER, AN INSTRUMENT MECHANICAL FLOW TIP
 6 PAGES TO BE PAST ITS NORMAL IN-SHIELD POSITION. THE GRAVITY-OPERATED LIMIT SWITCH IN THE
 CHAMBER SHIELD FAILED TO OPERATE. IT WAS MISALIGNED. WHEN THE TIP WAS LAST OPERATED, PROCEDURES
 WERE NOT FOLLOWED IN VERIFYING THAT THE PROBE STOPPED IN-SHIELD. THE LIMIT SWITCH WAS REALIGNED.
 BECAUSE OF FREQUENT FAILURES, THESE LIMIT SWITCHES WILL BE REPLACED WITH PROXIMITY SWITCHES.
 OPERATIONS WERE TOLD TO FOLLOW PROCEDURES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, OPERATION ERROR * INSTRUMENT, IN CORE * PROCEDURES AND MANUALS * FAILURE, INSTRUMENT * DRESDEN 2 (BRI)
 * INSTRUMENT, SWITCH * FAILURE, DESIGN ERROR * INSTRUMENT, POSITION

110944
 BUS DISCONNECT IN SWITCHYARD MALFUNCTIONS AT DRESDEN 2

110320 *CONTINUED*
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS. LTR W/NO 50-237/1970-1 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 29, 1970, SUBJECT
50-237, TYPE--BWR, NRC--G.E., AE--SUT & LUNDY

CAUSE - LOOSE CABLE CONNECTION. WHILE OPERATING AT 90% POWER, OSCILLOGRAPH ALARMS WERE RECEIVED ON
130 KV VARD. BUS SECTION 1-2 ON BUS 1 DISCONNECT WAS OBSERVED TO BE ABNORMAL AND NOISY. IT WAS
OPENED. A LOOSE CONNECTOR WAS FOUND ON THE CABLE BETWEEN BUS AND BUS 1 DISCONNECT ON C PHASE.
THE CABLE WAS REPLACED WITH A NEW SECTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

UNRESOLVED 2 (BWR) * ELECTRIC POWER, AVAILABLE * CABLES AND CONNECTORS * FAILURE, INCIDENT * FOREIGN

111034
SET POINT DRIFT IN DAYWELL HIGH PRESSURE SWITCH AT DRESDEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS. LTR W/NO 50-237/1970-4 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, FEB. 19, 1970, SUBJECT
50-237, TYPE--BWR, NRC--G.E., AE--SUT & LUNDY

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE THE REACTOR WAS AT 95% POWER, 1 OF THE 4 DAYWELL
HIGH PRESSURE SCRAM SENSORS WAS FOUND TO BE SET 0.07 PSI BELOW THE 20.00 PSI LIMIT. THE CAUSE
WAS INSTRUMENT DRIFT. THE SENSOR WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INCIDENT * DRESDEN 2 (BWR) * INSTRUMENT,
SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * SENSORS, PRESSURE

111057
SET POINT DRIFT IN FLOW SENSOR AT DRESDEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS. LTR W/NO 50-237/1970-5 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 2, 1970, SUBJECT
50-237, TYPE--BWR, NRC--G.E., AE--SUT & LUNDY

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE ISOLATION COMPENSER WANDENFATE HIGH FLOW SWITCHES
WITH THE REACTOR AT 90% POWER, 1 OF THE 2 SWITCHES ACTUATED AT 29.0 INCHES UP INCREASING. THE
LIMIT IS 32 INCHES. THE CAUSE WAS INSTRUMENT DRIFT. THIS IS A DANFORS MODEL 200-2200 PRESSURE
SENSOR WITH AN ACCURACY OF 0.5% ON A RANGE OF 0-100 INCHES. IT WAS RESET TO 29.5 INCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INSTRUMENT CALIBRATION * PROTECTION SYSTEM * FAILURE, INCIDENT * DRESDEN 2 (BWR) * INSTRUMENT, SWITCH *
TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * SENSORS, FLOW

111100
MPC1 STEAM SUPPLY VALVE FAILS TO OPEN AT DRESDEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS. LTR W/NO 50-237/1970-9 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 24, 1970, SUBJECT
50-237, TYPE--BWR, NRC--G.E., AE--SUT & LUNDY

CAUSE - PROBABLY DIRTY BREAKER CONTACTS. DURING TESTING WITH THE REACTOR AT 80% POWER, MPC1 STEAM
SUPPLY VALVE WAS CLOSED BUT IT FAILED TO REOPEN. AFTER A VOLTMETER WAS CONNECTED AT THE VALVE
BREAKER, THE VALVE OPENED. FAILURE WAS ATTRIBUTED TO DIRTY CONTACTS IN THE BREAKER. THE BREAKER
WILL BE INSPECTED AND ITS CONTACTS CLEANED DURING THE REFUELING OUTAGE WHICH STARTED THE DAY
AFTER FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT * DRESDEN 2 (BWR) * TEST, SYSTEM OPERABILITY * BREAKER * VALVES * MPC1

112107
DAYWELL-TC-TURUS PRESSURE DIFFERENTIAL BELOW LIMIT AT DRESDEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS. LTR W/NO 50-237/1970-7 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 29, 1970, SUBJECT
50-237, TYPE--BWR, NRC--G.E., AE--SUT & LUNDY

CAUSE - NITROGEN EVAPORATOR MALFUNCTION. WHILE OPERATING AT 90% POWER, DAYWELL-TC-TURUS PRESSURE
DIFFERENTIAL DROPPED BELOW THE 1.00 PSI LIMIT TO 0.95 PSI FOR ABOUT 1.4 MINUTES. THE NITROGEN
REGULATOR BYPASS VALVE WAS OPENED AN ADDITIONAL 3/4 TURN TO RESTORE THE REQUIRED V/P. PRESSURE
AGAIN DROPPED BELOW LIMITS TO 0.99 PSI. THE EFFICIENCY ON THE CIRCULATION LIQUID NITROGEN SUPPLY
SYSTEM EVAPORATOR DECREASED DUE TO ICING, LIMITING NITROGEN FLOW TO THE DAYWELL. PORTABLE
HEATERS WERE USED TO REMOVE THE ICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM

112167 CONTINUED
CHARGE \$2.00

CONTAINMENT • NITROGEN • DRESSEN 2 (HHR) • FAILURE, DESIGN ERROR • OPERATOR ERROR • LEAKS • THERMAL EFFICIENCY • HEAT EXCHANGERS • TUBES

112727
LPCI PUMP BREAKER FOUND TO BE OUT OF SERVICE AT DRESSEN 2
COMMONWEALTH EDISON, MORRIS, IL
2 PGS, LTR N/RO 50-237/1970-12 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 20, 1970, URGENT
50-237, TYPE-DNR, RFG-G.E., AE-SGT & LUNDY

CAUSE - MAINTENANCE ERROR. DURING REFUELING, LPCI PUMP 2A BREAKER WAS FOUND TO BE OUT OF SERVICE. MAINTENANCE HAD TAKEN THE BREAKER OUT OF SERVICE FOR INSPECTION PRIOR TO REFUELING AND FAILED TO RETURN IT. ALSO, THE UNIT OPERATORS FAILED TO VERIFY OPERABILITY OF THE PUMP. THE BREAKER WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • DRESSEN 2 (HHR) • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • BREAKER • PUMPS • LPCI

112728
CCSW FLOOD PROTECTION VALVE DRIVEN OPEN AT DRESSEN 2
COMMONWEALTH EDISON, MORRIS, IL
3 PGS, LTR N/RO 50-237/1970-13 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 6, 1970, URGENT
50-237, TYPE-DNR, RFG-G.E., AE-SGT & LUNDY

CAUSE - PROCEDURAL DEFICIENCY. DURING TESTING OF THE CCSW FLOOD PROTECTION VALVE, THE MAIN VALVE WAS FOUND MECHANICALLY BLOCKED OPEN AND ELECTRICALLY INOPERABLE. THE RELATED VALVE ON UNIT 3 WAS IN A SIMILAR CONDITION. THESE VALVES WERE PART OF A MODIFICATION COMPLETED DURING THE 1975 REFUELING OUTAGE. FUNCTIONAL TESTING WAS NOT IDENTIFIED IN THE MODIFICATION SO THE VALVES WERE NOT TESTED AFTER INSTALLATION. BOTH VALVES WERE MANUALLY CLOSED. UNIT 3 VALVE WAS MADE OPERATIONAL WITHIN 12 DAYS. UNIT 2 VALVE WILL BE MADE OPERATIONAL DURING THE CURRENT REFUELING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS • TESTING • DRESSEN 2 (HHR) • MODIFICATION • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, ADMINISTRATIVE CONTROL • COMPLIMENT COOLING SYSTEM • VALVES

112725
THROUGH-HALL CRACK FOUND IN NPCL SAFE-END AT DRESSEN 2
COMMONWEALTH EDISON, MORRIS, IL
3 PGS, LTR N/RO 50-237/1970-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 7, 1970, URGENT
50-237, TYPE-DNR, RFG-G.E., AE-SGT & LUNDY

CAUSE - SENSITIZED STAINLESS STEEL. DURING A REFUELING OUTAGE INSERVICE INSPECTION, A THROUGH-HALL CRACK WAS DISCOVERED IN THE 14-INCH NPCL FURNACE SENSITIZED STAINLESS STEEL SAFE-END. THE CRACK LEAKED A SMALL AMOUNT OF WATER. IT WAS LOCATED AT THE BOTTOM OF THE PIPE, 3/8 INCH FROM THE SAFE-END-TO-PIPE WELD. THE CRACK WAS 1/4 INCH LONG AT THE JOINT AND 2 INCHES LONG AT THE 10. RUNNING CIRCUMFERENTIALLY. THE SAFE-END WAS MANUFACTURED FROM SA-102 F302 STAINLESS STEEL. UNLOAD. THE REPLACEMENT WILL BE EITHER SA-102 F302 STAINLESS STEEL OR SA-105 CARBON STEEL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE • STEEL, STAINLESS • DRESSEN 2 (HHR) • FAILURE, FABRICATION ERROR • REFUELING • NOZZLE • HEAT TREATMENT • LEAK • CRACK • PIPES AND PIPE FITTINGS • NPCL • INSERVICE INSPECTION

112700
STUFFING BOX OF DRYWELL VENTILATION SYSTEM VALVE LEAKS AT DRESSEN 2
COMMONWEALTH EDISON, MORRIS, IL
2 PGS, LTR N/RO 50-237/1970-11 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 14, 1970, URGENT
50-237, TYPE-DNR, RFG-G.E., AE-SGT & LUNDY

CAUSE - NORMAL USAGE. DURING LOCAL LEAK RATE TESTING WITH THE UNIT SHUT DOWN FOR REFUELING, LEAKAGE IN EXCESS OF THE LIMIT WAS NOTED THROUGH A DRYWELL VENTILATION SYSTEM VALVE. THE VALVE STUFFING BOX WAS LEAKING. THE VALVE PACKING WAS REPLACED. THE VALVE IS AN 18-INCH RUBBER SEATED BUTTERFLY VALVE, M. PRATT, CO., MODEL Z F11.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • TEST, LEAK RATE • VENTILATION SYSTEM • DRESSEN 2 (HHR) • REFUELING • TEST, SYSTEM OPERABILITY • SEAL • LEAK RATE • FAILURE, IMPERFECT • VALVES

113275

LEAK RATE OF CONTAINMENT ISOLATION VALVE EXCEEDS LIMIT AT UNDESIGN 2
 WASHINGTON EDISON CO., MARIETTA, IL
 4 PGS, LTR W/NO 50-237/1970-22 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 12, 1970, URGENT
 50-237, TYPE--BWR, MW--6000, AE--SUT & LUNNY

CAUSE - STOPPING BOX LEAK. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TESTING, LEAKAGE IN EXCESS
 OF THE 24000 SCFM LIMIT WAS NOTED THROUGH A CONTAINMENT ISOLATION VALVE. THE CAUSE WAS
 EXCESSIVE PACKING LEAKAGE. THE PACKING IS THE 10-INCH RUBBER-SEALED BUTTERFLY VALVE. NO PART
 CO. MODEL 2 FILL WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT ISOLATION + TEST, LEAK RATE + UNDESIGN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + SEAL + LEAK
 RATE + FAILURE, INCIDENT + VALUES

113203

ADDITIONAL INFORMATION ON DIESEL GENERATOR STARTING FAILURES AT UNDESIGN 2
 WASHINGTON EDISON CO., MARIETTA, IL
 4 PGS, LTR W/NO 50-237/1970-32A TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 13, 1970,
 URGENT 50-237, TYPE--BWR, MW--6000, AE--SUT & LUNNY

CAUSE - BURNED AREAS ON RING GEAR. THE DIESEL GENERATOR FAILED TO START A NUMBER OF TIMES DURING
 1970. AN EXHAUSTIVE INVESTIGATION BY THE VENDOR FOUND 2 SMALL, SLIGHTLY UNEVEN AND BURNED AREAS
 ON THE RING GEAR IN THE AIR STARTING SYSTEM. THESE AREAS APPEARED TO PREVENT THE RING GEAR FROM
 ENGAGING THE PINION GEARS. THE RING GEAR WAS UNDESIGNED. NO STARTING FAILURES HAVE OCCURRED
 SINCE THEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, COMPONENT + PLAN + UNDESIGN 2 (BWR) + COMPONENTS + PNEUMATIC SYSTEM + ENGINE, INTERNAL COMBUSTION +
 GENERATOR, DIESEL

112701

WYNELL VENTILATION SYSTEM VALVE LEAKS EXCESSIVELY AT UNDESIGN 2
 WASHINGTON EDISON CO., MARIETTA, IL
 3 PGS, LTR W/NO 50-237/1970-26 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 14, 1970, URGENT
 50-237, TYPE--BWR, MW--6000, AE--SUT & LUNNY

CAUSE - SEAT LEAKAGE. DURING LOCAL LEAK-RATE TESTING WITH THE UNIT IN A REFUELING OUTAGE, A
 WYNELL VENTILATION SYSTEM VALVE HAD EXCESSIVE LEAKAGE THROUGH THE SEAT. THE HEAVY PHAT 10-INCH
 RUBBER-SEALED BUTTERFLY VALVE, MODEL NO. 2F 11 WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + TEST, LEAK RATE + VENTILATION SYSTEM + UNDESIGN 2 (BWR) + REFUELING + TEST,
 SYSTEM OPERABILITY + LEAK RATE + VALVES

113200

LEAK RATE OF CONTAINMENT ISOLATION VALVE EXCEEDS LIMIT AT UNDESIGN 2
 WASHINGTON EDISON CO., MARIETTA, IL
 3 PGS, LTR W/NO 50-237/1970-20 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 14, 1970, URGENT
 50-237, TYPE--BWR, MW--6000, AE--SUT & LUNNY

CAUSE - PACKING LEAKS. DURING LOCAL LEAK RATE TESTING WITH THE REACTOR SHUT DOWN FOR REFUELING, 2
 VALVES EXCEEDED THE INDIVIDUAL PENETRATION LEAK RATE LIMIT OF 24000 SCFM. LEAKAGE WAS CAUSED BY
 DETERIORATION OF THE WATERLESS GREASE USED WITH DOUBLE TEPLOM PACKING TO PROVIDE SHARP SEALING.
 ALL SHARP SEALS WERE LUBRICATED. LEAKAGE WAS REDUCED TO 0000 AND 000 SCFM, RESPECTIVELY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT ISOLATION + TEST, LEAK RATE + UNDESIGN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE,
 MAINTENANCE ERROR + SEAL + LUBRICATION + LEAK RATE + VALVES

113200

CRACK FOUND IN ISOLATION CONDENSER SAFE-END AT UNDESIGN 2
 WASHINGTON EDISON CO., MARIETTA, IL
 2 PGS, LTR W/NO 50-237/1970-22 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 20, 1970, URGENT
 50-237, TYPE--BWR, MW--6000, AE--SUT & LUNNY

CAUSE - NOT STATED. DURING ULTRASONIC TESTING WHILE THE UNIT WAS SHUT DOWN FOR REFUELING, AN
 ISOLATION WAS DISCOVERED IN THE ISOLATION CONDENSER SENSITIZED TAINLESS STEEL SAFE-END. UTE-
 PENETRANT EXAMINATION OF THE INNER SURFACE REVEALED A CIRCUMFERENTIAL CRACK AS WELL AS 4 RADIAL
 CRACKS. THE SAFE-END, FORGED FROM SA 370-TYPE 304 STAINLESS STEEL, HAD BEEN SENT FOR

113200 *CONTINUED*
METALLURGICAL ANALYSIS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STEEL, STAINLESS + DRESDEN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + DAMAGE + HEAT TREATMENT + ULTRASONICS + ACIC + CRACK + PIPES AND PIPE FITTINGS

113201

FLUID LOSS FROM HYDRAULIC SHOCK SUPPRESSORS AT DRESDEN 2
COMMONWEALTH EDISON CO., MORRIS, IL

2 PGS, LTR N/RO 50-237/1970-15 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 23, 1970, DUCRET 50-237, TYPE--BWR, NRC--G.E., AE--SGT & LUNDT

CAUSE - FLUID LEAKAGE. DURING A REFUELING OUTAGE INSPECTION OF ISOLATION CONDENSER PIPEWAY SHROUDS, 2 UNITS APPEARED TO BE IMPERABLE DUE TO LOSS OF FLUID. BENCH TESTS REVEALED THAT BOTH WERE OPERABLE. LEAKAGE HAD OCCURRED THROUGH SHAFT SEALS AND LOOSE CONNECTION FITTINGS. THE CONNECTION FITTINGS, SHAFT G-RINGS, AND WIPERS WERE REPLACED ON BOTH WINNELL FIG. 200 UNITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 2 (BWR) + REFUELING + SHOCK ABSORBER + SEAL + SUPPORT STRUCTURE + SURVEILLANCE PROGRAM + LEAK + PIPES AND PIPE FITTINGS

113202

STANBY LIQUID CONTROL CHECK VALVE LEAKS EXCESSIVELY AT DRESDEN 2
COMMONWEALTH EDISON CO., MORRIS, IL

2 PGS, LTR N/RO 50-237/1970-17 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 23, 1970, DUCRET 50-237, TYPE--BWR, NRC--G.E., AE--SGT & LUNDT

CAUSE - UNKNOWN AT THIS TIME. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TESTING, A STANBY LIQUID CONTROL ISOLATION CHECK VALVE EXCEEDED THE 29.301 SCFH LIMIT. THE RATE WAS 420079 SCFH. THE VALVE CANNOT BE EXAMINED UNTIL THE REFUELING OPERATION HAS BEEN COMPLETED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + TEST, LEAK RATE + DRESDEN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + SHUTDOWN SYSTEM, SECONDARY + LEAK RATE + VALVE, CHECK

113203

LEAK RATE OF FEEDWATER CHECK VALVES EXCEED LIMIT AT DRESDEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

2 PGS, LTR N/RO 50-237/1970-18 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 23, 1970, DUCRET 50-237, TYPE--BWR, NRC--G.E., AE--SGT & LUNDT

CAUSE - UNKNOWN AT THIS TIME. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TEST, 2 FEEDWATER ISOLATION CHECK VALVES EXCEEDED THE 29.301 SCFH LIMIT (095.3 AND 00.096 SCFH). EXAMINATION AND OVERHAULING HAS NOT YET BEEN COMPLETED. THESE ARE 18-INCH TILTING-DISC, PRESSURE SEAL CHECK VALVES, MODEL 973, CRANE CO.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + TEST, LEAK RATE + DRESDEN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + LEAK RATE + VALVE, CHECK + FEEDWATER

113204

RESTRAINER CLAMP BOLT KEEPS FOUND LOOSE ON JET PUMPS AT DRESDEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR N/RO 50-237/1970-19 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 26, 1970, DUCRET 50-237, TYPE--BWR, NRC--G.E., AE--SGT & LUNDT

CAUSE - BROKEN TACK WELDS. DURING THE REFUELING OUTAGE JET PUMP INSPECTION, 30 LOOSE RESTRAINER CLAMP BOLT KEEPS WERE FOUND ON 19 OF THE 20 JET PUMPS. EACH JET PUMP HAS 2 BOLT KEEPS. FAILURES WERE ATTRIBUTED TO VIBRATIONAL FATIGUE CRACKING. KEEPS WERE REWELDED TO ORIGINAL SPECIFICATIONS. ON JET PUMP 9, THE RESTRAINER GATE ASSEMBLY AND BOLT CLAMP BOLT KEEPS WERE REPLACED BECAUSE THE ORIGINAL KEEPS COULD NOT BE REWELDED. THESE PARTS WILL BE ANALYZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WELDS + FASTENER + DRESDEN 2 (BWR) + REFUELING + FAILURE, FATIGUE + FAILURE, DESIGN ERROR + PUMP, JET + VIBRATION + SURVEILLANCE PROGRAM + CRACK

113283
LEAK RATE OF MPC1 VALVE EXCEEDS LIMIT AT DRESDEN 2
COMMUNHEALTH EUISEN CO., MARISS, IL
2 PUS, LTR W/NO 50-237/1970-20 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 27, 1970, UCRJET
50-237, TYPE--BOM, MW--WUE, AE--SUT & LUNOT

CAUSE - CORROSION OF SEATING AREA. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TESTING, A MPC1 VALVE EXHIBITED SEAT LEAKAGE IN EXCESS OF THE 25.001 SCFH LIMIT (04.740 SCFH). THE LEAK FAILED TO SEAT FULLY DUE TO CORROSION AND LOCALIZED PITTING OF THE LOWER SEATING AREA IN USE SIVE. CORROSION WAS ACCELERATED BY WATER IN THE OUTLET OF THE PIPE. THE VALVE WAS CLEANED AND THE PITTED AREA WAS MENDED TO RESTORE THE SEATING SURFACE. ALSO THE VALVE WAS MODIFIED SO THAT THE CORROSION-AFFECTED AREA WOULD NOT BE EXPOSED TO THE INAPPED WATER. RETESTING SHOWED A RATE OF 1.492 SCFH FOR THE 12-INCH MISSION WUE-CHECK VALVE, MODEL B.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION * TEST, LEAK RATE * CORROSION * DRESDEN 2 (BOM) * REFUELING * TEST, SYSTEM OPERABILITY * LEAK RATE * VALVE, CHECK * MPC1

113543
LEAKAGE OF CUSH PUMP VAULT PENETRATIONS EXCESSIVE AT DRESDEN 2
COMMUNHEALTH EUISEN CO., MARISS, IL
2 PUS, LTR W/NO 50-237/1970-23 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 7, 1970, UCRJET 50-237, TYPE--BOM, MW--WUE, AE--SUT & LUNOT

CAUSE - CAULKING CRACKS. DURING A REFUELING LEAK TEST, 7 OF THE 9 CUSH PUMP VAULT PENETRATIONS LEAKED EXCESSIVELY. OPERATIONAL VIBRATION APPARENTLY CAUSED THE CAULKING TO CRACK. THE PENETRATIONS WERE RESEALED WITH A PLIABLE SEALANT INTO WHICH SHOULD PREVENT FUTURE SEAL DEGRADATION. RETESTING SHOWED ZERO LEAKAGE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 2 (BOM) * REFUELING * FAILURE, DESIGN ERROR * SEAL * VIBRATION * LEAK RATE * CONTAINMENT * CRACK * CONTAINMENT PENETRATION

113700
ECCS JOLLEY PUMP BREAKER FAILS AT DRESDEN 2
COMMUNHEALTH EUISEN CO., MARISS, IL
2 PUS, LTR W/NO 50-237/1970-22 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 10, 1970, UCRJET 50-237, TYPE--BOM, MW--WUE, AE--SUT & LUNOT

CAUSE - BURNED-OUT CONTACTOR COIL. DURING NORMAL OPERATION OF THE ECCS JOLLEY PUMP WHILE THE UNIT WAS SHUT DOWN FOR REFUELING, SMOKE WAS OBSERVED COMING FROM THE PUMP'S CONTROL FEEDER BREAKER. THERMAL FATIGUE AND OVERHEATING APPARENTLY CAUSED THE CONTACTOR COIL TO BURN OUT. THE COIL WAS REPLACED. THE PUMP MOTOR, BREAKER CONTACTS, AND WIRING WERE NOT DAMAGED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT * DRESDEN 2 (BOM) * REFUELING * EMERGENCY COOLING SYSTEM * EFFECT, AGE * FAILURE, INHERENT * BREAKER * PUMPS

113907
SET POINT UNIFT IN SOLC RELIEF VALVE AT DRESDEN 2
COMMUNHEALTH EUISEN CO., MARISS, IL
2 PUS, LTR W/NO 50-237/1970-24 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 12, 1970, UCRJET 50-237, TYPE--BOM, MW--WUE, AE--SUT & LUNOT

CAUSE - DRIFT. DURING THE REFUELING OUTAGE, BENCH TESTING DETERMINED THAT A STANBY LIQUID CONTROL RELIEF VALVE LISTED AT 1200 PSIG WHICH IS BELOW THE PERMISSIBLE RANGE OF 1400-1450 PSIG. FAILURE WAS ATTRIBUTED TO SET POINT DRIFT. THE VALVE SEAT WAS LAPPED AND THE VALVE WAS RESET AT 1400 PSIG. THIS IS A CUSHY VALVE AND WAGE CO., 1-1/2 X 2-INCH SELF-ACTUATED, STYLE JMM, RELIEF VALVE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * DRESDEN 2 (BOM) * OVERPRESSURE RELIEF * REFUELING * TEST, SYSTEM OPERABILITY * SHUTDOWN SYSTEM, SECONDARY * SET POINT * DRIFT * PUMPS

113749
SET POINT UNIFT IN SOLC RELIEF VALVE AT DRESDEN 2
COMMUNHEALTH EUISEN CO., MARISS, IL
2 PUS, LTR W/NO 50-237/1970-27 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 13, 1970, UCRJET 50-237, TYPE--BOM, MW--WUE, AE--SUT & LUNOT

113765 CONTINUED

CAUSE - VALVE SHIFT. DURING THE REFUELING OUTAGE, DEMON-TESTING FOUND A STANNOL LIQUID CONTROL VALVE TO SHIFT AT 1300 PSIG, WHICH IS BELOW THE PERMISSIBLE RANGE (1400 TO 1600 PSIG). A SIMILAR FAILURE OCCURRED THE DAY BEFORE ON ANOTHER VALVE. THE VALVE SEAL WAS LAPPED AND THE SET POINT WAS ADJUSTED TO 1400 PSIG. FAILURE WAS ATTRIBUTED TO SET POINT SHIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + DRESSEN 2 (DRI) + PRESSURE RELIEF + REFUELING + TEST, SYSTEM OPERABILITY + SHUTDOWN SYSTEM, SECURITY + SET POINT + SHIFT + VALVES

113773

PERSONNEL NOT EVALUATED PROPERLY DURING CONTROL AND MOVEMENT AT DRESSEN 2

COMMONWEALTH EUISEA CO., MAINE, IL

2 PUS, LTR N/AU 50-237/1970-25 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 13, 1970, JACKET 50-237, TYPE-BRM, MFU--UCL, AE--SUT & LUNOT

CAUSE - PROCEDURES VIOLATED. DURING FUEL LOADING, ALL PERSONNEL WERE NOT EVALUATED FROM WITHIN LINE-OF-SIGHT OF THE REACTOR VESSEL SAID FOR CONTROL AND EXERCISING VIOLATING EXISTING PROCEDURES. PERSONNEL NOT DIRECTLY INVOLVED IN FUEL HANDLING WERE NOT INSTRUCTED TO EVALUATE THE AREA. THEY WERE INFORMED OF THE UPCOMING TEST. THE IMPORTANCE OF ADHERING TO PROCEDURES WILL BE REEMPHASIZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + PROCEDURES AND MANUALS + TESTING + DRESSEN 2 (DRI) + RADIATION SAFETY AND CONTROL + REFUELING + CONTROL AIDS

113970

CONTROL AND DRIVE INTERLOCK FAILS AT DRESSEN 2

COMMONWEALTH EUISEA CO., MAINE, IL

2 PUS, LTR N/AU 50-237/1970-26 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 14, 1970, JACKET 50-237, TYPE-BRM, MFU--UCL, AE--SUT & LUNOT

CAUSE - DEFECTIVE PHASE BUFFER CARD. DURING THE REFUELING INTERLOCK CHECKS, CRU20-35 EXHIBITED A CONTINUOUS MALFUNCTION IRRESPECTIVE OF ROD POSITION. WHEN THE ROD WAS PULLED TO POSITION 02 AND AUTOMAT WAS SELECTED, THE PERMISSIVE LIGHT WAS OBSERVED ONCE. JUDAL ALUM SIMULTANEOUS WITHDRAWAL OF MORE THAN 1 CRU. THE CRU WAS INSERTED AND ELECTRICALLY DISARMED. CHIP W-33 ON THE CRU PHASE BUFFER CARD WAS DEFECTIVE. THE CARD WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

JUDAL STATE DEVICE + INSTRUMENT, INTERLOCK + REACTOR CONTROL + FAILURE, INSTRUMENT + DRESSEN 2 (DRI) + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, INHERENT + CONTROL AND AIDS

113977

SET POINT SHIFT IN DIFFERENTIAL PRESSURE SWITCH AT DRESSEN 2

COMMONWEALTH EUISEA CO., MAINE, IL

2 PUS, LTR N/AU 50-237/1970-26 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 14, 1970, JACKET 50-237, TYPE-BRM, MFU--UCL, AE--SUT & LUNOT

CAUSE - INSTRUMENT SHIFT. DURING THE REFUELING OUTAGE TESTING, THE ISOLATION CONDENSER LINE HIGH FLOW SWITCH WAS FOUND TO ACTIVATE AT 32.5 INCHES OF H₂O UP, WHICH EXCEEDS THE 32.0 INCH LIMIT. THE APPARENT CAUSE WAS INSTRUMENT SHIFT. THESE BARTON MODEL 400 DIFFERENTIAL PRESSURE SWITCHES TEND TO SHIFT DURING EXTENDED OUTAGES. THE SWITCH WAS RESET AT 27.5 INCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + DRESSEN 2 (DRI) + INSTRUMENT, SWITCH + REFUELING + TEST, SYSTEM OPERABILITY + FLOW + SET POINT + SHIFT + REL + SENSORS, PRESSURE

114171

JMC-ADD-PERMIT INTERLOCK FAILS AT DRESSEN 2

COMMONWEALTH EUISEA CO., MAINE, IL

2 PUS, LTR N/AU 50-237/1970-29 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 20, 1970, JACKET 50-237, TYPE-BRM, MFU--UCL, AE--SUT & LUNOT

CAUSE - BUFFER CIRCUIT CARD MALFUNCTION. BEFORE STARTING THE REFUELING OUTAGE FRICTION TESTING, AN ATTEMPT WAS MADE TO VERIFY ONE-ADD-PERMIT INTERLOCK. WHEN CRU A-Y WAS WITHDRAWN TO U2, THE ALL-RODS-IN RELAYS DID NOT ENERGIZE AS THEY SHOULD HAVE. IN THIS CONDITION ANOTHER CRU WOULD HAVE BEEN WITHDRAWN. A PHASE BUFFER CIRCUIT CARD IN THE MPS HAD MALFUNCTIONED. IT WAS REPLACED. TESTS WERE CONDUCTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

114171 CONTINUED

FAILURE, COMPONENT • INSTRUMENT, INTERLOCK • FAILURE, INSTRUMENT • UNDESIRABLE • TEST, SYSTEM OPERABILITY • FAILURE, IMMINENT • ELECTRONIC FUNCTION UNITS • CONTINUED AND UNRESOLVED

114200

SOGT TRAILER FLOWLINE REMOVAL EFFICIENCY BELOW LIMITS AT UNDESIRABLE 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR N/RO 50-237/1970-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 20, 1970, URGENT 50-237, TYPE--BWR, NRC--GEE, AE--SUT & LUNNY

CAUSE - HIGH USAGE. DURING TESTING WHILE THE REACTOR WAS SHUT DOWN FOR REFUELING, LABORATORY ANALYSIS SHOWED SOGT TRAILER A FLOWLINE REMOVAL EFFICIENCY TO BE 94.00%, WHICH IS BELOW THE 97.00% LIMIT. HIGH USAGE OF TRAILER APPARENTLY ACCELERATED THE NORMAL DEGRADATION OF THE CHARCOAL BED. THE FILTER MEDIA WAS REPLACED. ELAPSED-TIME METERS WERE INSTALLED ON SOGT TRAILERS WHICH WILL ALLOW EQUALIZATION OF OPERATING TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FLOWLINE • CHARCOAL ADSORBER • TEST, FILTER • UNDESIRABLE (BWR) • MODIFICATION • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, IMMINENT • STANDBY WAS TREATMENT

114443

SAFETY/RELIEF VALVE FAILS TO CLOSE AT CAESDEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR N/RO 50-237/1970-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 7, 1970, URGENT 50-237, TYPE--BWR, NRC--GEE, AE--SUT & LUNNY

CAUSE - EXCESSIVE LEAKAGE ON PILOT STAGES. DURING AUTOMATIC BLOWDOWN TESTING A SAFETY/RELIEF VALVE REMAINED OPEN CAUSING A CONTINUOUS BLOWDOWN COMMITMENT. DURING THE BLOWDOWN, TEMPERATURE EXCEEDED THE LIMIT. THE UNIT WAS MANUALLY SHUT DOWN FROM 156 POWER WHEN IT WAS DETERMINED THAT THE VALVE COULD NOT BE CLOSED. THERE WAS EXCESSIVE LEAKAGE ON THE PILOT STAGE OF THE VALVE. BOTH PILOT STAGE AND SECONDARY STAGE OF THE TARGENT MCCA MODEL 7307 VALVE WERE REPLACED TO PREVENT RECURRENCE. THE PILOT STAGE WILL BE LEAK-TESTED DURING THE ANNUAL REFUELING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • UNDESIRABLE (BWR) • OVERPRESSURE RELIEF • TEST, SYSTEM OPERABILITY • BLOWDOWN • MAIN LOOP IN SYSTEM • PRESSURE TRANSIENT • SYSTEM CAPACITY • REACTOR SHUTDOWN • VALVES • TUBES

114444

CHIMNEY SAMPLE VALVE INADVERTENTLY LEFT CLOSED AT UNDESIRABLE 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR N/RO 50-237/1970-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 9, 1970, URGENT 50-237, TYPE--BWR, NRC--GEE, AE--SUT & LUNNY

CAUSE - PERSONNEL ERROR. DURING ROUTINE COUNTING OF UNIT 2'S CHIMNEY SAMPLE CONTAINERS, IT WAS NOTED THAT FOR A 40 MIN PERIOD SAMPLE RESULTS WERE LOWER THAN USUAL. THE SAMPLE VALVE ON THE Suction SIDE OF THE SAMPLE PUMP HAD BEEN LEFT CLOSED WHILE FOLLOWING DAILY COUNTING OF THE SAMPLE CONTAINERS ON 2 DAYS. THE RAD-CHEM TECHNICIAN FAILED TO FOLLOW PROCEDURE TABLE. THE ERROR WAS NOT DISCOVERED IMMEDIATELY BECAUSE OF SIGNIFICANT AIR LEAKAGE INTO THE SYSTEM. THE TECHNICIAN WAS REPRIMANDED. LEAKS WERE SEALED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OPERATOR, STACK • PROCEDURES AND MANUALS • SAMPLING • UNDESIRABLE (BWR) • FAILURE, MAINTENANCE ERROR • FLOW BLOCKAGE

114446

DRIVE BRAKES ON CRANE SLOW SPEED MUST MALFUNCTIONS AT UNDESIRABLE 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR N/RO 50-237/1970-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 11, 1970, URGENT 50-237, TYPE--BWR, NRC--GEE, AE--SUT & LUNNY

CAUSE - BREAK RELEASE CONTACTOR UNDERSIZED. MALFUNCTION OF THE DRIVE BRAKES ON THE REACTOR BUILDING CRANE SPECIAL SLOW-SPEED MUST CAUSED THE REACTOR VESSEL HEAD TO SLIP VERTICALLY ABOUT 15 INCHES AS IT WAS BEING LOWERED INTO PLACE. AN ATTEMPT TO CONTINUE LOWERING RESULTED IN A SECOND 15 INCH DROP. OPERATIONS RESUMED USING THE NORMAL SPEED DRIVE. THE SLOW-SPEED MUST BRAKES WERE FULLY ENGAGING ONLY AFTER A DELAY OF 1-2 SECONDS. THE CONTACTOR FOR THE BRAKE RELEASE SOLENOIDS WAS UNDERSIZED, WHICH PERMITTED ARcing WHEN THE CONTACTS OPENED. APPROPRIATE MODIFICATIONS WILL BE MADE PRIOR TO USE OF THE SLOW-SPEED DRIVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • UNDESIRABLE (BWR) • MODIFICATION • REFUELING • FAILURE, DESIGN ERROR • CRANE

115003
LPCI AND CURE SPRAY TESTS NOT PERFORMED ON TIME AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
4 PUS, LTR N/AU 50-237/1970-34 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 10, 1970, DOCKET 50-237, TYPE--BWR, RFU--WGL, AE--SUT & LUNDY

CAUSE - SUPERVISION FAILED TO SCHEDULE. LPCI AND CURE SPRAY TESTS WERE NOT PERFORMED DURING THE MONTH FOLLOWING 6/3/70. THEY WERE COMPLETED ON 6/3/70. SUPERVISING PERSONNEL FAILED TO SCHEDULE THE TESTS DURING THE ALLOTTED TIME PERIOD. THE LPCI SUBSYSTEM HAD BEEN OPERATED SEVERAL TIMES DURING THIS PERIOD.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

LCI & SPRAY + TESTING + DRESSEN 2 (BWR) + FAILURE, ADMINISTRATIVE CONTROL + TEST INTERVAL + LPCI

115004
JUNIOR PENTAMOLATE SOLUTION LEAKS INTO REACTOR VESSEL AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
4 PUS, LTR N/AU 50-237/1970-34 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 10, 1970, DOCKET 50-237, TYPE--BWR, RFU--WGL, AE--SUT & LUNDY

CAUSE - PNEUMATIC DEFICIENCY. DURING SACC SYSTEM TESTING WITH THE UNIT IN THE REFUELING OUTAGE, TWO WALLS OF JUNIOR PENTAMOLATE SOLUTION LEAKED INTO THE REACTOR VESSEL. FOLLOWING TESTING OF THE EXPLOSIVE INJECTION VALVE AND THE INJECTION PUMPS AND PRIOR TO VALVING OUT THE INJECTION PUMP DISCHARGE, THE PUMP INLET FROM THE JUNIOR TANK WAS VALVED IN PER PROCEDURE. THIS ALLOWED JUNIOR SOLUTION TO UNRAIN FROM THE STORAGE TANK THROUGH THE PUMP INTO THE REACTOR VESSEL. VESSEL WATER WAS DISCHARGED TO THE WASTE SYSTEM. CLEANUP DEMINERALIZERS REDUCED THE CONCENTRATION TO ACCEPTABLE LEVELS WITHIN 8 DAYS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OUTAGE + PROCEDURES AND MANUALS + REACTOR COOLANT + DRESSEN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + PNEUMATIC SYSTEM, SECONDARY + FAILURE, ADMINISTRATIVE CONTROL + COOLANT PURIFICATION SYSTEM + COOLANT QUALITY + PLEAK + PRESSURE VESSELS

115510
DIESEL GENERATION FAILS TO START AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
4 PUS, LTR N/AU 50-237/1970-33 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 22, 1970, DOCKET 50-237, TYPE--BWR, RFU--WGL, AE--SUT & LUNDY

CAUSE - UNKNOWN. DURING A TEST WITH THE UNIT SHUT DOWN FOR REFUELING, DIESEL GENERATION 2/3 FAILED TO START ON THE FIRST ATTEMPT. IT WAS SUCCESSFULLY STARTED IMMEDIATELY FOLLOWING THE FAILURE. THE CAUSE COULD NOT BE DETERMINED. AN OPERATOR REPORTED THAT THE DIESEL OIL NOT TURN OVER, WHICH INDICATED A PROBLEM IN THE AIR START SYSTEM. IT IS POSTULATED THAT SOME FUEL OIL WATER ORIGINATING DURING REPLACEMENT OF RUSTING HOSES MAY HAVE TEMPORARILY BLOCKED THE AIR START SEQUENCE BEFORE BEING DISCHARGED FROM THE SYSTEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY PUMP, ELECTRIC + FAILURE, EQUIPMENT + DRESSEN 2 (BWR) + REFUELING + TEST, SYSTEM OPERABILITY + PNEUMATIC SYSTEM + RUSTING, INTERNAL CORROSION + GENERATION, DIESEL

115517
NITROGEN STORAGE TANK LEVEL DROPS BELOW LIMIT AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
4 PUS, LTR N/AU 50-237/1970-33 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 24, 1970, DOCKET 50-237, TYPE--BWR, RFU--WGL, AE--SUT & LUNDY

CAUSE - UNANTICIPATED DELAY IN DELIVERY. DURING DAYWELL INSERTING WITH THE REACTOR AT 25% POWER, THE NITROGEN STORAGE TANK LEVEL DROPPED TO 54 INCHES AND REMAINED BELOW THE 60 INCH LEVEL FOR ABOUT 2 HOURS BEFORE ADDITIONAL NITROGEN WAS DELIVERED. THIS WAS CAUSED BY AN UNANTICIPATED DELAY IN THE DELIVERY OF THE NITROGEN. IN ORDER TO MAINTAIN THE REQUIRED LESS THAN 4% OXYGEN CONCENTRATION AND THE TORUS/DAYWELL 1 PSI OP, THE LEVEL WAS ALLOWED TO TEMPORARILY DROP BELOW THE LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TRANSPORTATION AND HANDLING + NITROGEN + DRESSEN 2 (BWR) + STORAGE CONTAINER + FAILURE, ADMINISTRATIVE CONTROL + CONTAINMENT ATMOSPHERE + SYSTEM CAPACITY

110077
UPDATE REPORT ON DOLL ISOLATION CHECK VALVE LEAKAGE AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL

115077 CONTINUOUS
2 PGS, LTR W/AD 50-237/1970-17 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 25, 1970, JUNE 25-237, TYPE--BWR, MW--660, AE--SGT & LUNNY

CASE - LEAK ON VALVE SEAT. AS REPORTED EARLIER, DURING LOCAL LEAK RATE TESTING WHILE THE REACTOR WAS SHUT DOWN FOR REPAIRING, A STANDBY CLOUTIER ISOLATION CHECK VALVE EXCEEDED THE 4700 SCFM LIMIT WITH A LEAKAGE OF 43079 SCFM. WHEN THE SYSTEM WOULD BE REMOVED FROM SERVICE, LOCAL GENERALIZED WATER WAS RUN THROUGH THE LINE. A RETEST YIELDED A SATISFACTORY LEAK RATE OF 2000 SCFM. THE INITIAL FAILURE WAS APPARENTLY CAUSED BY SOME SLIGHT LEAK OUT-OF-UP ON THE VALVE SEAT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * TEST, LEAK RATE * LEAK * DRESSEN 2 (BWR) * REFUELING * TEST, SYSTEM OPERABILITY * SHUTDOWN SYSTEM, SECONDARY * LEAK RATE * OVALVE, CHECK * FAILURE, IMMINENT

115736
SET POINT DRIFT IN REACTOR HIGH PRESSURE SCRAM SWITCH AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/AD 50-237/1970-42 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 28, 1970, JUNE 28-237, TYPE--BWR, MW--660, AE--SGT & LUNNY

CASE - INSTRUMENT DRIFT. DURING TESTING WITH THE UNIT AT 726 POWER, REACTOR HIGH PRESSURE SCRAM SWITCH PS2-202-55A WAS FOUND TO ACTUATE AT 1072 PSIG, OR 2 PSI ABOVE THE LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE RELAYING MODEL 372-055-49A GUMMUM TUBE TYPE PRESSURE SENSOR WAS RESET TO 1054 PSIG. A REDUNDANT SWITCH WAS ALSO FOUND AT 1072 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * DRESSEN 2 (BWR) * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * SENSORS, PRESSURE

115731
SET POINT DRIFT IN REACTOR HIGH PRESSURE SCRAM SWITCH AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/AD 50-237/1970-41 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 29, 1970, JUNE 29-237, TYPE--BWR, MW--660, AE--SGT & LUNNY

CASE - INSTRUMENT DRIFT. DURING TESTING WITH THE UNIT AT 726 POWER, REACTOR HIGH PRESSURE SCRAM SWITCH PS2-202-55C WAS FOUND TO ACTUATE AT 1072 PSIG, OR 2 PSI ABOVE THE LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE RELAYING MODEL 372-055-49A GUMMUM TUBE TYPE PRESSURE SENSOR WAS RESET TO 1054 PSIG. A REDUNDANT SWITCH WAS ALSO FOUND AT 1072 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * DRESSEN 2 (BWR) * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * SENSORS, PRESSURE

116904
UPDATE REPORT ON FEEWATER ISOLATION CHECK VALVES LEAKAGE AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
1 PG, RPT TO NRC DIRECTOR OF REGULATORY OPERATIONS, REGION III, JUNE 29, 1970, JUNE 29-237, TYPE--BWR, MW--660, AE--SGT & LUNNY

CASE - EXCESSIVE DISC-TO-SEAT CLEARANCES. AS REPORTED EARLIER, DURING A REFUELING OUTAGE LOCAL LEAK RATE TEST, 2 FEEWATER ISOLATION CHECK VALVES EXCEEDED THE 4700 SCFM LIMIT. BOTH VALVES EXHIBITED EXCESSIVE DISC-TO-SEAT CLEARANCES. THE O-RING SEATING AREAS WERE LAPPED AND THE SEAL RING AREAS WERE HONED. THE SEAT RING AND O-RING ASSEMBLIES WERE REPLACED ON BOTH VALVES. ANOTHER LRT WAS PERFORMED WITH SATISFACTORY RESULTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * CONTAINMENT ISOLATION * TEST, LEAK RATE * DRESSEN 2 (BWR) * REFUELING * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * MAIN COOLING SYSTEM * LEAK RATE * OVALVE, CHECK * PREVENTION

115732
OFF GAS SYSTEM OVERPRESSURIZED AT DRESSEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/AD 50-237/1970-40 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 2, 1970, JUNE 30-237, TYPE--BWR, MW--660, AE--SGT & LUNNY

CASE - PROBABLY A HYDROGEN EXPLOSION. DURING STEADY STATE OPERATION AT 726 POWER, SDA 2A FLOW DROPPED TO ZERO. WHILE INVESTIGATING, PERSONNEL HEARD A THUD WHICH WAS THOUGHT TO BE AN EXPLOSION. AN IMMEDIATE LEAD REDUCTION WAS INITIATED. RUPTURE DISCS IN BOTH SDA'S WERE FOUND FAILED. THE OFF GAS FILTER WAS FOUND TO BE ACCEPTABLE. THE CAUSE OF OVERPRESSURIZATION HAS NOT BEEN DETERMINED. RUPTURE DISC FAILURE PROBABLY RESULTED FROM A HYDROGEN EXPLOSION IN THE OFF GAS

115734 OUGHTANGEUO

SYSTEM. THIS IS THE FIRST TO OCCUR DURING STEADY STATE OPERATION WITH THE REACTOR SYSTEM IN SERVICE AND NO VALVING IN PROGRESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + REAPLUSHA + OBTULCEA + INSTRUMENT, PROTECTIVE + WRESUEN 2 (000) + OFF WAS + PRESSURE TRANSIST

115733

SET POINT DRIFT IN RPS PRESSURE SWITCH AT WRESUEN 2

COMMUNHEALTH EUSICH CO., MORRIS, IL

2 PUS, LTR WNU 50-237/1970-37 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 6, 1970, DCLRET 50-237, TYPE--000, RW--000, AE--SUT & LUNOT

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE OPERATING AT 20% POWER, A RPS 000 PSI BYPASS PRESSURE SWITCH ACTUATED AT 000 PSI. THE TECH SPEC LIMIT IS LESS THAN 000 PSI. THE CAUSE WAS INSTRUMENT DRIFT. THE SWITCH WAS ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + WRESUEN 2 (000) + OINSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + OSET POINT + ODRIFT + SENSORS, PRESSURE

115930

UPDATE REPORT ON ISOLATION CONDENSER SAFE-END CRACK AT WRESUEN 2

COMMUNHEALTH EUSICH CO., MORRIS, IL

3 PUS, LTR WNU 50-237/1970-26 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 14, 1970, DCLRET 50-237, TYPE--000, RW--000, AE--SUT & LUNOT

CAUSE - STRESS CRACKING IN HEAT AFFECTED ZONE. AS REPORTED EARLIER, A REPAIRING OUTAGE INSERVICE INSPECTION OF THE ISOLATION CONDENSER SAFE-END REVEALED AN UNACCEPTABLE ULTRASONIC INDICATION. THE SAFE-END (WHICH WAS SA-104 316L STAINLESS STEEL) WAS REPLACED WITH ONE FORGED FROM SA-102 316L STAINLESS STEEL. METALLOGRAPHIC EXAMINATION OF THE DEFECTIVE SAFE-END REVEALED A CIRCUMFERENTIALLY-ORIENTED CRACK AND A AXIALLY-ORIENTED CRACK. THE CRACKS RAN FROM 0.255 TO 0.360 INCHES. THE MECHANISM OF CRACKING IS THE SAME AS THAT EXPERIENCED IN MPC1 SAFE-END. THE 10-INCH CONE SPRAY PIPING, AND THE 4-INCH RELICULATION BYPASS PIPING, AT AND BEEN FURNACE-SENSITIZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE + METAL + STEEL, STAINLESS + WRESUEN 2 (000) + MATERIAL + MODIFICATION + FAILURE, DESIGN ERROR + DAMAGE + HEAT TREATMENT + ULTRASONICS + RCIC + OCAACA + OPIES AND PIPE FITTINGS + INSERVICE INSPECTION

115771

SET POINT DRIFT IN LPCI PRESSURE SWITCH AT WRESUEN 2

COMMUNHEALTH EUSICH CO., MORRIS, IL

2 PUS, LTR WNU 50-237/1970-44 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 16, 1970, DCLRET 50-237, TYPE--000, RW--000, AE--SUT & LUNOT

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE OPERATING AT 90% POWER, A LPCI PERMISSIVE PRESSURE SWITCH WAS FOUND TO ACTUATE AT 307 PSI, EXCEEDING THE UPPER LIMIT OF 300 PSI. THE CAUSE WAS INSTRUMENT DRIFT. THE METALIN INSTRUMENT COMP., MODEL 374, BOURNOM TUBE-TYPE PRESSURE WAS RESET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + WRESUEN 2 (000) + OINSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + OSET POINT + ODRIFT + FAILURE, INHERENT + SENSORS, PRESSURE + LPCI

115997

SET POINT DRIFT IN HIGH REACTOR PRESSURE SWITCH AT WRESUEN 2

COMMUNHEALTH EUSICH CO., MORRIS, IL

2 PUS, LTR WNU 50-237/1970-45 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 19, 1970, DCLRET 50-237, TYPE--000, RW--000, AE--SUT & LUNOT

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 90% POWER, A SUSTAINED HIGH REACTOR PRESSURE SWITCH WAS FOUND TO ACTUATE AT 307 PSI ABOVE THE 1070 PSI LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE METALIN MODEL 374 BOURNOM TUBE-TYPE PRESSURE SWITCH WAS IMMEDIATELY RESET TO TRIP AT THE CORRECT SET POINT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + WRESUEN 2 (000) + OINSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + OSET POINT + ODRIFT + FAILURE, INHERENT + SENSORS, PRESSURE

115096

INSTRUMENT INDICATING LINE PENETRATED AT DRESOEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS, LTR WAO 50-237/1970-43 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 17, 1970, UNCLAS
50-237, TYPE--OHR, RPO--WEL, AE--SUT & LUNNY

CAUSE - CONTRACTOR ERROR. LURING CAME DURING FILL HIGH ENERGY LINE SUPPORTS IN THE AREA OF THE REACTOR FUEL PUMPS. THE 2 1/2 IN CONTAMINATED CONDENSATE STORAGE TANK LEVEL INDICATING LINE WAS PENETRATED. THE LINE WAS IMMEDIATELY ISOLATED. ISOLATION CAUSED 2 LEVEL SWITCHES TO INDICATE ZERO WHICH SWITCHED MPC1 SUCTION FROM THE STORAGE TANK TO THE TOWNS CO MAIN UNIT. LEAKAGE WAS MONITORED BY THE REACTOR BUILDING FLOOD DRAIN SYSTEM. THE CONTRACTOR SUBSEQUENTLY INTERPRETED THE DESIGN DRAWING AND BEGAN CORRECTION DURING THE SAME LOCATION. THE REACTOR WAS AT THE PUMP. THE LINE WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

COMPENSATION - DRESOEN 2 (OHR) - MODIFICATION - STORAGE CONTAINER - FAILURE, INSTALLATION ERROR - PIPES AND PIPE FITTINGS - SENSORS, LEVEL

115093

SET POINT DRIFT IN HIGH REACTOR PRESSURE SWITCH AT DRESOEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS, LTR WAO 50-237/1970-41 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 20, 1970, UNCLAS
50-237, TYPE--OHR, RPO--WEL, AE--SUT & LUNNY

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE OPERATING AT THE PUMP, A SUSTAINED HIGH REACTOR PRESSURE SWITCH WAS FOUND TO ACTUATE 0 PSI ABOVE THE 1370 PSIG LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE REACTOR MODEL 374 BOURNEMAN TUBE-TYPE PRESSURE SWITCH WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM - INSTRUMENT CALIBRATION - FAILURE, INSTRUMENT - DRESOEN 2 (OHR) - INSTRUMENT, SWITCH - TEST, SYSTEM OPERABILITY - SET POINT - DRIFT - FAILURE, INSTRUMENT - SENSORS, PRESSURE

115098

LPCI PUMP FAILS TO START AT DRESOEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR WAO 50-237/1970-47 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 20, 1970, UNCLAS
50-237, TYPE--OHR, RPO--WEL, AE--SUT & LUNNY

CAUSE - DIRTY CONTACTS IN MAIN BREAKER. DURING A ROUTINE SHUTDOWN OPERATION, LPC1 PUMP 2L FAILED TO START FOR USE IN MAINTAINING TOWNS WATER TEMPERATURE REQUIREMENTS. A 300-TYPE SWITCH CONTAINING THE PUMP'S MAIN AND BREAKER'S AUXILIARY CONTACTS WAS FOUND TO BE DIRTY. THE CONTACTS WERE CLEANED AND THE PUMP TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT - CAUSE - DRESOEN 2 (OHR) - INSTRUMENT, SWITCH - FAILURE, MAINTENANCE ERROR - BREAKER - PUMPS - LPC1

110270

APRM CHANNEL INDICATION DRIPS AT DRESOEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR WAO 50-237/1970-40 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 20, 1970, UNCLAS
50-237, TYPE--OHR, RPO--WEL, AE--SUT & LUNNY

CAUSE - LOOSE WIRE. DURING STRAIGHT OPERATION AT 50% POWER, APRM CHANNEL 5 INDICATION DRIPPED FROM 50% TO 38%. HEAT BALANCE CALCULATION VERIFIED THE INDICATED POWER DROP ON THE CHANNEL. THE CALCULATION ALSO INDICATED THAT THE AVERAGE GAIN ADJUSTMENT FACTOR HAD DRIFTED TO 1.000 (PROCEDURAL LIMIT -1.021 FOR CHANNEL 5). CHANNEL 5 GAIN WAS ADJUSTED TO WITHIN 2% AS REQUIRED. INDICATION ON CHANNEL 5 SUDDENLY RETURNED TO NORMAL WHEN THE PAGE WAS OPENED USING TROUBLESHOOTING. INVESTIGATION FOUND A BROKEN LEAD ON A DC AMPLIFIER CONNECTION. THIS WAS DUE TO A POORLY SOLDERED CONNECTION MADE DURING INITIAL INSTALLATION. IT WAS RESOLDERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM - DRESOEN 2 (OHR) - FAILURE, INSTALLATION ERROR - INSTRUMENT, ABNORMAL INDICATION - INSTRUMENT, POWER RANGE - CABLES AND CONNECTIONS

110530

DIESEL GENERATOR COOLING WATER PUMP BREAKER FOUND TRIPPED AT DRESOEN 2
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR WAO 50-237/1970-50 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, AUG 9, 1970, UNCLAS
50-237, TYPE--OHR, RPO--WEL, AE--SUT & LUNNY

110530 CONTINUED

CAUSE - HIGH TEMPERATURE IN BREAKER LOGICAL. DURING AN INSPECTION WHILE OPERATING AT 958 PUMER, THE DIESEL GENERATOR COOLING WATER PUMP BREAKER WAS FOUND IN THE TRIPPED CONDITION. THE PUMP HAD BEEN OPERATING IN THE MANUAL MODE FOR SEVERAL DAYS FOR MPLI AND LPLI ROOM COOLING. THE TRIP WAS APPARENTLY CAUSED BY EXCESSIVE TEMPERATURE IN THE BREAKER LOGICAL. THE RESULT OF EXTENDED PUMP OPERATION WITH A HIGH AMBIENT TEMPERATURE. THE BREAKER WAS RESET AND THE PUMP WAS MANUALLY STARTED. LOGGERS HAVE BEEN ADDED TO THE APPROPRIATE MOTOR CONTROL CENTER LOGS FOR COOLING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

FAILURE, EQUIPMENT + UNDESIRABLE (DNR) + BEHAVIOR, SEVERE + COOLING + TEMPERATURE + FAILURE, IMMINENT + OBTAINED + PUMPS + GENERATOR, DIESEL

110531

CORE SPRAY VALVE FAILS TO OPEN AT UNDESIRABLE

COMMUNHEALTH EDISON CO., MORRIS, IL

3 PAGES, LTR NRC 50-237/1976-55 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, AUG. 9, 1976, DCKET 50-237, TYPE--DNR, MFU--UC, AC--SUT & LUNDY

CAUSE - BREAKER LIMIT SWITCH CONTACT BLOCK. DURING CORE SPRAY SYSTEM VALVE OPERABILITY TESTING WITH THE REACTOR AT 958 PUMER, AN OUTBOARD INJECTION VALVE LAST OPEN/CLOSED INDICATION AND COULD NOT BE ELECTRICALLY RESPONDED. A LIMIT SWITCH CONTACT BLOCK IN THE VALVE OPERATION WAS OBSERVED. BEFORE INSTALLATION OF THE ECCS JACKET PUMP CHANGING SYSTEM, INADEQUATE SYSTEM VENTING CAUSED SEVERAL WATER HAMMER INCIDENTS DURING TESTS. IT IS THOUGHT THAT THE SWITCH BLOCKS WERE JAMMED TO THE POINT OF CHIPPING AND FAILED AFTER SUBSEQUENT VALVE CYCLES. THE FAILED BLOCKS WERE REPLACED AND THE VALVE RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

CORE SPRAY + FAILURE, EQUIPMENT + HYDRAULIC EFFECT + UNDESIRABLE (DNR) + TEST, SYSTEM OPERABILITY + FAILURE, IMMINENT + VALVE OPERATIONS + VALVES

110891

MAPLEHURD LIMITS ARE NOT CONSERVATIVE FOR LOW CORE FLOW RATES AT UNDESIRABLE

COMMUNHEALTH EDISON CO., MORRIS, IL

3 PAGES, LTR NRC 50-237/1976-55 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, AUG. 17, 1976, DCKET 50-237, TYPE--DNR, MFU--UC, AC--SUT & LUNDY

CAUSE - DEFICIENCY IN ANALYSIS MODEL. FORMAL NOTIFICATION WAS RECEIVED FROM US ADVISING THAT, IN LIGHT OF RECENTLY COMPLETED LOW-FLOW ECCS ANALYSIS, THE CURRENT MAXIMUM AVERAGE PLANAAR LINEAR PEAK GENERATION RATE LIMITS MAY NO LONGER BE CONSIDERED TO BE SUFFICIENTLY CONSERVATIVE AT LOW CORE FLOW RATES. WE RECOMMEND THAT THE MAPLEHURD BE REDUCED BY 58 FOR CORE FLOW RATES OF 858 OR LESS. THE PROBLEM IS CONSIDERED TO BE IN THE PRESENT ANALYSIS MODEL USED IN COMPUTER CODES FOR ECCS ANALYSIS. WE IS RE-EVALUATING THE MODELS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

COMPUTER PROGRAM + ANALYTICAL MODEL + PHOT CHANNEL ANALYSIS + UNDESIRABLE (DNR) + FAILURE, DESIGN ERROR + EMERGENCY COOLING + MAIN COOLING SYSTEM + FLOW

117170

SET POINT SHIFT IN DRYWELL PRESSURE SWITCH AT UNDESIRABLE

COMMUNHEALTH EDISON CO., MORRIS, IL

3 PAGES, LTR NRC 50-237/1976-55 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, AUG. 24, 1976, DCKET 50-237, TYPE--DNR, MFU--UC, AC--SUT & LUNDY

CAUSE - UNKNOWN. DURING TESTING OF THE DRYWELL HIGH PRESSURE ECCS INITIATION SWITCHES WHILE OPERATING AT 958 PUMER, 1 OF THE 4 STATIC-J-RING, MODEL 12M-445, PRESSURE SWITCHES WAS FOUND TO ACTUATE AT 2004 PSI, EXCEEDING THE 2000 PSI UPPER LIMIT. IT WAS ADJUSTED TO 1994 PSI. IT IS NOT KNOWN WHETHER THE FAILURE WAS CAUSED BY SET POINT SHIFT OR BY MECHANICAL ERROR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

CONTINUED + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + UNDESIRABLE (DNR) + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + EMERGENCY COOLING SYSTEM + UNIT + SENSORS, PRESSURE

117150

DIESEL FIRE PUMP FAILS TO START AT UNDESIRABLE

COMMUNHEALTH EDISON CO., MORRIS, IL

3 PAGES, LTR NRC 50-237/1976-55 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, AUG. 25, 1976, DCKET 50-237, TYPE--DNR, MFU--UC, AC--SUT & LUNDY

CAUSE - DEFECTIVE SHUTOFF SOLENOID VALVE. DURING TESTING WITH THE REACTOR AT 958 PUMER, THE UNIT 2/3 DIESEL FIRE PUMP FAILED TO START. UNIT 2 PUMP AUTOMATICALLY STARTED IN RESPONSE TO LOW FIRE MAIN PRESSURE. FAILURE RESULTED FROM A DEFECTIVE SHUTOFF SOLENOID VALVE. IT FAILED IN THE

117154 OUNTINUED

CLOSED POSITION, BLOCKING FUEL FLOW TO THE ENGINE. THE VALVE WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * DRESSEN 2 (BWR) * TEST, SYSTEM OPERABILITY * FIRE PROTECTION * FAILURE, INHERENT * SCHEMATIC * PUMPS * VALVES * ENGINES, INTERNAL COMBUSTION

117976

FLOW RATE IN STANDBY GAS TRAIN LESS THAN LIMIT AT DRESSEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR NRD 50-237/1976-55 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, SEPT. 13, 1976, SUBJECT 50-237, TYPE--BWR, NRC--GEE, AE--SGT & LUNNY

CAUSE - CLOGGED PRE-MEPA FILTER. DURING POST-MAINTENANCE SURVEILLANCE TEST ON STANDBY GAS TRAIN A WHILE OPERATING AT 90% POWER, THE MAXIMUM ATTAINABLE FLOW WAS 3750 CFM WHICH IS BELOW THE TEST SPEC LIMIT OF 4000 CFM. PRESSURE DROP ACROSS THE PRE-MEPA FILTER WAS 2.3 INCHES H₂O. THE FILTER WAS CLOGGED WITH DIRT. IT WAS REPLACED. SYSTEM FLOW RETURNED TO 6000 CFM. PRESSURE-TEMP READINGS ON TRAIN B INDICATED THAT THE PRE-MEPA FILTER WAS ALSO BECOMING CLOGGED WITH DIRT. HOWEVER, FLOW REMAINED ABOVE LIMITS. THE FILTER WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * FILTER, HIGH EFFICIENCY * DRESSEN 2 (BWR) * TEST, SYSTEM OPERABILITY * FLOW * FAILURE, INHERENT * STANDBY GAS TREATMENT

118186

SET POINT DRIFT IN REACTOR WATER LEVEL INSTRUMENT AT DRESSEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR NRD 50-237/1976-57 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, SEPT. 20, 1976, SUBJECT 50-237, TYPE--BWR, NRC--GEE, AE--SGT & LUNNY

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE REACTOR WATER LEVEL INSTRUMENTS WHILE THE UNIT WAS SHUT DOWN, THE TRIP POINT FOR ISOLATION FOR 1 SWITCH WAS FOUND AT 112.8 INCHES WATER UP. THIS EXCEEDS THE 114.3 INCH LIMIT. FAILURE WAS DUE TO INSTRUMENT DRIFT. THE TARRANT CORP., MODEL 4410C, LEVEL SENSOR WAS ADJUSTED TO WITHIN THE STATION SET POINT BAND WHICH HAS PREVENTED FURTHER IN PREVENTING SET POINT VARIATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * DRESSEN 2 (BWR) * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * FAILURE, INHERENT * SENSOR, LEVEL

118187

CORE SPRAY SYSTEM TEST VALVE FAILS TO CLOSE AT DRESSEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR NRD 50-237/1976-58 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, SEPT. 23, 1976, SUBJECT 50-237, TYPE--BWR, NRC--GEE, AE--SGT & LUNNY

CAUSE - INADEQUATE LUBRICATION OF STEM. DURING PUMP OPERABILITY TESTING WITH THE REACTOR AT 70% POWER, A CORE SPRAY SYSTEM TEST VALVE FAILED TO CLOSE AGAINST PUMP PRESSURE. THE VALVE CLOSED SATISFACTORILY AFTER THE PUMP WAS SECURED. FAILURE WAS APPARENTLY CAUSED BY INADEQUATE LUBRICATION OF THE VALVE STEM. THE VALVE STEM WAS LUBRICATED AND THE VALVE OPERATED SUCCESSFULLY 4 TIMES AGAINST SYSTEM PRESSURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY * FAILURE, EQUIPMENT * TESTING * DRESSEN 2 (BWR) * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * LUBRICATION * VALVES

118429

NPCT TEST RETURN LINE LEAKS AT DRESSEN 2

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS, LTR NRD 50-237/1976-60 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 5, 1976, SUBJECT 50-249, TYPE--BWR, NRC--GEE, AE--SGT & LUNNY

CAUSE - EXTERNAL CORROSION. WHILE OPERATING AT 75% POWER, A SMALL HOLE WAS DISCOVERED IN NPCT 2/3 TEST RETURN LINE AT COMPENSATE STORAGE TANK 6. THIS LINE IS NORMALLY ISOLATED EXCEPT WHEN USED FOR FLOW TESTING. AT SOME INDETERMINATE TIME, THE PIPE INSULATION WAS APPARENTLY ROTTEN CAUSING CARBIDES TO LEACH OUT OF THE LAGGING. THIS ACCELERATED EXTERNAL CORROSION OF THE PIPE. THE 1/4 INCH DIAMETER AFFECTED AREA WAS TEMPORARILY REPAIRED. THIS SECTION OF LINE WILL BE REPLACED AND FITTED WITH A DIFFERENT TYPE OF INSULATION AS SOON AS PRACTICABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

110427 - CONTINUED
FAILURE, PIPE + TESTING + CORROSION + DRESDEN 2 (BOR) + FAILURE, DESIGN ERROR + THERMAL INSULATION + LEAK +
PIPES AND PIPE FITTINGS + MPI

110799
MPI TEST RETURN LINE LEAKS AT DRESDEN 2
COMMUNHEALTH DISCH CO., MCKINIS, IL
+ PWS, LTR N/AU 50-237/1970-02 TO NAL DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 14, 1970, DUCRET
50-237, TYPE-BOR, MFG--GEC, AC--SUT & LUNNY

CAUSE - PLUMBLY MADE BELLO. DURING TESTING OF THE MPI TEST RETURN LINE, WHICH WAS SUSPECTED TO BE
LEAKING, IT WAS FOUND THAT CONTAMINATED SEMI-MINERALIZED WATER WAS LEAKING FROM THE UNDERGROUND PIPE
INTO THE STORM SEWER. THE RETURN LINE WAS IMMEDIATELY ISOLATED. INTERNAL EXAMINATION WITH A TV
LARENA LOCATED A POORLY MADE WELD LOCATED JUST OUTSIDE THE BUILDING. SINCE THE LEAK IS LOCATED
BELOW THE AIR/WATER STORM AREA, THE RETURN LINE WILL BE REMOVED TO FACILITATE REPAIRS.

AVAILABILITY - NAL PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, PIPE + TESTING + LOSS + DRESDEN 2 (BOR) + FAILURE, FABRICATION ERROR + TEST, SYSTEM OPERABILITY +
LEAK + TEST, LEAK + PIPES AND PIPE FITTINGS + MPI

119513
STALK WAS SAMPLE PUMP FLOWS ABNORMALLY LOW AT DRESDEN 2
COMMUNHEALTH DISCH CO., MCKINIS, IL
+ PWS, LTR N/AU 50-237/1970-03 TO NAL DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 2, 1970, DUCRET 50-
237, TYPE-BOR, MFG--GEC, AC--SUT & LUNNY

CAUSE - VALVING LEAKS/PLUGGED FILTER. DURING 974 PPM OPERATION, STALK WAS SAMPLE FLOWS WERE
FOUND TO BE ABNORMALLY LOW. PUMP A FLOW WAS 2.0 SCFM, PUMP B FLOW WAS 3 SCFM. NORMAL FLOW IS
GREATER THAN 2.0 SCFM. MANUAL DEAN PRODUCTS FROM THE CARBON IMPERMEABLE VAMES COLLECTED IN THE
SAMPLE LINES, PUMP CAVITY, AND FILTER OF PUMP A, RESULTING IN REDUCED PUMP EFFICIENCY AND FLOW.
THE PUMP AND Suction FILTER WERE REPLACED. THE ZERO-FLOW OF PUMP B WAS CAUSED BY AN IMPROPER
VALVE LINEUP. THE VALVING ERROR WAS CORRECTED.

AVAILABILITY - NAL PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT + FAILURE, OPERATION ERROR + MONITOR, STALK + SAMPLING + STALK + DRESDEN 2 (BOR) + FLOW
DRAINAGE + FLOW + ANALYTICAL MONITORS + FILTERS

119810
MAYNELL SPRAY VALVE FAILS TO OPEN AT DRESDEN 2
COMMUNHEALTH DISCH CO., MCKINIS, IL
+ PWS, LTR N/AU 50-249/1970-02 TO NAL DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 10, 1970, DUCRET
50-249, TYPE-BOR, MFG--GEC, AC--SUT & LUNNY

CAUSE - LOOSE TERMINAL. DURING VALVE OPERABILITY TESTING OF THE MAYNELL SPRAY SYSTEM WHILE THE
UNIT WAS SHUT DOWN FOR REFUELING, MOTOR-OPERATED VALVE 5-1501-27A FAILED TO OPEN. IT WAS
IMMEDIATELY OPENED MANUALLY. THE CRANE 10-INCH 3/4 A A GATE VALVE FAILED BECAUSE OF A LOOSE
TERMINAL IN THE CONTROL CIRCUITRY. ALL ASSOCIATED TERMINALS FOR THE VALVE WERE TIGHTENED.

AVAILABILITY - NAL PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

DRESDEN 2 (BOR) + VALVES + OCCUPANCY SPRAY + TEST, SYSTEM OPERABILITY + FAILURE, EQUIPMENT + FAILURE,
MAINTENANCE ERROR + REFUELING + CABLES AND CONNECTORS

120227
MPI FLOW IN CLOSED POSITION WITH SEVERED VALVE STEM AT DRESDEN 2
COMMUNHEALTH DISCH CO., MCKINIS, IL
+ PWS, LTR N/AU 50-237/1970-00 TO NAL DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 20, 1970, DUCRET
50-237, TYPE-BOR, MFG--GEC, AC--SUT & LUNNY

CAUSE - UNKNOWN. DURING A MAINTENANCE OUTAGE, MPI INJECTION VALVE PUL-2301-B WAS FOUND TO BE IN
THE CLOSED POSITION WITH ITS VALVE STEM SEVERED. THE VALVE HAD BEEN TAKEN OUT OF SERVICE IN THE
OPEN POSITION SIMILARLY. THE CAUSE CANNOT BE DEFINITELY DETERMINED. SEVERAL INCHES OF WATER
WERE FOUND IN THE MOTOR OPERATOR WHICH CAUSED THE 250 V DC SYSTEM GROUND. THE WATER LEAKED IN
THROUGH CONTROL CIRCUITRY CABLE WHICH WAS ADEQUATELY SEALED. THIS WOULD HAVE CAUSED A TORQUE
SWITCH MALFUNCTION. ALSO, A CONTROL CIRCUIT DEFICIENCY CAUSED EXCESS CYCLING OF THE VALVE DURING
REFUELING. THE VALVE OPERATION WAS OVERSIZED WHICH COULD CAUSE FATIGUE FAILURE FROM CYCLING.

AVAILABILITY - NAL PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

VALVES + MPI + FAILURE, EQUIPMENT + FAILURE, DESIGN ERROR + FAILURE, FATIGUE + VALVE OPERATION + DRESDEN 2
(BOR)

120626
DIESEL GENERATOR FAILS TO START AT DRESSEN 2
COMMONWEALTH Edison CO., MORRIS, IL
3 PGS, LTR WRO 50-237/1970-04 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 26, 1970, UCCRET
50-237, TYPE--DRA, RF--G.E., AE--SGT & LUNNY

CAUSE - GOVERNOR SHUTDOWN SOLENOID FAILURE. DURING TESTING WITH THE REACTOR AT 70% POWER, DIESEL GENERATOR 2 FAILED TO START TWICE. FAILURE WAS CAUSED BY A MALFUNCTIONING SHUTDOWN SOLENOID ON THE DIESEL GOVERNOR. THE SOLENOID PLUNGER WAS OUT OF ADJUSTMENT. A MAINTENANCE PROCEEDURE REQUIRED CHECKING THE SHUTDOWN AND LOCKOUT TIMING WHICH REQUIRED REMOVAL OF THE LOCKOUT ARMOR. THIS IN TURN DISTURBED A SETBACK ADJUSTMENT WHICH ALLOWED THE SHUTDOWN ARM TO VIBRATE OUT OF ADJUSTMENT. THE SHUTDOWN SOLENOID WAS READJUSTED. THE LOCKOUT TIMING ARMOR HAS BEEN RECHECKED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESSEN 2 (DRA) * GENERATOR, DIESEL * ENGINES, INTERNAL COMBUSTION * FAILURE, COMPONENT * SOLENOID * FAILURE, ADMINISTRATIVE CONTROL * PROCEDURES AND MANUALS * MODIFICATION * EMERGENCY POWER, ELECTRIC

120671
UPDATE REPORT ON VALUUM BREAKER BUSHINGS AT DRESSEN 2
COMMONWEALTH Edison CO., MORRIS, IL
1 PG, LTR W/UPDATE RPT. 50-237/1970-27A TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 15, 1970, UCCRET 50-237, TYPE--DRA, RF--G.E., AE--SGT & LUNNY

CAUSE - GROWTH OF TEFLON BUSHINGS. BINDING PROBLEMS FOR TUBS-TURNWELL VACUUM BREAKER BUSHING WAS REPORTED IN 1970. SINCE THEN, A STUDY WAS IN PROGRESS TO EVALUATE THE POSSIBLE USE OF PHOSPHORUS-BRONZE IN PLACE OF TEFLON AS A BUSHING MATERIAL. DURING THE 3-YEAR PERIOD, 3 BINDING PROBLEMS HAVE BEEN EXPERIENCED, 2 WITH TEFLON AND 1 WITH PHOSPHORUS-BRONZE. BASED ON THESE RESULTS, THERE IS NO JUSTIFICATION FOR REPLACEMENT OF THE TEFLON WITH PHOSPHORUS-BRONZE BUSHINGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESSEN 2 (DRA) * BEARING * CONTAINMENT VACUUM BREAKER * CONTAINMENT * TUBS * TESTING * OPERATIVE EXPERIENCE * MATERIAL

110108
SINGLE FAILURE COULD DISABLE SOGT SYSTEM AT DRESSEN 2 AND 3
COMMONWEALTH Edison CO., MORRIS, IL
3 PGS, LTR WRO 50-237/1970-59 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, SE. 15, 1970, UCCRET 50-237/249, TYPE--DRA, RF--G.E., AE--SGT & LUNNY

CAUSE - DESIGN DEFICIENCY. A REVIEW REVEALED THAT THE 2/3 STANDBY GAS TREATMENT SYSTEM COULD BE DISABLED BY A SINGLE FAILURE. WHEN 1 OF THE 2 UNITS PRODUCES A SOGT SYSTEM AUTO-INITIATION SIGNAL, THE INLET VALVE FROM THE SECOND UNIT CLOSURE. THE VALVE REMAINS CLOSED WHEN THE SIGNAL IS REMOVED AND THE SYSTEM RESET. AN AUTO-INITIATION SIGNAL FROM THE SECOND UNIT WILL CLOSE THE INLET VALVE FROM THE FIRST UNIT ISOLATING THE SOGT SYSTEM SINCE BOTH INLET VALVES MUST BE CLOSED. THIS RESULTS FROM A DEFICIENCY IN THE ORIGINAL LOGIC DESIGN. A MODIFICATION REQUEST HAS BEEN INITIATED. BOTH INLET VALVES WERE TAKEN OUT OF SERVICE IN THE OPEN POSITION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM * DRESSEN 3 (DRA) * DRESSEN 2 (DRA) * FAILURE, DESIGN ERROR * REVIEW * SIGNAL FAILURE CRITERION * INTAKE * STANDBY GAS TREATMENT * VALVES

119907
DIESEL GENERATOR OUTPUT ERRATIC AT DRESSEN 2 & 3
COMMONWEALTH Edison CO., MORRIS, IL
3 PGS, LTR WRO 50-237/1970-02 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 29, 1970, UCCRET 50-237/249, TYPE--DRA, RF--G.E., AE--SGT & LUNNY

CAUSE - SHORTED SELENIUM RECTIFIER. UPON COMPLETION OF DIESEL GENERATOR 2/3 TESTING WITH THE REACTOR AT 90% POWER, THE CONTROL SWITCH WAS PLACED IN THE STOP POSITION. THE GENERATOR OUTPUT SUBSEQUENTLY BECAME ERRATIC, VOLTAGE BEGAN OSCILLATING AND THE AC AND DC CURRENT METERS WENT OFF SCALE. THIS RESULTED FROM A SHORTED SELENIUM RECTIFIER IN THE GENERATOR FIELD CIRCUIT. THE CAUSE WAS A UNUSUAL BUILDUP OF DIRT BETWEEN THE PLATES OF THE RECTIFIER. FAILURE EVIDENTLY RESULTED IN DAMAGE TO A SIMILAR UNIT IN THE CIRCUIT. BOTH WERE REPLACED. THESE ARE INTERNATIONAL RECTIFIER, MODEL 300000, SELENIUM COMPONENTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * DRESSEN 2 (DRA) * TEST, SYSTEM OPERABILITY * FAILURE, IMMINENT * ENGINES, INTERNAL COMBUSTION * GENERATOR, DIESEL

120532

120522 PLUTONIUM
UPPER LIMIT OF POWER FOR REQUIRED AND WITH MINIMAL OPERATION INCREASED AT ORESSEN 2 AND 3
COMMONWEALTH EUISON CO., MORRIS, IL
J PWS, LTR N/NU 50-237/1970-07 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 15, 1970, DUCRET 50-237/249, TYPE--BWR, RFU--WRE, AE--SUT & LUNDY

CASE - REANALYSES FOR BWR FUEL ASSEMBLIES. ORESSEN STATION WAS INFORMED BY WE THAT THE CURRENT UPPER LIMIT OF 108 POWER FOR REQUIRED AND WITH MINIMAL OPERATION MAY NOT BE SUFFICIENTLY CONSERVATIVE FOR UNITS 2 AND 3. ANALYSES FOR BWR TYPE FUEL ASSEMBLIES INDICATE THAT, WITH REACTOR POWER AT LESS THAN 200, THE MATH OF AN OUT-OF-SEQUENCE CONTROL AND MAY BE SUFFICIENT TO CAUSE A PEAK FUEL ENTALPY IS GREATER THAN 200 CAL/GM SHOULD A RUN-UP ACCIDENT OCCUR. AN OPERATING ORDER HAS BEEN ISSUED TO ENSURE THAT A NEW 208 UPPER LIMIT BE OBSERVED BY OPERATING PERSONNEL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ORESSEN 2 (BWR) + ORESSEN 3 (BWR) + SET POINT + INSTRUMENT, CONTROL + CONTROL AND DRIVES + CONTROL SYSTEM + FAILURE, DESIGN ERROR + ACCIDENT ANALYSIS + ACCIDENT, CONTROL AND DRUPONT + HOT CHANNEL ANALYSIS + REACTOR CONTROL

120727
MAPLEHURD LIMITS NOT SUFFICIENTLY CONSERVATIVE AT ORESSEN 2 AND 3
COMMONWEALTH EUISON CO., MORRIS, IL
J PWS, LTR N/NU 50-237/1970-09 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 20, 1970, DUCRET 50-237/249, TYPE--BWR, RFU--WRE, AE--SUT & LUNDY

CASE - ADMINISTRATIVE ERROR. NOTIFICATION WAS RECEIVED FROM WE STATING THAT THE ABSOLUTE MAXIMUM AVERAGE PLASMA LINEAR HEAT GENERATION RATE LIMITS MAY NO LONGER BE CONSIDERED SUFFICIENTLY CONSERVATIVE. WE RECOMMENDED THAT LIMITS BE REDUCED BY 40. AN APPARENT ADMINISTRATIVE ERROR WAS IDENTIFIED IN THE MAPLEHURD CALCULATIONS RECEIVED FROM GE'S ECCS ANALYSIS RESULTS. COMPUTER-STORED LIMITS WERE REDUCED BY 40.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ORESSEN 2 (BWR) + ORESSEN 3 (BWR) + HOT CHANNEL ANALYSIS + HOT CHANNEL FACTOR + MATHEMATICAL TREATMENT + ACCIDENT ANALYSIS + ACCIDENT, LOSS OF COOLANT + FAILURE, ADMINISTRATIVE CONTROL

16400
DIESEL GENERATOR FAILS TO ACCEPT FULL LOAD AT ORESSEN 3
COMMONWEALTH EUISON CO., MORRIS, IL
J PWS, LTR N/NU 50-249/1975-47 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 6, 1970, DUCRET 50-249, TYPE--BWR, RFU--WRE, AE--SUT & LUNDY

CASE - LOOSE SOLENOID IN THE WYEARMON. DURING A TEST WHILE THE REACTOR WAS AT 718 POWER, A DIESEL GENERATOR WOULD NOT ACCEPT LOAD ABOVE 100 AMP. DURING SUBSEQUENT TESTING ON THE SAME DAY, THE ENGINE DID OPERATE AT FULL AND VARYING LOADS BUT COULD NOT BE SHUT DOWN BY NORMAL METHODS. THE SOLENOID SOLENOID IN THE WYEARMON, WHICH CONTROLS FUEL FLOW, WAS FOUND TO BE LOOSE. THE REACTOR, WHICH WAS LOADED, WAS SHUT DOWN AFTER THE SOLENOID WAS REPOSITIONED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ORESSEN 3 (BWR) + FASTENER + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SOLENOID + ENGINES, INTERNAL COMBUSTION + OVERHEATING, DIESEL

180322
REFUELING FLOW RADIATION MONITOR FAILS AT ORESSEN 3
COMMONWEALTH EUISON CO., MORRIS, IL
J PWS, LTR N/NU 50-249/75-49 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 14, 1970, DUCRET 50-249, TYPE--BWR, RFU--WRE, AE--SUT & LUNDY

CASE - CABLE CONNECTION FAILED. WHILE THE REACTOR WAS AT 718 POWER, CHANNEL A REFUELING FLOW RADIATION MONITOR FAILED UNSCALE. A CABLE CONNECTION HAD FAILED DUE TO EXCESSIVE TENSION ON THE CABLE. THE CONNECTION WAS REPLACED AND THE CABLE LENGTH INCREASED TO RELIEVE TENSION. WHEN THE UNIT WAS RETURNED TO SERVICE, THE TEMPORARY UNIT WAS INSTALLED UNTIL THE ORIGINAL UNIT COULD BE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ORESSEN 3 (BWR) + MONITORING SYSTEM, RADIATION + FAILURE, INSTALLATION ERROR + CABLES AND CONNECTORS + ELECTRICAL FUNCTION UNITS + RADIATION MONITORS

180323
SET POINT SHIFT IN PRESSURE SWITCH AT ORESSEN 3
COMMONWEALTH EUISON CO., MORRIS, IL
J PWS, LTR N/NU 50-249/75-40 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 14, 1970, DUCRET 50-

110323 CONTINUED
249, TYPE--BWR, NRU--G.E., AE--SGT & LUNDY

CAUSE - MISAPPLICATION OF SWITCH. DURING TESTING WITH THE REACTOR AT 89% POWER, A MPC1 FLUX SWITCH WAS FOUND TO TRIP AT 173 INCHES OF WATER. THIS EXCEEDED THE 150 INCH LIMIT. THE CAUSE IS MISAPPLICATION OF THE BANTON 233, RANGE -250 TO 2500 INCHES. SWITCH. THE SWITCH WILL SOON BE REPLACED. IT WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED 3 (BWR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, DESIGN ERROR + SET POINT + PURSUIT + SENSORS, PRESSURE + MPC1

110352
ECC FILL JOCKEY PUMP-MOTOR COUPLING FAILS AT UNRESOLVED 3
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-249/1970-2 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JAN. 20, 1970, DUCKET 50-249, TYPE--BWR, NRU--G.E., AE--SGT & LUNDY

CAUSE - INSUFFICIENT LUBRICATION. DURING A ROUTINE INSPECTION WITH THE REACTOR AT 71% POWER, THE ECCS FILL JOCKEY PUMP WAS FOUND IMPERFECT. THE PUMP-MOTOR COUPLING HAD FAILED, APPARENTLY DUE TO INSUFFICIENT LUBRICATION. THIS RESULTED IN INCREASED FRICTION AND WEAR OF THE COUPLING TEETH. THE COUPLING WAS REPLACED AND THE PUMP RETURNED TO SERVICE. THE COUPLING WILL BE ADDED TO THE LUBRICATION PROGRAM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + UNRESOLVED 3 (BWR) + FAILURE, MAINTENANCE ERROR + LUBRICATION + EMERGENCY COOLING SYSTEM + PUMPS

110353
CONTROL VALVE FAILS TO INITIATE REACTOR HALF-SCRAM AT UNRESOLVED 3
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS, LTR W/NO 50-249/1970-1 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, FEB. 2, 1970, DUCKET 50-249, TYPE--BWR, NRU--G.E., AE--SGT & LUNDY

CAUSE - FAST ACTING SOLENOID VALVE FAILURE. DURING A TEST WITH THE REACTOR AT 89% POWER, CLOSURE OF CONTROL VALVE 2 FAILED TO INITIATE A REACTOR HALF-SCRAM. FAILURE WAS APPARENTLY CAUSED BY A MALFUNCTIONING FAST-ACTING SOLENOID VALVE ON CONTROL VALVE 2. THE SOLENOID VALVE WILL BE REPLACED DURING SHUTDOWNS. THE OPERATION PERFORMED AN ADMINISTRATIVE HALF-SCRAM. LATER, REPEATED ATTEMPTS TO INITIATE A HALF-SCRAM WERE SUCCESSFUL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + CONTROL + UNRESOLVED 3 (BWR) + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + FAILURE, INHERENT + SOLENOID + VALVES

110740
TURBINE CONTROL VALVE CLOSURE FAILS TO INITIATE HALF-SCRAM AT UNRESOLVED 3
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS, LTR W/NO 50-249/1970-3 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, FEB. 5, 1970, DUCKET 50-249, TYPE--BWR, NRU--G.E., AE--SGT & LUNDY

CAUSE - PROBABLE SOLENOID MALFUNCTION. DURING THE HEART TURBINE CHECK WHILE OPERATION AT 89% POWER, CLOSURE OF CONTROL VALVE 2 AGAIN FAILED TO INITIATE A REACTOR HALF-SCRAM. CONTROL VALVE EXERCISE. THE FINAL 4 OF 8 ATTEMPTS SUCCESSFULLY INITIATED A SCRAM ON CHANNEL NO. THE FAST-ACTING SOLENOID ON THIS CONTROL VALVE WILL BE INSPECTED AND, IF NECESSARY, REPLACED DURING THE NEXT SHUTDOWNS. A SIMILAR FAILURE HAD OCCURRED 8 DAYS EARLIER.

REACTOR PROTECTION SYSTEM + UNRESOLVED 3 (BWR) + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + TURBINE + FAILURE, INHERENT + SOLENOID + VALVES

111043
FOLLOW-UP REPORT ON THROUGH-WALL CRACK ON TURBO-PUMP LINE AT UNRESOLVED 3
COMMONWEALTH EDISON CO., MORRIS, IL
2 PGS, LTR W/NO 50-249/1970-29A (FOLLOW-UP RPT) TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, FEB. 10, 1970, DUCKET 50-249, TYPE--BWR, NRU--G.E., AE--SGT & LUNDY

CAUSE - HIGH HOT PLUS STRESS. A THROUGH-WALL CRACK ON THE TURBO-PUMP LINE WAS REPORTED ON OCT. 2, 1970. EXAMINATION OF THE CRACKED SECTION OF THE 10-INCH LINE SHOWED THAT THE PIPING HAD A NIL-DUCTILITY TEMPERATURE OF 80 F. IT WAS POSTULATED THAT THE PIPE HAD A FLAW PRE-EXISTING DURING INSTALLATION. THIS BUILT-IN STRAIN PLUS STRESS RESULTING FROM LIQUID NITROGEN CAUSED THE CRACK TO PROPAGATE THROUGH THE WALL. THE PIPE WAS REPLACED. THE PIPE TEMPERATURE IS NOW MONITORED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM

11043 CONTINUOUS
CHANGE 12000

CONTAINMENT PLUGS + NOT UNIT + FAILURE, PIPE + STRESS + UNDESIRABLE + FAILURE, DESIGN ERROR + REPAIR +
PIPES AND PIPE FITTINGS

11098
DIESEL GENERATOR FAILS TO LOAD FROM CONTROL ROOM AT UNDESIRABLE
UNDESIRABLE DESIGN ERROR, REPAIR, IL
3 PUS, LTR NRO 50-249/1970-4 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 22, 1970, DUCRET
50-249, TYPE--BMR, NRO--UOE, AE--SUT & LUNDY

CAUSE - LOOSE WIRE IN GOVERNOR. DURING TESTING WITH THE REACTOR AT 75% POWER, THE DIESEL
GENERATOR COULD NOT BE LOADED FROM THE CONTROL ROOM DUE TO A GOVERNOR CONTROL WIRE THAT HAD
BECOME FREE FROM ITS LOW PROPER AUTO ACTUATION AND LOADING REMAINED UNEXPECTED. THE WIRE
APPARENTLY VIBRATED FREE. THE DIESEL GENERATOR WAS PROMPTLY REPAIRED AND RETURNED TO SERVICE. A
GOVERNOR LOW INSPECTION WILL BE ADDED TO THE ANNUAL LOW SURVEILLANCE PROCEDURE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 12000

EMERGENCY POWER, ELECTRIC + UNDESIRABLE + FAILURE, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR +
VIBRATION + CABLES AND CONNECTORS + REPAIR, INTERNAL COMBUSTION + GENERATION, DIESEL

11370
CCSW FLOW PROTECTION VALVE MAIN VALVE BLOCKED OPEN AT UNDESIRABLE
UNDESIRABLE DESIGN ERROR, REPAIR, IL
3 PUS, LTR NRO 50-249/1970-6 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 6, 1970, DUCRET
50-249, TYPE--BMR, NRO--UOE, AE--SUT & LUNDY

CAUSE - INSTALLATION ERROR. DURING A TEST OF THE UNIT 2 CCSW FLOW PROTECTION VALVE, THE MAIN
VALVE WAS FOUND BLOCKED OPEN MECHANICALLY AND ELECTRICALLY INOPERABLE. THE CORRESPONDING VALVE
ON UNIT 3 WAS THEN CHECKED AND FOUND TO BE IN A SIMILAR CONDITION. THE VALVES ON BOTH UNITS
WERE PLACED MANUALLY IN THE CLOSED POSITION. THEY WERE MADE OPERATIONAL LATER. THESE VALVES
WERE PART OF A MODIFICATION WHICH WAS COMPLETED DURING THE 1970 REFUELING OUTAGE. THE VALVES
WERE NOT INCLUDED IN THE FUNCTIONAL TESTING. UNIT 3 WAS OPERATING AT 72% POWER AT THE TIME.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 12000

TESTING + UNDESIRABLE + FAILURE, MODIFICATION + FAILURE, ADMINISTRATIVE CONTROL + COMPARTMENT + SERVICE WATER +
VALVES

114374
EXPLOSION OCCURS IN OFF GAS SYSTEM AT UNDESIRABLE
UNDESIRABLE DESIGN ERROR, REPAIR, IL
3 PUS, LTR NRO 50-249/1970-7 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 27, 1970, DUCRET 50-
249, TYPE--BMR, NRO--UOE, AE--SUT & LUNDY

CAUSE - STATIC ELECTRICITY SPARK SUSPECTED. FOLLOWING REMOVAL OF THE RECHAM SYSTEM FROM SERVICE
WITH THE REACTOR AT 57% POWER, AN EXPLOSION OCCURRED IN OFF GAS SYSTEM 30. THE CHARGES
ALARMERS AND FILTERS WERE BYPASSED AT 1140. OFF GAS ANALYZER HI-HI ALARMS WERE RECEIVED AND
POWER WAS REDUCED TO CLEAR ALARMS. AFTER THEY CLEARED, POWER WAS INCREASED SLOWLY UNTIL THE
EXPLOSION OCCURRED AT 1250. THE UNIT WAS SHUT DOWN BY 1330 BECAUSE THE RUPTURE DISCS IN BOTH
SUCKERS HAD FAILED. THE FILTER WAS ALSO DAMAGED. THE CAUSE IS UNKNOWN, HOWEVER, A SPARK CAUSED
BY STATIC ELECTRICITY IS SUSPECTED. A TOTAL OF 4000 CF OF ACTIVITY WAS RELEASED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 12000

AIRBORNE RELEASE + EXPLOSION + HYDROGEN + INSTRUMENT, PROTECTIVE + UNDESIRABLE + OFF GAS + DAMAGE +
REACTION PRODUCT + FILTERS

114375
CCSW PUMP VAULT PENETRATION, LEAK EXCESSIVELY AT UNDESIRABLE
UNDESIRABLE DESIGN ERROR, REPAIR, IL
3 PUS, LTR NRO 50-249/1970-8 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 27, 1970, DUCRET 50-
249, TYPE--BMR, NRO--UOE, AE--SUT & LUNDY

CAUSE - IMPROPER APPLICATION OF SEALANT. DURING TESTING WITH THE UNIT SHUT DOWN, THE CCSW PUMP
VAULTS PENETRATIONS WERE FOUND TO LEAK WHEN PRESSURIZED AS REQUIRED BY TECH SPECS. FAILURE OF
THE PENETRATION SEALS WAS ATTRIBUTED TO IMPROPER APPLICATION OF THE SILICONE SEALANT (NEVI) AND TO
OPERATIONAL VIBRATION. AFTER COMPLETING REPAIRS TO THE 9 PENETRATIONS, THEY EXHIBITED ZERO
LEAKAGE. A SIMILAR EVENT HAD OCCURRED ON UNIT 2.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 12000

TEST, LEAK RATE + UNDESIRABLE + FAILURE, SYSTEM OPERABILITY + SEAL + FAILURE, INSTALLATION ERROR + LEAK RATE

114375 "CONTINUED"
 • COMPARTMENT • SERVICE WATER SYSTEM • PUMPS

114374
 CORE SPRAY VALVE TRIPS ON THERMAL OVERLOAD AT DRESSEN 3
 COMMONWEALTH EDISON CO., MORRIS, IL
 3 PGS, LTR W/NO 50-249/1970-9 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MAY 27, 1970, DUCRET 50-249, TYPE-BMR, NRC-66E, AE-SGT & LUNNY

CAUSE - UNDERSIZED OVERLOAD HEATER. DURING A TEST ON THE CORE SPRAY VALVES WITH THE REACTOR AT 728 POWER, ONE VALVE TRIPPED ON THERMAL OVERLOAD AS IT WAS BEING CLOSED FOR THE SECOND TIME. THE EXISTING OVERLOAD HEATER, GE MODEL CA 123K7-22A, WAS SIZED ACCORDING TO THE VALVE MOTOR'S RATED CURRENT AT 440V AC. HOWEVER, THE VALVE WAS PLACED ON A 480V AC SYSTEM. WITH THE RESULTANT INCREASE IN CURRENT, FREQUENT OPERATION CAUSED THE OVERLOAD HEATER TO TRIP. THE PRESENT HEATERS WILL BE REPLACED WITH LARGER GE MODEL CA 123K7-91A OVERLOAD HEATERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 1.00 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY • INSTRUMENT, PROTECTIVE • DRESSEN 3 (BMR) • MODIFICATION • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • VALVE OPERATORS • VALVES

114375
 SUPPLEMENTAL REPORT ON THERMAL TRIPS OF VALVES AT DRESSEN 3
 COMMONWEALTH EDISON CO., MORRIS, IL
 2 PGS, LTR W/ SUPPLEMENTAL RPT TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 15, 1970, DUCRET 50-249, TYPE-BMR, NRC-66E, AE-SGT & LUNNY

CAUSE - UNDERSIZED OVERLOAD HEATERS. AS REPORTED EARLIER 2 MOTOR-OPERATED VALVES, 12 CORE SPRAY AND 1 LPCI, HAD FAILED TO OPERATE ELECTRICALLY DUE TO TRIPPING OF THE THERMAL OVERLOAD DEVICES ON SEVERAL TESTS. THE VALVE MOTORS WERE DRAWING 3.5 AMPS WHILE THE RATED CURRENT WAS 2.05 AMPS. BOTH MOTORS WERE REPLACED. EXAMINATION FOUND THE MOTORS OPERATING PROPERLY. THE MANUFACTURER AGED THAT HIGHER CURRENT VALUES WERE NORMAL IF GREATER THAN RATED VOLTAGE WERE USED. THE MOTORS ARE RATED FOR 440 VOLTS WHILE THE STATION IS OPERATING THE MOTORS AT 480 VOLTS. AT 480 VOLTS THE MOTOR SHOULD DRAW 3.5 TO 3.8 AMPS. LARGER CAPACITY OVERLOAD HEATERS HAVE BEEN INSTALLED WHERE REQUIRED IN UNITS 2 AND 3.

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CORE SPRAY • INSTRUMENT, PROTECTIVE • DRESSEN 2 (BMR) • MODIFICATION • TEST, SYSTEM OPERABILITY • FAILURE, INSTALLATION ERROR • FAILURE, COMMON MODE • VALVE OPERATIONS • MOTORS • VALVES • LPCI

114902
 SUPPLEMENTAL REPORT ON LPCI VALVE MOTOR TRIP AT DRESSEN 3
 COMMONWEALTH EDISON CO., MORRIS, IL
 2 PGS, LTR W/ SUPPLEMENTAL RPT TO AD 50-249/75-42 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 29, 1970, DUCRET 50-249, TYPE-BMR, NRC-66E, AE-SGT & LUNNY

CAUSE - UNDERSIZED OVERLOAD HEATERS. AS REPORTED EARLIER, A LPCI MOTOR-OPERATED VALVE FAILED TO OPEN DURING TESTING DUE TO A THERMAL OVERLOAD TRIP. AT THAT TIME, THE CAUSE WAS ATTRIBUTED TO A DEFECTIVE MOTOR. BASED ON THE VENDOR'S EVALUATION, THE CAUSE WAS FOUND TO BE UNDERSIZED OVERLOAD HEATERS. THE OVERLOAD HEATERS WERE SIZED ACCORDING TO NAMEPLATE CURRENT VALUE, WHICH ASSUMES 440 VAC APPLICATION. HOWEVER, SINCE THE STATION OPERATES THE MOTOR AT 480 VAC, A SIGNIFICANTLY HIGHER CURRENT OCCURS. LARGER CAPACITY OVERLOAD HEATERS WERE INSTALLED.

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INSTRUMENT, PROTECTIVE • DRESSEN 3 (BMR) • MODIFICATION • TEST, SYSTEM OPERABILITY • FAILURE, INSTALLATION ERROR • FAILURE, COMMON MODE • VALVE OPERATIONS • MOTORS • VALVES • LPCI

115894
 CLEANUP NON-REGENERATIVE HEAT EXCHANGER LEAKS AT DRESSEN 3
 COMMONWEALTH EDISON CO., MORRIS, IL
 3 PGS, LTR W/NO 50-249/1970-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 15, 1970, DUCRET 50-249, TYPE-BMR, NRC-66E, AE-SGT & LUNNY

CAUSE - CRACKS IN WELD. DURING A ROUTINE INSPECTION WITH THE REACTOR AT 746 POWER, REACTOR WATER WAS FOUND TO BE LEAKING FROM A CLEANUP NON-REGENERATIVE HEAT EXCHANGER. THE HEAT EXCHANGER WAS IMMEDIATELY ISOLATED. WHEN THE CHANNEL COVER WAS REMOVED, 2 CRACKS WERE FOUND IN THE WELD JOINING THE STAINLESS STEEL DIAPHRAGM SHIELD PLATE TO THE CHANNEL TUBE SHEET. THE CRACKS WERE APPARENTLY CAUSED BY A LACK OF FUSION IN THE WELD. THE CRACKS WERE WOUND OUT AND THE AFFECTED AREA WAS REWELDED. NO DISCONTINUITIES WERE NOTED.

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FAILURE, EQUIPMENT • WELDS • DRESSEN 3 (BMR) • COOLANT PURIFICATION SYSTEM • FAILURE, INSTALLATION ERROR •

115094 PLUM:INHEU
 PLUM + LUMU + TEAL EACMANERS

110207
 CLOSING TIME OF MSIV OUT OF LIMITS AT DRESOEN 3
 COMMUNALITY EOLICH CO., MORRIS, IL
 4 PUS, LTR N/AU 50-249/1970-14 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 30, 1970, DUCRET
 50-249, TYPE--BNA, NRU--660, AE--SUT & LUMU

CAUSE - PACKING DRIED OUT. DURING MSIV TIMING TESTING WHILE THE REACTOR WAS SHUT DOWN, A MSIV
 CLOSED IN 3.5 SECONDS (UPPER LIMIT -3.0 SECONDS). DURING THE 4-WAY OUTAGE IMMEDIATELY PRIOR TO
 TESTING, THE VALVE PACKING APPARENTLY DRIED SLIGHTLY, RESULTING IN A SLIGHTLY INCREASED CLOSURE
 TIME. THE TIMING WAS ADJUSTED AND THE VALVE CLOSED 3 TIMES WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + DRESOEN 3 (BNA) + PREPULSE TIME + TEST, SYSTEM OPERABILITY +
 SEAL + MAIN COOLING SYSTEM + FAILURE, INHERENT + VALVES

110005
 CIRCUIT BREAKER FOR JC COOLING WATER PUMP FOUND TRIPPED AT DRESOEN 3
 COMMUNALITY EOLICH CO., MORRIS, IL
 4 PUS, LTR N/AU 50-249/1970-13 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, AUG. 11, 1970, DUCRET
 50-249, TYPE--BNA, NRU--660, AE--SUT & LUMU

CAUSE - PUMP FAILS DUE TO BEARING WEAR. DURING TBA POWER OPERATION, THE CIRCUIT BREAKER FOR THE
 DIESEL GENERATOR COOLING WATER PUMP WAS FOUND IN THE TRIPPED POSITION. THE BREAKER WAS RESET
 BUT TRIPPED IMMEDIATELY. THE COOLING WATER PUMP WAS DAMAGED. THIS WAS CAUSED BY EXCESSIVELY
 WEAR PUMP BEARINGS WHICH RESULTED IN A ROTOR-STATOR CONTACT. FREQUENT USE OF THE PUMP FOR LPLI
 AND MPLS FROM COOLING APPARENTLY ACCELERATED THE BEARING WEAR THAT WOULD NORMALLY RESULT FROM
 ABRASIVES IN THE RIVER WATER. ROADS WILL BE COOLED BY THE SERVICE WATER SYSTEM. THE DAMAGED
 PUMP WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + DRESOEN 3 (BNA) + MODIFICATION + FAILURE, DESIGN ERROR + COOLING + BEARING + WEAR +
 BREAKER + PUMPS + GENERATOR, DIESEL

110797
 OUTWARD MSIV FAILS TO CLOSE COMPLETELY AT DRESOEN 3
 COMMUNALITY EOLICH CO., MORRIS, IL
 4 PUS, LTR N/AU 50-249/1970-14 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, SEPT. 20, 1970, DUCRET
 50-249, TYPE--BNA, NRU--660, AE--SUT & LUMU

CAUSE - FAULTY POSITION INDICATION. DURING STARTUP OPERATIONS, OUTWARD MAIN STEAM ISOLATION
 VALVES WERE CLOSED TO MAINTAIN REACTOR PRESSURE AND TEMPERATURE. CONTROL ROOM INDICATION SHOWED
 THAT ONE VALVE HAD FAILED TO FULLY CLOSE. INSPECTION REVEALED THAT THE VALVE HAD CLOSED
 COMPLETELY. THE ACTUATOR ARM OF THE POSITION-INDICATING LIMIT SWITCH IN THE VALVE OPERATOR HAD
 SLIPPED ON ITS SHAFT, RESULTING IN A FALSE VALVE POSITION INDICATION. THE ACTUATOR ARM WAS
 TIGHTENED AND THE LIMIT SWITCH TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT ISOLATION + DRESOEN 3 (BNA) + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + FAILURE, MAINTENANCE
 ERROR + MAIN COOLING SYSTEM + INSTRUMENT, POSITION + VALVES

110794
 DRYWELL DE-INERTED WHILE REACTOR WAS OPERATING AT DRESOEN 3
 COMMUNALITY EOLICH CO., MORRIS, IL
 4 PUS, LTR N/AU 50-249/1970-17 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, SEPT. 30, 1970, DUCRET
 50-249, TYPE--BNA, NRU--660, AE--SUT & LUMU

CAUSE - SYSTEM EMERGENCY HALTED LOAD DROP. DE-INERTING OF THE DRYWELL WAS BEGUN WITH THE REACTOR
 AT 738 POWER IN ANTICIPATION OF THE SCHEDULED UNIT SHUT DOWN FOR REFUELING. TECH SPECS ALLOW DE-
 INERTING TO COMMENCE 24 MUWS PRIOR TO A SHUTDOWN. AFTER THE OXYGEN CONCENTRATION REACHED 4%,
 THE UNIT LOAD DROP WAS HALTED AT THE DIRECTION OF THE CHILAW LOAD DISPATCHER BECAUSE OF A
 SYSTEM EMERGENCY. DRYWELL INERTING WAS BEGUN 203 MUWS LATER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

ADMINISTRATIVE CONTROL + OXYGEN + DRESOEN 3 (BNA) + CONTAINMENT ATMOSPHERE + CONCENTRATION + STABILITY +
 POWER TRANSMISSION + FAILURE, INHERENT

110790
MOISTURE SEPARATOR GRAIN TANK LINE LEAKS AT DRESDEN 3
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-249/1970-15 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 14, 1970, UCCRET
50-249, TYPE--BWR, RF--G.E., AE--SGT & LUNNY

CAUSE - STRESS FROM PROCESS STEAM SURGE. DURING A ROUTINE PLANT INSPECTION WHILE OPERATING AT 73% POWER, A STEAM LEAK WAS FOUND IN AN ELBOW ON MOISTURE SEPARATOR GRAIN TANK LINE TO FUELWATER HEATER D. A SURGE IN THE PROCESS STEAM RESULTED IN FAILURE OF A SUPPORT BOLT ON A RIVET LINE HANGER. THE RESULTANT ADDITIONAL FORCE ON A DOWNSTREAM SUPPORT WHICH WAS BELIEVED TO BE PROCESS LINE CAUSED A CRACK TO DEVELOP IN THE PROCESS PIPE IN THE ATTACHMENT WELD AREA. THE CRACK WAS CALLED OUT AND COVERED WITH WELD MATERIAL. ADDITIONAL RESTRAINTS WERE ALREADY SCHEDULED FOR INSTALLATION BEFORE THE FAILURE OCCURRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

HYDRAULIC EFFECT + FAILURE, PIPE + WELDS + CONDENSATION + MESSAGES (4000) + FAILURE, DESIGN ERROR + SUPPORT STRUCTURE + LEAK + CRACK + PIPES AND PIPE FITTINGS

110792
LEAK RATE OF ISOLATION VALVE EXCEEDS LIMIT AT DRESDEN 3
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-249/1970-16 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 18, 1970, UCCRET
50-249, TYPE--BWR, RF--G.E., AE--SGT & LUNNY

CAUSE - PACKING FAILURES. DURING LOCAL LEAK RATE TESTING OF THE JAYWELL AND TURBO VENT ISOLATION VALVES WITH THE UNIT AT 73% POWER, ONE VALVE EXHIBITED A LEAK RATE THAT EXCEEDED THE TEST SPEC LIMIT OF 29.201 SCFH. THE CALCULATED LEAK RATE OF 59.2 SCFH WAS MAINLY ATTRIBUTABLE TO GUMMET AND THROMION PACKING ASSEMBLY LEAKS. THE LEAK RATE WAS REDUCED TO 0.23 SCFH BY TIGHTENING THE PACKING BOLTS AND PLACING A GASKET BETWEEN THE BUTTERFLY VALVE COVER PLATE AND THE VALVE BODY. THE HENRY PRATT CO. 10 INCH BUTTERFLY VALVE WILL BE PERMANENTLY REPAIRED AND RETESTED DURING THE CURRENT REFUELING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT + FAILURE, EQUIPMENT + CONTAINMENT PURGE + CONTAINMENT ISOLATION + TEST, LEAK RATE + DRESDEN 3 (BWR) + TEST, SYSTEM OPERABILITY + SEAL + LEAK RATE + FAILURE, INHERENT + VALVES + TURBS

119100
TWO JAYWELL SHUTTERS APPEAR INOPERABLE AT DRESDEN 3
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-249/1970-21 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 19, 1970, UCCRET
50-249, TYPE--BWR, RF--G.E., AE--SGT & LUNNY

CAUSE - GREASE FITTING LEAKAGE. DURING A ROUTINE INSPECTION OF THE JAYWELL SHUTTERS DURING THE REFUELING OUTAGE, 2 SHUTTERS APPEARED TO BE INOPERABLE DUE TO LOSS OF FLUID. BENCH TESTING REVEALED THAT BOTH DOG OPERATE PROPERLY. LEAKAGE WAS THROUGH THE GREASE FITTINGS. THE FITTINGS WERE REPLACED, THE SHUTTERS REINSTALLED AND FILLED WITH FLUID. THESE ARE BENCH PATTERNS HYDRAULIC SHOCK SUPPRESSORS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + DRESDEN 3 (BWR) + REFUELING + SHOCK ABSORBER + SUPPORT STRUCTURE + SURVEILLANCE PROGRAM + LEAK + FAILURE, INHERENT + PIPES AND PIPE FITTINGS

119157
HIGH TEMPERATURE ALARM RECEIVED FOR DIESEL GENERATOR AT DRESDEN 3
COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/NO 50-249/1970-19 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 21, 1970, UCCRET
50-249, TYPE--BWR, RF--G.E., AE--SGT & LUNNY

CAUSE - PARTIALLY CLOGGED OIL STRAINER. DURING THE REFUELING OUTAGE, BREAKERS BETWEEN BUS 34 AND 34-1 WERE OPENED FOR BREAKER INSPECTION. THE DIESEL GENERATOR WAS USED TO SUPPLY BUS 34-1. AFTER THE INSPECTION, THE DG WAS ALLOWED TO RUN TO ALLOW THE ENGINE TO WARM UP COMPLETELY. IN ABOUT 30 MINUTES, A HIGH TEMPERATURE ALARM WAS RECEIVED. THE STRAINER IN THE LOW OIL CIRCULATING PUMP WAS PARTIALLY CLOGGED, RESTRICTING OIL FLOW SUFFICIENTLY TO CAUSE A SIGNIFICANT RISE IN OIL TEMPERATURE. THE STRAINER WAS CLEANED. THE STRAINER WILL BE CLEANED AS PART OF THE DG ANNUAL INSPECTION PROCEDURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + DRESDEN 3 (BWR) + CRUD + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + FLGN BLOCKAGE + LUBRICATION + TEMPERATURE + ENGINE, INTERNAL COMBUSTION + OVERHEATING, DIESEL + FILTERS

119166

LEAK RATE OF FRESHWATER CHECK VALVES EXCESSIVE AT DRESSEN 3
COMMONWEALTH EDITION CO., MARIAS, IL
3 PGS, LTR NRD 50-249/1970-18 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 21, 1970, DUCRET
50-249, TYPE--BNA, NFO--GCE, AE--SUT & LUNNY

CAUSE - DIAT IN SEATING AREA. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TESTING, 2 FRESHWATER CHECK VALVES EXHIBITED LEAK RATES OF 04.3 AND 010 SCFM (LIMIT IS 29.301 SCFM). A FEW DAYS LATER, THESE CHECK VALVES WERE PRESSURIZED TO 500 PSIG TO BETTER APPROXIMATE ACCIDENT CONDITIONS. RETESTING FOUND ONE WITH SATISFACTORY LEAK RATE. BOTH WERE FOUND TO HAVE DIAT IN THE SEATING AREA. THEY WERE CLEANED. ONE HAD HIGH DISC ASSEMBLY PINS. THE DISC ASSEMBLY AND SEAL RINGS WERE REPLACED. THE METHOD OF TESTING IS BEING REEVALUATED. THESE ARE CRANE CO., 10 INCH, TILTING DISC CHECK VALVES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, LEAK RATE + DRESSEN 3 (BNA) + CRUO + REFUELING + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + LEAK RATE + VALVE, CHECK + FRESHWATER

119167

LEAKAGE OF MAIN STEAM LINE DRAIN VALVE EXCESSIVE AT DRESSEN 3
COMMONWEALTH EDITION CO., MARIAS, IL
3 PGS, LTR NRD 50-249/1970-26 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 21, 1970, DUCRET
50-249, TYPE--BNA, NFO--GCE, AE--SUT & LUNNY

CAUSE - BODY TO BUNNET LEAK. DURING REFUELING OUTAGE LOCAL LEAK RATE TESTING, THE VOLUME BETWEEN 2 MAIN STEAM LINE DRAIN VALVES EXHIBITED A LEAK RATE OF 93.5 SCFM (LIMIT IS 29.301 SCFM). MOST OF THE LEAKAGE WAS FROM A VALVE-TO-BUNNET LEAK ON THE INBOARD VALVE. BECAUSE OF VESSEL LEVEL CONSIDERATIONS, REPAIR WILL BE PERFORMED LATER. THIS IS A CRANE CO. 2 INCH GLOBE VALVE, MODEL 7822-L.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, LEAK RATE + CONTAINMENT INTEGRITY + DRESSEN 3 (BNA) + REFUELING + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + LEAK RATE + LEAKAGE + VALVES

119468

LPCI DIFFERENTIAL PRESSURE SWITCH FAILS TO TRIP AT DRESSEN 3
COMMONWEALTH EDITION CO., MARIAS, IL
4 PGS, LTR NRD 50-249/1970-22 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JCT. 20, 1970, DUCRET
50-249, TYPE--BNA, NFO--GCE, AE--SUT & LUNNY

CAUSE - ACTUATING ARM JAMMED ROLLER CAM. DURING PREREQUISITE TESTING FOR A REFUELING OUTAGE LPCI LOGIC SURVEILLANCE, UPIS 201-50A FAILED TO TRIP. THIS IS 1 OF 4 INSTRUMENTS WHICH MONITOR THE REACTOR LOOP HEAVY PRESSURE FOR LOOP BREAK INDICATIONS. THE MICROSWITCH ACTUATING ARM HAD JAMMED THE ROLLER CAM, PREVENTING SWITCH OPERATION. THE SWITCH WAS REPAIRED AND CALIBRATED. IT IS A BAYCOR MODEL 200, 0-4 PSIG RANGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESSEN 3 (BNA) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, INHERENT + SENSORS, PRESSURE + LPCI

119510

LEAK RATE OF FRESHWATER CHECK VALVES EXCESSIVE AT DRESSEN 3
COMMONWEALTH EDITION CO., MARIAS, IL
3 PGS, LTR NRD 50-249/1970-25 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 9, 1970, DUCRET
50-249, TYPE--BNA, NFO--GCE, AE--SUT & LUNNY

CAUSE - DIAT IN SEAT. DURING REFUELING OUTAGE LOCAL LEAK RATE TESTING, 2 FRESHWATER CHECK VALVES EXHIBITED LEAKAGE RATES OF 43T AND 012 SCFM. TECH SPEC LIMIT IS 29.301 SCFM. A FEW DAYS LATER, THESE CHECK VALVES WERE PRESSURIZED WITH WATER TO 500 PSIG TO MORE CLOSELY APPROXIMATE ACCIDENT CONDITIONS. RETESTING YIELDED LEAKAGE RATES OF 15.4 AND 29.7 SCFM. THE CHECK VALVE WITH THE HIGHER RATE HAD DIAT IN THE SEAT. THE VALVE WAS CLEANED AND THE DISC ASSEMBLY AND SEAL RING WERE REPLACED AS A PRECAUTIONARY MEASURE. RETEST SHOWED A LEAK RATE OF 1.03 SCFM. THESE ARE CRANE CO. 10-INCH TILTING DISC CHECK VALVES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, LEAK RATE + DRESSEN 3 (BNA) + CRUO + REFUELING + TEST, SYSTEM OPERABILITY + MAIN COOLING SYSTEM + LEAK RATE + VALVE, CHECK + FAILURE, INHERENT + FRESHWATER

119511

LEAK RATE OF LPCI CHECK VALVE EXCESSIVE AT DRESSEN 3

119511 *CONTINUED*

COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/RO 50-249/1970-23 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWJEN III, NOV. 17, 1970, UUCRET
50-249, TYPE--BMR, RFG--GEE, AE--SUT & LUNDY

CAUSE - DIAT WAS IN SCRATCHES ON SEAT. DURING REFUELING OUTAGE LOCAL LEAK-RATE TESTING, LPCI PRIMARY ISOLATION CHECK VALVE 3-ADJ1-250 EXHIBITED A LEAKAGE RATE OF 0.103 SCFM, EXCEEDING THE 27-301 SCFM LIMIT. LEAK-TO-SEAT LEAKAGE WAS ATTRIBUTED TO DIRT AND SMALL SCRATCHES IN THE VALVE SEAT, APPARENTLY THE RESULT OF NORMAL WEAR. THE SEAT WAS LAPPED AND THE PACKING AND ELASTIC GASKET WERE REPLACED. LEAK-RATE RETESTING WAS SATISFACTORY. THIS IS AN ATMOX AND MURKILL CLOS, 10-INCH TILTING DISC CHECK VALVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + TEST, LEAK RATE + DRESDEN 3 (DMN) + REFUELING + TEST, SYSTEM OPERABILITY + LEAK RATE + VALVE, CHECK + FAILURE, IMMERENT + WEAR + LPCI

119467

CONTROL ROOM ADJUSTMENT OF DIESEL GENERATOR SPEED FAILS AT DRESDEN 3

COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/RO 50-249/1970-24 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWJEN III, NOV. 17, 1970, UUCRET
50-249, TYPE--BMR, RFG--GEE, AE--SUT & LUNDY

CAUSE - LOOSE WIRE IN CONTROL CIRCUIT. FOLLOWING REFUELING OUTAGE DIESEL GENERATOR 2 TESTING, AN ATTEMPT TO ADJUST ENGINE SPEED FROM THE CONTROL ROOM FAILED. THE DIESEL GENERATOR WAS SHUT DOWN FROM THE LOCAL CONTROL STATION. LOSS OF CONTROL ROOM SPEED ADJUSTMENT CAPABILITY WAS CAUSED BY A LOOSE WIRE IN THE DIESEL GENERATOR CONTROL CIRCUIT. THE WIRE TERMINAL WAS APPARENTLY LOOSENED AS A RESULT OF OPERATIONAL VIBRATION. IT WAS TIGHTENED RESTORING REMOTE SPEED CONTROL CAPABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTROL + DRESDEN 3 (DMN) + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, DESIGN ERROR + VIBRATION + CABLES AND CONNECTORS + ENGINE, INTERNAL COMBUSTION + GENERATOR, DIESEL

119509

CCSM PUMP VAULT PENETRATIONS HAVE DETECTABLE LEAKAGE AT DRESDEN 3

COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/RO 50-249/1970-27 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWJEN III, NOV. 17, 1970, UUCRET
50-249, TYPE--BMR, RFG--GEE, AE--SUT & LUNDY

CAUSE - OPERATIONAL VIBRATION. DURING REFUELING OUTAGE TESTING, CCSM PUMP VAULT PENETRATIONS EXHIBITED DETECTABLE LEAKAGE WHEN PRESSURIZED AS REQUIRED BY TECH SPECS. FAILURES WERE ATTRIBUTED TO OPERATIONAL VIBRATION. THEY WERE REPAIRED WITH SILICONE SEALANT (RTV). RETESTING SHOWED ZERO LEAKAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TEST, LEAK RATE + DRESDEN 3 (DMN) + REFUELING + TEST, SYSTEM OPERABILITY + SEAL + VIBRATION + LEAK RATE + COMPARTMENT COOLING SYSTEM + COMPARTMENT + FAILURE, IMMERENT + PUMPS + CONTAINMENT PENETRATION

119745

250-VOLT BATTERY FOUND IN A DEGRADED CONDITION AT DRESDEN 3

COMMONWEALTH EDISON CO., MORRIS, IL
4 PGS, LTR W/RO 50-249/1970-28 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWJEN III, NOV. 17, 1970, UUCRET
50-249, TYPE--BMR, RFG--GEE, AE--SUT & LUNDY

CAUSE - PRIOR BATTERY CHARGE PROBLEMS. AFTER PRELIMINARY TESTING OF THE 250-VOLT BATTERY AND A SUBSEQUENT INSPECTION BY A VENDOR REPRESENTATIVE DURING THE REFUELING OUTAGE, IT WAS DETERMINED THAT THE BATTERY WAS IN A DEGRADED CONDITION. THIS APPARENTLY RESULTED FROM PRIOR BATTERY CHARGE PROBLEMS WHICH SUBJECTED THE BATTERY TO DEEP CYCLING DURING THE EARLY LIFE OF THE UNIT. THE ORIGINAL BATTERY CELLS, GULUD MODEL PPR-23, WERE REPLACED WITH GULUD MODEL PPR-25 UNITS WHICH HAVE A LARGER CAPACITY. THE NEW UNITS WERE THE ONLY SUITABLE UNITS AVAILABLE AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRESDEN 3 (DMN) + BATTERIES & CHARGERS + EMERGENCY POWER, ELECTRIC + TEST, SYSTEM OPERABILITY + FAILURE, EQUIPMENT + FAILURE, IMMERENT + REPELING

119825

LEAKAGE RATE OF TIP PURGE CHECK VALVE FOUND TO BE EXCESSIVE AT DRESDEN 3

COMMONWEALTH EDISON CO., MORRIS, IL
3 PGS, LTR W/RO 50-249/1970-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWJEN III, NOV. 22, 1970, UUCRET
50-249, TYPE--BMR, RFG--GEE, AE--SUT & LUNDY

CAUSE - DIRT ON BALL ON SEAT. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TESTING, THE TIP PURGE

120225 CONTINUED

CRACK VALVE EXHIBIT - A LEAKAGE RATE OF 100 SCFM ITEM SPEC LIMIT IS 49.301 SCFM. IT WAS CLEANED WITH COMPRESSOR AIR. RETESTING WAS SATISFACTORY. VALVE LEAKAGE WAS APPARENTLY CAUSED BY DIRT ON THE BALL ON THE SEATING AREA. THIS IS THE FIRST TIME THIS MAINTAIN 1/4-INCH BALL CHECK VALVE, MODEL 400-100, HAS BEEN LOCAL LEAK-RATE TESTED SINCE UNIT OPERATIONS BEGAN.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED 3 (UNIT) * LEAK RATE * VALVE, CHECK * INSTRUMENT, IN LINE * TEST, SYSTEM OPERABILITY * TEST, LEAK RATE * CAUSE * FAILURE, EQUIPMENT * FAILURE, MAINTENANCE ERROR * REFUELING

120230

LEAKAGE THRU CRACK RETURN CHECK VALVE EXCESSIVE AT UNRESOLVED 3

COMMUNALITY EDISON CO., MARIETTA, IL

3 PWS, LTH N/NU 50-249/1970-24 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 26, 1970, WCKET 50-249, TYPE--BHM, MFG--GEC, AE--SGT & LUNNY

CAUSE - WEAR ON SEATING SURFACE. DURING A REFUELING OUTAGE TEST, CRACK RETURN LINE PRIMARY ISOLATION CHECK VALVE 3-021-40 EXCEEDED THE 49.301 SCFM LIMIT. THE EXCESSIVE DISC-TO-SEAT LEAKAGE RESULTED FROM A COMBINATION OF 2 FACTORS. FIRST, ALTHOUGH THE VALVE'S SEATING SURFACE WAS IN EXCELLENT CONDITION, WEAR HAD REDUCED THE TOTAL SEATING AREA SUFFICIENTLY TO ALLOW SOME LEAKAGE. SECONDLY, THE VALVE PISTON HAD LIGHT SURFACE RUST ON ALL NON-SEATING SURFACES WHICH CAUSED ELASTIC DEFORMATION. THE SEAT WAS LAPPED. THE PISTON WAS CLEANED AND LUBRICATED. THIS IS A PERRY PUMP MACHINE CO., 4-IN. PISTON-TYPE LEFT CHECK VALVE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED 3 (UNIT) * LEAK RATE * VALVE, CHECK * CONTROL AND VALVES * TEST, SYSTEM OPERABILITY * TEST, LEAK RATE * WEAR * REFUELING * FAILURE, EQUIPMENT * FAILURE, INCIDENT * CONTAINMENT ISOLATION

120231

LEAKAGE THRU CRACK RETURN CHECK VALVE EXCESSIVE AT UNRESOLVED 3

COMMUNALITY EDISON CO., MARIETTA, IL

3 PWS, LTH N/NU 50-249/1970-24 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 30, 1970, WCKET 50-249, TYPE--BHM, MFG--GEC, AE--SGT & LUNNY

CAUSE - DIRT ON SEATING AREA. DURING THE REFUELING OUTAGE LOCAL LEAK RATE TESTING REACTOR HEAD COOLING ISOLATION CHECK VALVE 3-205-2-7 EXHIBITED A LEAK RATE UP TO 300 SCFM (LIMIT IS 49.301 SCFM). LEAKAGE WAS APPARENTLY CAUSED BY DIRT IN THE SEATING AREA AND ON THE DISC PISTON PIN. THE VALVE WAS CLEANED AND THE SEATING SURFACE L. PEU. RETESTING YIELDED A LEAKAGE RATE OF 1.00 SCFM. THIS IS A MISSION VALVE AND PUMP CO. 1/2-INCH JAW-CHECK STYLE B CHECK VALVE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED 3 (UNIT) * LEAK RATE * VALVE, CHECK * SHUTDOWN COOLING SYSTEM * TEST, SYSTEM OPERABILITY * TEST, LEAK RATE * CAUSE * REFUELING * FAILURE, EQUIPMENT * FAILURE, MAINTENANCE ERROR * CONTAINMENT ISOLATION

120232

MPLI INJECTION VALVE ARMED OUT OF SERVICE IN OPEN POSITION AT UNRESOLVED 3

COMMUNALITY EDISON CO., MARIETTA, IL

3 PWS, LTH N/NU 50-249/1970-24 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 2, 1970, WCKET 50-249, TYPE--BHM, MFG--GEC, AE--SGT & LUNNY

CAUSE - POSSIBLE STEM DAMAGE. AS A RESULT OF MPLI INJECTION VALVE STEM FAILURE ON UNIT 2, A MPLI LEAK DURING DURING PHOENIX WAS IDENTIFIED WHICH WAS BELIEVED TO BE COMMON TO BOTH UNITS 2 AND 3. THE DURING LEAKAGE, WHICH DID NOT EXIST ON UNIT 3, MAY HAVE CAUSED THE VALVE TO OSCILLATE OPEN/CLOSED DURING REFUELING TESTING. THEREFORE, VALVE NO 3-2301-8 WAS ARMED OUT OF SERVICE IN THE OPEN POSITION AND VALVE 2301-7 WAS CLOSED TO ISOLATE THE MPLI PUMP DISCHARGE DURING THE NEXT OUTAGE. THE STEM OF VALVE 3-2301-8 WILL BE INSPECTED AND REPLACED IF NECESSARY. CONTROL LINELIGHT WILL BE ALTERED. A SMALLER MOTOR OPERATOR WILL BE INSTALLED ON THE VALVE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

UNRESOLVED 3 (UNIT) * VALVES * CONTAINMENT ISOLATION * MPLI * FAILURE, DESIGN ERROR * CONTROL SYSTEM * MODIFICATION * VALVE OPERATIONS

120235

DIESEL GENERATOR SPEED FAILS TO INCREASE FROM CONTROL ROOM STATION AT UNRESOLVED 3

COMMUNALITY EDISON CO., MARIETTA, IL

3 PWS, LTH N/NU 50-249/1970-24 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 4, 1970, WCKET 50-249, TYPE--BHM, MFG--GEC, AE--SGT & LUNNY

CAUSE - OVERHAUL LIMIT SWITCH OUT OF ADJUSTMENT. WHILE DIESEL GENERATOR 3 WAS BEING OPERATED FOR A BY BREAKER SWITCHING DURING THE REFUELING OUTAGE, ENGINE SPEED (RPM) COULD BE DECREASED BUT NOT INCREASED FROM THE CONTROL ROOM. THE RAISE OVERTRAVEL LIMIT SWITCH ON THE DIESEL OVERHAUL

120535 CONTINUED

FAILED TO CLOSE AFTER STARTUP. THE SWITCH ACTUATING ARM WAS OUT OF ADJUSTMENT APPARENTLY DUE TO VIBRATION. THE ARM WAS RESET AND THE SWITCH ACTUATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WRESDEN 3 (UHR) • GENERATOR, DIESEL • ENGINES, INTERNAL COMBUSTION • FAILURE • INSTRUMENT • MISSTAMENT, SWITCH • REFUELING • EMERGENCY POWER, ELECTRIC • VIBRATION • FAILURE, MAINT. ERROR • TEST, SYSTEM OPERABILITY

120537

UNION IN ISOLATION CONDENSER INSTRUMENT LINE LEAKS AT WRESDEN 3
COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS. LTR W/NO 50-249/1970-33 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGIONS III, WELD 13, 1970, URGENT 00 249, TYPE--DMR, RFG--GEE, AE--SGT & LUNDY

CAUSE - CAUSIS-THREADED. DURING A ROUTINE INSPECTION, THE THREADED UNION BETWEEN THE ISOLATION FLUID CHECK VALVE 3-1301-23 AND THE ISOLATION CONDENSER STEAM LINE FLUID SENSOR INSTRUMENT LINE WAS FOUND TO BE LEAKING. DURING MAINTENANCE ON THE VALVE, THE UNION APPARENTLY BECAME CAUSIS-THREADED. THE ISOLATION CONDENSER WAS IMMEDIATELY ISOLATED FROM THE REACTOR WHICH WAS AT 34 POWER. THE UNION WAS RETIGHTENED AND REINSTALLED. THE ISOLATION CONDENSER WAS THEN RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WRESDEN 3 (UHR) • PIPES AND PIPE FITTINGS • ORCEL • LEAK • FAILURE, MAINTENANCE ERROR • FAILURE, PIPE • SENSORS, FLOW

120538

TURNS-TO-LAYWELL VACUUM BREAKER POSITION ALARM FAILS AT WRESDEN 3

COMMONWEALTH EDISON CO., MORRIS, IL

3 PGS. LTR W/NO 50-249/1970-33 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGIONS III, WELD 13, 1970, URGENT 00 249, TYPE--DMR, RFG--GEE, AE--SGT & LUNDY

CAUSE - VIATY CONTACTS IN RELAY. DURING TESTING OF THE TURNS-TO-LAYWELL VACUUM BREAKERS, 1 OF THE 2 POSITION ALARMS DID NOT ANNUNCIATE IN THE CONTROL ROOM. FAILURE WAS CAUSED BY VIATY CONTACTS IN RELAY 1001-0A. THE CONTACTS WERE CLEANED AND VACUUM BREAKER 3-1001-33A WAS SUCCESSFULLY RETESTED THE FOLLOWING DAY. THIS IS A SQUARE D CO., 2POT, TYPE AP12, RELAY. THE REACTOR WAS AT 62% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WRESDEN 3 (UHR) • ANNUNCIATIONS • CONTAINMENT VACUUM BREAKER • TURNS • CONTAINMENT • INSTRUMENT, POSITION • TEST, SYSTEM OPERABILITY • RELAYS • CAUSE • FAILURE, INSTRUMENT • FAILURE, MAINTENANCE ERROR

110255

STATIC INVERTER FAILS AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

3 PGS. LTR W/NO 70-02 TO NRC DIRECTORATE OF LICENSING, JAN 13, 1970, URGENT 00 255, TYPE--DMR, RFG--GEE, AE--STONE & WEBSTER

CAUSE - ELECTRICAL SHORT. WHILE OPERATING AT 150% MW, A STATIC INVERTER FAILED. ONE LEAD OF A 25 WATT BIPOLAR NEGATIVE RESISTOR TOUCHED THE RESISTOR RESULTING IN MELTING OF THE INSULATION AND A SHORT WHICH CAUSED THE RESISTOR TO OPEN. THE INVERTER WAS REPAIRED AND PLACED IN BACK IN SERVICE. THE FAILED POWER SUPPLY FEEDS ONE HALF OF THE STEAM LEAK DETECTION EQUIPMENT FOR THE NRC SYSTEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (UHR) • FAILURE, INSTRUMENT • MONITOR • FAILURE, INSTALLATION ERROR • LEAK • ORCEL • GENERATOR

110252

DRYWELL PRESSURE SWITCH FAILS TO RESPOND TO PRESSURE CHANGE AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

3 PGS. LTR W/NO 70-02 TO NRC DIRECTORATE OF LICENSING, JAN 14, 1970, URGENT 00 252, TYPE--DMR, RFG--GEE, AE--STONE & WEBSTER

CAUSE - WATER IN SENSING LINE. THE DRYWELL HI-LO PRESSURE SWITCH WOULD NOT RESPOND TO CHANGES IN DRYWELL PRESSURE. MOISTURE HAD BUILT UP IN THE LINE SUFFICIENT TO PREVENT AN ADEQUATE PRESSURE SIGNAL TO THE SENSOR. THIS WAS CAUSED BY A PIPE SLOPING PROBLEM WHICH WILL BE CORRECTED DURING THE UPCOMING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

110252 *CONTINUED*
CONTAINMENT • REACTION PROTECTION SYSTEM • FITZPATRICK (DNR) • WATER • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, INSTALLATION ERROR • TUBING • SENSING, PRESSURE

110253
CONTINUOUS DRYWELL PARTICULATE SAMPLING INTERRUPTED AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
3 PGS, LTR W/NO 70-03 TO NRC DIRECTORATE OF LICENSING, JAN. 14, 1970, DCKET 50-333, TYPE--DNR, MFU--UOL, AE--
STONE & WEBSTER

CAUSE - SOLENOID VALVE FAILURE. WHILE THE REACTOR WAS OPERATING AT 1720 MWt, THE CONTINUOUS DRYWELL PARTICULATE SAMPLING WAS INTERRUPTED DUE TO FAILURE OF THE DRYWELL RAD MONITOR SOLENOID OPERATED VALVE. THE SOLENOID WAS REPLACED AND TESTED SATISFACTORILY. A DESIGN CHANGE TO UPDATE THE SAMPLING AND MONITORING SYSTEM HAS BEEN INITIATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00.

CONTAINMENT • FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • FITZPATRICK (DNR) • SAMPLING • MONITOR • WAS-
PARTICLE • FAILURE, INHERENT • SOLENOID • VALVES

110254
UNMONITORED RELEASE OF LIQUID WASTE AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
3 PGS, LTR W/NO 70-04 TO NRC DIRECTORATE OF LICENSING, JAN. 14, 1970, DCKET 50-333, TYPE--DNR, MFU--UOL, AE--
STONE & WEBSTER

CAUSE - FEED PUMP PACKING LEAK. AN UNMONITORED RELEASE OF LIQUID WASTE TO THE EAST STORM SEWER WAS DISCOVERED ON ROUTINE SAMPLING OF THE AUXILIARY OILER OIL PHASE SEPARATOR TANK. THE AUXILIARY BOILER FEED PUMP PACKING LEAKED TO THE FLOOD MAIN WHICH DRAINS TO THE OIL SEPARATOR TANK. THE LEAKAGE WAS CONTAMINATED. THE LEAK RATE WAS 1 GPM FOR 6 HOURS. ABOUT 104 MICROLITERS WERE RELEASED. THE PUMP WAS IMMEDIATELY SHUT DOWN. THE SEPARATOR TANK WILL BE RETURNED TO THE RADWASTE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (DNR) • BUILDING • RADIOACTIVITY RELEASE • FAILURE, DESIGN ERROR • SEAL • LEAK • DRAINAGE • PUMPS

110251
TURBINE WATER LEVEL EXCEEDS LIMIT AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
3 PGS, LTR W/NO 70-05 TO NRC DIRECTORATE OF LICENSING, JAN. 14, 1970, DCKET 50-333, TYPE--DNR, MFU--UOL, AE--
STONE & WEBSTER

CAUSE - RELIEF VALVE OPERATION, RCIC EXHAUST. AFTER A MANUAL SCRAM, THE TURBINE WATER LEVEL INCREASED ABOVE THE LIMIT BY 3.1 INCHES DUE TO RELIEF VALVE OPERATION AND RCIC TURBINE EXHAUST. WATER WAS DISCHARGED TO THE RADWASTE SYSTEM TO RETURN THE LEVEL TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

SCRAM, SEAL • FITZPATRICK (DNR) • SYSTEM CAPACITY • FAILURE, INHERENT • TUBING

112673
DISCHARGE OF RADIOACTIVE EFFLUENTS EXCEED QUARTERLY LIMIT AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-06 TO NRC DIRECTORATE OF LICENSING, MARCH 18, 1970, DCKET 50-333, TYPE--DNR, MFU--UOL, AE--
STONE & WEBSTER

CAUSE - EQUIPMENT FAILURES. DURING THE FIRST QUARTER OF 1970 THE DISCHARGE OF RADIOACTIVE EFFLUENTS, EXCLUDING THORIUM AND URANIUM WASTE, EXCEEDED 200 Lb. THE MAJOR CAUSE WAS FAILURE OF CRITICAL RADIOACTIVE WASTE EQUIPMENT COUPLED WITH A RELATIVELY LONG WASTE THE CONCENTRATE WASTE TANK DEVELOPED HOLES IN THE LOWER PORTIONS RENDERING IT USELESS. IT IS BEING REPAIRED AND WILL BE RETURNED TO SERVICE IN 2 WEEKS. BOTH CONCENTRATIONS WERE DISASSEMBLED FOR INSPECTION. ONE WAS FOUND TO BE CORRODED BEYOND REPAIR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FITZPATRICK (DNR) • WASTE DISPOSAL • CORROSION • STORAGE CONTAINER • RADIOACTIVITY RELEASE • FAILURE, DESIGN ERROR • WASTE TREATMENT, EQUIPMENT • WASTE

113490
RCIC TURBINE EXHAUST PRESSURE HIGH AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-06 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DCKET 50-333, TYPE--DNR, MFU--UOL, AE--

113496 CONTINUOUS
STONE & WEBSTER

CAUSE - MANUAL EXHAUST VALVE CLOSED. DURING RLIC SYSTEM FLOW RATE TESTING WITH THE REACTOR AT 38 POWER, TURBINE EXHAUST PRESSURE INCREASED ENOUGH TO RUPTURE BOTH EXHAUST RUPTURE DEVICES. THE MANUAL EXHAUST VALVE WAS FOUND TO BE FULLY CLOSED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE + FITZPATRICK (BWR) + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ENGR + PRESSURE, INTERNAL + TURBINE + RLIC

113497

CONTROL POWER TO PRESSURE RELIEF VALVE DISABLED AT FITZPATRICK

NIAGARA NUCLEAR POWER CORP., SYRACUSE, NY

2 PGS, LTR N/A/0 70-00 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET 50-333, TYPE--BWR, NRU--G.E., AE--
STONE & WEBSTER

CAUSE - MAINTENANCE REQUIREMENT. DURING THE PROCESS OF LOCATING A WOUND ON A TARGET AGCA RELIEF VALVE WITH THE REACTOR AT 808 POWER, THE CONTROL POWER WAS DISABLED, ALLOWING ONLY MECHANICAL REACTING OF THE VALVE. THIS WAS AN OPERATIONAL EVENT REQUIRING MAINTENANCE ACTIVITY ALLOWED BY TERN SPECS. REDUNDANT COMPONENTS WERE OPERABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR + FITZPATRICK (BWR) + ELECTRIC POWER + CONTROL + PRESSURE RELIEF + MAIN COOLING SYSTEM + FAILURE, IMMERENT + VALVE OPERATIONS + VALVES

113498

FUEL ASSEMBLIES OPERATE WITH MFLA VALVE LOWER THAN LIMIT AT FITZPATRICK

NIAGARA NUCLEAR POWER CORP., SYRACUSE, NY

2 PGS, LTR N/A/0 70-00 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET 50-333, TYPE--BWR, NRU--G.E., AE--
STONE & WEBSTER

CAUSE - ROUTINE EVENT DURING STARTUP. SUBSEQUENT TO INCREASING REACTOR POWER LEVEL ABOVE 608 BY CENTRAL RW INSTRUMENTALS, REACTOR PHYSICS SURVEILLANCE REVEALED 13 FUEL ASSEMBLIES WITH MCPR VALUES LOWER THAN THE FLOW BIASED LIMIT. THE LIMIT WAS 1.570. LOWEST ACTUAL VALUE WAS 1.5099. A PHLESS COMPUTER UPDATING WAS RUN. THEN CONTROL RODS WERE INSERTED IN AREAS AROUND THE AFFECTED FUEL ASSEMBLIES. THIS IS A ROUTINE EVENT DURING NON-STEADY STATE POWER OPERATION WITH INSULIN AERON TRANSIENT AND CONSERVATIVE PROCESS COMPUTER CALCULATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (BWR) + AERON + POWER DISTRIBUTION + REACTOR PHYSICS + MFL CHANNEL + FAILURE, IMMERENT + REACTOR STARTUP + FUEL ELEMENTS

113499

RECIRCULATION PUMP TRIPS AT FITZPATRICK

NIAGARA NUCLEAR POWER CORP., SYRACUSE, NY

2 PGS, LTR N/A/0 70-00 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET 50-333, TYPE--BWR, NRU--G.E., AE--
STONE & WEBSTER

CAUSE - WATER IN CONTROL CABINET. WHILE OPERATING AT 838 POWER, RECIRCULATION PUMP A TRIPPED DUE TO EXCITEM OVERCURRENT. POTENTIAL TRANSFORMER FUSES WERE FOUND TO BE BLOWN. EVIDENCE OF HIGH VOLTAGE ARCING DUE TO WATER IN-LEAKAGE TO THE CONTROL CABINET WAS FOUND. TEMPORARY WIP SHIELDS WERE INSTALLED. PERMANENT WIPES WILL BE INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE + FITZPATRICK (BWR) + WATER + MAIN COOLING SYSTEM + FLOW, RECIRCULATION + CONTROL PANEL/ROOM + FAILURE, IMMERENT + PUMPS + TRANSFORMERS

113500

SET POINT UNIFT IN DRYWELL PRESSURE SWITCHES AT FITZPATRICK

NIAGARA NUCLEAR POWER CORP., SYRACUSE, NY

2 PGS, LTR N/A/0 70-00 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET 50-333, TYPE--BWR, NRU--G.E., AE--
STONE & WEBSTER

CAUSE - CLOSURE TO LIMIT SETTINGS. DURING TESTING WHILE OPERATING AT 826 POWER, 9 HIGH DRYWELL PRESSURE SWITCHES WERE FOUND TO ACTUATE AT HIGHER THAN THE REQUIRED 200 PSIG. AS FOUND TRIP POINTS RANGED FROM 204 PSIG TO 207 PSIG. SET POINT UNIFT WHICH IS DUE TO THE REQUIREMENT FOR 1 PSIG DRYWELL/TIONUS WAS NECESSITATED SETTING THESE SWITCHES CLOSER TO THE 200 PSIG TRIP POINT RATHER THAN HAVE VARIOUS SPONTANEOUS ECCS AND REACTOR TRIP FUNCTIONS OCCUR. NORMAL UNIFT IS THE CAUSE.

113500 PLANTINGUP
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT + FITZPATRICK (DNR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST,
 SYSTEM OPERABILITY + SET POINT + SHIFT + FAILURE, INHERENT + FAILURE, COMMON MODE + SENSORS, PRESSURE

113501
 SET POINT SHIFT IN OFF WAS RADIATION MONITOR AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 C PUS: LTR NRC TO-11 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET SJ-333, TYPE--DNR, NRC--GEE, AE--
 STONE & WEBSTER

CASE - INSTRUMENT SHIFT. DURING TESTING WITH THE REACTOR AT 706 POWER, OFF GAS RADIATION MONITOR
 0 WAS FOUND TO BE INDICATING LESS (PM/HR) THAN REQUIRED. REQUIRED PM/HR IS 101200, 101300,
 101400, 101500, AND 101600. AS FOUND PM/HR READINGS WERE 05,050, 000 X 101300, 705 X 101400,
 AND 0 X 101500 RESPECTIVELY. THE UNIT WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FITZPATRICK (DNR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM
 OPERABILITY + OFF GAS + SET POINT + DRIFT + RADIATION MONITOR

113502
 REACTOR HIGH PRESSURE FAILS TO TRIP AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 C PUS: LTR NRC TO-14 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET SJ-333, TYPE--DNR, NRC--GEE, AE--
 STONE & WEBSTER

CASE - IMPROPER ADJUSTMENT. DURING TESTS WITH THE REACTOR AT 706 POWER, A REACTOR HIGH PRESSURE
 SWITCH WAS FOUND NOT TO CAUSE THE REQUIRED TRIP ACTION. THE SWITCH MECHANICAL STOP WAS SET TOO
 CLOSE PREVENTING CONTACT MAKE UP. THE INADEQUATE ADJUSTMENT WAS FOUND AND CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

REACTION PROJECTION SYSTEM + FITZPATRICK (DNR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT,
 SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SENSORS, PRESSURE

113503
 WITH CONTAINMENT ATMOSPHERE ANALYZERS OUT OF SERVICE AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 C PUS: LTR NRC TO-15 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET SJ-333, TYPE--DNR, NRC--GEE, AE--
 STONE & WEBSTER

CASE - ONE NOT PLUGGED IN. WHILE CONTAINMENT ATMOSPHERE ANALYZER 0 WAS OUT OF SERVICE AND
 CALIBRATION WAS BEING PERFORMED ON ANALYZER A, NO MONITORING OF THE DRYWELL ATMOSPHERE WAS ABLE
 TO BE PERFORMED. ONE ANALYZER WAS INADVERTENTLY NOT PLUGGED IN CAUSING THIS OCCURRENCE.
 ANALYSIS REVEALED THE LEAKAGE TO BE LOWER THAN REQUIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

JAYCOB + FITZPATRICK (DNR) + TESTING + INSTRUMENT CALIBRATION + MONITOR + FAILURE, MAINTENANCE ERROR +
 CONTAINMENT ATMOSPHERE + FAILURE, SIMULTANEOUS

113504
 MAPLNGR FOUND TO EXCEED LIMIT AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 C PUS: LTR NRC TO-14 TO NRC DIRECTORATE OF LICENSING, MAY 3, 1970, DUCRET SJ-333, TYPE--DNR, NRC--GEE, AE--
 STONE & WEBSTER

CASE - UNPLANNED POWER INCREASE. DURING AN UNSTABLE CONDITION INVOLVING THE TURBINE CONTROL
 VALVE POSITION, PLANT OUTPUT WAS INCREASED TO ELIMINATE THE FLUCTUATING CAM POSITION. AT THE
 STABLE POWER POWER LOAD, MAPLNGR WAS FOUND TO BE 0.48 HIGHER THAN REQUIRED. POWER WAS
 IMMEDIATELY REDUCED. THE CASE WAS THE UNPLANNED POWER INCREASE NECESSITATED BY UNSTABLE CONTROL
 VALVE POSITION ON THE CAM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FITZPATRICK (DNR) + NOT SHUT + POWER DISTRIBUTION + FAILURE, ADMINISTRATIVE CONTROL + REACTOR PHYSICS

113507
 RECALIBRATION PUMP SECURED AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

113907 *CONTINUED*

2 PGS, LTR W/NO 76-17 TO NRC DIRECTORATE OF LICENSING, MAY 16, 1976, DUCLET 50-333, TYPE--BHM, MFU--UCL, AC--
STONE & WEBSTER

CAUSE - ROUTINE MAINTENANCE. DUE TO A RELIEF VALVE LEAK ON ROCKET TO RECIRCULATION PUMP A LUBE OIL
COOLER, ACCUMULATION PUMP A WAS SHUT DOWN FOR REPAIRS. THE REACTOR WAS
AT 80% POWER. REPAIRS WERE COMPLETED AND THE PUMP RETURNED TO SERVICE WITHIN THE 24 HOUR LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT * MAINTENANCE AND REPAIR * FITZPATRICK (BHM) * MAIN COOLING SYSTEM * FLOW, RECIRCULATION *
COMPONENT COOLING SYSTEM * FAILURE, INHERENT * PUMPS

114401

TIP BALL VALVE IN OPEN IMPERMEABLE POSITION AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 76-15 TO NRC DIRECTORATE OF LICENSING, MAY 25, 1976, DUCLET 50-333, TYPE--BHM, MFU--UCL, AC--
STONE & WEBSTER

CAUSE - ACTUATING COIL FAILURE. DURING REPAIRS TO TIP BALL VALVE WITH THE REACTOR AT 70% POWER,
DUE TO A DEFECTIVE COIL THE BALL VALVE WAS LEFT IN AN OPEN IMPERMEABLE POSITION. THE ENTIRE BALL
VALVE ASSEMBLY WAS REPLACED DUE TO RADIATION CONSIDERATIONS. ONLY THE ACTUATING COIL HAD FAILED.
IN THE EVENT OF PCIS, THE SHEAR VALVE WOULD HAVE BEEN USED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT * INSTRUMENT, IN CORE * CONTAINMENT ISOLATION * FITZPATRICK (BHM) * FAILURE, INHERENT *
VALVE OPERATORS * VALVES

114402

SAMPLE STREAM VALVE FAILS AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 76-16 TO NRC DIRECTORATE OF LICENSING, MAY 25, 1976, DUCLET 50-333, TYPE--BHM, MFU--UCL, AC--
STONE & WEBSTER

CAUSE - DEFECTIVE SCLECID. DURING PRIMARY CONTAINMENT VALVE EXERCISE TESTING WITH THE REACTOR AT
92% POWER, A FUSE BLEW ON ONE VALVE DUE TO A DEFECTIVE SLENCID. THE SAMPLE STREAM ISOLATING
VALVE WAS PLACED IN THE ISOLATED CONDITION. THE DEFECTIVE SLENCID WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT * CONTAINMENT ISOLATION * FITZPATRICK (BHM) * SAMPLING * TEST, SYSTEM OPERABILITY *
FAILURE, INHERENT * SOLENOID * VALVES

114403

WYTHELL VACUUM BREAKERS NOT TESTED ON SCHEDULE AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 76-18 TO NRC DIRECTORATE OF LICENSING, MAY 25, 1976, DUCLET 50-333, TYPE--BHM, MFU--UCL, AC--
STONE & WEBSTER

CAUSE - WRONG DATE ENTERED ON SCHEDULE. DUE TO A SCHEDULING ERROR, THE WYTHELL VACUUM BREAKER
TESTING WAS NOT PERFORMED ON 4/24/76. THE WRONG DATE HAD BEEN ENTERED ON THE SCHEDULE. IT WAS
SUCCESSFULLY PERFORMED 9 DAYS LATE. APPROPRIATE PEOPLE HAVE BEEN MADE AWARE OF THIS EVENT. THE
REACTOR WAS OPERATING AT 87% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONTAINMENT * FITZPATRICK (BHM) * TESTING * CONTAINMENT VACUUM BREAKER * FAILURE, ADMINISTRATIVE CONTROL *
TEST INTERVAL * TORUS

114404

MSIV LIMIT SWITCH FAILS TO CLOSE AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 76-20 TO NRC DIRECTORATE OF LICENSING, MAY 25, 1976, DUCLET 50-333, TYPE--BHM, MFU--UCL, AC--
STONE & WEBSTER

CAUSE - UNKNOWN. DURING MAIN STREAM ISOLATION VALVE TESTING WITH THE REACTOR AT 95% PWR, MAIN
STREAM LINE B LIMIT SWITCH WAS FOUND NOT CLOSED WHEN REQUIRED TO BE CLOSED. DURING LEAK
APPLICATION OF JUMPERS, THE SWITCH RETURNED TO NORMAL. TESTING WAS COMPLETED WITHOUT JUMPERS.
THE SWITCH WILL BE INSPECTED AND CHECKED WHEN THE UNIT WILL PERMIT SUCH OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONTAINMENT ISOLATION * FITZPATRICK (BHM) * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM

115436 CONTINUED
OPERABILITY + MAIN COOLING SYSTEM + INSTRUMENT, POSITION + VALVES

115437
EMERGENCY DIESEL GENERATOR FAILS TO START AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 Pgs, LTR N/NU 70-22 TO NRC DIRECTORATE OF LICENSING, JUNE 23, 1970, DUCRET 50-333, TYPE--BWR, MFG--G.E., AE--
STONE & WEBSTER

CAUSE - IMPERFECT SPEED TACH RELAY. DURING TESTING WITH THE REACTOR AT 80% POWER, EMERGENCY
DIESEL GENERATOR FAILED TO START. THE SPEED TACH RELAY WAS FOUND IMPERFECT AND WAS REPLACED.
THE SYSTEM OPERATED SUCCESSFULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

FAILURE, EQUIPMENT + FITZPATRICK (BWR) + CONTROL + TEST, SYSTEM OPERABILITY + EXHAUST, INTERNAL COMBUSTION +
GENERATOR, DIESEL + RELAYS

115438
JET PUMP UNIT IN APRN AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 Pgs, LTR N/NU 70-22 TO NRC DIRECTORATE OF LICENSING, JUNE 23, 1970, DUCRET 50-333, TYPE--BWR, MFG--G.E., AE--
STONE & WEBSTER

CAUSE - INSTRUMENT UNIT. DURING A TEST OF OPERATION AT 91% POWER, 1 OF THE 4 APRN'S FAILED TO
PROVIDE A TRIP SIGNAL AT THE 145% FLOW POINT. THE APPARENT CAUSE WAS DRIFT. THE APRN WAS
RECALIBRATED AND TESTED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

REACTOR PROTECTION SYSTEM + FITZPATRICK (BWR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT,
SWITCH + TEST, SYSTEM OPERABILITY + INSTRUMENT, POWER RANGE + SET POINT + UNIT

115439
REACTOR WATER NOT SAMPLED ON SCHEDULE AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 Pgs, LTR N/NU 70-23 TO NRC DIRECTORATE OF LICENSING, JUNE 23, 1970, DUCRET 50-333, TYPE--BWR, MFG--G.E., AE--
STONE & WEBSTER

CAUSE - TECHNICIAN UNAVAILABLE. DURING A REACTOR STARTUP, THE RADIOCHEMICAL AND RADIATION
PROTECTION TECHNICIAN FAILED TO OBTAIN THE 4-MINUTE SAMPLE OF REACTOR WATER REQUIRED BY TECH SPECS.
HE WAS UNAVAILABLE TO PERFORM THE ANALYSIS. THE SAMPLE WAS TAKEN 2 HOURS LATE. IT WAS WITHIN
SPECS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

FAILURE, WATCH ERROR + FITZPATRICK (BWR) + REACTOR COOLANT + SAMPLING + RADIOCHEMICAL ANALYSIS + TEST
INTERVAL

115440
DISCHARGE OF RADIOACTIVE EFFLUENTS EXCEED LIMITS AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 Pgs, LTR N/NU 70-23 TO NRC DIRECTORATE OF LICENSING, JUNE 24, 1970, DUCRET 50-333, TYPE--BWR, MFG--G.E., AE--
STONE & WEBSTER

CAUSE - LEAKAGE FROM PUMP MAIN VALVE. DURING THE SECOND QUARTER OF 1970, THE CUMULATIVE
DISCHARGE OF RADIOACTIVE EFFLUENTS, EXCLUDING TRITIUM AND MOLECULAR GASES, EXCEEDED THE 2.5 CI
LIMITATION LIMIT. THE MAJOR CAUSE WAS AN EXCEPTIONALLY LARGE CONTINUOUS VOLUME OF WATER FROM A
LEAKING PRESSURIZED PUMP MAIN VALVE TO THE LOW CONDUCTIVITY JUMP IN THE TURBINE BUILDING. FAILURE
OF THE VACUUM DRAIN VALVE USED TO TRANSFER THE SHIP WATER AUTOMATICALLY TO THE CONDENSER RESULTED
IN A NEARLY CONTINUOUS PUMPING OF HOT WATER TO THE WASTE COLLECTION TANK. BOTH HAVE BEEN REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

EFFLUENT + FAILURE, EQUIPMENT + FITZPATRICK (BWR) + WASTE DISPOSAL + WASTE HANDLING + WASTE DISPOSAL, LIQUID
+ RADIOACTIVITY RELEASE + LEAK + PRESSURE + VALVES

115441
MPC VALVE OVERFLOW OCCURS AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 Pgs, LTR N/NU 70-24 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, MFG--G.E., AE--
STONE & WEBSTER

115048 - CONTINUED

CAUSE - UNKNOWN. WHILE OPERATING AT 94% POWER, AN ANOMALY WAS RECEIVED ON MPC1 VALVE OVERLOAD/LOSS OF CENTRAL PLANE. DURING THE INVESTIGATION, A FIRE WAS FOUND IN BUNDLE FOR 23 NGV10. FIRE PROCEDURES WERE INITIATED AND THE VALVE BREAKER DE-ENERGIZED. THE VALVE WAS MANUALLY OPENED RESTORING MPC1 TO SERVICE. THE CAUSE WAS AN APPARENT OVERLOAD. THE INVESTIGATION IS CONTINUING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FIRE + FITZPATRICK (BWR) + BREAKER + VALVE OPERATIONS + VALVES + MPC1

115049

REACTOR BUILDING ISOLATION AND EVACUATION OCCURS AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 70-20 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NEW--U-20, AC--STONE & WEBSTER

CAUSE - MANHOLE COVER ON SEPARATOR REMOVED. DURING A SHUTDOWN, HIGH AIRBORNE RADIATION OCCURRED IN THE REACTOR BUILDING CAUSING ISOLATION AND BUILDING EVACUATION. THE MANHOLE COVER ON THE CLEANUP SYSTEM PHASE SEPARATOR HAD BEEN REMOVED. STEAM FROM THIS SYSTEM CAUSED ISOLATION OF THE CPM. THE MANHOLE COVER WILL BE REPLACED. NO RELEASE TO THE ENVIRONMENT OCCURRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

AIRBORNE RELEASE + CONTAINMENT + CONTAINMENT ISOLATION + FITZPATRICK (BWR) + FAILURE, MAINTENANCE ERROR

115050

EMERGENCY DIESEL GENERATORS UNSTABLE AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 70-25 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NEW--U-20, AC--STONE & WEBSTER

CAUSE - DRAFT IN DROOP CIRCUIT. DURING TESTING OF THE 4 EMERGENCY DIESEL GENERATORS WITH THE REACTOR AT 94% POWER, IT WAS NOTED THAT THEY WERE UNSTABLE ALTHOUGH THEY DID PERFORM PROPERLY. THE DROOP CIRCUIT HAD DRAFTED CAUSING THE INSTABILITY. DROOP IS NECESSARY FOR TESTING ONLY, NOT FOR EMERGENCY OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC + FITZPATRICK (BWR) + TESTING + CONTROL + TEST, SYSTEM OPERABILITY + DRAFT + FAILURE, INHERENT + ENGINES, INTERNAL COMBUSTION + GENERATOR, DIESEL

115051

REACTOR BUILDING MONITOR FAILS TO FUNCTION PROPERLY AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 70-27 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NEW--U-20, AC--STONE & WEBSTER

CAUSE - DEFECTIVE CIRCUIT BOARD. DURING POWER ASCENSION AT 82% POWER, RBM B LOUDED NOT BE FUNCTIONALLY OPERATED AND WAS PLACED IN TRIPPED CONDITION. A CIRCUIT BOARD WAS DEFECTIVE AND WAS REPLACED. RBM B HAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FITZPATRICK (BWR) + FAILURE, INSTRUMENT + FAILURE, INHERENT + ELECTRONIC FUNCTION UNITS + RADIATION MONITORS

115052

REACTOR BUILDING MONITOR FAILS DOWNSCALE AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/NO 70-28 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NEW--U-20, AC--STONE & WEBSTER

CAUSE - CIRCUIT BOARD FAILURE. WHILE OPERATING AT 82% POWER, RBM A FAILED DOWNSCALE. RBM B WAS ALREADY IN TRIPPED CONDITION. A CIRCUIT BOARD WAS REPLACED, THUS RESTORING OPERATION OF THE SYSTEM. NO HAZARD WAS PRESENT SINCE BOTH MONITORS WERE IN FAIL SAFE CONDITION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FITZPATRICK (BWR) + FAILURE, INSTRUMENT + FAILURE, INHERENT + ELECTRONIC FUNCTION UNITS + RADIATION MONITORS

115053
MAPLEHUR LIMIT EXCEEDED AT FITZPATRICK
NIAGARA PLUMMA POWER CORP., SYRACUSE, NY
2 PWS, LTR N/AU 70-34 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DOLNET 50-333, TYPE--BOM, NFW--GUE, AE--
STONE & WEBSTER

CASE - SHIFT IN LPRM. WITH THE UNIT AT 80% POWER, PHYSICS SURVEILLANCE FOR MAPLEHUR INDICATED THAT THE LIMIT WAS EXCEEDED. THERMAL OUTPUT OF THE REACTOR WAS IMMEDIATELY DERATED. LPRM 44-37-C WAS SHIFTED UPWARD, THUS PROVIDING INCONGRUENT DATA TO THE PROCESS COMPUTER. ONCE THE COMPUTER WAS UPDATED, THERMAL POWER WAS RETURNED TO THE PREVIOUS VALUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (BOM) • POWER DISTRIBUTION • HOT CHANNEL ANALYSIS • FAILURE, INSTRUMENT • TEST, SYSTEM OPERABILITY • INSTALLMENT, POWER RANGE • HOT CHANNEL • SHIFT • FAILURE, INHERENT

115054
MPCI SYSTEM FAILS AT FITZPATRICK
NIAGARA PLUMMA POWER CORP., SYRACUSE, NY
2 PWS, LTR N/AU 70-34 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DOLNET 50-333, TYPE--BOM, NFW--GUE, AE--
STONE & WEBSTER

CASE - GLAND SEAL CONDENSER GASKET FAILURE. DURING MPCI SUBSYSTEM LOGIC TESTING WHILE OPERATING AT 95% POWER AND UPON START OF MPCI-CST TO CST FLUSH, THE GLAND SEAL CONDENSER COOLING SIDE GASKET FAILED MAKING MPCI IMPENETRABLE. THE GASKET WAS REPLACED AND WILL BE WATCHED TO DETERMINE WHETHER A CHANGE IN MATERIAL OR OPERATION IS NEEDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FITZPATRICK (BOM) • TEST, SYSTEM OPERABILITY • SEAL • CONDENSER • MPCI

115055
TURBINE BUILDING ISOLATES CN HIGH AIRBORNE RADIATION AT FITZPATRICK
NIAGARA PLUMMA POWER CORP., SYRACUSE, NY
2 PWS, LTR N/AU 70-34 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DOLNET 50-333, TYPE--BOM, NFW--GUE, AE--
STONE & WEBSTER

CASE - INCREASE IN OFF GAS ACTIVITY. DURING 80% POWER OPERATION, THE TURBINE BUILDING WAS ISOLATED ON HIGH AIRBORNE RADIATION FROM STEAM LEAKS AND INCREASING ACTIVITY IN THE OFF GAS. EVACUATION PLANS WERE FOLLOWED AND NO MEASURABLE ACTIVITY ESCAPED THE BUILDING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

AIRBORNE RELEASE • CONTAINMENT ISOLATION • STEAM • FITZPATRICK (BOM) • BUILDING • OFF GAS • TURBINE • FAILURE, INHERENT

115056
TURBINE BUILDING ISOLATES CN HIGH AIRBORNE ACTIVITY AT FITZPATRICK
NIAGARA PLUMMA POWER CORP., SYRACUSE, NY
2 PWS, LTR N/AU 70-34 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DOLNET 50-333, TYPE--BOM, NFW--GUE, AE--
STONE & WEBSTER

CASE - SMALL LEAKS IN OFF GAS PIPING. WHILE OPERATING AT 80% POWER, THE TURBINE BUILDING ISOLATED AT 900 CPM. THE PRIMARY ISOTOPE WAS AR-135 CAUSED BY SMALL LEAKS IN THE OFF GAS PIPING IN CONJUNCTION WITH THE GLAND SEALING SYSTEM. NO MEASURABLE ACTIVITY WAS RELEASED FROM THE SITE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

AIRBORNE RELEASE • CONTAINMENT ISOLATION • FITZPATRICK (BOM) • BUILDING • OFF GAS • LEAK • TURBINE • FAILURE, INHERENT • PIPES AND PIPE FITTINGS

115057
MPCI TURBINE SUCTION VALVE FAILS TO OPEN AT FITZPATRICK
NIAGARA PLUMMA POWER CORP., SYRACUSE, NY
2 PWS, LTR N/AU 70-34 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DOLNET 50-333, TYPE--BOM, NFW--GUE, AE--
STONE & WEBSTER

CASE - SHORT IN MOTOR. DURING TESTING WITH THE REACTOR AT 80% POWER, THE MPCI TURBINE SUCTION VALVE FAILED TO OPEN. IT WAS MANUALLY OPENED AND THE BREACH MADE OUT ALLOWING FULL OPERABILITY OF THE MPCI SYSTEM. THERE WAS A SHORT IN THE LIMITING MOTOR. THE MOTOR WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

115057 CONTINUED
FAILURE, EQUIPMENT • FITZPATRICK (BWR) • TEST, SYSTEM OPERABILITY • FAILURE, INHERENT • VALVE OPERATIONS •
OVALVES • ONPCI

115058
CONDENSATE TRANSFER LINE LEAKS OUTSIDE THE BUILDING AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-34 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NRU--UOL, AC--
STONE & WEBSTER

CAUSE - SPLIT PIPE. A JANITOR MOWING THE LAWN NEAR THE ADMINISTRATIVE BUILDING DISCOVERED AN AREA
OF SOFT LAWN. A BUNDSTRAND LINE CARRYING WATER FROM THE WASTE SAMPLE TANK IN HAD WASTE TO THE
CONDENSATE STORAGE TANKS WAS FOUND TO BE LEAKING. THE LINE WAS ISOLATED. THE LEAKING SECTION OF
BUNDSTRAND WAS REPLACED WITH STAINLESS STEEL PIPE. THE ENTIRE LENGTH OF PIPE WILL BE REPLACED
WITH STAINLESS STEEL AS SOON AS PRACTICAL. ABOUT 1000 LB VARS OF CONTAMINATED WAST WILL BE
SHIPPED OFF SITE FOR BURIAL. ALL UNDERGROUND PIPING WHICH MIGHT CONTAIN RADIOACTIVE WATER WILL
BE INVESTIGATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, PIPE • FITZPATRICK (BWR) • WASTE HANDLING • MODIFICATION • RADIOACTIVITY RELEASE • FAILURE, DESIGN
ERROR • LEAK • UNDERGROUND • PIPES AND PIPE FITTINGS

115059
REQUIRED SURVEILLANCE NOT PERFORMED AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-35 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NRU--UOL, AC--
STONE & WEBSTER

CAUSE - OPERATOR ERROR. DURING OPERATION AT 93% POWER, ONE PUMP CREAKER WAS TAKEN OUT OF
SERVICE TOO LONG MAINTENANCE WORK. THE SURVEILLANCE ASSOCIATED WITH THIS ACTION WAS NOT
PERFORMED. OPERATING PERSONNEL WERE INATTENTIVE OF THE REQUIREMENTS IN THE EVENT EQUIPMENT IS
REMOVED FROM SERVICE. WHEN THE SURVEILLANCE WAS PERFORMED, IT WAS SATISFACTORY

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, OPERATOR ERROR • MAINTENANCE AND REPAIR • PROCEDURES AND MANUALS • FITZPATRICK (BWR) • TESTING •
SHUTDOWN LOOKING SYSTEM • TEST INTERVAL • CREAKER • PUMPS

115060
MAIN STEAM LINE RADIATION MONITOR HAS SPURIOUS BEHAVIOR AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-36 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NRU--UOL, AC--
STONE & WEBSTER

CAUSE - UNKNOWN. DURING 93% POWER OPERATION, A MAIN STEAM LINE RADIATION MONITOR BEGAN SPURIOUS
BEHAVIOR RESULTING IN IMPERATIVE TRIPS IN ONE CHANNEL TO THE RPS. WHILE TROUBLE SHOOTING THE
INSTRUMENT, IT FUNCTIONED PROPERLY WITH NO APPARENT CAUSE FOR ITS BEHAVIOR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

REACTOR PROTECTION SYSTEM • FITZPATRICK (BWR) • FAILURE, INSTRUMENT • INSTRUMENT, ABNORMAL INDICATION •
FAILURE, INHERENT • RADIATION MONITORS

115061
NRC TURBINE FAILS TO TRIP AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-37 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NRU--UOL, AC--
STONE & WEBSTER

CAUSE - RUSTY LINNAGE. DURING TESTING OF THE NRC SYSTEM WITH THE UNIT AT 97% POWER, THE NRC
TURBINE WOULD NOT TRIP WHEN CALLED UPON TO DO SO. THIS RESULTED FROM A RUSTY LINNAGE CAUSED BY A
STEAM LEAK. THE LINNAGE WAS LINED AND WILL BE REEXERCISED ONCE PER SHIFT FOR A WEEK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT • FITZPATRICK (BWR) • CORRUSION • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR •
TURBINE • NRC

115062
OXYGEN CONCENTRATION IN DRYWELL EXCEEDS LIMIT AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-38 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DUCRET 50-333, TYPE--BWR, NRU--UOL, AC--

115002 OCCUPANCY
STONE & NEBSTER

CAUSE - UNKNOWN. WHILE AT 936 POWER, THE DAYWELL ATMOSPHERIC ANALYZERS INDICATED GREATER THAN 42 CATHEN. AN IMMEDIATE PLANT SHUTDOWN WAS STARTED AND ANALYZERS CALIBRATED. THE INSTRUMENTS WERE ACCEPTABLE. A RETRACTION PUMP WAS STARTED. CONCENTRATION WAS BELOW 40.06 WITHIN 5 HOURS. NO APPARENT CAUSE HAS YET BEEN DETERMINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE - FITZPATRICK (BWR) + OCCUPANCY ATMOSPHERE + CONCENTRATION

115003
SAMPLE STREAM VALVE FAILS AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
L PWR LTR N/NU 70-39 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DCKET 50-333, TYPE--BWR, NRU--60E, AE--
STONE & NEBSTER

CAUSE - DEFECTIVE CUI. WHILE OPERATING AT 936 POWER, A SAMPLE STREAM E VALVE BURNED OUT APPARENTLY DUE TO A DEFECTIVE CUI. THE VALVE WILL BE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT - FITZPATRICK (BWR) + SAMPLING + FAILURE, INHERENT + SENSING + VALVE OPERATION + EVALUATION

115004
DAYWELL RADIATION MONITOR SUCTION VALVES FOUND CLOSED AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
L PWR LTR N/NU 70-40 TO NRC DIRECTORATE OF LICENSING, JULY 6, 1970, DCKET 50-333, TYPE--BWR, NRU--60E, AE--
STONE & NEBSTER

CAUSE - OPERATION ERROR. DURING INVESTIGATION INTO THE CAUSE OF INCREASING DAYWELL CONCENTRATION IN THE DAYWELL, 2 DAYWELL RADIATION MONITOR SUCTION ISOLATION VALVES WERE FOUND CLOSED. WITH THE VACUUM PUMPS OPERABLE, AIR INLEAKAGE TO THE DAYWELL WAS INCREASED. THE VALVES WERE OPENED AND THE PANEL AUTOMATICALLY MARKED TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + CONTAINMENT ISOLATION + FITZPATRICK (BWR) + TEST, SYSTEM OPERABILITY + CONTAINMENT ATMOSPHERE + INTAKE + EVALUATION + RADIATION MONITORS

115939
TRAVELING INCORE PROBE MONITOR LGST AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
L PWR LTR N/NU 70-43 TO NRC DIRECTORATE OF LICENSING, JULY 19, 1970, DCKET 50-333, TYPE--
BWR, NRU--60E, AE--STONE & NEBSTER

CAUSE - INADVERTENTLY SHIPPED FOR BURNAL. DURING THE ANNUAL PHYSICAL PIECE COUNT OF SPECIAL ALLEMAN MATERIAL, 3 USED TRAVELING INCORE PROBE MONITORS WERE LOCATED IN THE TIP ROOM. THE SAM STATUS SHEET INDICATED THAT THERE SHOULD BE 4. AN INVESTIGATION REVEALED THAT A MONITOR HAD BEEN REMOVED FROM THE LEAD CONTAINER AND PLACED IN A 55 GALLON DRUM. DURING A MAJOR PLANT CLEAN-UP, THE DRUM WAS SEALED AND SENT TO THE WASTE BUILDING FOR DISPOSAL WITHOUT ANY ONE BEING AWARE THAT IT CONTAINED THE MONITOR. RECOVERY IS IMPOSSIBLE. THE MONITOR CONTAINED 0.01 GRAM OF URANIUM ENRICHED TO 93.356 IN U-235

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, IN CORE - FITZPATRICK (BWR) + TRANSPORTATION AND HANDLING + JOURNAL + WASTE DISPOSAL + SOURCE, RADIATION, LGST + FAILURE, ADMINISTRATIVE CONTROL + SPECIAL NUCLEAR MATERIAL + SAFEGUARDS, NUCLEAR MATERIAL

116002
MCPN TO CPM RATIO EXCEEDS LIMIT AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
L PWR LTR N/NU 70-49 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, DCKET 50-333, TYPE--BWR, NRU--60E, AE--
STONE & NEBSTER

CAUSE - CONSERVATIVE ADJUSTMENTS BY COMPUTER. DURING PRE COMMISSIONING OF REACTOR CORE FUEL, INFORMATION OBTAINED FROM THE PAGES, COMPUTER INDICATED A MCPN TO CPM RATIO OF 1.000. AN UPDATE OF CURRENT AXIAL FLUX PROFILES IN THE VICINITY REDUCED THE RATIO TO 0.900 (ALLOWABLE 1.000). THEREFORE, A CORRECTION WAS MADE IN THE RATIO TO 0.900. DURING THE 3000 RATE OF POWER ASCENSION, THE PROCESS COMPUTER MADE CONSERVATIVE ADJUSTMENTS FOR VARYING FLUX PROFILES RESULTING IN MORE CONSERVATIVE CALCULATION. VARYING AXIAL DISTRIBUTION CAN CAUSE THIS SITUATION TO OCCUR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM

110482 *CONTINUED*
CHARGE \$2.00

COMPUTER PROGRAM • FITZPATRICK (BWR) • POWER DISTRIBUTION • HOT CHANNEL • FAILURE, INCIDENT

110483
BUS FAILS TO TRANSFER TO RESERVE POWER AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/AL 70-42 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, Docket 50-333, TYPE--BWR, MFU--UCL, RE--
STONE & WEBSTER

CAUSE - NO CAUSE FOUND. UPON LOSS OF NORMAL POWER TO BUS 10230 AS A RESULT OF A TURBINE TRIP, BUS 10200 FAILED TO TRANSFER TO RESERVE POWER CAUSING LOSS OF RECIRCULATION PUMP 0. IT WAS MANUALLY TRANSFERRED. A COMPLETE INVESTIGATION FOUND NO APPARENT CAUSE FOR THIS EVENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FITZPATRICK (BWR) • ELECTRIC POWER • DIELECTRIC POWER, ALTERNATE • BREAKER

110484
INJECTION VALVE FAILS TO OPEN AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/AL 70-42 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, Docket 50-333, TYPE--BWR, MFU--UCL, RE--
STONE & WEBSTER

CAUSE - UPON MOTOR WINDINGS. DURING VALVE EXERCISING WITH THE REACTOR AT 92% POWER, A RM INJECTION VALVE FAILED TO OPEN DUE TO THE LARGE CURRENT LOAD DRAIN AT THE VALVE OPERATION RESULTING IN OVERHEATING. THE WINDINGS PROBABLY ARE OPEN. THE VALVE WAS MANUALLY OPENED. IT WAS LEFT OPEN WITH THE OTHER ISOLATION VALVE IN THE LINE CLOSED. REPAIRS WILL BE MADE DURING THE NEXT AVAILABLE OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • FITZPATRICK (BWR) • TEST, SYSTEM OPERABILITY • POSITIVELY WORKING SYSTEM • VALVE OPERATORS • VALVES

110485
ALARM RECEIVED FOR HIGH RADIATION IN CONTROL ROOM VENT AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/AL 70-42 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, Docket 50-333, TYPE--BWR, MFU--UCL, RE--
STONE & WEBSTER

CAUSE - NO APPARENT CAUSE. DURING 90% POWER OPERATION, AN ALARM INDICATING HIGH RADIATION IN THE CONTROL ROOM VENTILATION SYSTEM OCCURRED. EMERGENCY VENTILATION WAS PLACED IN SERVICE. THE MAIN CONTROL ROOM VENTILATION SYSTEM WAS ISOLATED. SAMPLING INDICATED NO ABNORMAL ACTIVITY. NO CAUSE WAS FOUND. THE RADIATION MONITOR WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (BWR) • VENTILATION SYSTEM • MONITORING SYSTEM, RADIATION • CONTROL PANEL/ROOM • RADIATION MONITORS

110486
REACTOR BUILDING VENT JAMPER FAILS TO CLOSE AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/AL 70-42 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, Docket 50-333, TYPE--BWR, MFU--UCL, RE--
STONE & WEBSTER

CAUSE - SOLENOID OUT OF ADJUSTMENT. DURING REACTOR BUILDING ISOLATION TESTING WITH THE REACTOR AT 93% POWER, VENTILATION SYSTEM B JAMPER DID NOT ISOLATE. IT WAS MANUALLY CLOSED. THE SOLENOID CONTROLLING THIS FUNCTION WAS ADJUSTED TO CAUSE THE CORRECT JAMPER ACTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • FITZPATRICK (BWR) • VENTILATION SYSTEM • BUILDING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • VALVES

110487
RM PROCESS SAMPLING LINE FAILS TO ISOLATE AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/AL 70-42 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, Docket 50-333, TYPE--BWR, MFU--UCL, RE--
STONE & WEBSTER

110007 CONTAINMENT

CAUSE - PROCEDURAL DEFICIENCY. DURING TESTING WITH THE REACTOR AT 928 POWER, A MAIN PROCESS SAMPLING LINE VALVE FAILED TO ISOLATE ON SIGNAL. BOTH VALVES IN THE LINE WERE MANUALLY ISOLATED PROVIDING THE REQUIRED PRIMARY CONTAINMENT INTEGRITY. THE PROCEDURE USED FOR ISOLATING THE ISOLATION SIGNAL WAS NOT CORRECT. IT IS BEING REVISED AND APPROVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + PROCEDURES AND MANUALS + FITZPATRICK (BWR) + SAMPLING + TEST, SYSTEM OPERABILITY + FAILURE, ADMINISTRATIVE CONTROL + SHUTDOWN COOLING SYSTEM + VALVES

110008

SAFETY RELIEF VALVE OPENS AT FITZPATRICK

NIAGARA POWER CORP., SYRACUSE, NY

2 PGS, LTR N/ENR 70-40 TO NRC DIRECTORATE OF LICENSING, JULY 30, 1970, Docket 50-333, TYPE--BWR, NRC--60E, AE--STURGE & WEBSTER

CAUSE - NOT YET DETERMINED. DURING OPERATION AT 918 POWER, SAFETY RELIEF VALVE OPENED. ABOUT 15 SECONDS FOLLOWING DE-ENERGIZATION OF VALVE POWER, THE VALVE CLOSED. THE PLANT WAS SHUT DOWN FOR INVESTIGATION. THE VALVE WAS REMOVED AND REPLACED WITH A SPARE. IT WILL BE EXAMINED BY THE VENDOR FOR CAUSE OF MALFUNCTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + STCR + FITZPATRICK (BWR) + OPRESSURE RELIEF + SHUTDOWN + MAIN COOLING SYSTEM + PRESSURE TRANSIENT + REACTOR SHUTDOWN + FAILURE, INHERENT + VALVES

117007

OFF GAS SAMPLE LINE PUMP ISOLATED AT FITZPATRICK

NIAGARA POWER CORP., SYRACUSE, NY

2 PGS, LTR N/ENR 70-40 TO NRC DIRECTORATE OF LICENSING, AUG. 11, 1970, Docket 50-333, TYPE--BWR, NRC--60E, AE--STURGE & WEBSTER

CAUSE - PROCEDURE ERROR. DURING AN ATTEMPT TO OBTAIN AN OFF GAS SAMPLE WHILE OPERATING AT 802 POWER, IT WAS FOUND THAT THE OFF GAS SAMPLE LINE WAS ISOLATED AND, THEREFORE, READINGS ON THE OFF GAS MONITORS HAD NOT BEEN VALID FOR THE LAST 2 DAYS. THE ISOLATION APPARENTLY OCCURRED DURING OFF GAS RECUMINER LEAK TESTING. THE MONITORS WERE IMMEDIATELY VALVED INTO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + PROCEDURES AND MANUALS + FITZPATRICK (BWR) + SAMPLING + OFF GAS + FAILURE, ADMINISTRATIVE CONTROL + RADIATION MONITORS

117006

NRC IMPOSING CIVIL PENALTIES OF \$10000 AT FITZPATRICK

NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC

7 PGS, LTR N/ENR TO NIAGARA POWER CORP., AUG. 31, 1970, Docket 50-333, TYPE--BWR, NRC--60E, AE--STURGE & WEBSTER

CAUSE - PHYSICAL SECURITY VIOLATIONS. AFTER CAREFUL CONSIDERATION OF RESPONSES TO THE NOTICE OF VIOLATION RELATED TO IMPLEMENTATION OF THE PHYSICAL SECURITY PROGRAM, NRC HAS CONCLUDED THAT THE ITEMS OF NONCOMPLIANCE DID OCCUR. TAKING INTO ACCOUNT THE CIRCUMSTANCES CONCERNING ONE ITEM, THE PROPOSED PENALTY FOR THAT ITEM WAS REDUCED FROM \$3000 TO \$0. ENCLOSES AN ORDER IMPOSING CIVIL PENALTIES OF \$10000 FOR THE OTHER VIOLATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

SECURITY + FITZPATRICK (BWR) + COMPLIANCE + FAILURE, ADMINISTRATIVE CONTROL + LEGALISTICS + AGENCY, NRC + SECURITY

117771

RADIATION MONITOR FAILS AT FITZPATRICK

NIAGARA POWER CORP., SYRACUSE, NY

2 PGS, LTR N/ENR 70-49 TO NRC DIRECTORATE OF LICENSING, SEPT. 3, 1970, Docket 50-333, TYPE--BWR, NRC--60E, AE--STURGE & WEBSTER

CAUSE - COMPONENT FAILURE. DURING A TEST WHILE OPERATING AT 908 POWER, RADIATION MONITOR B FOR THE RADIATION WASTE VENTILATION SYSTEM WAS FOUND INOPERABLE. THE APPARENT CAUSE WAS A FAILED COMPONENT IN THE MONITOR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + FITZPATRICK (BWR) + VENTILATION SYSTEM + WASTE TREATMENT + TEST, SYSTEM OPERABILITY + MONITORING SYSTEM, RADIATION + FAILURE, INHERENT + RADIATION MONITORS

117772
SET POINT DRIFT IN APRM AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LEN 70-50 TO NRC DIRECTORATE OF LICENSING, SEPT. 8, 1970, WJACKET 50-333, TYPE--DM, RFU--GOL, AC--STONE & WEBSTER

CAUSE - INSTRUMENT DRIFT. DURING SURVEILLANCE WITH THE REACTOR AT 864 POWER, IT WAS DISCOVERED THAT APRM C WOULD NOT PRODUCE AN IMPERATIVE SIGNAL WITH LESS THAN 11 LPM INPUTS. THE SET POINT FOR THE IMPERATIVE APRM WILL BE MAINTAINED AT 12 LPM INPUTS OR LESS TO GENERATE AN INM SIGNAL TO ACCOUNT FOR ANY SET POINT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (DM) • INSTRUMENT CALIBRATION • REACTOR CONTROL • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • DRIFT • FAILURE, IMMINENT • INSTRUMENTS, MISG.

117773
MAIN STEAM LINE LEAK DETECTION THERMOCOUPLE FOUND DEFECTIVE AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LEN 70-51 TO NRC DIRECTORATE OF LICENSING, SEPT. 9, 1970, WJACKET 50-333, TYPE--DM, RFU--GOL, AC--STONE & WEBSTER

CAUSE - TEMPERATURE DETECTOR DEFECTIVE. DURING TESTING WITH THE REACTOR AT 906 POWER, ONE OF THE MAIN STEAM LINE LEAK DETECTION HIGH TEMPERATURE THERMOCOUPLES WERE DISCOVERED DEFECTIVE. THERE WAS AN APPARENT FAILURE OF THE TEMPERATURE DETECTOR. THE THERMOCOUPLE WILL BE REPLACED DURING AN OUTAGE WHEN RADIATION LEVELS ARE REDUCED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • FITZPATRICK (DM) • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • THERMOCOUPLE • LEAK DETECTION • FAILURE, IMMINENT • SENSORS, TEMPERATURE

117774
ALPHA ANALYSIS ON LIQUID WASTE COMPOSITE NOT PERFORMED AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LEN 70-52 TO NRC DIRECTORATE OF LICENSING, SEPT. 9, 1970, WJACKET 50-333, TYPE--DM, RFU--GOL, AC--STONE & WEBSTER

CAUSE - PROCEDURAL DEFICIENCY. DURING A REVIEW OF THE ETS SURVEILLANCE PROGRAM, IT WAS DISCOVERED THAT MONTHLY GROSS ALPHA ANALYSIS ON THE LIQUID WASTE COMPOSITE WAS NOT BEING PERFORMED. PROCEDURE AND DATA SHEETS WILL BE REVISED TO INCLUDE GROSS ALPHA.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS • FITZPATRICK (DM) • TESTING • WASTE DISPOSAL • SAMPLING • GROSS ALPHA • WASTE DISPOSAL, LIQUID • RADIOCHEMICAL ANALYSIS • FAILURE, ADMINISTRATIVE CONTROL • TEST INTERVAL

117946
INVERTER SUPPLY FOR MPLI FAILS AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LEN 70-53 TO NRC DIRECTORATE OF LICENSING, SEPT. 13, 1970, WJACKET 50-333, TYPE--DM, RFU--GOL, AC--STONE & WEBSTER

CAUSE - UNKNOWN. DURING 958 POWER OPERATION, THE INVERTER SUPPLY FOR MPLI TRIPPED AND WOULD NOT RESTART. THE TOPAZ INVERTER, MODEL 125-1250J, SERIAL NO. 0601, WAS REPLACED WITH A SPARE UNIT UNTIL THE CAUSE OF FAILURE COULD BE DETERMINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FITZPATRICK (DM) • ELECTRIC POWER • GENERATOR, • MPLI

117947
RELU ON ILT CONNECTION CRACKS AT FITZPATRICK
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LEN 70-54 TO NRC DIRECTORATE OF LICENSING, SEPT. 13, 1970, WJACKET 50-333, TYPE--DM, RFU--GOL, AC--STONE & WEBSTER

CAUSE - NO APPARENT REASON. DURING 958 POWER OPERATION, A CRACK WAS NOTICED IN A RELU ON ILT CONNECTION BETWEEN 10 NOV 250 AND 10 NOV 270. THIS IS A 3/4 INCH PIPE UPSTREAM OF ILT TO RRM 700. THIS CONNECTION IS NOT USED IN NORMAL OPERATION BUT FOR ILT. THE CRACK WAS REPAIRED. NO APPARENT CAUSE WAS FOUND FOR THE CRACK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

117947 RADIATION
FAILURE, PIPE + FITZPATRICK (BOOK) + TEST, LEAK RATE + PULSES + PULSA + PIPES AND PIPE FITTINGS

117948
STEAM LEAKAGE FROM RUC RUPTURE DISC AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PAGES WITH NRC LETTER 76-55 TO NRC DIRECTORATE OF LICENSING, SEPT. 13, 1970, URGENT 50-333, TYPE--BWR, NRU--6000, AE--STUNE & REISTER

CAUSE - CRACK IN RUPTURE OF DISC DURING TESTING WHILE OPERATING AT 95% POWER. STEAM WAS NOTICED IN THE AREA OF RUPTURE DISC AS-4-3. THE RUC SURVEILLANCE WAS COMPLETED AND RUC MADE IMPERMEABLE TO AFFECT THE REPAIRS. THE RUPTURE DISC WAS CRACKED ON RUPTURE. IT WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2000

FAILURE, COMPONENT + INSTRUMENT, PROTECTIVE + FITZPATRICK (BOOK) + FAILURE, INHERENT + RUC + PULSA

118228
CONTROL RUC UNCOUPLED AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PAGES WITH NRC LETTER 76-55 TO NRC DIRECTORATE OF LICENSING, SEPT. 20, 1970, URGENT 50-333, TYPE--BWR, NRU--6000, AE--STUNE & REISTER

CAUSE - UNKNOWN AT THIS TIME. DURING CONTROL RUC OVERTRAVEL TESTING WITH THE REACTOR AT 95% POWER, CONTROL RUC 40-55 ALARMED ON OVERTRAVEL. IT WAS TYPED UNCOUPLED AND INSERTED ACCORDING TO SPECIAL PROCEDURES. THE SYMMETRICAL CONTROL RUCS WERE ALSO INSERTED TO PROVIDE CORE SYMMETRY. THE CAUSE IS UNKNOWN AT THIS TIME. THE SCHEDULE CALLS FOR A SHUTDOWN AND INVESTIGATION IN EARLY OCTOBER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2000

FAILURE, EQUIPMENT + FITZPATRICK (BOOK) + REACTOR CONTROL + TEST, SYSTEM OPERABILITY + CONTROL RUCS + CONTROL RUC UNITS

118254
SET POINT SHIFT IN APRM AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PAGES WITH NRC LETTER 76-55 TO NRC DIRECTORATE OF LICENSING, SEPT. 20, 1970, URGENT 50-333, TYPE--BWR, NRU--6000, AE--STUNE & REISTER

CAUSE - INSTRUMENT SHIFT. DURING SURVEILLANCE TESTING, APRM A DID NOT GO TO THE OPERATIVE MODE. AS REQUIRED, WITH 21 OR LESS LPM INPUTS. APRM, MODEL NO. 10563090000, INPUT SIGNAL HAS BEEN INCREASED TO 24 INPUTS. THIS SHOULD PREVENT RECURRENCE. THE REACTOR WAS OPERATING AT 95% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2000

REACTOR PROTECTION SYSTEM + FITZPATRICK (BOOK) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SHIFT + TEST, SYSTEM OPERABILITY + INSTRUMENT, POWER RANGE + SET POINT + SHIFT + FAILURE, INHERENT

118273
MAPLEMAN RATIO EXCEEDS LIMIT AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PAGES WITH NRC LETTER 76-55 TO NRC DIRECTORATE OF LICENSING, OCT. 9, 1970, URGENT 50-333, TYPE--BWR, NRU--6000, AE--STUNE & REISTER

CAUSE - CONSERVATISM IN COMPUTER PROGRAM. AS A RESULT OF AN UNCOUPLED CONTROL RUC INCIDENT (REPORTED EARLIER) WHICH CAUSED ASYMMETRY IN THE CONTROL RUC PATTERN, SUBSEQUENT CALCULATION OF CORE LIMITS WAS PERFORMED USING THE ASYMMETRICAL ALGORITHM IN COMPUTER PROGRAM P-1 (CORE PERFORMANCE CALCULATIONS). RESULTS INDICATED MAPLEMAN RATIO GREATER THAN ONE (1.0077), TPF INCREASED TO 2.050, AND LRA FATIC INCREASED TO 0.003. THE ASYMMETRICAL ALGORITHM IS HIGHLY CONSERVATIVE AND RESULTED IN THE EXCESSIVE COMPUTER CALCULATION. THE CONTROL RUC PATTERN WAS MADE SYMMETRICAL AND THE COMPUTER DATA BASE UPDATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2000

COMPUTER PROGRAM + FITZPATRICK (BOOK) + OPERATOR DISTRIBUTION + HOT CHANNEL ANALYSIS + MATHEMATICAL TREATMENT + HOT CHANNEL

118491
TEMPERATURE UNWASANT ACROSS LUMBERER EXCEEDS LIMIT AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PAGES WITH NRC LETTER 76-55 TO NRC DIRECTORATE OF LICENSING, OCT. 14, 1970, URGENT 50-333, TYPE--BWR, NRU--6000, AE--STUNE & REISTER

110991 PLUMTIMED

CAUSE - VALVE MALFUNCTION. WHILE THE UNIT WAS OPERATING AT 998 POUNDS, THE COMMON RISE FROM THE CONDENSATE DERIVATIVE TO THE CONDENSER STUCK OPEN CAUSING THE CONDENSER VACUUM TO DROP TO 25.0 INCH HG. LOAD WAS REDUCED TO MAINTAIN VACUUM. THE VALVE WAS MANUALLY CLOSED AND VACUUM RESTORED IN 25 MINUTES. DURING THIS TRANSIENT, CONDENSER DELTA T WENT TO 33.07 F FOR ABOUT 3 MINUTES. ETS LIMIT IS 24.4 F.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FITZPATRICK (BHR) + TEMPERATURE GRADIENT + CONDENSER + TRANSIENT + CONDENSER COOLING SYSTEM + FAILURE, INHERENT + VALVES

110992

SET POINT DRIFT IN RADWASTE BUILDING VENT RADIATION MONITORS AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/EN 70-57 TO NRC DIRECTORATE OF LICENSING, OCT. 15, 1970, DCKET 50-333, TYPE--DMM, NRC--WEEK, AC--STONE & WEBSTER

CAUSE - ELECTRICAL COMPONENT MALFUNCTION. WHILE OPERATING AT 898 POUNDS, THE RADWASTE BUILDING VENT RADIATION MONITORS FAILED TO TRIP THE EXHAUST VENT SYSTEM AT THE 900 C/M SET POINT DURING TESTING. THE AS FOUND READINGS WERE 2300 C/M AND 5200 C/M. FAILURE WAS DUE TO MALFUNCTION OF ELECTRICAL COMPONENTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + FITZPATRICK (BHR) + VENTILATION SYSTEM + WASTE TREATMENT + BUILDING + TEST, SYSTEM OPERABILITY + FAILURE, INHERENT + RADIATION MONITORS

110993

MILK SAMPLES NOT ANALYZED ON TIME AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/EN 70-62 TO NRC DIRECTORATE OF LICENSING, OCT. 15, 1970, DCKET 50-333, TYPE--DMM, NRC--WEEK, AC--STONE & WEBSTER

CAUSE - TRANSPORTATION DELAYS. DURING MANAGEMENT REVIEW OF CONTRACTOR DATA, IT WAS FOUND THAT MILK SAMPLES COLLECTED ON 9/20/70 WERE NOT COUNTED UNTIL 9/28-30/70. SAMPLES WERE SHIPPED VIA AIR FREIGHT INTERSTATE CARRIER DURING UPS STRIKE ON 9/24 BUT WERE NOT RECEIVED BY CONTRACTOR UNTIL 9/26. SAMPLES WERE 7 DAYS IN SHIPMENT. COUNTING WAS STARTED UPON RECEIPT BUT ALL COULD NOT BE COMPLETED ON THAT DATE. SOME WERE COUNTED ON THE 9TH DAY. ETS REQUIRED COUNTING WITHIN 5 DAYS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (BHR) + TRANSPORTATION AND HANDLING + SAMPLING + MILK + RADIOCHEMICAL ANALYSIS + MONITORING PROGRAM, ENVIRONMENTAL + TEST INTERVAL

110984

BENTHOS COLLECTIONS NOT MADE ON TIME AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/EN 70-63 TO NRC DIRECTORATE OF LICENSING, OCT. 15, 1970, DCKET 50-333, TYPE--DMM, NRC--WEEK, AC--STONE & WEBSTER

CAUSE - DIVERS UNAVAILABLE. BENTHOS COLLECTIONS ARE REQUIRED DAILY. THE AUGUST SAMPLES WERE NOT COLLECTED UNTIL 9/4/70. THIS EXCEEDS THE +/- 25% TIME VARIATION ALLOWED BY ETS. CONTRACTOR DIVERS COULD NOT BE USED FOR THE AUGUST COLLECTIONS DUE TO RECENT OSHA REGULATIONS IMPOSED ON PROFESSIONAL DIVERS. DIVERS WERE NOT AVAILABLE UNTIL 9/4.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (BHR) + SAMPLING + TEST INTERVAL + LAKE + REGULATION, FEDERAL + COMMUNITY, BENTHOS

119535

I-131 CONCENTRATION IN MILK SAMPLES EXCEED LIMIT AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/EN 70-68 TO NRC DIRECTORATE OF LICENSING, NOV. 5, 1970, DCKET 50-333, TYPE--DMM, NRC--WEEK, AC--STONE & WEBSTER

CAUSE - CHINESE WEAPONS TESTING. TWO MILK SAMPLES CONTAINED CONCENTRATIONS UP TO 131 IN EXCESS OF 19 PICOCURIES/LITER. CONCENTRATIONS WERE 1903 AND 45 PICOCURIES/LITER. THIS WAS DUE TO CHINESE WEAPONS TESTING THAT OCCURRED PRIOR TO SAMPLING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ISUINE + FITZPATRICK (BHR) + TEST, WEAPONS + MILK + MONITORING PROGRAM, ENVIRONMENTAL + CONCENTRATION + FOOD CHAIN

119735
 RHM CHECK VALVE LEAKS THROUGH AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PWS; LTR N/LEA 70-04 TO NRC DIRECTORATE OF LICENSING, NOV. 5, 1970, Docket 50-333, TYPE--DNR, MFG--GEC, AE--STONE & WEBSTER

CAUSE - NORMAL SEAT WEAR. WHILE REMOVING RHM PUMP 8 FROM SERVICE DURING NORMAL START-UP ACTIVITIES, IT WAS DISCOVERED THAT CHECK VALVE 420 WAS LEAKING THROUGH, PREVENTING THE SYSTEM FROM BEING FILLED WHEN SHUT DOWN. PUMP 8 HAD TO BE DECLARED INOPERABLE. APPARENT LEAKAGE THROUGH THIS VALVE WAS THE RESULT OF NORMAL WEAR ON THE VALVE SEAT. IT WILL BE CORRECTED DURING A CUM SHUTDOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (DNR) * VALVE, CHECK * OPERATING COOLING SYSTEM * LEAK * WEAR * FAILURE, EQUIPMENT * FAILURE, IMMINENT

119736
 FIRE OCCURS IN DIESEL GENERATOR EXHAUST AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PWS; LTR N/LEA 70-05 TO NRC DIRECTORATE OF LICENSING, NOV. 5, 1970, Docket 50-333, TYPE--DNR, MFG--GEC, AE--STONE & WEBSTER

CAUSE - OIL LEAK IN TURBO-CHARGER. DURING TESTING WITH THE REACTOR AT 284 POWER, A FIRE WAS DISCOVERED IN THE EXHAUST OF EMERGENCY DIESEL GENERATOR A. PROPER METHODS AND PROCEDURES WERE FOLLOWED TO PUT OUT THE FIRE. APPARENTLY, THE TURBO-CHARGER FAILED RESULTING IN AN APPARENT OIL LEAK. THE TURBO-CHARGER WAS REPLACED. THE DEFECTIVE UNIT WILL BE TURN DOWN TO DISCOVER THE CAUSE OF FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (DNR) * FIRE * GENERATOR, DIESEL * ENGINE, INTERNAL COMBUSTION * FUEL, FOSSIL * LEAK * FAILURE, EQUIPMENT * FAILURE, IMMINENT * EMERGENCY POWER, ELECTRIC

119737
 LIMIT SWITCH ON MSIV FAILS TO PROVIDE TRIP SIGNAL AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PWS; LTR N/LEA 70-06 TO NRC DIRECTORATE OF LICENSING, NOV. 5, 1970, Docket 50-333, TYPE--DNR, MFG--GEC, AE--STONE & WEBSTER

CAUSE - OUT OF ADJUSTMENT. DURING MAIN STEAM ISOLATION VALVE TESTING WITH THE REACTOR AT 348 POWER, THE LIMIT SWITCH (208 CLOSURE) FAILED TO PROVIDE A TRIP SIGNAL. THE AFFECTED CHANNEL WAS PLACED IN THE TRIPPED CONDITION. APPARENTLY, THE LIMIT SWITCH MOVED FROM ITS PREVIOUS ADJUSTMENT. IT WAS READJUSTED TO PROVIDE THE TRIP SIGNAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (DNR) * INSTRUMENT, POSITION * VALVES * CONTAINMENT ISOLATION * MAIN COOLING SYSTEM * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * FAILURE, MAINTENANCE ERROR * REACTOR PROTECTION SYSTEM * INSTRUMENT, SWITCH

119738
 RELEASE RATE OF GASEOUS RADIOACTIVITY EXCEEDS REPORT LIMIT AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PWS; LTR N/LEA 70-07 TO NRC DIRECTORATE OF LICENSING, NOV. 5, 1970, Docket 50-333, TYPE--DNR, MFG--GEC, AE--STONE & WEBSTER

CAUSE - TURBINE BUILDING STEAM LEAKS. THE AVERAGE RELEASE RATE OF MAJOR GASES AND PARTICULATES WITH HALF-LIVES GREATER THAN 8 DAYS WAS 4.036 PPM THE THIRD QUARTER, EXCEEDING 4% OF THE MAXIMUM ALLOWABLE. MAJOR CAUSES WERE AN UNUSUAL NUMBER OF TURBINE BUILDING STEAM LEAKS AND UNSTEADY OPERATION OF THE EFFLUENT RECOMBINER. EFFLUENT CONTINUES TO PLACE THE RECOMBINER IN STEADY OPERATION SO THE CHARCOAL FILTERS CAN BE PLACED INTO SERVICE AND TO ELIMINATE STEAM LEAKS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FITZPATRICK (DNR) * RELEASE RATE * RADIOACTIVE RELEASE * STEAM * LEAK * RECOMBINERS * EFFLUENT * FAILURE, IMMINENT

119739
 GASEOUS RELEASE SAMPLES NOT TAKEN AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PWS; LTR N/LEA 70-08 TO NRC DIRECTORATE OF LICENSING, NOV. 11, 1970, Docket 50-333, TYPE--DNR, MFG--GEC, AE--STONE & WEBSTER

119018 NJP-IMR60

CASE - INADEQUATE PROCEDURES. WHILE OPERATING AT 90% POWER, DAILY STACK AND VEIL PARTICULATE AND CHIMNEAL SAMPLES WERE NOT OBTAINED FOLLOWING WEEKLY RELEASE RATES GREATER THAN 8% OF THE MAXIMUM ALLOWABLE MASS/HR AND PARTICULATE WITHIN 1/2 GREATER THAN 8 DAYS. PROCEDURE DID NOT PROVIDE ADEQUATE INSTRUCTIONS FOR CALCULATION OF PER CENT OF RELEASE RATE IN A TIMELY FASHION. THE PROCEDURE HAS BEEN REWRITTEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (DNR) • TEST INTERVAL • EFFLUENT • RELEASE RATE • MONITOR, STACK • CHIMNEAL • SAMPLING • FAILURE, ADMINISTRATIVE CONTROL • PROCEDURES AND MANUALS

119019

EXCESS SULFATES DISCHARGED TO THE LAKE AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LEA 70-72 TO NRC DIRECTORATE OF LICENSING, NOV. 17, 1970, WUCLET 50-333, TYPE--DNR, RPU--WUCLE, AC--STONE & WEBSTER

CASE - PROCEDURAL DEFICIENCY. WHILE OPERATING AT 85% POWER, THERE WAS AN APPARENT EXCESSIVE DISCHARGE OF SULFATES TO THE LAKE FOLLOWING THE ANALYSIS OF THE MONTHLY 24 HR COMPOSITE OF THE INLET AND DISCHARGE CANALS DURING WHICH TIME A MAKEUP DEMINERALIZED WASTE NEUTRALIZER TANK WAS DISCHARGED. ENVIRONMENTAL TECH SPECS DID NOT PROVIDE A REASONABLE METHOD FOR DETERMINING THE PER CENT OF SULFATE INCREASE TO THE LAKE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (DNR) • RELEASE RATE • EFFLUENT • WASTE DISPOSAL • WASTE DISPOSAL, LIQUID • FAILURE, ADMINISTRATIVE CONTROL • PROCEDURES AND MANUALS

119044

LPCI VALVE FAILS TO OPER AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LEA 70-67 TO NRC DIRECTORATE OF LICENSING, NOV. 19, 1970, WUCLET 50-333, TYPE--DNR, RPU--WUCLE, AC--STONE & WEBSTER

CASE - MOTOR BURNED UP FROM EXCESS TORQUE. DURING TESTING OF THE HMA SYSTEM (LPCI) WITH THE REACTOR AT 91% POWER, INJECTION VALVE 10-MOV-27A WOULD NOT OPEN. APPARENTLY, THE VALVE MOTOR OPERATOR BURNED UP DUE TO EXCESSIVE TORQUE NECESSARY TO OPEN THE VALVE. IMMUTILE VALVE 10-MOV-27A WAS CLOSED AND 10-MOV-25A MANUALLY OPENED. THE SYSTEM WILL FUNCTION AND PROVIDE LPCI INJECTION UPON SIGNAL BY OPENING 10-MOV-27A.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (DNR) • VALVES • LPCI • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • FAILURE, MAINTENANCE ERROR • VALVE OPERATORS

119045

MOTOR OPERATOR ON RCIC VALVE BURNS UP AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LEA 70-67 TO NRC DIRECTORATE OF LICENSING, NOV. 19, 1970, WUCLET 50-333, TYPE--DNR, RPU--WUCLE, AC--STONE & WEBSTER

CASE - LIMIT SWITCH MALFUNCTION. WHILE STACKING OUTWARD RCIC ISOLATION VALVE 13-MOV-10 TO VERIFY LIMIT SWITCH OPERATION WITH THE REACTOR AT 91% POWER, THE VALVE BURNED UP AND THE INCREASED TORQUE BURNED UP THE MOTOR OPERATOR. THE INWARD VALVE WAS CLOSED PASSING PCIS AND 13-MOV-10 MANUALLY OPENED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (DNR) • VALVES • RCIC • CONTAINMENT ISOLATION • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • FAILURE, MAINTENANCE ERROR • VALVE OPERATORS

119046

MPCI ISOLATES AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LEA 70-72 TO NRC DIRECTORATE OF LICENSING, NOV. 19, 1970, WUCLET 50-333, TYPE--DNR, RPU--WUCLE, AC--STONE & WEBSTER

CASE - SPURIOUS HI STEAM FLOW SIGNAL. FOLLOWING A REACTOR SCRAM WITH SUBSEQUENT MPCI INITIATION, MPCI STARTED THEN ISOLATED. THE CONTROL ROOM OPERATOR MANUALLY RESTORED THE SYSTEM. AN APPARENT HIGH FLOW SPURIOUS SIGNAL ON STARTING THE SYSTEM CAUSED A HIGH STEAM FLOW ISOLATION. TESTING PROVED THAT SHUDDING OF THE STEAM FLOW SIGNAL WAS REQUIRED. ADDITION OF SHUDDERS ELIMINATED THIS PROBLEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

21944 CONTINUED
CHANGE 12001

FITZPATRICK (ORNL) • MPC1 • INSTRUMENT, ABNORMAL INDICATION • SENSORS, FLOW • FAILURE, EQUIPMENT • FAILURE, DESIGN ERROR • MUFFICATION • STEAM

21944
MILK CONCENTRATION IN MILK SAMPLE HIGH AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PGS, LTR D/LER 76-75 TO NRC DIRECTORATE OF LICENSING, NOV. 20, 1976, DCKET 50-333, TYPE--ORNL, MFG--GEE, AC--STONE & POSTER

CAUSE - CHINESE WEAPONS TEST. RESULTS FROM A MILK SAMPLE COLLECTED ON 11/17/76 INDICATE AN I-131 CONCENTRATION OF 1709 +/- 64 PICOCURIES/L. THIS EXCEEDS THE ETS REPORTING LIMIT. THE CONCENTRATION IS DUE TO NUCLEAR FALL-OUT FROM THE CHINESE WEAPONS TEST THAT OCCURRED PRIOR TO SAMPLING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE 12001

FITZPATRICK (ORNL) • CONCENTRATION • MILK • FOOD CHAIN • TEST, WEAPONS • FAILURE, INHERENT • MONITORING PROGRAM, ENVIRONMENTAL

22022
RELIEF VALVE INADVERTENTLY OPENS AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PGS, LTR D/LER 76-75 TO NRC DIRECTORATE OF LICENSING, DEC. 2, 1976, DCKET 50-333, TYPE--ORNL, MFG--GEE, AC--STONE & POSTER

CAUSE - UNKNOWN. WHILE THE REACTOR WAS AT 804 POWER AND 1303 PSIG RELIEF VALVE Q2-RV-715 INADVERTENTLY OPENED AND BEGAN DISCHARGING TO THE TURBINE. MONITORING RELIEF VALVE TEMPERATURES TO DETERMINE WHICH VALVE OPENED FAILED BECAUSE THE THERMOCUPLE FOR THIS VALVE HAD FAILED. ALL 4 RHM PUMPS STURUS COOLING MEDIE WERE STARTED TO COOL THE TURBINE. WHEN THE RELIEF VALVE COULD NOT BE CLOSED, THE REACTOR WAS SCRAMMED. IT CLOSED WHEN THE REACTOR PRESSURE REACHED 300 PSIG 49 MINUTES AFTER THE SCRAM. TEMPERATURE CHANGE WAS 93 F FOR THE FIRST RUN. THE CAUSE OF VALVE FAILURE IS BEING INVESTIGATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE 12001

FITZPATRICK (ORNL) • VALVES • PRESSURE RELIEF • MAIN COOLING SYSTEM • FAILURE, EQUIPMENT • PRESSURE TRANSIENT • BURST • OPERATOR ACTION • THERMAL TRANSIENT • REACTOR SHUTDOWN • SCRAM, REAL

22062
CONDENSATE STORAGE TANK FILL LINE FLANGE CRACKS AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PGS, LTR D/LER 76-73 TO NRC DIRECTORATE OF LICENSING, DEC. 6, 1976, DCKET 50-333, TYPE--ORNL, MFG--GEE, AC--STONE & POSTER

CAUSE - BONDSTAND FLANGE SUBJECT TO CRACKING. WHILE THE CONDENSATE STORAGE TANK WAS BEING FILLED, THE FILL LINE FLANGE CRACKED CAUSING 200 GALLONS OF CONDENSATE TO BE PUMPED TO THE DISCHARGE UNMONITORED. APPARENTLY THE BONDSTAND FLANGE IN THIS APPLICATION IS SUBJECT TO CRACKING. PLANS ARE UNDER WAY TO REPLACE THE FLANGE WITH STAINLESS STEEL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE 12001

FITZPATRICK (ORNL) • FLANGE • PIPES AND PIPE FITTINGS • STORAGE CONTAINER • RADIOACTIVITY RELEASE • LEAK • REACTOR COOLANT • FAILURE, PIPE • FAILURE, DESIGN ERROR • MATERIAL • CRACK • CONDENSATION

22063
PLUM THROUGH MAIN STEAM LINE D LUD AT FITZPATRICK
NIAGARA POWER PUMP CORP., SYRACUSE, NY
2 PGS, LTR D/LER 76-74 TO NRC DIRECTORATE OF LICENSING, DEC. 6, 1976, DCKET 50-333, TYPE--ORNL, MFG--GEE, AC--STONE & POSTER

CAUSE - MSIV IMPERFECTIVE. DURING A ROUTINE STARTUP WITH THE REACTOR AT 204 POWER, IT WAS NOTED THAT MAIN STEAM FLOW THROUGH LINE D WAS LOW. A VERIFICATION WAS MADE FOLLOWING SHUTDOWN THAT THE INHER MSIV WAS IMPERFECTIVE. THE OUTSIDE MSIV IN LINE C WAS CLOSED PROVIDING FOR PCI AND STARTUP CONTINUED WITH 3 MAIN STEAM LINES AVAILABLE. APPARENT FAILURE IN THE VALVE ITSELF WILL BE INVESTIGATED DURING SHUTDOWN FOR VALVE REPAIR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHANGE 12001

FITZPATRICK (ORNL) • VALVES • CONTAINMENT ISOLATION • FLOW BLOCKAGE • FAILURE, EQUIPMENT • REACTOR SHUTDOWN • MAIN COOLING SYSTEM

120444

SET POINT DRAIFT IN PRESSURE SWITCH AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-76 TO NRC DIRECTORATE OF LICENSING, DEC. 6, 1970, WJACKET 50-333, TYPE--DRA, MFU--UCL, AC--
 STONE & WEBSTER

CAUSE - INSTRUMENT DRAIFT. DURING TESTING WHILE THE REACTOR WAS SHUT DOWN, PRESSURE SWITCH 2-3-SEL
 11 OF 41 ACTUATED AT 442.0 PSIG, WHICH WAS BELOW THE 450 PSIG LIMIT. THE CAUSE WAS INSTRUMENT
 DRAIFT. THE SWITCH WAS RECALIBRATED TO 405.0 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FITZPATRICK (DRA) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSORS, PRESSURE * TEST, SYSTEM
 OPERABILITY * FAILURE, INSTRUMENT * SET POINT * DRAIFT * ENGINEERED SAFETY FEATURE * CONTROL SYSTEM *
 FAILURE, INHERENT

120445

SAFETY/RELIEF VALVE LIFTS AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 3 PGS, LTR N/LEA 70-82 TO NRC DIRECTORATE OF LICENSING, DEC. 6, 1970, WJACKET 50-333, TYPE--DRA, MFU--UCL, AC--
 STONE & WEBSTER

CAUSE - UNKNOWN. DURING A REACTOR STARTUP WITH THE REACTOR AT 10% POWER PRIOR TO PLACING THE
 TURBINE GENERATOR UNIT ON LINE, SAFETY/RELIEF VALVE W2-RV-71C LIFTED CAUSING THE BYPASS VALVES TO
 CLOSE. REACTOR PRESSURE DECREASED FROM 931.7 PSIG TO 803.0 PSIG IN 90 SECONDS RESULTING IN A
 REACTOR CLUSURE AND REACTOR SCRAM. THE PILOT VALVE ASSEMBLY IS BEING ANALYZED BY THE MANUFACTURER
 TO ASCERTAIN THE CAUSE OF FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FITZPATRICK (DRA) * VALVES * PRESSURE RELIEF * MAIN COOLING SYSTEM * SCRAM, REACTOR * REACTOR SHUTDOWN * UNKNOWN
 * PRESSURE TRANSIENT * FAILURE, EQUIPMENT

120446

COOLDOWN RATE LIMIT EXCEEDED DURING SHUTDOWN AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-83 TO NRC DIRECTORATE OF LICENSING, DEC. 6, 1970, WJACKET 50-333, TYPE--DRA, MFU--UCL, AC--
 STONE & WEBSTER

CAUSE - INADVERTENT RELIEF VALVE ACTUATION. DURING RELIEF VALVE INADVERTENT ACTUATION WITH THE
 REACTOR AT 10% POWER, THE 100 F/PM COOLDOWN RATE WAS EXCEEDED. PRELIMINARY ANALYSIS INDICATES
 THAT THE SHAFT FRACTION IN THE REACTOR VESSEL WAS MUCH LESS THAN 1%. THE RELIEF VALVE HAS BEEN
 REPLACED WITH A SPARE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FITZPATRICK (DRA) * OTHERMAL TRANSIENT * MAIN COOLING SYSTEM * SHUTDOWN * PRESSURE RELIEF * VALVES * EFFECT *
 PRESSURE VESSELS * REACTOR SHUTDOWN * SCRAM, REACTOR * COOLING

120552

DIESEL GENERATOR FAILS TO START AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-77 TO NRC DIRECTORATE OF LICENSING, DEC. 13, 1970, WJACKET 50-333, TYPE--DRA, MFU--UCL, AC--
 STONE & WEBSTER

CAUSE - DEFECTIVE CONVERTER IN TACH RELAY. DURING A TEST WHILE OPERATING AT 70% POWER, EMERGENCY
 DIESEL GENERATOR B FAILED TO START. THE CONVERTER INSIDE THE GENERATOR TACH RELAY WAS FOUND TO
 BE DEFECTIVE. THE RELAY WAS REPLACED WITH AN ACCEPTABLE SPARE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FITZPATRICK (DRA) * GENERATOR, DIESEL * ENGINES, INTERNAL COMBUSTION * TEST, SYSTEM OPERABILITY * FAILURE,
 EQUIPMENT * FAILURE, INHERENT * RELAYS * EMERGENCY POWER, ELECTRIC * ELECTRONIC FUNCTION UNITS

120553

FUEL OIL TRANSFER PUMP FOR EDG FAILS AT FITZPATRICK
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-78 TO NRC DIRECTORATE OF LICENSING, DEC. 13, 1970, WJACKET 50-333, TYPE--DRA, MFU--UCL, AC--
 STONE & WEBSTER

CAUSE - NOT YET DETERMINED. DURING SURVEILLANCE ON THE EDG SYSTEM, FUEL OIL TRANSFER PUMP V3-P-02
 WOULD NOT OPERATE ON EMERGENCY DIESEL GENERATORS A AND C. THE REDUNDANT PUMP WAS TESTED
 SATISFACTORILY. THE FAILED PUMP WAS REPLACED WITH AN ACCEPTABLE SPARE. THE CAUSE OF FAILURE HAS
 NOT YET BEEN DETERMINED.

120553 CONTINUOUS
 -AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FITZPATRICK (DOM) • PUMPS • PULL, PUSSLE • ENGINES, INTERNAL COMBUSTION • GENERATION, DIESEL • TEST, SYSTEM
 OPERABILITY • FAILURE, EQUIPMENT • EMERGENCY POWER, ELECTRIC

120554
 TOWNS WATER LEVEL EXCEEDS TECH SPEC LIMIT AT FITZPATRICK
 NIAGARA PLUMAH PUMPH COMP., SYRACUSE, NY
 2 PWS, LTR N/LEA 70-79 TO NRC DIRECTORATE OF LICENSING, DEC. 13, 1970, DUCRET 50-333, TYPE--DOM, NPG--60E, AE--
 -STONE & WEBSTER

CAUSE - INADVERTANT RELIEF VALVE OPERATION. DURING INADVERTANT RELIEF VALVE OPERATION WHILE
 OPERATING AT 80% POWER, TOWNS WATER LEVEL INCREASED GREATER THAN TECH SPEC LIMIT OF 50 IN H
 INDICATED SURVEILLANCE. PUMPING TO WASTEWATER WAS COMMENCED AND THE REACTOR WAS MANUALLY SHUT DOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FITZPATRICK (DOM) • SYSTEM CAPACITY • TOWNS • FAILURE, INHERENT • REACTOR SHUT DOWN • FAILURE, EQUIPMENT •
 VALVES • PRESSURE RELIEF • MAIN COOLING SYSTEM • TRANSIENT

120555
 CALCULATED STACK RELEASE RATE EXCEEDS AT FITZPATRICK
 NIAGARA PLUMAH PUMPH COMP., SYRACUSE, NY
 2 PWS, LTR N/LEA 70-81 TO NRC DIRECTORATE OF LICENSING, DEC. 13, 1970, DUCRET 50-333, TYPE--DOM, NPG--60E, AE--
 -STONE & WEBSTER

CAUSE - WATER IN SAMPLE FLUX LINE. DURING 80% POWER OPERATION, THE STACK RELEASE RATE AS
 INDICATED ON MONITOR 17-AM-50 WAS DROPPED FROM THE NORMAL 2000 LPM. WATER HAD ACCUMULATED IN
 THE SAMPLE FLUX LINE. IT WAS REMOVED BY PURGING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FITZPATRICK (DOM) • MONITOR, STACK • MONITOR • RADIATION MONITORS • STACK • FLOW BLOCKAGE • SAMPLING • WATER
 • PIPES AND PIPE FITTINGS

120498
 NPLI SUCTION TO TOWNS VALVE FAILS TO OPEN AT FITZPATRICK
 NIAGARA PLUMAH PUMPH COMP., SYRACUSE, NY
 2 PWS, LTR N/LEA 70-80 TO NRC DIRECTORATE OF LICENSING, DEC. 17, 1970, DUCRET 50-333, TYPE--DOM, NPG--60E, AE--
 -STONE & WEBSTER

CAUSE - MOTOR REMAINS OPEN ON OVERLOAD. DURING 40% POWER OPERATION WHILE AUTOMATICALLY
 TRANSFERRING NPLI SUCTION TO TOWNS (ON TOWNS HIGH WATER LEVEL), 23-NOV-77 FAILED TO OPEN. AN
 APPARENT TORQUE OVERLOAD CAUSED OPENING IN THE MOTOR WINDINGS. THE VALVE WAS MANUALLY OPENED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FITZPATRICK (DOM) • VALVES • NPLI • TOWNS • FAILURE, EQUIPMENT • VALVE OPERATORS

120746
 SUPPRESSION POOL WATER VOLUME EXCEEDS LIMIT AT FITZPATRICK
 NIAGARA PLUMAH PUMPH COMP., SYRACUSE, NY
 2 PWS, LTR N/LEA 70-84 TO NRC DIRECTORATE OF LICENSING, DEC. 21, 1970, DUCRET 50-333, TYPE--DOM, NPG--60E, AE--
 -STONE & WEBSTER

CAUSE - RELIEF VALVE BLOWDOWN. AS A RESULT OF RELIEF VALVE BLOWDOWN, THE SUPPRESSION POOL WATER
 VOLUME EXCEEDED LIMITS. THE POOL WAS PUMPED DOWN TO NORMAL LEVELS. THE REACTOR WAS IN A
 SHUT DOWN CONDITION AT THIS TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FITZPATRICK (DOM) • TOWNS • SYSTEM CAPACITY • FAILURE, EQUIPMENT • BLOWDOWN • PRESSURE RELIEF • VALVES •
 FAILURE, INHERENT

120747
 OUTSIDE PERSONNEL AIRLOCK DOOR LEAK RATE EXCEEDS LIMIT AT FITZPATRICK
 NIAGARA PLUMAH PUMPH COMP., SYRACUSE, NY
 2 PWS, LTR N/LEA 70-85 TO NRC DIRECTORATE OF LICENSING, DEC. 21, 1970, DUCRET 50-333, TYPE--DOM, NPG--60E, AE--
 -STONE & WEBSTER

CAUSE - APPARENT SEAL LEAKAGE. DURING TESTING OF THE PRIMARY CONTAINMENT AIR LOCK WITH THE

120747 *CONTINUED*

REACTOR AT 508 POWER, THE OUTSIDE PERSONNEL AIRLOCK DOOR FAILED TO MEET THE 24 HOUR TEST. THE APPARENT CAUSE IS SEAL LEAKAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (BWR) * LEAK RATE * OSEAL * CONTAINMENT AIR LOCK * TEST, LEAK RATE * TEST, SYSTEM OPERABILITY * FAILURE, EQUIPMENT * FAILURE, INHERENT * CONTAINMENT INTEGRITY

120748

TORUS/REACTOR BUILDING VACUUM BREAKERS NOT TESTED ON TIME AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LETS 70-00 TO NRC DIRECTORATE OF LICENSING, DEC. 21, 1970, WUACET 50-333, TYPE--BWR, NRC--DOE, AE--STONE & WEBSTER

CAUSE - SCHEDULING ERROR. DURING AN INTERNAL AUDIT, IT WAS DISCOVERED THAT THE TORUS/REACTOR BUILDING VACUUM BREAKER SURVEILLANCE TEST HAD NOT BEEN PERFORMED. IT WAS THEN PERFORMED SUCCESSFULLY. THE TEST WAS ADDED TO THE MASTER SCHEDULE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (BWR) * OTESTING * TEST INTERVAL * OCONTAINMENT VACUUM BREACH * TORUS * BUILDING * FAILURE, ADMINISTRATIVE CONTROL * REVIEW

120749

RCIC TESTING NOT PERFORMED ON TIME AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LETS 70-07 TO NRC DIRECTORATE OF LICENSING, DEC. 21, 1970, WUACET 50-333, TYPE--BWR, NRC--DOE, AE--STONE & WEBSTER

CAUSE - REACTOR SHUT DOWN DUE TO A PLANT SHUTDOWN, RCIC TESTING COULD NOT BE PERFORMED WITHIN THE ALLOWABLE TIME PERIOD. IT WAS COMPLETED 2 DAYS LATER. SOME LEGAL SHOULD BE ALLOWED BY TECH SPECS FOR SYSTEMS WHICH REQUIRE SURVEILLANCE AT PLANT OPERATING CONDITIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (BWR) * TEST INTERVAL * OTESTING * OICIC * FAILURE, ADMINISTRATIVE CONTROL

120750

BELLONS MONITORING ON SAFETY RELIEF VALVE LIST AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/LETS 70-00 TO NRC DIRECTORATE OF LICENSING, DEC. 21, 1970, WUACET 50-333, TYPE--BWR, NRC--DOE, AE--STONE & WEBSTER

CAUSE - BROKEN WIRE. WHILE OPERATING AT 508 POWER, BELLONS MONITORING ON SAFETY RELIEF VALVE WEA-71A WAS LOST AS A RESULT OF A GROUND ON THE PRESSURE SWITCH. THE GROUND WAS REMOVED DURING A SUBSEQUENT OUTAGE. A BROKEN WIRE FROM THE SENSOR WAS DISCOVERED. IT WAS REPLACED ALLOWING OPERABILITY OF THE DETECTION SYSTEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (BWR) * OSEAL * OMONITOR * LEAK * VALVES * PRESSURE RELIEF * FAILURE, INSTRUMENT * CABLES AND CONNECTORS * FAILURE, INHERENT

120751

REACTOR BUILDING VENT MONITOR MALFUNCTIONS AT FITZPATRICK

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

3 PGS, LTR W/LETS 70-09 AND 70-06 TO NRC DIRECTORATE OF LICENSING, DEC. 30, 1970, WUACET 50-333, TYPE--BWR, NRC--DOE, AE--STONE & WEBSTER

CAUSE - MONITOR INOPERATIVE. DURING 508 POWER OPERATION, REACTOR BUILDING VENT MONITOR A WAS DISCOVERED TO BE NOT OPERATING AND WAS SPINNING. THE DETECTOR FOR THE MONITOR WAS INOPERATIVE AND WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FITZPATRICK (BWR) * OREACTOR MONITORS * BUILDING * VENTILATION SYSTEM * MONITOR * FAILURE, INSTRUMENT * FAILURE, INHERENT

120752

YU-04 CYLINDER BREAK TESTS SATISFACTORY AT OHAWO GULF 1 AND 2 MISSISSIPPI POWER & LIGHT CO., JACKSON, MS

111475 CONTINUED
 1 Pgs, LTR R/PT TO U.S. NAC, REGION II, JANU 23, 1970, DUCKETS 50-410/417, TYPE--BWR, MFU--GEE, AE--DECHTEL

CASE - NO DEFICIENCY. SEVEN OF 19 TEST CYLINDERS FOR THE CONCRETE BUILDING BASE SLAB CONCRETE FAILED TO REACH THE SPECIFIED STRENGTH OF 4000 PSI AT 28 DAYS AS REPORTED EARLIER. HOWEVER, ALL 90 DAY CYLINDER BEAR TESTS REVEALED STRENGTHS ABOVE THE DESIGN STRENGTH OF 4000 PSI. THEREFORE, NO SIGNIFICANT DEFICIENCY OCCURRED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONCRETE * TEST, PROOF * BUILDING * PROPERTY, MECHANICAL * CONSTRUCTION * GRAND WOLF 2 (BWR) * GRAND WOLF 1 (BWR)

111742
 TWO PROBLEMS IN THE DESIGN AND PROCUREMENT OF MANGERS AT GRAND WOLF 1 AND 2
 MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
 1 Pgs, LTR R/PT TO NAC DIRECTOR OF NUCLEAR REACTOR REGULATION, FEB. 23, 1970, DUCKETS 50-410/417, TYPE--BWR, MFU--GEE, AE--DECHTEL

CASE - MATERIAL UNAVAILABLE. THE UTILITY IS UNABLE TO PURCHASE MATERIALS FOR FORMED MANGER COMPONENTS DESIGNED TO ASTM SECTION III, SUBSECTION NF, IN PARTICULAR, ASTM A-600 GRACES C AND F MATERIALS. SECOND, THE CODE DOES NOT LIST STRESS INTENSITY VALUES OF ASTM SA-325 MATERIALS AT TEMPERATURES ABOVE 100 F. IN THE DESIGN, SA-325 IS USED FOR CONCRETE ANCHORS WHICH MIGHT BE EXPOSED TO 330 F UNDER ACCIDENT CONDITIONS. UNTIL A CODE REVISION IS APPROVED, AVAILABLE MANUFACTURER'S STANDARD COMPONENTS AND CATALOG LOAD RATINGS WILL BE USED IN MANGER AND SUPPORT DESIGN.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

LOADS AND STANDARDS * DESIGN CRITERIA * MATERIAL * PROPERTY, PHYSICAL * FAILURE, ADMINISTRATIVE CONTROL * SUPPORT STRUCTURE * CONSTRUCTION * TEMPERATURE * GRAND WOLF 2 (BWR) * GRAND WOLF 1 (BWR)

112095
 BREAKDOWN IN QUALITY ASSURANCE PROGRAM AT GRAND WOLF 1 AND 2
 MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
 3 Pgs, LTR R/PT TO NAC OFFICE OF 1 & 2, MARCH 5, 1970, DUCKETS 50-410/417, TYPE--BWR, MFU--GEE, AE--DECHTEL

CASE - ADMINISTRATIVE DEFICIENCY. DURING A REVIEW OF THE CONSTRUCTION SITE DOCUMENT CONTROL SPECIFICATION FILES, IT WAS FOUND THAT THE FILES INCLUDED APPENDICES WHICH WERE OF A DIFFERENT REVISION THAN THOSE LISTED IN THE TABLE OF CONTENTS AND SOME APPENDICES WERE NOT INCLUDED IN THE SPECIFICATION PACKAGES. DECHTEL'S FIELD CONSTRUCTION ORGANIZATION CONDUCTED A COMPLETE INVENTORY/REVIEW OF THE FILES. DEFICIENCIES HAVE BEEN CORRECTED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS * FAILURE, ADMINISTRATIVE CONTROL * QUALITY ASSURANCE * CONSTRUCTION * GRAND WOLF 2 (BWR) * GRAND WOLF 1 (BWR)

112370
 VOIDS FOUND BENEATH THE DRYWELL WALL EMBED AND THE SHEAR KEY AT GRAND WOLF 1 AND 2
 MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
 1 Pgs, LTR R/PT TO U.S. NAC, REGION II, MARCH 22, 1970, DUCKETS 50-410/417, TYPE--BWR, MFU--GEE, AE--DECHTEL

CASE - CONSTRUCTION DEFICIENCY. INVESTIGATION SHOWED THAT VOIDS EXISTED BENEATH THE DRYWELL WALL EMBED AND THE SHEAR KEY. ONE INCH DIAMETER EXPLORATORY HOLES WERE DRILLED THROUGH THE EMBEDDED HORIZONTAL PLATE WHICH IS A SEWENT OF THE LINER PLATE. THE VOIDS WERE FILLED WITH CEMENTITIOUS GROUT CAPABLE OF ATTAINING 5000 PSI COMPRESSIVE STRENGTH. CIRCULAR HOLES WERE WELDED TO THE HORIZONTAL PLATE TO REPAIR THE HOLES. VOIDS BENEATH THE SHEAR KEY WERE REPAIRED BY REMOVING THE CENTRAL PLATE OF THE PLATE, CHIPPING AWAY A PORTION OF THE CONCRETE AND POURING NEW CONCRETE TO RESHAPE THE JOINT. THE PLATE WAS THEN REPAIRED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONCRETE * CONTAINMENT * MAINTENANCE AND REPAIR * CONTAINMENT CONSTRUCTION * FAILURE, INSTALLATION ERROR * CONSTRUCTION * VOID * GRAND WOLF 2 (BWR) * GRAND WOLF 1 (BWR)

112213
 SIGNIFICANT BREAKDOWN IN DECHTEL'S QA PROGRAM AT GRAND WOLF 1 AND 2
 MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
 3 Pgs, LTR R/PT TO NAC OFFICE OF 1 & 2, APRIL 2, 1970, DUCKETS 50-410/417, TYPE--BWR, MFU--GEE, AE--DECHTEL

CASE - ADMINISTRATIVE DEFICIENCY. CODE QUALITY RELATED PROCEDURES APPROVED BY DECHTEL DID NOT INCLUDE ALL APPLICABLE COMMITMENTS OF THE CODE SPECS AND THE PSAR. ALSO, SPECS C-15100 FURNISH AND ENCL LINER PLATE AND ACCESSORIES FOR CONTAINMENT DRYWELL AND SUPPRESSION POOL DID NOT CONTAIN ALL APPLICABLE PSAR COMMITMENTS. ALL DISCREPANCIES HAVE BEEN IDENTIFIED, DOCUMENTED, AND

113213 *CONTINUED*
ARE BEING TRACKED TO ASSURE PROPER REMEDIAL ACTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS • FAILURE, ADMINISTRATIVE CONTROL • QUALITY ASSURANCE • CONTAINMENT LINER • INSTALLATION • CONSTRUCTION • GRAND GULF 2 (BWR) • GRAND GULF 1 (BWR) • TUMUS

114100

FINAL REPORT ON BREAKDOWN IN BECHTEL'S QA PROGRAM AT GRAND GULF 1 AND 2
MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
2 PGS, LTR W/RT TO NRC OFFICE OF I & E, MAY 17, 1970, DUCATS 50-410/417, TYPE--BWR, RFU--U.S., AC--BECHTEL

CAUSE - INADEQUATE PROCEDURES. BECHTEL DOCUMENT CONTROL SYSTEM DID NOT PROVIDE ADEQUATE PROCEDURES FOR CONTROL OF APPENDICES TO DESIGN SPECIFICATIONS. THIS CONSTITUTES A SIGNIFICANT BREAKDOWN IN THE QUALITY ASSURANCE PROGRAM. BECHTEL'S PROJECT ENGINEERING ORGANIZATION HAS DETERMINED WHICH OF THEIR SAFETY RELATED SPECS HAD AN IMPROPER APPENDIX ATTACHMENT THAT COULD HAVE AFFECTED DESIGN. THESE WERE CORRECTED AND SENT TO THE CONSTRUCTION SITE DOCUMENT CONTROL ORGANIZATION AND AFFECTED SUPPLIERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS • MODIFICATION • FAILURE, ADMINISTRATIVE CONTROL • QUALITY ASSURANCE • CONSTRUCTION • RECORDS • GRAND GULF 2 (BWR) • GRAND GULF 1 (BWR)

115920

FINAL REPORT ON QUALITY ASSURANCE DEFICIENCY AT GRAND GULF 1 AND 2
MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
2 PGS, LTR W/RT TO NRC DIRECTOR OF REGULATORY OPERATIONS, REGION II, JULY 20, 1970, DUCATS 50-410/417, TYPE--BWR, RFU--U.S., AC--BECHTEL

CAUSE - FAILURE TO MEET REQUIREMENTS. CBLI HAS REVISED THEIR HOLDING PROCEDURE SPECS AND RADIOGRAPHIC EXAMINATION PROCEDURE TO INCORPORATE BECHTEL'S REVIEW COMMENTS. CBLI HAS SUCCESSFULLY COMPLETED ALL CONTAINMENT LINER NONDESTRUCTIVE EXAMINATION ACTIVITIES THAT WERE EITHER OMITTED OR DEVIATED FROM FOR WORK COMPLETED PRIOR TO THE INITIAL REPORT. A SPECIFICATION CHECK LIST PROCEDURE HAS BEEN ISSUED WHICH MUST BE COMPLETED BY EACH RESPONSIBLE DESIGN ENGINEER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FABRICATION • TEST, NONDESTRUCTIVE • FAILURE, ADMINISTRATIVE CONTROL • QUALITY ASSURANCE • CONTAINMENT LINER • CONSTRUCTION • RECORDS • GRAND GULF 2 (BWR) • GRAND GULF 1 (BWR)

118170

SUPPRESSION POOL LOADING FROM SAFETY/RELIEF VALVE ACTUATION AT GRAND GULF 1 AND 2
MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
2 PGS, LTR W/RT TO NRC DIRECTOR OF I & E, REGION II, AUG. 31, 1970, DUCATS 50-410/417, TYPE--BWR, RFU--U.S., AC--BECHTEL

CAUSE - DESIGN DEFICIENCY. THERE IS AN ONGOING REVIEW OF POOL DYNAMICS AND THE LOADINGS RESULTING FROM MAIN STEAM SAFETY/RELIEF VALVE DISCHARGES INTO THE SUPPRESSION POOL. FOR THIS ANALYSIS QUENCHER DISCHARGE LOADS WILL BE USED AS A DESIGN BASIS INSTEAD OF HAMPSHIRE LOADS SINCE THE QUENCHER DEVICES WOULD BE USED ON THE VALVE DISCHARGE. AN ANALYSIS OF THE DYNAMIC EFFECTS OF QUENCHER LOADINGS HAS BEEN STARTED. NO DEFINITE DESIGN PROBLEMS ARE NOW KNOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT VESSEL LOADING • HYDRAULIC EFFECT • STRESS ANALYSIS • OVERPRESSURE RELIEF • FAILURE, DESIGN ERROR • MAIN COOLING SYSTEM • STRUCTURAL ANALYSIS, DYNAMIC • CONSTRUCTION • GRAND GULF 2 (BWR) • GRAND GULF 1 (BWR) • VALVES • TORUS

120429

DEFICIENCY FOUND IN REINFORCING STEEL FOR SSF COOLING TOWER BASINS AT GRAND GULF 1 AND 2
MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
2 PGS, LTR W/RT TO NRC DIRECTOR OF I & E, REGION II, NOV. 19, 1970, DUCATS 50-410/417, TYPE--BWR, RFU--U.S., AC--BECHTEL

CAUSE - CONSTRUCTION ERROR. DESIGN DOCUMENTS SPECIFIED HORIZONTAL JOISTS (REINFORCING BARS) INSTALLED AT 6-INCH CENTER-TO-CENTER VERTICAL SPACING AT JUNCTION OF THE INTERIOR AND EXTERIOR WALLS OF THE STANDBY SERVICE WATER COOLING TOWER BASINS. THESE JOISTS WERE INCORRECTLY INSTALLED ON 12-INCH CENTER-TO-CENTER VERTICAL SPACING. THIS STEEL IS TO RESIST THE HYDRODYNAMIC FORCES OF THE IMPOUNDED WATER DURING THE SAFE SHUTDOWN EARTHQUAKE. AN ANALYSIS OF THE CORRECTIVE ACTION IS IN PROGRESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

140925 CONTINUOUS
 WASH WOLF 2 (ORR) • WASH WOLF 2 (ORR) • CONSTRUCTION • REINFORCEMENT, REINFORCED • STEEL • FAILURE,
 INSTALLATION ERROR • SERVICE WATER SYSTEM • COOLING TOWER • QUALITY ASSURANCE • DESIGN • STRESS •
 CONTINUOUS

140926
 SMALL FISSURES FOUND IN RPV HELDS AT WASH WOLF 2
 MISSISSIPPI POWER & LIGHT CO., JACKSON, MS
 2 PWS, LTR WASH TO NRC OFFICE OF L & E, REGION 11, DEC. 8, 1970, URGENT 50-617, TYPE--ORR, RFU--WOL, AE--REACTEL

CASE - ONE LOT OF HELD PLUG, DURING A REGULAR MANUFACTURING PROCESS NONDESTRUCTIVE EXAM UP A
 WITHIN SEAM WELD PASS ON THE REACTOR PRESSURE VESSEL, LOS NUCLEAR CO. DETECTED A LOCAL WELD REGION
 WITHIN THE WELD PASS. THE MAXIMUM FISSURE SIZE WAS 5/16 INCHES LONG. INVESTIGATION
 REVEALED THE PROBLEM TO BE A LOT OF WELD PLUG, LOT NO. 1042, WELD NO. 124, MANUFACTURED BY
 LINE 110 OF UNION CARBIDE CORP. THIS LOT WAS JUST RECENTLY EMPLOYED ON THIS JOINT. ALL WELDS
 MADE WITH THIS LOT OF PLUG HAVE BEEN LONG REMOVED AND REWELDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHANGE 120001

WASH WOLF 2 (ORR) • CONSTRUCTION • REINFORCEMENT • PRESSURE VESSELS • MAIN COOLING SYSTEM • TEST, NONDESTRUCTIVE •
 PLAN • FAILURE, CORRUPTION • FABRICATION FACILITY

140930
 MATERIAL IDENTIFICATION INDETERMINATE AT MARTSVILLE 1, 2, 3, AND 4
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR WASH TO NRC OFFICE OF L & E, REGION 11, NOV. 10, 1970, URGENT 50-510/517/520/521, TYPE--ORR, RFU--
 WOL, AE--TVA

CASE - DOCUMENTATION DEFICIENCY. DURING ROUTINE INPROCESS INSPECTION OF MATERIAL AT BRISTOL
 STEEL AND IRON WORKS, BRISTOL, VA, A TVA INSPECTOR NOTED THAT MATERIAL IDENTIFICATION ON AN
 INDETERMINATE NUMBER OF CONTAINMENT VESSEL PIECES HAD BEEN UNKNOWN OUT AND REWELDED WITH NO
 DOCUMENTATION TO EXPLAIN THE CHANGE. THUS, MATERIAL IDENTIFICATION IS UNCERTAIN WITHOUT
 ASSURANCE OF MATERIAL TRACEABILITY. FURTHER INVESTIGATION IS UNDERWAY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHANGE 120001

MARTSVILLE 1 (ORR) • MARTSVILLE 2 (ORR) • MARTSVILLE 3 (ORR) • MARTSVILLE 4 (ORR) • CONSTRUCTION • MATERIAL •
 IDENTIFICATION • CONTAINMENT • FABRICATION FACILITY • RECORDS • QUALITY ASSURANCE • FAILURE, ADMINISTRATIVE
 CONTROL

140930
 MATERIAL IDENTIFICATION DEFICIENCIES FOUND AT MARTSVILLE 1, 2, 3, AND 4
 TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN
 2 PWS, LTR WASH TO NRC OFFICE OF L & E, REGION 11, DEC. 22, 1970, URGENT 50-510/517/520/521, TYPE--ORR, RFU--
 WOL, AE--TVA

CASE - A DEFICIENCY. DURING ROUTINE INPROCESS INSPECTION OF MATERIAL AT BRISTOL STEEL AND IRON
 WORKS, A TVA INSPECTOR NOTED THAT MATERIAL IDENTIFICATION ON AN INDETERMINATE NUMBER OF
 CONTAINMENT VESSEL PIECES HAD BEEN UNKNOWN OUT AND REWELDED WITH NO DOCUMENTATION TO EXPLAIN THE
 CHANGE. ALL INSTANCES OF CHANGE WILL BE DOCUMENTED AND THE REASON GIVEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHANGE 120001

MARTSVILLE 1 (ORR) • MARTSVILLE 2 (ORR) • MARTSVILLE 3 (ORR) • MARTSVILLE 4 (ORR) • CONSTRUCTION • MATERIAL •
 IDENTIFICATION • CONTAINMENT STRUCTURE • STEEL • FAILURE, ADMINISTRATIVE CONTROL • QUALITY ASSURANCE

140944
 SET POINT OF MAIN STEAM RELIEF VALVE EXCEEDED LIMIT AT MATCH 1
 GEORGIA POWER CO., DALLAS, VA
 2 PWS, LTR WASH 50-522/1975-78 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 11, JAN. 13, 1970, URGENT
 50-522, TYPE--ORR, RFU--WOL, AE--SSI

CASE - NOT STATED. WHILE THE REACTOR WAS IN FULL SHUTDOWN, THE MAIN STEAM RELIEF VALVE WAS FOUND
 TO OPERATE ABOVE THE 2200 PSIG LIMIT. IT OPENED AT 2200 PSIG. THE OTHER VALVES OPERATED ABOVE
 THEIR NAMEPLATE VALUES BUT DID NOT EXCEED THEIR SPEC LIMITS. THE VALVE WAS RESET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHANGE 120001

STEAM • PRESSURE RELIEF • TEST, SYSTEM OPERABILITY • MAIN COOLING SYSTEM • SET POINT • MATCH 1 (ORR) • CRIP
 • VALVES

140946
 PLANT SERVICE WATER FLOW SWITCHES FREEZE AT MATCH 1

109402 *CONTINUED*
 WEONUIA POWER CO., BAXLEY, GA
 2 PGS, LTR W/AD 50-322/1970-3 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWTON II, JAN. 19, 1970, JACKET 50-322, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - SEVERE WEATHER. WHILE OPERATING AT 046 POWER, 2 OF THE 4 PLANT SERVICE WATER DIVISION ISOLATION FLOW SWITCHES FACIL CAUSING A FALSE ISOLATION OF DIVISION 1 SERVICE WATER VALVES. THE SENSING LINES HAVE BEEN HEAT TRACED TO PREVENT A RECURRANCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, DESIGN ERROR * AUXILIARY COLLING * TUBING * WEATHER, SEVERE * MATCH 1 (COMM) * SENSORS, FLOW * HEATERS

110277
 STEADY STATE CORE THERMAL LIMIT VIOLATED AT MATCH 1
 WEONUIA POWER CO., BAXLEY, GA
 4 PGS, LTR W/AD 50-322/1970-2 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWTON II, JAN. 22, 1970, JACKET 50-322, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - XENON TRANSIENT. DURING THE 4TH QUARTER, THE MAXIMUM LIMIT OF 1000 WAS SLIGHTLY EXCEEDED 4 TIMES. UNCERTAINTIES IN COMPUTER CALCULATIONS AND PROCESS VARIABLES IS SUSPECTED TO BE THE CAUSE. RECALCULATION FLOW WAS REDUCED TO CORRECT THE ERROR. ALPHA LIMIT OF 2.40 WAS VIOLATED 3 TIMES DURING XENON TRANSIENTS. CONTROL RODS WERE INSERTED TO CORRECT THE VIOLATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COMPUTER PROGRAM * XENON * POWER DISTRIBUTION * REACTOR POWER * MATCH 1 (COMM) * OPERATION ACTION * FAILURE, IMMINENT

110275
 TEST ON CORE SPRAY FLOW INSTRUMENT NOT COMPLETED ON TIME AT MATCH 1
 WEONUIA POWER CO., BAXLEY, GA
 3 PGS, LTR W/AD 50-322/1970-2 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWTON II, JAN. 20, 1970, JACKET 50-322, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - PERSONNEL ERROR. DURING NORMAL OPERATION, CORE SPRAY DISMANT FLOW INSTRUMENT TEST WAS NOT PERFORMED BY THE ALLOWED GRACE PERIOD. IT WAS COMPLETED 4 DAYS LATER. CLOSING OF THE MINIMUM FLOW VALVE HAD PREVIOUSLY BEEN ENCOUNTERED WITH THIS PHENOMENON. PERSONNEL WERE TRYING TO AVOID UNNECESSARY CYCLING. PROCEDURES WERE REVISED. OPERATION TOOK TO COMPLETE TESTS ON TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY * FAILURE, OPERATOR ERROR * TESTING * INSTRUMENT, SWITCH * TEST INTERVAL * MATCH 1 (COMM) * SENSORS, FLOW

110270
 SET POINTS ON FLOW SWITCH REVERSED AT MATCH 1
 WEONUIA POWER CO., BAXLEY, GA
 3 PGS, LTR W/AD 50-322/1970-1 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWTON II, JAN. 30, 1970, JACKET 50-322, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - NO WRITTEN PROCEDURE. DURING TESTING WHILE OPERATING AT 746 POWER, A DARTON TYPE 2804 FLOW SWITCH (E01-M005) WAS FOUND WITH ITS SET POINTS REVERSED. THIS INSTRUMENT HAD BEEN CHANGED OUT SINCE THE LAST TEST AS A PART OF A DESIGN CHANGE. VERBAL INSTRUCTIONS WERE GIVEN FOR THE SET POINTS WHILE THE PROCEDURE WAS BEING CHANGED. INSTRUCTIONS WERE EITHER GIVEN INCORRECTLY OR MISUNDERSTOOD. ONLY APPROVED PROCEDURES WILL BE USED. THE SWITCH SETTINGS WERE CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * MODIFICATION * TEST, SYSTEM OPERABILITY * FAILURE, ADMINISTRATIVE CONTROL * ENGINEERED SAFETY FEATURE * SET POINT * MATCH 1 (COMM) * COMMUNICATION * SENSORS, FLOW

110271
 MPC1 MINIMUM FLOW SWITCH FAILS AT MATCH 1
 WEONUIA POWER CO., BAXLEY, GA
 2 PGS, LTR W/AD 50-322/1970-4 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWTON II, FEB. 25, 1970, JACKET 50-322, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - BELLGUS FAILURE. DURING A TEST WITH THE REACTOR AT 526 POWER, THE MPC1 MINIMUM FLOW SWITCH FAILED TO RESPOND PROPERLY. THE BELLGUS IN THE DARTON TYPE 2804 DIFFERENTIAL PRESSURE INDICATING SWITCH HAD FAILED. THE SWITCH WAS REPLACED AND THE SYSTEM RESTORED TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

110271 PLANTINMENT
CHANGE 020001

FAILURE, COMPONENT + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + MATCH 1 (0001) +
FAILURE, INHERENT + SENSORS, PLUS + NPCL

110272

LIMIT SWITCHES ON TWO VACUUM BREAKERS FAIL AT MATCH 1

VERMONT POWER CO., DARTLEY, VA

2 PWS, LTR N/AU 50-321/1970-5 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REVIEW 11, FEB. 3, 1970, Docket 50-321, TYPE--000, MFU--0000, AE--331

CAUSE - UNKNOWN. DURING TESTING OF THE TENDS TO WATER VACUUM BREAKERS WITH THE REACTOR AT 700 PWS, THE VACUUM INSULATING LIGHTS ON 2 BREAKERS DID NOT EXTINGUISH WHEN THE VACUUM BREAKERS WERE OPENED. THE OPER CO DOUBLE LIMIT SWITCHES HAVE NOT PROVED TO BE RELIABLE ON 2 OF THE 12 BREAKERS. REPAIR OR REPLACEMENT WILL BE MADE AT AN UNKOWN IN THE NEAR FUTURE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 020001

CONTAINMENT + PLANTINMENT VACUUM BREAKER + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + RELIABILITY, COMPONENT + TEST, SYSTEM OPERABILITY + INSTRUMENT, POSITION + MATCH 1 (0001) + TENDS

110273

WATER SPRAY SWITCHES FLUNG IMPROPERLY SET AT MATCH 1

VERMONT POWER CO., DARTLEY, VA

2 PWS, LTR N/AU 50-321/1970-6 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REVIEW 11, FEB. 3, 1970, Docket 50-321, TYPE--000, MFU--0000, AE--331

CAUSE - PROCEEDURAL DEFICIENCY. WHILE OPERATING AT 775 PWS, ROUTINE SURVEILLANCE FLUNG CURE SPRAY PUMP DISCHARGE PRESSURE INTERLOCK SWITCHES TO HAVE INCORRECT SET POINTS OF 70 PSIG. CORRECT SETTINGS ARE 140 + OR - 10 PSIG. THE CALIBRATION PROCEDURES HAD IMPROPERLY SPECIFIED INCREASING PRESSURE INSTEAD OF DECREASING PRESSURE. THE SWITCHES WERE PROPERLY RESET. PROCEDURE IS BEING REVISED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 020001

WATER SPRAY + PROCEDURES AND MANUALS + INSTRUMENT, INTERLOCK + INSTRUMENT CALIBRATION + INSTRUMENT, SWITCH + MODIFICATION + TEST, SYSTEM OPERABILITY + FAILURE, ADMINISTRATIVE CONTROL + SET POINT + MATCH 1 (0001) + SENSORS, PRESSURE

110274

HYDRA TEST NOT PERFORMED ON NPCL LEVEL SWITCH PRIOR TO STARTUP AT MATCH 1

VERMONT POWER CO., DARTLEY, VA

2 PWS, LTR N/AU 50-321/1970-7 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REVIEW 11, FEB. 3, 1970, Docket 50-321, TYPE--000, MFU--0000, AE--331

CAUSE - TEST INADVERTENTLY OVERLOOKED. A ROBERT SHAW MODEL 071-1300 LEVEL SWITCH USED TO SENSE HIGH TENDS LEVEL FOR NPCL SUCTION WAS RELOCATED DURING THE CURE PLATE PLW TING OUTAGE. A HYDRA TEST WAS NOT PERFORMED ON IT PRIOR TO PLANT STARTUP. THE TEST WAS INADVERTENTLY OVERLOOKED BY PERSONNEL RESPONSIBLE FOR IT. GC REVIEW DISCOVERED THE OVERSIGHT. THEN, THE TEST WAS PERFORMED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 020001

TESTING + TEST, PROOF + REVIEW + REVIEW + FAILURE, ADMINISTRATIVE CONTROL + QUALITY ASSURANCE + MATCH 1 (0001) + PIPES AND PIPE FITTINGS + SENSORS, LEVEL + NPCL

110282

WITH AIR-LOCK DOORS BETWEEN TURBINE AND REACTOR BUILDINGS OPENED AT MATCH 1

VERMONT POWER CO., DARTLEY, VA

2 PWS, LTR N/AU 50-321/1970-8 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REVIEW 11, FEB. 3, 1970, Docket 50-321, TYPE--000, MFU--0000, AE--331

CAUSE - CONTRACT PERSONNEL ERROR. WITH THE REACTOR AT 000 PWS, CONTRACT LABOR PERSONNEL OPENED BOTH AIR LOCK DOORS BETWEEN THE TURBINE BUILDING AND THE REACTOR BUILDING TO MOVE A LONG PIECE OF UNISTRUT. LOCK INTERLOCKS WERE DEFEATED TO DO THIS. INSTRUCTIONS WERE MISINTERPRETED. PERSONNEL INSTRUCTED THAT LOCK INTERLOCKS MUST NEVER BE DEFEATED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 020001

CONTAINMENT AIR LOCK + CONTAINMENT INTEGRITY + FAILURE, MAINTENANCE ERROR + MATCH 1 (0001) + COMMUNICATION

110272

WATER PUMP SUCTION VALVE FAILS TO CLOSE AT MATCH 1

VERMONT POWER CO., DARTLEY, VA

110972 *CONTINUED*
2 PGS, LTR N/AUR 50-321/1970-12 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, FEB. 17, 1970, URGENT 50-321, TYPE--BWR, RFU--G.E., AE--SSI

CAUSE - CHARGED LIMIT SWITCH CONTACTS. WITH THE REACTION AT 794 PUMPS, NRC PUMP SUCTION FROM SUPPRESSION CHAMBER ISOLATION VALVE FAILED TO CLOSE DURING AN OPERABILITY TEST. CONTACTS ON THE TENSILE LIMIT SWITCH HAD CORRUDED PROBABLY DUE TO A PREVIOUS STEAM LEAK IN THE AREA. CONTACTS WERE CLEANED. OTHER VALVES IN THE AREA HAD CLEAN CONTACTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * CONTAINMENT ISOLATION * CORROSION * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * MATCH 1 (BWR) * FAILURE, INHERENT * NRC * VALVE OPERATORS * OCCURS

110970
NEUTRALIZATION TANK OVERFLOW DRAINS INTO RIVER AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
3 PGS, LTR N/AUR 50-321/1970-14 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, FEB. 19, 1970, URGENT 50-321, TYPE--BWR, RFU--G.E., AE--SSI

CAUSE - LEVEL CONTROLLER MALFUNCTION. DURING HOT STANDBY, THE MAKEUP DRAIN NEUTRALIZATION TANK DRAINED TO THE NEUT. SUMP, OVERFLOWED THE SUMP INTO THE JERING PUMPSE FLOW DRAIN, AND THEN TO THE RIVER. PH DROPPED TO 3.5 AND REMAINED BELOW THE ETS LIMIT OF 5.0 FOR 2.5 HOURS. BY THE TIME THE PROBLEM WAS DISCOVERED, IT HAD CORRECTED ITSELF. A MAGNETIC LEVEL CONTROLLER MALFUNCTIONED CAUSING THE SUMP PUMPS TO NOT OPERATE. THE HIGH LEVEL ALARM SWITCH WAS SHOWN. IT WAS REPLACED. THE SUMP PUMP CONTROLS OPERATED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFECT, PH * FAILURE, INHERENT * SENSORS, LEVEL
EFFECT, PH * FAILURE, INHERENT * SENSORS, LEVEL

110971
PLANT SERVICE WATER PUMP FAILS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR N/AUR 50-321/1970-15 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, FEB. 19, 1970, URGENT 50-321, TYPE--BWR, RFU--G.E., AE--SSI

CAUSE - SHAFT FAILURE DUE TO FLARE. DURING OPERATION AT 916 PUMPS, PLANT SERVICE WATER PUMP 6 WAS NOT PRODUCING ANY DISCHARGE FLOW OR PRESSURE. THE SHAFT HAD FAILED DUE TO A METALLIC FLARE AT THE POINT OF FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * FAILURE, EQUIPMENT * FLARE * FAILURE, FABRICATION ERROR * AUXILIARY COOLING * MATCH 1 (BWR) * PUMPS

110972
APRM CHANNEL FAILS TO INDICATE INCP PROPERLY AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR N/AUR 50-321/1970-16 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, FEB. 27, 1970, URGENT 50-321, TYPE--BWR, RFU--G.E., AE--SSI

CAUSE - KNOB ON OPERATE SWITCH LOOSE. DURING TESTING WITH THE REACTION AT 904 PUMPS, APRM CHANNEL C FAILED TO INDICATE INCP WHEN THE NUMBER OF APRM INPUTS WAS DECREASED FROM 16 TO 10. THE SET SCREW DRILL SECURES THE KNOB TO THE OPERATE SWITCH SHAFT WAS LOOSE AND THE SWITCH WAS NOT IN THE POSITION INDICATED BY THE KNOB. THE KNOB POSITION WAS CORRECTED AND THE SET SCREW TIGHTENED. PROPER OPERATION WAS VERIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FASTENER * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * INSTRUMENT, PUMP * MATCH 1 (BWR)

110973
MAPLMA EXCEEDS LIMIT AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR N/AUR 50-321/1970-17 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 1, 1970, URGENT 50-321, TYPE--BWR, RFU--G.E., AE--SSI

CAUSE - XENON TRANSIENT DURING TESTING. WHILE OPERATING AT 794 PUMPS, THE MAXIMUM AVERAGE PLANTWIDE LINEAR HEAT GENERATION RATE EXCEEDED THE 13.3% LIMIT. IT REACHED 13.3%. POWER HAD BEEN DECREASED TO TEST CONTROL VALVES THEN INCREASED TO RESUME NORMAL OPERATION. THE DECREASE IN XENON INVENTORY CAUSED MAPLMA TO INCREASE BEYOND THE LIMIT. A CIRCULATION PUMP WAS REDUCED TO 1, BRING MAPLMA TO 13.27.

11804 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATOR ERROR • REACTOR • POWER DISTRIBUTION • HEAT GENERATION, INTERNAL • HOT CHANNEL • MATCH 1 (100%)

11805
 FUEL RODS EXCEEDED MAXIMUM LIMIT AT MATCH 1
 GEORGIA POWER CO., DALEY, VA
 2 PWS, LTR N/A/NU 50-321/1970-09 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 1, 1970, DUCRET 50-321, TYPE--BWR, MFU--UOL, AE--SSI

CAUSE - REACTOR TRANSIENT DURING TESTING. DURING OPERATION AT 77% POWER, 2 RODS EXCEEDED THE MAXIMUM LIMIT OF 13.33. LMRH WAS 13.35. FOLLOWING A LOAD ASSESSMENT AFTER A LOAD REDUCTION FOR TURBINE CONTROL VALVE TESTING, THE REACTOR INVENTORY DECREASED CAUSING LMRH TO EXCEED LIMITS. RECIRCULATION FLOW WAS REDUCED TO BRING THESE RODS WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATION ERROR • REACTOR • POWER DISTRIBUTION • HEAT GENERATION, INTERNAL • HOT CHANNEL • MATCH 1 (100%)

11806
 MAXIMUM EXCEEDS LIMIT IN TWO FUEL BUNDLES AT MATCH 1
 GEORGIA POWER CO., DALEY, VA
 3 PWS, LTR N/A/NU 50-321/1970-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 1, 1970, DUCRET 50-321, TYPE--BWR, MFU--UOL, AE--SSI

CAUSE - UNCERTAINTY IN CALCULATIONS. DURING ONE POWER OPERATION, MAXIMUM LIMIT OF 13.33 MW/FT WAS EXCEEDED IN 2 BUNDLES. THE VALUE REACHED WAS 13.37 MW/FT. THE UNCERTAINTY IN THE CALCULATION CAN PARTIALLY EXPLAIN WHY THE LAST 3 OCCURRENCES HAPPENED. THE ROD PATTERN HAS BEEN CHANGED SIGNIFICANTLY TO PREVENT RECURRENCE. RECIRCULATION FLOW WAS REDUCED TO BRING MAXIMUM WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATION ERROR • REACTOR • POWER DISTRIBUTION • HEAT GENERATION, INTERNAL • HOT CHANNEL • MATCH 1 (100%)
 • CONTROL RODS

11807
 ANALYSIS NOT PERFORMED ON REACTOR COOLANT ON TIME AT MATCH 1
 GEORGIA POWER CO., DALEY, VA
 2 PWS, LTR N/A/NU 50-321/1970-11 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 1, 1970, DUCRET 50-321, TYPE--BWR, MFU--UOL, AE--SSI

CAUSE - PERSONNEL ERROR. WHILE OPERATING AT 64% POWER WITH THE REACTOR WATER CLEANUP SYSTEM ISOLATED, CHEMICAL AND PH ANALYSIS IS REQUIRED EVERY 8 HOURS. ONE SAMPLE WAS ANALYZED 30 MINUTES LATE DUE TO PERSONNEL ERROR. THE EVENT WAS DISCOVERED DURING A REVIEW OF RECORDS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATION ERROR • REACTOR COOLANT • CHEMICAL ANALYSIS • TEST INTERVAL • COOLANT QUALITY • MATCH 1 (100%)

11808
 SET POINT DRIFT IN NUC ELECTRONIC OVERSPEED AT MATCH 1
 GEORGIA POWER CO., DALEY, VA
 2 PWS, LTR N/A/NU 50-321/1970-12 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 9, 1970, DUCRET 50-321, TYPE--BWR, MFU--UOL, AE--SSI

CAUSE - PROCEDURAL DEFICIENCY. WHILE OPERATING AT 53% POWER, CALIBRATION OF THE NUC ELECTRONIC OVERSPEED REVEALED THAT THE TRIP SET POINT HAD EXCEEDED 120% OF NUC SPEED. CALIBRATION PROCEDURE ALLOWED SETTING OF THE TRIP AT THE LIMIT. IT IS BEING REVISED TO ALLOW ADEQUATE MARGIN. THE SET POINT WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT, PROTECTIVE • PROCEDURES AND MANUALS • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, ADMINISTRATIVE CONTROL • SET POINT • MATCH 1 (100%) • DRIFT • ALARM

11809
 NUC TURBINE TRIPS ON OVERSPEED AT MATCH 1
 GEORGIA POWER CO., DALEY, VA
 3 PWS, LTR N/A/NU 50-321/1970-13 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 9, 1970, DUCRET 50-321, TYPE--BWR, MFU--UOL, AE--SSI

111800 CONTINUOUS

CAUSE - UNKNOWN. WHILE THE REACTOR WAS SHUT DOWN FOLLOWING A SCRAM, THE OPERATOR INITIATED A MANUAL START UP OF THE RCIC TURBINE. IT THEN WAS TRIPPED BY THE MECHANICAL OVERSPEED TRIP. THE MECHANICAL TRIP WAS RESET AND A RCIC QUICK START WAS INITIATED SUCCESSFULLY. THE CAUSE OF THE TRIP IS UNKNOWN. THE MECHANICAL OVERSPEED TRIP MAY NOT HAVE BEEN CALIBRED PROPERLY AND VIBRATION CA STARTUP CAUSED THE VALVE TO VIBRATE. THE ELECTRONIC OVERSPEED, WHICH HAS A LOWER SET POINT, DID NOT TRIP INDICATING THAT THE TURBINE DID NOT OVERSPEED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + INSTRUMENT, PROTECTIVE + INSTRUMENT, SWITCH + TURBINE + MATCH 1 (10M) + RCIC

111803

NAPHEA EXCEEDS LIMIT AT MATCH 1

GEORGIA POWER CO., BARLEY, GA

3 PWS, LTR N/AO 50-321/1970-13 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 10, 1970, CUCKET 50-321, TYPE--BWR, NFO--GCE, AE--SSI

CAUSE - DRIFT IN PUMP SPEED. WITH THE REACTOR AT 75% MAXIMUM AVERAGE PLANNED LINEAR HEAT GENERATION RATE EXCEEDED THE 13.33 KW/FT BY 0.01. DURING AN INVESTIGATION OF NOISE IN THE COOLING SYSTEM OF THE RECIRCULATION PUMPS, THE PUMPS WERE OPERATED IN MANUAL. ONE PUMP UNITED UP 2% CAUSING THE FLOW TO INCREASE AND THE NAPHEA LIMIT TO BE EXCEEDED. FLOW WAS REDUCED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + POWER DISTRIBUTION + HEAT GENERATION, INTERNAL + NOT CHANNEL + FLOW + MATCH 1 (10M) + DRIFT

111895

PRIMARY CONTAINMENT INTEGRITY VIOLATED AT MATCH 1

GEORGIA POWER CO., BARLEY, GA

3 PWS, LTR N/AO 50-321/1970-17 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 10, 1970, CUCKET 50-321, TYPE--BWR, NFO--GCE, AE--SSI

CAUSE - VACUUM BREAKER TESTING ERROR. WHILE THE REACTOR WAS AT 50% POWER, PRIMARY CONTAINMENT WAS VIOLATED WHEN 2 PRIMARY TO SECONDARY CONTAINMENT VACUUM BREAKER PRESSURE SWITCHES WERE RETURNED TO SERVICE AFTER CALIBRATION WITH A TEST CONNECTION CAP LEFT OFF. THIS WAS AN OVERSIGHT BY THE INSTRUMENT TECHNICIAN. A BETTER METHOD OF TESTING HAS BEEN FOUND THAT DOES NOT REQUIRE THE CAP TO BE REMOVED. PROCEDURES WILL BE REVISED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + PROCEDURES AND MANUALS + CONTAINMENT INTEGRITY + CONTAINMENT VACUUM BREAKER + BUILDING + INSTRUMENT, SWITCH + FAILURE, MAINTENANCE ERROR + MATCH 1 (10M)

111896

INDICATING LIGHTS ON VACUUM BREAKERS MALFUNCTION AT MATCH 1

GEORGIA POWER CO., BARLEY, GA

3 PWS, LTR N/AO 50-321/1970-22 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 10, 1970, CUCKET 50-321, TYPE--BWR, NFO--GCE, AE--SSI

CAUSE - OUT OF ADJUSTMENT. ONE OF THE 2 CLOSED INDICATING LIGHTS ON A ORTHELL/TORUS VACUUM BREAKER WAS FOUND EXTINGUISHED. WHEN THE DIFFERENTIAL PRESSURE BETWEEN THE ORTHELL AND TORUS WAS REMOVED, IT OPERATED PROPERLY. THE SWITCH WILL BE ADJUSTED AT THE NEXT TORUS ENTRY. A CLOSED INDICATING LIGHT ON ANOTHER VACUUM BREAKER FAILED TO EXTINGUISH WHEN THE VALVE OPENED. THIS SWITCH WILL BE REPAIRED AT THE NEXT TORUS ENTRY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + CONTAINMENT VACUUM BREAKER + FAILURE, MAINTENANCE ERROR + INSTRUMENT, POSITION + MATCH 1 (10M) + INDICATORS + TORUS

111881

RESPONSE TIME OF TURBINE CONTROL VALVE TOO SLOW AT MATCH 1

GEORGIA POWER CO., BARLEY, GA

2 PWS, LTR N/AO 50-321/1970-10 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 12, 1970, CUCKET 50-321, TYPE--BWR, NFO--GCE, AE--SSI

CAUSE - SOLENOID VALVE SLOUGHS. DURING TESTING OF THE TURBINE CONTROL VALVE WHILE OPERATING AT 80% POWER, ONE VALVE FAILED TO MEET THE FAST CLOSURE LIMIT OF 30 MSEC. CLOSURE TIME WAS 52 MSEC. TO MEET THE LIMIT, THE FAST ACTING SOLENOID VALVES ON THE CONTROL VALVES MUST BE EXERCISED FREQUENTLY. THE USUAL HEARTY TEST WAS NOT REQUIRED WHEN THE VALVES WERE CLOSED. PROCEDURES WILL BE REVISED TO REQUIRE TESTING WHENEVER THE VALVES ARE OPEN OR CLOSED. AFTER THE VALVE WAS EXERCISED, CLOSURE TIME WAS 21 MSEC.

112301 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTROL - RESPONSE TIME - TEST, SYSTEM OPERABILITY - FAILURE, ADMINISTRATIVE CONTROL - TURBINE - MATCH 1 (100) - VALVES

112302
 LPCI PRESSURE SWITCH SET POINTS EXCEED LIMIT AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 3 PGS, LTR N/AU 50-321/1970-23 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 22, 1970, DUCRET 50-321, TYPE--DM, MFG--GE, AE--SSI

CAUSE - PROCEEDURAL ERROR. DURING 600 POWER OPERATIONS, TESTING REVEALED THAT 4 LPCI WHEN DETECTION ACTUATION PERMISSIVE PRESSURE SWITCHES WERE ABOVE THE 700 PSIG LIMIT. INVESTIGATION REVEALED THAT PROCEEDURE SET POINT OF 930 PSIG WED NOT AGREE WITH THE TECH SPEC. WHEN THE PROCEEDURE WAS WRITTEN, THE 700 PSIG WAS CONSIDERED AS THE LOWER LIMIT. TECH SPECS WERE LATER CHANGED TO READ 900 PSIG AS THE UPPER LIMIT BUT THE PROCEEDURES WERE NOT CHANGED. THEY HAVE BEEN REVISED AND THE SWITCHES RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

PROCEEDURES AND MANUALS - INSTRUMENT CALIBRATION - INSTRUMENT, SWITCH - TEST, SYSTEM OPERABILITY - FAILURE, ADMINISTRATIVE CONTROL - PSET PLANT - MATCH 1 (100) - FAILURE, CURRENT MODE - SENSORS, PRESSURE - LPCI

112303
 DIESEL GENERATOR FAILS TO START AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 2 PGS, LTR N/AU 50-321/1970-24 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 23, 1970, DUCRET 50-321, TYPE--DM, MFG--GE, AE--SSI

CAUSE - SOLENOID AIR VALVE STUCK CLOSED. DURING OPERATION AT 600 POWER AND AFTER MAINTENANCE ON DIESEL GENERATOR 1A, THE DIESEL FAILED TO START. AN ASUL CATALOU NO. HTAZ1040302 SOLENOID OPERATED AIR VALVE STUCK IN THE CLOSED POSITION PREVENTING THE AIR STARTER FROM FUNCTIONING. THE VALVE WAS REBUILT AND THE DIESEL STARTED SUCCESSFULLY. A DIFFERENT TYPE VALVE WILL BE INSTALLED IN THE NEAR FUTURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, COMPONENT - TEST, SYSTEM OPERABILITY - FAILURE, DESIGN ERROR - MATCH 1 (100) - SOLENOID - VALVE OPERATIONS - VALVES - ENGINES, INTERNAL COMBUSTION - GENERATOR, DIESEL

112305
 MAIN STEAMLINE FLUX INSTRUMENT NOT VALVED INTO SERVICE AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 3 PGS, LTR N/AU 50-321/1970-22 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MARCH 31, 1970, DUCRET 50-321, TYPE--DM, MFG--GE, AE--SSI

CAUSE - MAINTENANCE ERROR. DURING TESTING WITH THE REACTOR AT 700 POWER, A MAIN STEAMLINE INSTRUMENT FLUX RACK WAS NOT CORRECTLY VALVED BACK INTO SERVICE. THE MISALIGNMENT WAS DISCOVERED WHEN THE INSTRUMENT DRIVE UPSCALE AND TRAPPED HALF OF THE LOGIC FOR GROUP 1 ISOLATION. TECHNICIANS HAVE BEEN INSTRUCTED TO CHECK VALVE LINEUPS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT ISOLATION - TESTING - FAILURE, INSTRUMENT - INSTRUMENT, SWITCH - FAILURE, MAINTENANCE ERROR - MATCH 1 (100) - VALVES - SENSORS, FLUX

112372
 SHUTDOWN COOLING OUT OF SERVICE AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 3 PGS, LTR N/AU 50-321/1970-20 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, APRIL 13, 1970, DUCRET 50-321, TYPE--DM, MFG--GE, AE--SSI

CAUSE - PERSONNEL MISUNDERSTANDING. WHILE IN COLD SHUTDOWN FOR LPCI MODIFICATION, OPEN LINES IN PANEL MAINT-PANEL DETECTED THE STARTING OF ALL RMA PUMPS DURING THE LPCI MODIFICATION. THE ACTION HAD BEEN APPROVED. DRAWINGS DID NOT SHOW CLEARLY THAT THIS WOULD DEPRAT THE MANUAL CONTROL STARTING CIRCUITS. THE LINES WERE CLOSED AND THE SYSTEM RETURNED TO NORMAL. PERSONNEL WERE MADE AWARE OF THE AEU FOR COMPLETE INVESTIGATION OF CIRCUITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, OPERATION ERROR - INSTRUMENT, PROTECTIVE - MODIFICATION - SHUTDOWN COOLING SYSTEM - MATCH 1 (100)

113514
CALIBRATION OF FLOW TRANSMITTER FOUND TO BE INCORRECT AT MATCH 1
GEORGIA POWER CO., DALLEY, GA
2 PGS, LTR W/NO 50-321/1970-27 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, APRIL 20, 1970, UCLCET
50-321, TYPE--BNA, MF--G.E., AE--SSI

CAUSE - DESIGN DATA ERROR. WHILE TRYING TO RUN A PUMP RUNOUT TEST ON A 400 PUMP WHILE IN COLD SHUTDOWN, A FLOW TRANSMITTER AND FLOW RECORDER WERE FOUND TO BE CALIBRATED FOR THE WRONG RANGE. THE DESIGN DATA OBTAINED FROM GC WAS INCORRECT. BOTH HAVE BEEN RECALIBRATED TO THE CORRECT SPECIFICATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + MODIFICATION + TEST, SYSTEM OPERABILITY + FAILURE, DESIGN ERROR + SHUTDOWN COOLING SYSTEM + MATCH 1 (BNA) + SENSORS, FLOW + RECORDERS

113515
VALVE MOTOR WINDING FAILS AT MATCH 1
GEORGIA POWER CO., DALLEY, GA
2 PGS, LTR W/NO 50-321/1970-29 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, APRIL 20, 1970, UCLCET
50-321, TYPE--BNA, MF--G.E., AE--SSI

CAUSE - NO OVERLOAD PROTECTION. WHILE THE UNIT WAS IN COLD SHUTDOWN, A MOTOR WINDING FAILURE OCCURRED ON A 400 HEAT EXCHANGER ISOLATION VALVE. ECCS VALVES BY DESIGN DO NOT HAVE OVERLOAD PROTECTION WHICH COMMONLY ALLOWS WINDING FAILURE UNCE A FAULT DEVELOPS. THE VALVE OPERATOR WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + SHUTDOWN COOLING SYSTEM + MATCH 1 (BNA) + FAILURE, INCIDENT + VALVE OPERATIONS + VALVES

113516
ALLOCA LEAK RATE TEST NOT PERFORMED ON TIME AT MATCH 1
GEORGIA POWER CO., DALLEY, GA
2 PGS, LTR W/NO 50-321/1970-25 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, APRIL 21, 1970, UCLCET
50-321, TYPE--BNA, MF--G.E., AE--SSI

CAUSE - PERSONNEL OVERSIGHT. DURING NORMAL OPERATION, THE SURVEILLANCE INTERVAL OF 8 HOURS FOR LOCAL LEAK RATE TESTING OF THE DRYWELL ALLOCA INTERSPACE WAS EXCEEDED BY 8 DAYS. THIS RESULTED FROM AN OVERSIGHT OF PERSONNEL PERFORMING SURVEILLANCE AND FAILURE TO INCORPORATE IT IN THE SURVEILLANCE PROGRAM. IT HAS NOW BEEN INCLUDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + TESTING + TEST, LEAK RATE + CONTAINMENT AIR LOCK + TEST INTERVAL + MATCH 1 (BNA)

113517
400 PUMP INADVERTENTLY TRIPPED AT MATCH 1
GEORGIA POWER CO., DALLEY, GA
2 PGS, LTR W/NO 50-321/1970-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, APRIL 22, 1970, UCLCET
50-321, TYPE--BNA, MF--G.E., AE--SSI

CAUSE - JUMPER INSTALLED IMPROPERLY. DURING A COLD SHUTDOWN, A JUMPER WAS PLACED ON THE MAIN SIDE OF A LINK IN A PANEL AS PART OF THE LPCI MODIFICATION. WHEN THE LINK WAS OPENED IN TESTING THE MODIFICATION, IT CAUSED A RELAY TO BE DE-ENERGIZED WHICH TRIPPED 1 OF 2 400 PUMPS. THE JUMPER WAS REMOVED AND REPLACED IN THE CORRECT LOCATION. THE PUMP TRIP LOGIC WAS RESET AND THE PUMP RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE + MODIFICATION + TEST, SYSTEM OPERABILITY + FAILURE, INSTALLATION ERROR + SHUTDOWN COOLING SYSTEM + MATCH 1 (BNA) + BYPASS + PUMPS + LPCI

113518
SEVERAL VALVE BOUNDARIES LEAK EXCESSIVELY AT MATCH 1
GEORGIA POWER CO., DALLEY, GA
3 PGS, LTR W/NO 50-321/1970-28 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, APRIL 27, 1970, UCLCET
50-321, TYPE--BNA, MF--G.E., AE--SSI

CAUSE - BROKEN PARTS, MISADJUSTED SWITCHES. DURING THE LPCI MODIFICATION OUTAGE, LOCAL LEAK RATE TESTS REVEALED SEVERAL VALVE BOUNDARIES TO BE LEAKING EXCESSIVELY. CAUSES OF LEAKAGE THROUGH THE 10 VALVES WERE WARPED DISCS, BROKEN CLEVIS, SMEARED PENS, TURNED SWITCHES OUT OF ADJUSTMENT, AND DEFECTS ON SEATING SURFACES. NECESSARY MAINTENANCE WAS PERFORMED ON ALL VALVES TO ALLOW LEAKAGES TO BE WITHIN ACCEPTABLE LIMITS PRIOR TO STARTUP.

113512 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT ISOLATION * TEST, LEAK RATE * TEST, SYSTEM OPERABILITY * LEAK RATE * MATCH 1 (ENR) * VALVE, CHECK
 * VALVES * CONTAINMENT PENETRATION

114007
 NRC TURBINE FAILS TO ACHIEVE RATED FLOW AT MATCH 1
 VERMONT POWER CO., BALEY, VA
 3 PAGES LTR W/NO 50-321/1970-32 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 9, 1970. DCKET 50-
 321, TYPE--BWR, MW--600, AE--551

CAUSE - CUT CABLE IN CONTROL. WHILE TESTING THE NRC TURBINE WITH THE REACTOR AT 14 POWER, IT
 WOULD NOT INCREASE BEYOND IDLE SPEED OF 1000 RPM RESULTING IN NRC BEING UNABLE TO ACHIEVE RATED
 FLOW. A CUT CABLE WAS PREVENTING THE AMP GENERATOR FROM RECEIVING THE SIGNAL. CABLES WERE
 BEING PULLED IN THIS AREA DURING THE OUTAGE AND IT IS THOUGHT THAT THIS CABLE WAS PROBABLY CUT BY
 DISTANCE. THE CUT CABLE WAS REPAIRED BY PLACING A TERMINAL BLOCK AT THE CUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

OUTAGE * MODIFICATION * TEST, SYSTEM OPERABILITY * FAILURE, MAINTENANCE ERROR * OUTAGE * TURBINE * MATCH 1
 (ENR) * CABLES AND CONNECTIONS * NRC

114008
 WATER WITH HIGH PH DISCHARGED TO RIVER AT MATCH 1
 VERMONT POWER CO., BALEY, VA
 3 PAGES LTR W/NO 50-321/1970-32 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 10, 1970. DCKET 50-
 321, TYPE--BWR, MW--600, AE--551

CAUSE - SUMP LEVEL CIRCUITRY ERROR. WHILE OPERATING AT 348 POWER, A HIGH LEVEL WAS REACHED ON THE
 WASTE NEUTRALIZATION SUMP IN THE MVD HOUSE BUT THE SWITCH FAILED TO ISOLATE SOURCES OF HIGH PH
 WATER DUE TO A LIFTED WIRE. THIS RESULTED IN A DISCHARGE OF 8000 GALLONS OF WATER HAVING A PH
 GREATER THAN 9.0 INTO THE RIVER. THE WIRE WAS LIFTED BECAUSE OF AN INTERLOCK WHICH PREVENTED THE
 ISOLATION SIGNAL FROM BEING RESET ONCE IT WAS INITIATED. AN INVESTIGATION REVEALED A SECOND WIRE
 HAD BEEN INCORRECTLY LOCATED IN THE CIRCUITRY. NO REASON FOR THE WIRE'S PRESENCE COULD BE FOUND.
 IT WAS REMOVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EFFLUENT * RIVER * WASTE DISPOSAL * WATER QUALITY * FAILURE, INSTALLATION ERROR * MATCH 1 (ENR) * CABLES AND
 CONNECTIONS

114101
 ECCS FLOW SWITCH FAILS TO RESPOND AT MATCH 1
 VERMONT POWER CO., BALEY, VA
 4 PAGES LTR W/NO 50-321/1970-34 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 11, 1970. DCKET 50-
 321, TYPE--BWR, MW--600, AE--551

CAUSE - RUPTURED BELLOW. DURING TESTING WITH THE REACTOR AT 634 POWER, AN ECCS FLOW SWITCH
 FAILED TO RESPOND PROPERLY. THE MARTON MODEL 207A DIFFERENTIAL PRESSURE OPERATED FLOW SWITCH
 FAILED DUE TO A RUPTURED BELLOW. THE SWITCH WAS REPLACED WITH A NEW ONE OF THE SAME KIND. THE
 VENDOR IS BEING CONTACTED TO DETERMINE THE CAUSE OF FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM
 OPERABILITY * MATCH 1 (ENR) * EMERGENCY COOLING SYSTEM * SENSORS, FLOW

114102
 DIESEL GENERATOR TRIPS AT MATCH 1
 VERMONT POWER CO., BALEY, VA
 3 PAGES LTR W/NO 50-321/1970-35 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 12, 1970. DCKET 50-
 321, TYPE--BWR, MW--600, AE--551

CAUSE - UNKNOWN. DURING A TEST WHILE OPERATING AT 608 POWER, DIESEL GENERATOR IC TRIPPED AND ONLY
 THE SHUT-DOWN ALARM WAS RECEIVED. A RETEST WAS SUCCESSFUL. A DETAILED SEARCH FOUND THAT A NUT
 HAD VIBRATED OFF A TERMINAL BLOCK ALLOWING A WIRE TO UNWIND OFF. THE WIRE STRUCK THE PANEL BLINDING
 A FUSE. THE LOOSE WIRE ALSO DE-ENERGIZED THE INVERTER. THERE WAS NO ALARM CAPABILITY EXCEPT THE
 ONE. THE WIRE WAS PLACED BACK ON THE TERMINAL AND THE NUT TIGHTENED SECURELY. THE DIESEL WILL
 BE TESTED HEAVILY IN AN EFFORT TO LOCATE THE SOURCE OF THE TRIP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EMERGENCY POWER, ELECTRIC * FAILURE, EQUIPMENT * TEST, SYSTEM OPERABILITY * MATCH 1 (ENR) * ENGINE, INTERNAL

114100 *CONTINUED*
COMBUSTION * GENERATOR, DIESEL

114174
APS RELAYS FAIL AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 PGS, LTR D/NO 50-321/1970-30 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 19, 1970, DCKET 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - INCORRECT TYPE INSTALLED. UPON A REACTOR SCRAM WHEN THE MUSIC SWITCH WAS PLACED IN THE STOP/STANDBY POSITION, THE SELENIUM RECTIFIERS FOR 2 APS RELAYS BURNED OUT AND THE FUSES BLEW. THESE WERE REPLACED WITH NEW RECTIFIERS AND THE STOP/STANDBY SCRAM RESET BUT THIS TIME THE CUI RELAYS BURNED OUT. THESE RELAYS HAD BEEN ERRONEOUSLY REPLACED. IN RESPONSE TO IT DALLIN TO-DO, WITH RELAYS HAVING AC COILS. THIS IS A DC CIRCUIT. THE RELAYS WERE REPLACED WITH THE ORIGINAL JACOBS RELAYS HAVING BEEN ORDERED AND WILL REPLACE THE OLD ONES AT THE FIRST OUTAGE AFTER THEY HAVE BEEN RECEIVED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * FAILURE, INSTRUMENT * FAILURE, MAINTENANCE ERROR * MATCH 1 (10MI) * DELAYS

114175
MPC1 DISCHARGE VALVE FAILS TO OPEN AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 PGS, LTR D/NO 50-321/1970-37 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 19, 1970, DCKET 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - PERHAPS A LIMIT SWITCH FAILURE. DURING A SCRAM RECOVERY OPERATION, THE MPC1 DISCHARGE VALVE FAILED TO OPEN ON AUTOMATIC INITIATION. IT OPERATED CORRECTLY ON A SECOND TRY. INVESTIGATION SUGGESTS THAT A SHARP LOCK LIMIT SWITCH MODEL 48200-0 IN THE STOP VALVE FAILED TO GIVE THE VALVE AN OPEN SIGNAL. THE VALVE OPERATOR WAS SUCCESSFULLY TESTED 3 TIMES AFTER FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT * INSTRUMENT, SETTING * TEST, SYSTEM OPERABILITY * INSTRUMENT, POSITION * MATCH 1 (10MI) * VALVES * MPC1

114179
MPC3 FLOW SWITCH HAS ABNORMAL INDICATION AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 PGS, LTR D/NO 50-321/1970-39 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 17, 1970, DCKET 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - DEFECTIVE BELLONIS. WHILE THE REACTOR WAS OPERATING AT TWO POWER WITH THE MPC1 SYSTEM NOT IN OPERATION, AN INDICATING FLOW SWITCH SHOWED 300 GPM. THE SENSING BELLONIS WAS DEFECTIVE. THE BELLONIS WAS REPLACED IN THE BARTON MODEL 480A SWITCH. THERE HAVE BEEN SEVERAL SWITCHES OF THIS TYPE TO FAIL. THE VENDOR WILL EVALUATE THE FAILURES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * INSTRUMENT, ABNORMAL INDICATION * MATCH 1 (10MI) * SENSORS, FLOW * MPC1

114707
LOW PH EFFLUENT DISCHARGED TO THE RIVER AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 PGS, LTR D/NO 50-321/1970-39 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 20, 1970, DCKET 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CAUSE - INSTRUMENT OUT OF CALIBRATION. WHILE OPERATING AT 778 POWER, A LOW SPEED/MAA PH RECORDER ON THE CELL ON THE NEUTRALIZATION TANK IN THE MUD HOUSE INDICATED THAT THE CONTENTS WERE WITHIN LIMITS. THE VALVE WAS OPENED TO DISCHARGE IT TO THE RIVER. WHEN THE CONTENTS STARTED THROUGH THE LUMP LINE, A METER IN THAT LINE INDICATED A PH OF 4.0 WHICH IS BELOW THE LTS LIMIT OF 6.0. A SAMPLE INDICATED A CONSTANT READING OF 3.7 ON TEST EQUIPMENT. THE DUMP VALVE WAS CLOSED. THE RECORDER IN THE DISCHARGE STRUCTURE HAD BEEN LEFT IN STANDBY AT ITS LAST CALIBRATION. IT WAS PLACED IN OPERATION. THE INSTRUMENT IN THE MUD HOUSE WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT * FAILURE, OPERATOR ERROR * WASTE DISPOSAL * INSTRUMENT CALIBRATION * WASTE DISPOSAL, LIQUID * WATER QUALITY * MATCH 1 (10MI)

114708

114708 CONTINUED
SEVERAL LLAT'S NOT PERFORMED ON TIME AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
J PWS, LTR N/AU 50-321/1970-94 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 21, 1970, DUCRET 50-321, TYPE--BWR, RW--GCE, AE--SSI

CAUSE - SCHEDULING ERROR. WHILE IN COLD SHUTDOWN, IT WAS NOTED THAT SEVERAL LLAT'S HAD SLIPPED PAST THEIR RESPECTIVE DUE DATES. FOUR OF THE 13 THAT WERE OVERDUE EXPIRED JUST BEFORE A PLANNED OUTAGE AND THE REMAINDER EXPIRED WHILE IN COLD SHUTDOWN. FREQUENCY FOR PENETRATION TESTING IS EACH REFUELLING OUTAGE NOT TO EXCEED 2 YEARS. THE SURVEILLANCE PROGRAM WAS SET UP WITH THE OPERATING CYCLE CONSIDERATION BUT NOT THE 2 YEAR LIMITATION. DUE TO THE UNUSUAL LENGTH OF THE FIRST OPERATING CYCLE, TEST DATES EXPIRED BEFORE TESTS WERE PERFORMED. THE SURVEILLANCE PROGRAM IS BEING ADVISED TO REFLECT THE 2 YEAR RESTRICTION ALSO.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

PROCEDURES AND MANUALS • TESTING • TEST, LEAK RATE • FAILURE, ADMINISTRATIVE CONTROL • TEST INTERVAL • MATCH 1 (BWR) • CONTAINMENT PENETRATION

114704
PM OF WASTE WATER EXCEEDS ETS LIMITS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
J PWS, LTR N/AU 50-321/1970-94 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 24, 1970, DUCRET 50-321, TYPE--BWR, RW--GCE, AE--SSI

CAUSE - VALVE LEFT OPEN. WHILE ON POWER OPERATION AND WHILE REGENERATING THE CATION AND ANION BEDS IN THE RW SYSTEM, 100 GALLONS OF REGENERATIVE WASTE WATER WITH A PM BELOW THE ETS PM LIMIT OF 0.0 WAS RELEASED DIRECTLY TO THE RIVER. THE PM MONITOR DOWNSTREAM OF THE DISCHARGE VALVE HAD BEEN CALIBRATED BY MANUALLY OPENING THE DISCHARGE VALVE AND ALLOWING FLOW THROUGH THE PM CELL. THE VALVE WAS NOT RETURNED TO SERVICE AFTER THE CALIBRATION. AS REGENERATION BEGAN, WASTE WATER WAS PUMPED INTO THE NEUTRALIZATION TANK AND THUS DIRECTLY TO THE RIVER. WHEN THE ERROR WAS DISCOVERED, THE VALVE WAS CLOSED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

EFFLUENT • FAILURE, OPERATION ERROR • WASTE DISPOSAL • INSTRUMENT CALIBRATION • WASTE DISPOSAL, LIQUID • WATER QUALITY • MATCH 1 (BWR)

114704
DIESEL GENERATOR FAILS TO START AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
J PWS, LTR N/AU 50-321/1970-94 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 20, 1970, DUCRET 50-321, TYPE--BWR, RW--GCE, AE--SSI

CAUSE - UNKNOWN. DURING OPERATION AT 77% POWER, THE FAIRBANKS-MORSE DIESEL GENERATOR 1B FAILED TO START ON THE FIRST ATTEMPT. IT STARTED SUCCESSFULLY ON A SECOND ATTEMPT. THE EXACT CAUSE HAS NOT BEEN DETERMINED. THIS IS NOT THE FIRST TIME THIS EVENT HAS OCCURRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • MATCH 1 (BWR) • ENGINES, INTERNAL COMBUSTION • GENERATION, DIESEL

114705
PLANT SERVICE WATER PUMP FLOW LOW AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
J PWS, LTR N/AU 50-321/1970-94 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, MAY 20, 1970, DUCRET 50-321, TYPE--BWR, RW--GCE, AE--SSI

CAUSE - SHEET OF PLASTIC OVER SUCTION. DURING OPERATION AT 79% POWER, A PLANT SERVICE WATER PUMP FLOW WAS 250 GPM AT 80 PSIG INSTEAD OF GREATER THAN 600 GPM AT 80 PSIG. A SHEET OF PLASTIC BLOCKED THE FIRST STAGE OF SUCTION OF THE JOHNSON VERTICAL PUMP. PLASTIC WAS PLACED AROUND PIPES IN THE INTAKE STRUCTURE BY CONSTRUCTION PERSONNEL TO PREVENT PERSONNEL WORKING IN THE AREA FROM GETTING WET. ALL THE PLASTIC WAS REMOVED FROM THE INTAKE STRUCTURE AND THE PUMP RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

TEST, SYSTEM OPERABILITY • FLOW BLOCKAGE • FAILURE, INSTALLATION ERROR • PLASTICS • MATCH 1 (BWR) • SERVICE WATER SYSTEM • PUMPS

114703
PM OF WASTE DISCHARGE EXCEEDS ETS LIMITS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
J PWS, LTR N/AU 50-321/1970-94 TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 2, 1970, DUCRET 50-

114703 "CONTINUED"
321, TYPE--DNR, NPG--G.E., AE--SSI

CAUSE - WASTE TANK VALVE LEFT OPEN WHILE OPERATING AT 60% POWER, REGENERATION OF THE CATION AND ANION BEDS AT THE MD HOUSE WAS INITIATED WITH A MANUAL DRAIN VALVE ON THE WASTE NEUTRALIZATION TANK OPEN DUMPING 1500 GALLONS OF WATER WITH PH RANGING FROM 5.5 TO 11.5 TO THE RIVER DURING A 2.5 HOUR PERIOD. DURING A PRIOR DISCHARGE, THE DRAIN VALVE WAS OPENED TO TAKE A LAB SAMPLE OF THE TANK CONTENTS. AS THIS SAMPLE WAS WITHIN LIMITS, THE VALVE WAS LEFT OPEN. THE DRAIN VALVE HAS BEEN CHAIN-LOCKED IN THE CLOSED POSITION TO PREVENT RECURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

EFFLUENT + FAILURE, OPERATOR ERROR + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + WATER QUALITY + MATCH 1 (DNR)

115093
MAPLUM RATIO EXCEEDS LIMIT AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/RO 50-321/1970-44 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 17, 1970, UCR#ET 50-321, TYPE--DNR, NPG--G.E., AE--SSI

CAUSE - FEED PUMP SWING WHILE OPERATING AT 60% POWER, MAPLUM EXCEEDED ITS LIMITS IN 4 MODES. THE RATIO WAS 1.003 IN 2 MODES AND 1.004 IN THE OTHER TWO. THE LIMIT IS 1.000. REACTOR FEED PUMP 2 EXPERIENCED A SWING WHICH SLIGHTLY INCREASED REACTOR POWER, THUS CREATING THE VIOLATION. SWINGING HAD OCCURRED IN THE PAST DUE TO OVERHEATING OF THE FEEDWATER PUMP COILS. ADDITION OF A FAN AND DUTCH TO THE MFP, CABINETS HAS GREATLY REDUCED SWINGS. TO CORRECT THIS VIOLATION, POWER WAS REDUCED WITH RECIRCULATION FLOW.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTROL SYSTEM + REACTOR TRANSIENT + POWER DISTRIBUTION + FAILURE, DESIGN ERROR + HOT CHANNEL + MATCH 1 (DNR)

115094
MAPLUM EXCEEDS LIMIT AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/RO 50-321/1970-43 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 17, 1970, UCR#ET 50-321, TYPE--DNR, NPG--G.E., AE--SSI

CAUSE - CALCULATION UNCERTAINTIES. WHILE OPERATING AT 80% POWER, MAPLUM EXCEEDED ITS LIMIT IN 4 MODES. THE MAPLUM RATIO REMAINED 1.005 IN EACH MODE EXCEEDING TO 1.000 LIMIT. TIP CALIBRATION HAD JUST BEEN PERFORMED. NEW CALIBRATION DATA CAUSED A CHANGE IN THE CALCULATED POWER DISTRIBUTION, CAUSING THE RATIO TO EXCEED THE LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

HOT SPOT + POWER DISTRIBUTION + HOT CHANNEL ANALYSIS + MATCH 1 (DNR) + FAILURE, INHERENT

115092
SET POINT DRIFT IN PRESSURE TRANSMITTERS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/RO 50-321/1970-40 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 29, 1970, UCR#ET 50-321, TYPE--DNR, NPG--G.E., AE--SSI

CAUSE - INSTRUMENT DRIFT. DURING OPERATION AT 80% POWER, TESTS REVEALED THAT THE CALIBRATION OF 10 NON-SAFETY PRESSURE TRANSMITTERS HAD DRIFTED JUST OUTSIDE THEIR CALIBRATION. THE GE MFG. CO. MODEL 555 AND 556 PRESSURE TRANSMITTERS WERE RECALIBRATED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + MATCH 1 (DNR) + DRIFT + SENSORS, PRESSURE

115091
MPC1 VALVE FAILS TO FULLY OPEN AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/RO 50-321/1970-50 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 23, 1970, UCR#ET 50-321, TYPE--DNR, NPG--G.E., AE--SSI

CAUSE - UNKNOWN. DURING A SCRAM RECOVERY, A MPC1 VALVE STARTED TO OPEN AND STOPPED AFTER COMING OFF THE SEAT. FLOW WAS RESTRICTED TO 1000 GPM. THIS IS NOT THE FIRST TIME THIS HAS OCCURRED. A CHECK OF LIMIT SWITCHES AND RELAYS DID NOT LOCATE ANY TROUBLE SPOTS. THE VALVE OPERATED CORRECTLY DURING TESTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

115092 PLANTINTEL
FAILURE, EQUIPMENT * MATCH 1 (BMR) * VALVE OPERATIONS * VALVES * PIPES

115113
DIESEL GENERATORS NOT TESTED WHEN STARTUP TRANSFORMER IMPERMEABLE AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PAGES, LTR D/NO 50-321/1970-28 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 20, 1970, UCINET 50-321, TYPE--BMR, NFO--GEC, AE--SSI

CAUSE - COOL DESIGN DEFICIENCY. WITH THE UNIT OPERATING AT 75% POWER, STARTUP TRANSFORMER IC WAS MADE IMPERMEABLE FOR USE ON UNIT 2. WHILE TRYING TO MEET TECH SPECS OF TESTING THE 3 UNIT 1 DIESEL GENERATORS, A ONE-HALF LOSS OF OFF-SITE POWER WAS RECEIVED NOT ALLOWING UFG TESTING. EMERGENCY POWER SUPPLY SYSTEM LOGIC DOES NOT ALLOW TESTING OF D/W'S WHILE STARTUP TRANSFORMER IC ON IC IS IMPERMEABLE. THE DESIGN GROUP IS INVESTIGATING THE PROBLEM. TRANSFORMER IC WAS RETURNED TO SERVICE AND ALL UFG TESTS SATISFACTORY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT SYSTEM * EMERGENCY POWER * ELECTRIC * TESTING * FAILURE, DESIGN ERROR * MATCH 1 (BMR) * ENGINES, INTERNAL COMBUSTION * GENERATOR, DIESEL * TRANSFORMERS

115140
SET POINT DRIFT IN MAIN STEAM LINE PRESSURE SWITCHES AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PAGES, LTR D/NO 50-321/1970-47 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 29, 1970, UCINET 50-321, TYPE--BMR, NFO--GEC, AE--SSI

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE THE UNIT WAS SHUT DOWN, 2 MAIN STEAM LINE PRESSURE SWITCHES WERE FOUND TO BE OUTSIDE THE ACCEPTANCE CRITERIA. THE BANSDALE PRESSURE SWITCHES, SET-POINTS, WERE RECALIBRATED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM
UPONABILITY * MAIN COOLING SYSTEM * SET POINT * MATCH 1 (BMR) * DRIFT * SENSORS, PRESSURE

115117
REFUELING FLOOR CRANE BREAKS HUGO DRAIN LINE AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PAGES, LTR D/NO 50-321/1970-54 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JUNE 29, 1970, UCINET 50-321, TYPE--BMR, NFO--GEC, AE--SSI

CAUSE - NEW TAILLET TOO TALL. WHILE OPERATING THE REFUELING FLOOR CRANE WITH THE REACTOR AT 834 PUNCH, IT CAME IN CONTACT WITH A 6-INCH REFUELING FLOOR HUGO DRAIN CAUSING A SEPARATION FROM ITS SLIDE BY 3/8 INCH. SECONDARY CONTAINMENT WAS LOST. THE REFUELING FLOOR WAS ISOLATED FROM THE REPAIRS OF THE REACTOR BUILDING. A NEW TAILLET HAD BEEN INSTALLED ON THE CRANE WHICH WAS SEVERAL INCHES TALLER THAN THE ORIGINAL. THIS ALLOWED CONTACT WITH THE DRAIN PIPE. A DESIGN RECTIFICATION IS BEING EVALUATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PLANTINTEL INTEGRITY * BUILDING * FAILURE, DESIGN ERROR * DAMAGE * MATCH 1 (BMR) * DRAINAGE * CRANE * PIPES AND PIPE FITTINGS

115114
DIESEL GENERATOR TRIPS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PAGES, LTR D/NO 50-321/1970-53 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 7, 1970, UCINET 50-321, TYPE--BMR, NFO--GEC, AE--SSI

CAUSE - TEMPERATURE SWITCH CALIBRATED IMPROPERLY. DURING A TEST WITH THE REACTOR AT 895 POWER, DIESEL GENERATOR IC TRIPPED. A WRONG TECHNIQUE WAS USED TO CALIBRATE AN ALLEN BRADLEY TEMPERATURE SWITCH, CAT. NO. 037-V3, USED TO REPLACE A JARAWEL CONSOLIDATED CONTROL COMP., TYPE 44A, TEMPERATURE SWITCH ON THE UFG IC LUBE OIL SYSTEM. THE SWITCH OPERATED TO TRIP THE DIESEL AT A TEMPERATURE MUCH BELOW THE REQUIRED SET POINT. THE SWITCH WAS RECALIBRATED TO THE CORRECT SET POINT USING THE PROPER TECHNIQUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC * FAILURE, EQUIPMENT * INSTRUMENT CALIBRATION * INSTRUMENT, SWITCH * TEST, SYSTEM
UPONABILITY * FAILURE, MAINTENANCE ERROR * SET POINT * MATCH 1 (BMR) * SENSORS, TEMPERATURE * ENGINES, INTERNAL COMBUSTION * GENERATOR, DIESEL

115911

SET POINT DRIFT IN CORE SPRAY DIFFERENTIAL PRESSURE SWITCH AT MATCH 1

GEORGIA POWER CO., DAWLEY, GA

3 PGS, LTR N/RD 50-321/1970-55 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 19, 1970, UCRRT 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CASE - INSTRUMENT DRIFT. DURING A TEST ON THE CORE SPRAY SYSTEM WHILE OPERATING AT 44 POWER, 2 DIFFERENTIAL PRESSURE INDICATING SWITCHES OPERATED AT 3.45 AND 3.7 PSID RESPECTIVELY. THE LUNCH LIMIT IS 4.95 PSID. THE BARTON, MODEL 200, SWITCH HAD UNIFIED TWO LMS. ALSO, THERE WAS A MINING ERROR WHICH HAD MASKED THE SET POINT DRIFT AND HAD PREVENTED IT FROM INITIATING THE ALARM. THE SWITCHES WERE RECALIBRATED TO THE PROPER SET POINT. THE MINING ERROR CORRECTED, AND THE SWITCHES RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, INSTALLATION ERROR + SET POINT + MATCH 1 (BWR) + CABLES AND CONNECTIONS + DRIFT + SENSORS, PRESSURE

115914

CORE SPRAY LEVEL SWITCH FAILS TO OPERATE AT MATCH 1

GEORGIA POWER CO., DAWLEY, GA

2 PGS, LTR N/RD 50-321/1970-49 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 23, 1970, UCRRT 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CASE - UNKNOWN. DURING TESTING WITH THE REACTOR AT 87% POWER, A CORE SPRAY DISCHARGE LINE LEVEL SWITCH FAILED TO OPERATE. NO CAUSE WAS FOUND. THE ROBERTSON, MODEL SL-921-A2, SWITCH WAS CHECKED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + MATCH 1 (BWR) + FAILURE, INSTRUMENT + SENSORS, LEVEL

115915

HRR LEVEL SWITCH FAILS TO OPERATE AT MATCH 1

GEORGIA POWER CO., DAWLEY, GA

2 PGS, LTR N/RD 50-321/1970-48 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 23, 1970, UCRRT 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CASE - SWITCH STICKING. DURING TESTING WITH THE REACTOR AT 83% POWER, A HRR LEVEL SWITCH FAILED TO OPERATE. THE ROBERTSON, MODEL S422-A2, SNAP ACTION SWITCH WAS STICKING. IT WAS READJUSTED, RECALIBRATED, AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SHUTDOWN COOLING SYSTEM + MATCH 1 (BWR) + SENSORS, LEVEL

115918

CORE SPRAY SPARGER LOOP IMPROPER AT MATCH 1

GEORGIA POWER CO., DAWLEY, GA

3 PGS, LTR N/RD 50-321/1970-50 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 20, 1970, UCRRT 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CASE - INSTRUMENT DEFICIENT. DURING OPERATION AT 20% POWER, INDICATION WAS RECEIVED THAT CORE SPRAY SPARGER, LOOP B, HAD FAILED MAKING THIS LOOP IMPROPER. THE ALARM WAS RECEIVED UPON STARTUP AFTER WARNING ERRORS WERE CORRECTED ON THE DP SWITCHES DURING A SHUTDOWN. GE RESPONDED TO AN INQUIRY THAT THE INSTRUMENT BEING USED HAD NOT THE BEST RANGE. UNDER PLANT CONDITIONS A READING OF 5 TO 7 PSID WAS NORMAL. TO CORRECT THE ALARM CONDITION, SENSING LINES WERE REVERSED AND A NEW SETTING OF 0.5 +/- 0.25 PSID WAS ESTABLISHED. A NEW MODEL INSTRUMENT WILL BE OBTAINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + INSTRUMENT, SWITCH + MODIFICATION + FAILURE, DESIGN ERROR + INSTRUMENT, ABNORMAL INDICATION + SET POINT + MATCH 1 (BWR) + SENSORS, PRESSURE

116502

STANCOY GAS TREATMENT SYSTEM NOT TESTED ON SCHEDULE AT MATCH 1

GEORGIA POWER CO., DAWLEY, GA

3 PGS, LTR N/RD 50-321/1970-59 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 23, 1970, UCRRT 50-321, TYPE--BWR, NRC--G.E., AE--SSI

CASE - PROCEDURAL DEFICIENCY. DURING OPERATION AT 93% POWER, A REVIEW OF TECH SPECS REVEALED THAT A CHANGE HAD BEEN MADE WHICH WAS NOT COVERED BY A SURVEILLANCE PROCEDURE. THIS RESULTED IN

110542 *CONTINUOUS

A MISSED SURVEILLANCE ON STANDBY WAS TREATMENT SYSTEM TESTING. PROCEDURE WAS REVISED TO COVER THE TECH SPEC REQUIREMENT AND WAS THEN PERFORMED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PROCEDURES AND MANUALS • TESTING • FAILURE, ADMINISTRATIVE CONTROL • TEST INTERVAL • MATCH 1 (000) • STANDBY GAS TREATMENT

110500

BLUENIFF PANEL ON REFUELING FLOW LIFT AT MATCH 1
GEORGIA POWER CO., DANLEY, GA

2 Pgs, LTR W/NU 50-321/1970-54 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 27, 1970, Docket 50-321, TYPE--BWR, RF--WGE, AE--SSI

CAUSE - DEFECTIVE LINNAGE. WHILE OPERATING AT ONE POWER, SECONDARY CONTAINMENT INTEGRITY WAS VIOLATED WHEN A BLUENIFF PANEL LIFTED ON THE REFUELING FLOW. THE BURNER MANUFACTURING CO. LINNAGE THAT MECHANICALLY PREVENTS THE PANEL FROM OPENING WAS APPARENTLY DEFECTIVE. THE BLUENIFF PANEL WAS REPAIRED. THE APPLICABLE LINNAGES WILL BE REPLACED DURING THE NEXT COLD SHUTDOWN.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT INTEGRITY • FASTENER • CONTAINMENT STRUCTURE • FAILURE, FABRICATION ERROR • COMPONENTS • MATCH 1 (000)

110501

CALCULATED VALUE OF NEPR LESS THAN LIMIT AT MATCH 1

GEORGIA POWER CO., DANLEY, GA

3 Pgs, LTR W/NU 50-321/1970-57 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 27, 1970, Docket 50-321, TYPE--BWR, RF--WGE, AE--SSI

CAUSE - CONSERVATISM IN METHOD. DURING OPERATION AT ONE POWER, HAND CALCULATIONS INDICATED A VALUE OF NEPR OF 1.19, WHICH IS BELOW THE 1.24 LIMIT. THE REACTOR WAS SHUT DOWN WHEN IT WAS DETERMINED THE NEPR COULD NOT BE WITHIN LIMITS IN THE 2 MINUTE ALLOWABLE PERIOD BY REDUCING POWER. THE PROCESS COMPUTER WAS OUT OF SERVICE AT THE TIME. CONSERVATISM IN THE HAND CALCULATIONS RESULTS FROM THE USE OF CONSERVATIVE TIP DATA. ALSO, THE HAND CALCULATIONS CAN TAKE HOURS TO PERFORM. THE PROCESS COMPUTER WAS REPAIRED AND RETURNED TO SERVICE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTION STABILITY • DATA PROCESSING • POWER DISTRIBUTION • MATHEMATICAL TREATMENT • HOT CHANNEL • MATCH 1 (000) • REACTION SHUTDOWN • FAILURE, INHERENT

110499

LPCI LINE LEVEL SWITCH FAILS TO OPERATE AT MATCH 1

GEORGIA POWER CO., DANLEY, GA

3 Pgs, LTR W/NU 50-321/1970-06 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 20, 1970, Docket 50-321, TYPE--BWR, RF--WGE, AE--SSI

CAUSE - STICKING ON SET POINT DRIFT. DURING OPERATION AT ONE POWER, TESTING REVEALED THAT THE LPCI DISCHARGE LINE LEVEL SWITCH WOULD NOT OPERATE. THE RUBENSHAW, MODEL NO. SL322-A2, SNAP ACTION LEVEL SWITCH WAS EITHER STICKING OR THE SET POINT HAD SHIFTED. THE SWITCH WAS RECALIBRATED AND RETURNED TO SERVICE. IT WILL BE TESTED ONCE A WEEK FOR THE NEXT 4 WEEKS.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • MATCH 1 (000) • DRIFT • SENSORS, LEVEL • LPCI

110497

LPCI LINE LEVEL SWITCH FAILS TO ACTUATE AT MATCH 1

GEORGIA POWER CO., DANLEY, GA

2 Pgs, LTR W/NU 50-321/1970-02 TO AEC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, JULY 20, 1970, Docket 50-321, TYPE--BWR, RF--WGE, AE--SSI

CAUSE - SET POINT DRIFT OR STICKING. DURING TESTING WITH THE REACTOR AT ONE POWER, A LPCI DISCHARGE LINE LEVEL SWITCH FAILED TO ACTUATE. THE RUBENSHAW, MODEL NO. SL322-A2, SNAP ACTION LEVEL SWITCH EITHER DRIFTED OR STUCK. IT WAS RECALIBRATED AND RETURNED TO SERVICE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • MATCH 1 (000) • DRIFT • SENSORS, LEVEL • LPCI

110498

MINIMUM FLOW VALVE FAILS TO STAY OPEN AT MATCH 1
GEORGIA POWER CO., BARTLEY, GA

2 PGS, LTR W/NO 50-321/1970-01 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 2, 1970, JACKET 50-321, TYPE--DMR, NRC--G.E., AE--SSI

CAUSE - DEFECTIVE HIGH FLOW SWITCH. DURING TESTING WITH THE REACTOR AT 636 POWER, A MINIMUM FLOW VALVE FAILED TO STAY OPEN. A BARTLEY NRC CO. SERIAL NO. 28944303 FLOW SWITCH FAILED TO OPEN THE MINIMUM FLOW VALVE BECAUSE OF A DEFECTIVE HIGH FLOW SWITCH. IN FLOW SWITCH AND RELAY. ALL DEFECTIVE PARTS WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + CONTINUOUS COOLING SYSTEM + MATCH 1 (DMR) + FAILURE, INHERENT + VALVES + SENSORS, FLOW

110499

MAIN STEAM LINE PRESSURE SWITCHES NOT TESTED ON TIME AT MATCH 1

GEORGIA POWER CO., BARTLEY, GA

2 PGS, LTR W/NO 50-321/1970-03 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 3, 1970, JACKET 50-321, TYPE--DMR, NRC--G.E., AE--SSI

CAUSE - PERSONNEL ERROR. WHILE OPERATING AT 636 POWER, IT WAS DISCOVERED THAT STANDING UNDER 70-23 WAS NOT PERFORMED IN THE PRESCRIBED TIME. THIS STANDING UNDER CONCERNS TESTING + MAIN STEAM LINE PRESSURE SWITCHES. THIS WAS DUE TO PERSONNEL ERROR. THE UNDER WAS PERFORMED AS SOON AS THE NRC COMPLIANCE WAS DISCOVERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + STEAM + TESTING + INSTRUMENT, SWITCH + MAIN COOLING SYSTEM + TEST INTERVAL + MATCH 1 (DMR) + SENSORS, PRESSURE

117705

LPCI LINE LEVEL SWITCH FAILS TO RESET AT MATCH 1

GEORGIA POWER CO., BARTLEY, GA

2 PGS, LTR W/NO 50-321/1970-05 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 17, 1970, JACKET 50-321, TYPE--DMR, NRC--G.E., AE--SSI

CAUSE - UNKNOWN. DURING TESTING WITH THE UNIT AT 778 POWER, A LPCI DISCHARGE LINE LEVEL SWITCH FAILED TO RESET. THE CAUSE OF MALFUNCTION IS UNDER INVESTIGATION. THIS IS A SUBSTANTIAL LEVEL SWITCH SERIAL NO. 073-11344. AN LUMP B WILL BE CHECKED WHEN PER SHIFT TO VERIFY THAT IT IS FILLED UNTIL THE SWITCH IS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + MATCH 1 (DMR) + SENSORS, LEVEL + LPCI

117706

DIESEL GENERATOR TRIPS DUE TO LOSS OF EXCITATION AT MATCH 1

GEORGIA POWER CO., BARTLEY, GA

3 PGS, LTR W/NO 50-321/1970-06 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 20, 1970, JACKET 50-321, TYPE--DMR, NRC--G.E., AE--SSI

CAUSE - OUT OF PHASE SYNCHRONIZATION. DURING TESTING WITH THE REACTOR AT 836 POWER, DIESEL GENERATOR IS TRIPPED DUE TO LOSS OF EXCITATION WHILE BEING SYNCHRONIZED AND TIED TO THE LINE. THE APPARENT CAUSE WAS TRYING THE D/G TO THE 4 KV BUS OUT OF SYNCHRONIZATION. LACK OF VOLTAGE AND POTENTIAL INFORMATION MAKES DETERMINING THE EXACT CAUSE IMPOSSIBLE. NO DAMAGE OCCURRED. IT WAS SUBSEQUENTLY SYNCHRONIZED AND TIED TO THE BUS 3 TIMES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC + FAILURE, OPERATOR ERROR + TEST, SYSTEM OPERABILITY + MATCH 1 (DMR) + ENGINES, INTERNAL COMBUSTION + GENERATOR, DIESEL

117757

REFUELING FLOW CRANE BREAKS A RCCF CRAIN AT MATCH 1

GEORGIA POWER CO., BARTLEY, GA

2 PGS, LTR W/NO 50-321/1970-08 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 23, 1970, JACKET 50-321, TYPE--DMR, NRC--G.E., AE--SSI

CAUSE - NEW TROLLEY TALLER THAN ORIGINAL. WHILE PERFORMING MAINTENANCE ON THE REFUELING FLOW CRANE DURING 928 POWER OPERATION, THE CRANE TROLLEY CAME IN CONTACT WITH AND SHRE A ROOF BEAM. THIS VIOLATED SECONDARY CONTAINMENT. A NEW TROLLEY WAS INSTALLED THAT WAS SEVERAL INCHES TALLER THAN THE ORIGINAL TROLLEY. THIS NOW ALLOWS CONTACT WITH THE BEAM. THE BEAM WILL BE REROUTED.

117757 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$20.00)

CONTAINMENT INTEGRITY • BUILDING • FAILURE, DESIGN ERROR • MATCH 1 (BWR) • URBAN • PLANT • PIPES AND PIPE FITTINGS

117758
 CHANNELS PLACED JUMPER ISOLATES BOLL SYSTEM AT MATCH 1
 VERMONT POWER CO., BARNETT, CA
 2 PAGES, LTR N/A 50-321/1970-70 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 25, 1970, UNCLAS 50-321, TYPE-BWR, MW-0000, AE-551

CAUSE - FAILURE TO FOLLOW PROCEDURES WHILE PERFORMING SURVEILLANCE WITH THE REACTOR AT 928 POWER, A JUMPER WAS CHANNELS PLACED IN A PANEL RESULTING IN THE ISOLATION OF LOOP B OF THE BOLL SYSTEM. THE TECHNICIAN PLACED THE JUMPER IN THE WRONG PANEL. HE WAS INFORMED OF THE IMPORTANCE OF REMAINING CLOSELY TO THE PROCEDURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$20.00)

FAILURE, EQUIPMENT • FAILURE, OPERATION ERROR • CONTAINMENT ISOLATION • TEST, SYSTEM OPERABILITY • COOLANT PURIFICATION SYSTEM • MATCH 1 (BWR) • BYPASS

117767
 DIESEL GENERATION FAILS TO START AT MATCH 1
 VERMONT POWER CO., BARNETT, CA
 2 PAGES, LTR N/A 50-321/1970-70 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, AUG. 27, 1970, UNCLAS 50-321, TYPE-BWR, MW-0000, AE-551

CAUSE - UNKNOWN DURING TESTING WITH THE REACTOR AT 944 POWER, DIESEL GENERATOR IC FAILED TO START. IT DID NOT REACH 150 RPM IN 7 SECONDS AND TRIPPED. THE EXACT CAUSE IS NOT KNOWN. IT HAS BEEN NOTICED THAT IF THE OPERATOR QUICKLY OPERATES AND RELEASES THE START SWITCH, UNCLASSIFIED THE START CIRCUIT WILL NOT SEAL IN AND THE DIESEL WILL FAIL TO START. PROCEDURE WILL BE MODIFIED TO INSTRUCT THE OPERATOR TO PULL THE SWITCH FOR 1 SECOND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$20.00)

EMERGENCY POWER, ELECTRICAL • FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • MATCH 1 (BWR) • CHINESE, INTERNAL COMBUSTION • GENERATOR, DIESEL

118250
 MAPLUM LIMIT EXCEEDED IN 4 BUNDLES AT MATCH 1
 VERMONT POWER CO., BARNETT, CA
 2 PAGES, LTR N/A 50-321/1970-70 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 9, 1970, UNCLAS 50-321, TYPE-BWR, MW-0000, AE-551

CAUSE - SYSTEM FLUCTUATION WHILE INCREASING RECIRCULATION FLOW TO INCREASE REACTOR POWER, THE MAPLUM LIMIT OF 1.000 WAS EXCEEDED AT NODE 11 IN 4 BUNDLES BY VALUES OF 1.005, 1.006, 1.006, AND 1.006. MAPLUM WAS RESTORED TO WITHIN LIMITS WITHIN 25 MINUTES. THE LIMIT WAS EXCEEDED PROBABLY BECAUSE OF SYSTEM FLUCTUATION, CAUSED BY CHANGING REACTIVITY AND A NEW COMPUTER BASE DISTRIBUTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$20.00)

REACTOR STABILITY • POWER DISTRIBUTION • MUT CHANNEL ANALYSIS • MUT CHANNEL • MATCH 1 (BWR) • FAILURE, INHERENT

118251
 MAPLUM LIMIT EXCEEDED AT MATCH 1
 VERMONT POWER CO., BARNETT, CA
 2 PAGES, LTR N/A 50-321/1970-70 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 9, 1970, UNCLAS 50-321, TYPE-BWR, MW-0000, AE-551

CAUSE - COMPUTER BASE DISTRIBUTION UPDATED. DURING OPERATION AT 906 POWER, THE MAPLUM LIMIT WAS EXCEEDED IN 4 NODES. DUE TO A DECREASING MAPLUM LIMIT WITH INCREASING EXPOSURE, THE NODES EXCEEDED THE LIMITS WHEN THE COMPUTER BASE DISTRIBUTION WAS UPDATED. RECIRCULATION FLOW WAS GROUPED TO DECREASE REACTOR POWER, THEREBY BRINGING MAPLUM TO AN ACCEPTABLE VALUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$20.00)

FUEL BURNUP • POWER DISTRIBUTION • MUT CHANNEL ANALYSIS • MUT CHANNEL • MATCH 1 (BWR) • EFFECT • FAILURE, INHERENT

110252
RAPIDUR LIMIT EXCEEDED IN 4 LOCATIONS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/NO 50-321/1970-71 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 20, 1970, URGENT
50-321, TYPE--BWR, NRC--GEC, AE--SSI

CAUSE - FUEL BURUP EFFECT. WHILE OPERATING AT 928 PWRM, THE RAPIDUR LIMIT WAS EXCEEDED IN 4 LOCATIONS. THE LIMIT DECREASES WITH EXPOSURE. THESE BURNS WERE OPERATING CLOSE TO THEIR LIMITS BEFORE THE VIOLATION AND EXCEEDED THEIR LIMITS WHEN THEIR EXPOSURES WERE UPDATED BY THE COMPUTER. REACTOR POWER WAS REDUCED USING RECIRCULATION FLOW CONTROL.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

FUEL BURUP + POWER DISTRIBUTION + MFT CHANNEL ANALYSIS + MFT CHANNEL + MATCH 1 (BURN) + EFFECT + FAILURE, IMMINENT

110253
RAPIDUR LIMIT EXCEEDED FOR SEVERAL BURNS AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/NO 50-321/1970-71 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 10, 1970, URGENT
50-321, TYPE--BWR, NRC--GEC, AE--SSI

CAUSE - AEREN TRANSIENT. WHILE OPERATING AT 916 PWRM, THE EXPOSURE DEPENDENT RAPIDUR LIMIT WAS EXCEEDED FOR SEVERAL BURNS DUE TO THE LOWER RAPIDUR VALUE ALLOWED FOR THE EXPOSURE AT WHICH THE LIMIT WAS EXCEEDED. A AEREN TRANSIENT WAS IN PROGRESS FROM POWER CHANGES. ALSO, REACTIVITY IN THE CORE WAS CHANGING WITH EQUILIBRIUM BURUP. REACTOR POWER WAS REDUCED WITHIN 15 MINUTES OF THE DISCOVERY.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

FUEL BURUP + REACTIVITY EFFECT + POWER DISTRIBUTION + MFT CHANNEL ANALYSIS + MFT CHANNEL + MATCH 1 (BURN) + FAILURE, IMMINENT

110254
SECONDARY CONTAINMENT INTEGRITY VIOLATED ONCE AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/NO 50-321/1970-71 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 20, 1970, URGENT
50-321, TYPE--BWR, NRC--GEC, AE--SSI

CAUSE - VIOLATION OF PROCEDURES. WHILE OPERATING AT 808 PWRM, SECONDARY CONTAINMENT INTEGRITY WAS VIOLATED WHEN BOTH REACTOR BUILDING PERSONNEL AIRLOCK DOORS WERE INADVERTENTLY OPENED AT THE SAME TIME. THE DOORS WERE IMMEDIATELY CLOSED. NO RADIOACTIVE MATERIAL WAS RELEASED. THE INCIDENT RESULTED FROM PERSONNEL VIOLATING PLANT PROCEDURE. THE DOORS ARE CONTROLLED BY A LIGHT AT EACH DOOR.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + PROCEDURES AND MANUALS + CONTAINMENT AIR LOCK + CONTAINMENT INTEGRITY + MATCH 1 (BURN)

120007
DIESEL GENERATOR TRIPS DUE TO TRIPPING OF REVERSE POWER RELAY AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/NO 50-321/1970-71 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 23, 1970, URGENT
50-321, TYPE--BWR, NRC--GEC, AE--SSI

CAUSE - VOLTAGE REGULATOR IMPROPERLY SET. DURING TESTING WITH THE REACTOR AT 700 PWRM, DIESEL GENERATOR IS TRIPPED DUE TO TRIPPING OF THE REVERSE POWER RELAY. DUE TO PERSONNEL ERROR, THE VOLTAGE REGULATOR WAS NOT ADJUSTED PROPERLY FOR THE REMOVAL OF LOAD TAKING PLACE. PERSONNEL HAVE BEEN INSTRUCTED TO PAY CLOSE ATTENTION TO THE REACTIVE POWER DURING LOAD REDUCTIONS. THE DG WAS RESTARTED SUCCESSFULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 TWO CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BURN) + GENERATOR, DIESEL + ENGINE, INTERNAL COMBUSTION + TEST, SYSTEM OPERABILITY + FAILURE, EQUIPMENT + FAILURE, MAINTENANCE ERROR + PROCEDURES AND MANUALS + EMERGENCY POWER, ELECTRIC + RELAYS

110270
DIESEL GENERATOR FAILS TO START AT MATCH 1
GEORGIA POWER CO., BARLEY, GA
2 PGS, LTR W/NO 50-321/1970-71 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, SEPT. 23, 1970, URGENT
50-321, TYPE--BWR, NRC--GEC, AE--SSI

CAUSE - UNKNOWN. DURING A TEST WHILE OPERATING AT 918 PWRM, DIESEL GENERATOR IS FAILED TO START.

110270 CONTINUED

NO ABNORMAL CONDITION WAS FOUND OTHER THAN A SLIGHTLY LOW OIL LEVEL IN THE GENERATOR. A SMALL AMOUNT OF OIL WAS ADDED AND THE DIESEL RE-TESTED SUCCESSFULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

FAILURE, EQUIPMENT * TEST, SYSTEM OPERABILITY * MATCH 1 (BWR) * ENGINE, INTERNAL COMBUSTION * GENERATOR, DIESEL

110960

RESPONSE TIME OF CONTROL VALVES DELO AT MATCH 1

GEORGIA POWER CO., DALEY, VA

4 PWS, LTR NRU 50-321/1970-39 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, OCT. 1, 1970, DOCKET 50-321, TYPE--BWR, NRU--0000, AE--331

CAUSE - SLOWISH SOLENOID VALVES. DURING TESTING WITH THE REACTOR AT 85% POWER, 3 CONTROL VALVES FAILED TO MEET THE CONTROL VALVE FAST CLOSURE 30 MS LIMIT. AFTER THE VALVES WERE CYCLED, CLOSURE TIMES ON RETEST WERE WITHIN THE LIMIT. THE SLOW CLOSURE TIME RESULTS FROM SLOWISH OPERATION OF THE FAST ACTING SOLENOID VALVES ON THE CONTROL VALVES. THESE SOLENOIDS MUST BE EXERCISED FREQUENTLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

FAILURE, EQUIPMENT * CONTROL * RESPONSE TIME * TEST, SYSTEM OPERABILITY * TUNING * MATCH 1 (BWR) * SOLENOID * VALVES

110965

SET POINT DRIFT IN REACTOR WATER LEVEL SWITCHES AT MATCH 1

GEORGIA POWER CO., DALEY, VA

4 PWS, LTR NRU 50-321/1970-70 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, OCT. 8, 1970, DOCKET 50-321, TYPE--BWR, NRU--0000, AE--331

CAUSE - NO MALFUNCTION FOUND. WHILE TESTING THE REACTOR WATER LEVEL SWITCHES WITH THE UNIT AT 91% POWER, LEVEL SWITCHES B11-MAXA OPERATED AT 70 INCHES. TECH SPEC LIMIT IS 70 INCHES. NO MALFUNCTION WAS FOUND IN THE SWITCH. IT WAS RECALIBRATED AND PUT IN SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * MATCH 1 (BWR) * DRIFT * FAILURE, INHERENT * SENSOR, LEVEL

110973

SET POINT DRIFT IN PRESSURE SWITCHES AT MATCH 1

GEORGIA POWER CO., DALEY, VA

4 PWS, LTR NRU 50-321/1970-79 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, OCT. 27, 1970, DOCKET 50-321, TYPE--BWR, NRU--0000, AE--331

CAUSE - INSTRUMENT DRIFT. DURING TESTING ON E31-MW17 WITH THE REACTOR AT 85% POWER, 2 ALIC SWITCHES WERE FOUND TO BE OUTSIDE TECH SPEC ACCEPTANCE CRITERIA. THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE BARTON DIFFERENTIAL PRESSURE INDICATING SWITCHES, MODEL 289A, WERE IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

MATCH 1 (BWR) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSOR, PRESSURE * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * SET POINT * DRIFT * ALIC * FAILURE, INHERENT

110980

DIESEL GENERATOR FAILED TO START AT MATCH 1

GEORGIA POWER CO., DALEY, VA

4 PWS, LTR NRU 50-321/1970-82 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 10, 1970, DOCKET 50-321, TYPE--BWR, NRU--0000, AE--331

CAUSE - UNKNOWN. WHILE TESTING DIESEL GENERATOR AC WITH THE REACTOR AT 80% POWER, THE DIESEL FAILED TO START. IT DID NOT REACH 450 RPM IN 7 SECONDS AND TRIPPED ON START FAILURE. THE EXACT CAUSE IS NOT KNOWN, HOWEVER IT WAS SUCCESSFULLY STARTED AFTER THE INITIAL FAILURE. A POSSIBLE CAUSE WAS SLOWISH OPERATION OF THE SUPERCHARGER AIR BOOSTER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

MATCH 1 (BWR) * GENERATOR, DIESEL * ENGINE, INTERNAL COMBUSTION * TEST, SYSTEM OPERABILITY * FAILURE, EQUIPMENT * EXHAUST PUMP, ELECTRICAL * RESPONSE TIME

120290
 DIESEL GENERATOR MALFUNCTION OCCURS AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 3 PGS, LTR NWD 50-321/1970-03 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 11, 1970, DUCRET 50-321, TYPE--BWR, NFW--U.S., AC--SSI

CAUSE - ERRATIC ACTUATION OF SHUTDOWN RELAY. WHILE TESTING DIESEL GENERATOR 1C WITH THE REACTOR AT 50% POWER, THE OVERSPEED ALARM BEGAN FLASHING ERRATICALLY. THE D/G OUTPUT BREAKER TRIPPED BUT THE DIESEL DID NOT SHUT DOWN. IT WAS MANUALLY SHUT DOWN. THE ERRATIC OVERSPEED ALARM INDICATES THE SHUT-DOWN RELAY WAS MOMENTARILY PICKING UP AND DROPPING OUT. THIS WOULD ACCOUNT FOR THE OUTPUT BREAKER TRIP AND DIESEL FAILURE TO TRIP IF ALL CONTACTS DID NOT MAKE UP DURING THE MOMENTARY ENERGIZATION OF THE SDR RELAY. THE MECHANICAL OVERSPEED TRIP AUXILIARY SWITCH TRIP LINKAGE APPEARED TO BE SLIGHTLY OUT OF ADJUSTMENT. IT WAS ADJUSTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * GENERATION, DIESEL * ENGINES, INTERNAL COMBUSTION * TEST, SYSTEM OPERABILITY * FAILURE, EQUIPMENT * FAILURE, MAINTENANCE ERROR * EMERGENCY POWER, ELECTRIC * SENSORS, FLUX

120291
 CONTROL ROOM AIR INTAKE CHLORINE MONITOR INOPERABLE AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 3 PGS, LTR NWD 50-321/1970-04 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 11, 1970, DUCRET 50-321, TYPE--BWR, NFW--U.S., AC--SSI

CAUSE - POTASSIUM IODIDE SOLUTION DRIED. DURING 75% POWER OPERATION, SURVEILLANCE REVEALED THE CONTROL ROOM AIR INTAKE CHLORINE MONITOR 241-70022A WAS INOPERABLE DUE TO A GAUGED OUT POTASSIUM IODIDE SOLUTION. THE SOLUTION WAS REPLACED IN THE INSTRUMENT AND IT WAS RETURNED TO SERVICE. TEN MINUTES LATER, SURVEILLANCE REVEALED THAT CONTROL ROOM AIR INTAKE MONITOR 241-70022A WAS INOPERABLE DUE TO A BURNED OUT FAN MOTOR. THE MOTOR WAS REPLACED AND THE INSTRUMENT RETURNED TO SERVICE. TEST FREQUENCY WILL BE INCREASED FROM GALE/3 MONTHS TO WACE/MONTH.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * MONITOR * MONITOR, AIR * CHLORINE * CONTROL PANEL/ROOM * FAILURE, INSTRUMENT * FAILURE, INHERENT * TEST, SYSTEM OPERABILITY * SOLUTION * DIVERS

120292
 LEVEL SWITCH MECHANISM REPLACED WITHOUT PROPER APPROVAL AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 3 PGS, LTR NWD 50-321/1970-07 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 11, 1970, DUCRET 50-321, TYPE--BWR, NFW--U.S., AC--SSI

CAUSE - PROCEDURAL VIOLATION. WHILE OPERATING AT 75% POWER, HMM DISCHARGE FILL LEVEL SWITCH MECHANISM 611-7040 WAS REPLACED WITH A NEW TYPE SWITCH MECHANISM. A PROCEDURAL VIOLATION OCCURRED BECAUSE THE REPLACEMENT WAS MADE WITHOUT FIRST INITIATING AND APPROVING A JEN JR PM TO PERFORM THE CHANGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * MODIFICATION * CERTIFICATION * INSTRUMENT, SWITCH * SENSORS, LEVEL * FAILURE, ADMINISTRATIVE CONTROL * SHUTDOWN COOLING SYSTEM

120293
 PLANT SERVICE WATER STRAINERS PLUG AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 2 PGS, LTR NWD 50-321/1970-08 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 11, 1970, DUCRET 50-321, TYPE--BWR, NFW--U.S., AC--SSI

CAUSE - STRAINER DRIVE MOTORS TRIP. WHILE OPERATING AT 85% POWER, BOTH DIVISION I AND II PLANT SERVICE WATER STRAINERS PLUGGED UP, THUS REDUCING PLANT SERVICE WATER TO THE TURBINE AND REACTOR BUILDING. THE STRAINER DRIVE MOTORS WHICH ARE IN CONTINUAL OPERATION TO PREVENT CLOGGING IN THE STRAINERS, TRIPPED. THUS THE STRAINERS PLUGGED. THEY WERE MANUALLY BACKWASHED. A STANDING ORDER WAS GIVEN TO MANUALLY BACKWASH THE STRAINERS TWICE EACH SHIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * FILTER, SCREEN * SERVICE WATER SYSTEM * CRUD * FLUX BLOCKAGE * FAILURE, EQUIPMENT * MOTORS * MULTIPLICATION * FAILURE, INHERENT

120414
 JET PUMP SHIFT IN DIFFERENTIAL PRESSURE SWITCH AT MATCH 1
 GEORGIA POWER CO., BARLEY, GA
 2 PGS, LTR NWD 50-321/1970-09 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 11, 1970, DUCRET

140924 OVERTIMEUP
50-321, TYPE--BOM, MFU--UCCO, AC--SSI

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 80% POWER, MPDI DIFFERENTIAL PRESSURE SWITCH 424-0000 SET POINT WAS DISCOVERED TO HAVE DRIFTED TO A VALUE OUTSIDE TECH SPEC LIMITS. THE CAUSE WAS DRIFT IN THE BARTON MODEL 200 DIFFERENTIAL PRESSURE SWITCH. THE SWITCH WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (CONT) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSORS, PRESSURE * FAILURE, INSTRUMENT * SET POINT * DRIFT * MPDI * FAILURE, INHERENT * TEST, SYSTEM OPERABILITY

140925
BELLWAS FAILURE ALARM RECEIVED ON SAFETY RELIEF VALVE AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 Pgs, LTR N/AU 50-321/1970-02 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, NOV. 19, 1970, DOCKET 50-321, TYPE--BOM, MFU--UCCO, AC--SSI

CAUSE - FAILED PRESSURE SWITCH. WHILE OPERATING AT 7% POWER, BELLWAS FAILURE ALARM WAS RECEIVED ON TANGENT NO. 4 VALVE OF SAFETY RELIEF VALVE 021-10130. THE PLANT WAS BROUGHT TO HOT STANDBY CONDITION AND UNWELL ENTRY INITIATED BY A FAILED PRESSURE SWITCH (PART NO. 200372-1). THE SWITCH WAS REPLACED, TESTED, AND OPERATIONS RESUMED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (CONT) * OVERPRESSURE RELIEF * MAIN COOLING SYSTEM * INSTRUMENT, SWITCH * SENSORS, PRESSURE * SET * FAILURE, INSTRUMENT * FAILURE, INHERENT * REACTOR SHUTDOWN * ANOMALIES * INSTRUMENT, ALARM

140926
GAYDEN CONCENTRATION CALCULUS 46 24 HOURS AFTER STARTUP AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 Pgs, LTR N/AU 50-321/1970-03 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, DEC. 1, 1970, DOCKET 50-321, TYPE--BOM, MFU--UCCO, AC--SSI

CAUSE - STARTUP BULKER FAILS TO OPERATE. DURING 80% POWER OPERATION, GAYDEN CONCENTRATION WAS NOT LESS THAN 46 24 HOURS AFTER STARTUP TO 40% LEVEL BECAUSE OF AN INABILITY TO GET THE STARTUP BULKER OPERATING SO THAT THE STEAM VAPORIZER COULD BE USED TO INERT THE DRYWELL. A REACTOR SHUTDOWN WAS COMMENCED UNTIL THE 46 LIMIT COULD BE MET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (CONT) * CONCENTRATION * GAYDEN * CONTAINMENT * FAILURE, EQUIPMENT * CONTAINMENT ATMOSPHERE

140927
SET POINT DRIFT IN PRESSURE SWITCH AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 Pgs, LTR N/AU 50-321/1970-04 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, DEC. 1, 1970, DOCKET 50-321, TYPE--BOM, MFU--UCCO, AC--SSI

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 85% POWER, PRESSURE SWITCH 421-0000 SET POINT WAS FOUND TO BE GREATER THAN THE 15 INCH HG VACUUM LIMIT. THE STATIC-O-RING, SERIAL NO. 73-22070, PRESSURE SWITCH HAD DRIFTED. IT WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (CONT) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSORS, PRESSURE * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * SET POINT * DRIFT * FAILURE, INHERENT * EMERGENCY COOLING SYSTEM

140928
SET POINT DRIFT IN RPV LEVEL SWITCH AT MATCH 1
GEORGIA POWER CO., DALEY, GA
2 Pgs, LTR N/AU 50-321/1970-05 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION II, DEC. 1, 1970, DOCKET 50-321, TYPE--BOM, MFU--UCCO, AC--SSI

CAUSE - INSTRUMENT DRIFT. DURING TESTING ON RUC HIGH RPV LEVEL TRIP SWITCH 021-02176 WITH THE REACTOR AT 80% POWER, SWITCH OPERATED ABOVE THE LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE BARTON MODEL 200A LEVEL SWITCH WAS RESET TO NEWLINE TOLERANCES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (CONT) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSORS, LEVEL * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * SET POINT * DRIFT * FAILURE, INHERENT * RUC

140549

BELLUMS FAILURE ALARM RECEIVED ON SEGMENT RELIEF VALVE AT MATCH 1
GEORGIA POWER CO., DALLAS, GA
2 PGS, LTR W/NO 50-321/1970-91 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 6, 1970, DUCRET 50-321, TYPE--BWR, MFU--GEC, AE--SSI

CAUSE - PRESSURE SWITCH FAILURE. WHILE OPERATING AT 80% POWER, A BELLUMS FAILURE ALARM ON RELIEF VALVE WAS RECEIVED WHILE OPERATING WITH AN EXISTING ALARM ON RELIEF VALVE. RELIEF VALVE WAS AVAILABLE. AN ORDNAL SHUTDOWN WAS MADE. THE BELLUMS PRESSURE SWITCH (TANUET 400A 570120) HAD FAILED. SWITCHES WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * ORDNAL * VALVES * OPRESSURE RELIEF * MAIN COOLING SYSTEM * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * REACTOR SHUTDOWN * SENSORS, PRESSURE

140550

SET POINT DRIFT IN REACTOR WATER LEVEL SWITCH AT MATCH 1
GEORGIA POWER CO., DALLAS, GA
2 PGS, LTR W/NO 50-321/1970-91 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 9, 1970, DUCRET 50-321, TYPE--BWR, MFU--GEC, AE--SSI

CAUSE - INSTRUMENT DRIFT. WHILE TESTING WITH THE REACTOR AT 80% POWER, A REACTOR WATER LEVEL INSTRUMENT WAS FOUND WITH ITS SET POINT BEYOND TECH SPEC LIMITS. THE CAUSE WAS INSTRUMENT DRIFT. THE TANK (NO 441000) LEVEL SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSORS, LEVEL * TEST, SYSTEM OPERABILITY * FAILURE, INSTRUMENT * SET POINT * DRIFT * FAILURE, INHERENT

140551

ACIC POWER SUPPLY INVERTER FAILS AT MATCH 1
GEORGIA POWER CO., DALLAS, GA
2 PGS, LTR W/NO 50-321/1970-91 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 9, 1970, DUCRET 50-321, TYPE--BWR, MFU--GEC, AE--SSI

CAUSE - SHORTED CAPACITOR. WITH THE REACTOR AT 80% POWER, ACIC POWER SUPPLY INVERTER (SI-400) FAILED CAUSING ACIC TO BE INOPERABLE. FAILURE OF THE TOPAZ ELECTRONIC MODEL 9250-000-125-00-113 INVERTER WAS CAUSED BY A SHORTED CAPACITOR IN THE FERRO-RESONANT OUTPUT TRANSFORMER. THE CAPACITOR WAS REPLACED AND THE INVERTER RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * ELECTRIC POWER * ACIC * FAILURE, INSTRUMENT * FAILURE, INHERENT * OPERATIONS

140552

TEMPORARY TEMPERATURE MONITORING STATION OUT OF SERVICE AT MATCH 1
GEORGIA POWER CO., DALLAS, GA
3 PGS, LTR W/NO 50-321/1970-92 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 15, 1970, DUCRET 50-321, TYPE--BWR, MFU--GEC, AE--SSI

CAUSE - COMMUNICATION PROBLEM. DURING 80% POWER OPERATION, THE TEMPORARY TEMPERATURE MONITORING STATION LOCATED IN THE MIXING ZONE IN THE ALABAMA RIVER WAS FOUND TO BE OUT OF SERVICE. FAILURE TO MONITOR THE REQUIRED TEMPERATURES CAN BE ATTRIBUTED TO A MISUNDERSTANDING BETWEEN THE ENVIRONMENTAL ENGINEERING DEPARTMENT AND PLANT PERSONNEL. THE PROBLEM WILL BE REVISED TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MATCH 1 (BWR) * DATA COLLECTION * TEMPERATURE * RIVER * EFFLUENT * MONITORING PROGRAM, ENVIRONMENTAL * FAILURE, ADMINISTRATIVE CONTROL * COMMUNICATION * MONITOR

140553

COOLDOWN RATE EXCEEDED FOLLOWING A REACTOR SCRAM AT MATCH 1
GEORGIA POWER CO., DALLAS, GA
3 PGS, LTR W/NO 50-321/1970-93 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 21, 1970, DUCRET 50-321, TYPE--BWR, MFU--GEC, AE--SSI

CAUSE - RELIEF VALVE FAILED TO RESEAT. WHILE REDUCING POWER FROM 80% TO CHANGE MW PATTERNS, A REACTOR SCRAM WAS RECEIVED DURING PERFORMANCE OF A REACTOR OIL TRIP TEST ON THE TURBINE. THE RELIEF VALVES OPENED DUE TO HIGH PRESSURE. ONE TARGET AREA RELIEF VALVE WOULD PARTIALLY OPEN RESULTING IN A COOLDOWN RATE THAT EXCEEDED TECH SPEC VALUES. THE VALVE RESEATED AT 500 PSIG. ALL OF THE RELIEF VALVES WILL BE REPLACED OR BENCHMARKED DURING THE UPCOMING REFUELING OUTAGE.

110000 *CONTINUED*
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

MATCH A LOSS. * VALVES * OPRESSURE RELIEF * MAIN LUBRICATION SYSTEM * BLEEDDOWN * SCRAM, REAL * THERMAL TRANSIENT
 * PRESSURE TRANSIENT * TEST, SYSTEM OPERABILITY * FAILURE, EQUIPMENT * FAILURE, EMERGENT

112702
 LEAK FOUND IN CLEAN-UP LINE AT MUMBLOUT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 * POS, LTR W/NO 70-2 TO NRC OFFICE OF I & E, REGION V, MARCH 31, 1970, DUCRET 50-133, TYPE--BWR, NFG--G.E., AE--
 BECHTEL

CAUSE - CIRCUMFERENTIAL CRACK. WHILE ON 50% POWER OPERATION, THE RATE OF WATER ACCUMULATION IN THE
 DRYWELL SUMP INCREASED FROM THE NORMAL 0.4 GPM TO 11.0 GPM. THE REACTOR WAS SHUT DOWN TO
 INVESTIGATE. A SMALL CIRCUMFERENTIAL CRACK WAS FOUND IN THE 4 INCH CLEAN-UP LINE BETWEEN THE
 VESSEL AND THE FIRST ISOLATION VALVE. THE LINE SECTION WAS REPLACED IN MARCH DURING THE REPAIR.
 ONE SECTION OF 5/8 IN PIPE WAS DISCOVERED AND REPLACED WITH THE REQUIRED SCH 80.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

MUMBLOUT BAY (BWR) * FAILURE, PIPE * LIQUANT PURIFICATION SYSTEM * CLEAN * REACTOR SHUTDOWN * CRACK * PIPES
 AND PIPE FITTINGS

112743
 SECONDARY CONTAINMENT LOST AT MUMBLOUT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 * POS, LTR W/NO 70-2 TO NRC OFFICE OF I & E, REGION V, APRIL 10, 1970, DUCRET 50-133, TYPE--BWR, NFG--G.E., AE--
 BECHTEL

CAUSE - PROCEDURAL DEFICIENCY. WHILE OPERATING AT 50% POWER, SECONDARY CONTAINMENT WAS LOST FOR
 SEVERAL HOURS WHEN TEMPORARY PLUGS WERE INADVERTENTLY PULLED OUT OF TWO 2-INCH DIAMETER HOLES
 WHICH HAD BEEN DRILLED IN THE REFUELING BUILDING AS PART OF SEISMIC MODIFICATIONS. THE PLUGGING
 PROCEDURE ALLOWED PART OF THE PLUG TO EXTEND FROM THE WALL WHERE IT COULD BE GRABBED BY MEN AND
 EQUIPMENT BEING RAISED ON THE WALL WHILE DRILLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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MUMBLOUT BAY (BWR) * PROCEDURES AND MANUALS * CONTAINMENT INTEGRITY * MODIFICATION * FAILURE, ADMINISTRATIVE
 CONTROL

113744
 SECONDARY CONTAINMENT LOST AT MUMBLOUT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 * POS, LTR W/NO 70-3 TO NRC OFFICE OF I & E, REGION V, APRIL 10, 1970, DUCRET 50-133, TYPE--BWR, NFG--G.E., AE--
 BECHTEL

CAUSE - PERSONNEL ERROR. WHILE OPERATING AT 50% POWER, SECONDARY CONTAINMENT WAS LOST FOR SEVERAL
 HOURS WHEN A TEMPORARY PLUG WAS NOT INSTALLED IN A 2-INCH DIAMETER HOLE DRILLED IN THE REFUELING
 BUILDING WALL AS PART OF SEISMIC MODIFICATIONS. WRITTEN INSTRUCTIONS TO PLUG THE HOLE SHORTLY
 AFTER DRILLING IT WERE NOT FOLLOWED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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MUMBLOUT BAY (BWR) * PROCEDURES AND MANUALS * CONTAINMENT INTEGRITY * MODIFICATION * FAILURE, MAINTENANCE
 ERROR

114000
 INDIVIDUAL RECEIVES OVEREXPOSURE AT MUMBLOUT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 * POS, LTR W/NO 70-3 TO NRC OFFICE OF I & E, APRIL 23, 1970, DUCRET 50-133, TYPE--BWR, NFG--G.E., AE--BECHTEL

CAUSE - ESTIMATION OF DAILY EXPOSURE. WHILE WORKING IN THE LOWER DRYWELL PREPARING FOR
 MAINTENANCE ON THE REACTOR CLEAN-UP LINE, AN INSTRUMENT FOREMAN RECEIVED 3.595 REM TO THE WHOLE
 BODY DURING A 2 DAY PERIOD. ON ONE TRIP HIS HIGHEST RANGE POCKET DOSIMETER WAS SETTING FULL-SCALE
 (1A) WITH THE MAINLINE STILL VISIBLE. THE DOSE WAS ESTIMATED TO BE 1200 MREM. USING THIS VALUE
 AND OTHER RECEIVED DOSE, OTHER ENTRIES, THE DOSE ESTIMATE WAS 2350 MREM. THE ERROR WAS IN
 ASSUMING THAT THE 2 HOURS IN THIS AREA RECEIVED NEARLY THE SAME DOSE. A HIGHER RANGE DOSIMETER
 PENCIL WILL BE USED FOR BACK-UP DOSE ESTIMATES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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DOSEIMETRY * MUMBLOUT BAY (BWR) * MAINTENANCE AND REPAIR * COMPLIANCE * DOSE CALCULATION, EXTERNAL * PERSONNEL
 EXPOSURE, RADIATION * FAILURE, ADMINISTRATIVE CONTROL

113979
 UNIT CONTAIN AND DRIVE EXERCISING NOT PERFORMED AT MUMBOLDT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 2 PGS, LTR W/LET 70-04 TO NRC OFFICE OF I & E, REGION V, APRIL 26, 1970, DUCRET 50-133, TYPE--BHM, NFG--GUL, AC--
 BECHTEL

CAUSE - OVERLOOKED DURING SPECIAL OPERATION. WHILE REPAIRING THE FEEDWATER REGULATING VALVE WITH
 THE REACTOR AT 100 POWER, DAILY CONTROL ROD DRIVE EXERCISING WAS NOT PERFORMED ON 18 OF 29
 OPERABLE DRIVES ONE DAY. SPECIAL OPERATIONS IN SUPPORT OF MAINTENANCE CAUSED THE EXERCISING TO
 BE OVERLOOKED. EXERCISING THE NEXT DAY SHOWED ALL UNDEREXERCISED ROD DRIVES OPERABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, OPERATOR ERROR + MUMBOLDT BAY (BHM) + MAINTENANCE AND REPAIR + TESTING + TEST INTERVAL + CONTROL
 ROD DRIVES

114076
 SECONDARY CONTAINMENT LOST AT MUMBOLDT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 2 PGS, LTR W/LET 70-03 TO NRC OFFICE OF I & E, REGION V, MAY 3, 1970, DUCRET 50-133, TYPE--BHM, NFG--GUL, AC--
 BECHTEL

CAUSE - TEMPORARY PLUG NOT INSTALLED. WHILE OPERATING AT 85% POWER, REQUIRED SECONDARY
 CONTAINMENT WAS LOST FOR SEVERAL HOURS WHEN A TEMPORARY PLUG WAS NOT INSTALLED IN A 2-INCH
 DIAMETER HOLE DRILLED IN THE REFUEL BUILDING WALL AS PART OF SEISMIC MODIFICATIONS. THE PROBLEM
 WAS DETECTED BY A SPECIAL BUILDING LEAK RATE TEST. WRITTEN INSTRUCTIONS TO PLUG HOLES SHORTLY
 AFTER DRILLING WERE NOT FOLLOWED. THE HOLE WAS PLUGGED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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MUMBOLDT BAY (BHM) + PROCEDURES AND MANUALS + TEST, LEAK RATE + CONTAINMENT INTEGRITY + BUILDING +
 MODIFICATION + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR

114109
 FLUX MONITOR TRIP SETTING OUT OF SPECS AT MUMBOLDT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 2 PGS, LTR W/LET 70-06 TO NRC OFFICE OF I & E, REGION V, MAY 24, 1970, DUCRET 50-133, TYPE--BHM, NFG--GUL, AC--
 BECHTEL

CAUSE - ERROR IN CALCULATIONS. DURING NORMAL OPERATION, 1 OF 3 REACTOR FLUX MONITOR (ISCAMETER)
 REACTOR TRIP SETTINGS WAS OUT OF SPECIFICATIONS IN THE NONCONSERVATIVE DIRECTION. THIS SETTING
 WAS REDUCED FROM 1008 TO 908 TO COMPENSATE FOR A CORE FLUX SHIFT DUE TO A CONTROL ROD STICKING
 FULLY INSERTED. THE CALCULATION WAS IN ERROR AND SHOULD HAVE BEEN 808. THE PROPER METHOD TO
 CALCULATE REDUCED TRIP SETTINGS WAS DISCUSSED WITH RESPONSIBLE ENGINEERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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MUMBOLDT BAY (BHM) + INSTRUMENT, SWITCH + FAILURE, ADMINISTRATIVE CONTROL + INSTRUMENT, POWER RANGE +
 MATHEMATICAL TREATMENT + SET POINT

115739
 WAS TREATMENT SYSTEM CAUSTIC PUMP MOTOR FAILS AT MUMBOLDT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 2 PGS, LTR W/LET 70-07 TO NRC OFFICE OF I & E, REGION V, JUNE 30, 1970, DUCRET 50-133, TYPE--BHM, NFG--GUL, AC--
 BECHTEL

CAUSE - STUCK COMMUTATOR BRUSH. DURING A TEST OF THE REFUELING BUILDING WAS TREATMENT SYSTEM
 WHILE OPERATING AT 80% POWER, 1 OF 2 CAUSTIC RECIRCULATION PUMPS FAILED DUE TO A JAMMED
 COMMUTATOR BRUSH. IN ADDITION TO NORMAL WEAR, A CONTRIBUTING FACTOR WAS THE PRESENCE OF CAUSTIC
 FROM MINOR PACKING AND PUMP SEAL LEAKS. THE BRUSH WAS CLEANED AND ADJUSTED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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PAIN CLEANING + FAILURE, EQUIPMENT + MUMBOLDT BAY (BHM) + BUILDING + TEST, SYSTEM OPERABILITY + FAILURE,
 MAINTENANCE ERROR + CONTAINMENT ATMOSPHERE + MOTORS + PUMPS

116094
 CRACKS SEEN IN THERMAL SLEEVE OF FEEDWATER NOZZLE AT MUMBOLDT BAY
 PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA
 2 PGS, LTR W/LET 70-07 TO NRC OFFICE OF I & E, REGION V, AUG. 4, 1970, DUCRET 50-133, TYPE--BHM, NFG--GUL, AC--
 BECHTEL

CAUSE - NOT YET DETERMINED. DURING THE CURRENT REFUELING OUTAGE, AN INSPECTION WAS MADE OF THE
 FEEDWATER NOZZLE UTILIZING AN UNDERWATER TV CAMERA. RESULTS SHOW CRACKING IN THE THERMAL SLEEVE

210094 MUMMULUT

WHERE IT ENTERS THE FRESHWATER MIDDLE. SEVERAL CRACKS HAVE RESULTED IN THE LOSS OF A 1/4 X 1-1/2 INCH PORTION OF THE INTERNAL SLEEVE. THE INTERNAL SLEEVE TO THE SPARGER RING ELEMENT HAD A CRACK EXTENDING SUB TO THE LUMPENANCE. INDICATIONS OF CRACKS WERE NOTED ON VISIBLE PORTIONS OF THE FRESHWATER MIDDLE RADIOS. THE INVESTIGATION WILL CONTINUE AND REPAIRS WILL BE MADE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

MUMMULUT DAY 1000 - FAILURE, PIPE - REFUELING - PUZZLE - REMOTE MANIPULATION AND VIEWING - MAIN COOLING SYSTEM - SURVEILLANCE PROGRAM - CRACK - OPERATOR - PIPES AND PIPE FITTINGS

217000

CRACKS DISCOVERED IN INTERNAL SLEEVE TO FRESHWATER SPARGER AT MUMMULUT DAY

PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA

3 PAGES LTR W/EN 70-10 TO NRC OFFICE OF I & E, NEWTON V, AUG. 12, 1970, SUBJECT SU-133, TYPE--BWR, NRC--G&E, AC--DECFTEL

CAUSE - UNKNOWN. DURING A REFUELING OUTAGE SPECIAL INSPECTION, A THIRDMAN WALL CIRCUMFERENTIAL CRACK OF AT LEAST 270 DEGREES WAS DISCOVERED ON THE FRESHWATER SPARGER INLET PIPE (THERMAL SHIELD) WHERE THE PIPE COMES OUT OF THE REACTOR VESSEL MIDDLE. IN ONE PART OF THE CRACK A PIECE 1/4 X 1-1/2 INCHES WAS MISSING. SEVERAL OTHER CRACKS WERE OBSERVED. THESE APPARENTLY OCCURRED DURING THE PREVIOUS OPERATING CYCLE. THE CRACKS WOULD NOT PREVENT THE FRESHWATER SYSTEM FROM PERFORMING ITS REG. FUNCTION. THE FRESHWATER SPARGER AND INLET PIPE ARE BEING REMOVED FOR EXAMINATION. CORRECTIVE ACTION WILL BE BASED ON THE TESTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

MUMMULUT DAY 1000 - FAILURE, PIPE - REFUELING - MAIN COOLING SYSTEM - CRACK - OPERATOR - PIPES AND PIPE FITTINGS - INSERVICE INSPECTION

217007

CONTROLS ON THE REFUELING BUILDING VENTILATION SYSTEM FAIL AT MUMMULUT DAY

PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA

3 PAGES LTR W/EN 70-10 TO NRC OFFICE OF I & E, NEWTON V, AUG. 20, 1970, SUBJECT SU-133, TYPE--BWR, NRC--G&E, AC--DECFTEL

CAUSE - PRESSURE CONTROLLER INOPERABLE. DURING A TEST OF THE REFUELING BUILDING CONTAINMENT SYSTEM, THE PRESSURE REQUIREMENTS OF THE TEST COULD NOT BE MET. THE BUILDING PRESSURE CONTROLLER WAS INOPERABLE, PROBABLY DUE TO A PRESSURE TRANSIENT THAT OCCURRED DURING EARLIER STAGES OF THE TEST. THE CONTROLLER WAS REPLIED WITH OIL AND A SATISFACTORY TEST CONDUCTED. THE MAIN CONTROL VALVE HAS EXHIBITED SLUGGISH OPERATION IN THE PAST. A NEW VALVE IS ON ORDER. SECONDARY CONTAINMENT WAS NOT REQUIRED AT THE TIME OF FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

CONTROL SYSTEM - MUMMULUT DAY 1000 - VENTILATION SYSTEM - CONTAINMENT INTEGRITY - BUILDING - FAILURE, INSTRUMENT - TEST, SYSTEM OPERABILITY - OPRESSURE, INTERNAL

217070

BREAKER ON GAS TREATMENT SYSTEM FOR MGTOR FAILS AT MUMMULUT DAY

PACIFIC GAS & ELECTRIC CO., SAN FRANCISCO, CA

3 PAGES LTR W/EN 70-10 TO NRC OFFICE OF I & E, NEWTON V, AUG. 20, 1970, SUBJECT SU-133, TYPE--BWR, NRC--G&E, AC--DECFTEL

CAUSE - SHORTING OF INDICATING LIGHT. DURING THE REFUELING OUTAGE, POTENTIAL INDICATING LAMP ON THE GAS TREATMENT EXHAUST FAN 125 V DC BREAKER WERE DISCOVERED TO BE HOT AND THE BREAKER WAS INOPERABLE. THE DC INDICATING LAMP, MODEL CAC990VC-2240, 125 V AC-DC, SHORTED CAUSING THE CONTROL CIRCUIT FUSE TO BLOW. THE LAMP WAS REPLACED WITH DC LAT 0100-00003, TYPE ET-0, 125 V DC LAMP AND SHORT. MOST SAFETY RELATED BREAKERS WERE CONVERTED TO 24 V LAMPS BECAUSE OF PREVIOUS FAILURES. THIS ONE WAS OVERLOOKED. IT WILL BE CONVERTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1727 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

MUMMULUT DAY 1000 - MODIFICATION - REFUELING - FAILURE, DESIGN CRACK - BREAKER - STANLEY GAS TREATMENT - FUSELERS - INDICATIONS

21931

CHLORIDE CONCENTRATION IN THE PRIMARY WATER EXCEEDS LIMIT AT LAKEUSSE

WATKINSVILLE POWER COOPERATIVE, LA CROSSE, WI

3 PAGES LTR W/EN 70-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, NEWTON V, MARCH 6, 1970, SUBJECT SU-409, TYPE--BWR, NRC--G&E, AC--201 6 LUNAT

CAUSE - PURIFICATION SYSTEM ISOLATED. THE REACTOR WAS SHUT DOWN FROM THE POWER DUE TO CHLORIDE CONCENTRATION IN THE PRIMARY WATER EXCEEDING THE 100 PPM LIMIT. THE PRIMARY PURIFICATION SYSTEM HAD BEEN ISOLATED 12 DAYS EARLIER DUE TO A MINOR LEAK AT THE CHANNEL COVER OF THE REGENERATIVE

111931 CONTINUED

CAUSE. THE DECAY HEAT SYSTEM DEVIATION AND PRIMARY PURIFICATION SYSTEM WAS USED FOR CRITICAL REGULATION AFTER SHUTDOWN. THE LEAK WILL BE REPAIRED PRIOR TO STARTUP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • LACROSSE (BMS) • COOLANT PURIFICATION SYSTEM • MAIN COOLING SYSTEM • COOLANT QUALITY • CONTAMINANT • LEAK • REACTOR SHUTDOWN • CONCENTRATION • FAILURE, IMMINENT

112900

CONTAINMENT AND FAILS TO WITHSTAND AT LACROSSE

WAINTELAN POWER COOPERATIVE, LA CROSSE, WI

3 PWS, LTR N/AW TO-US TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, MARCH 20, 1970, WCAET 50-409, TYPE--BMS, RFU--AC, AE--SUT & LUNDY

CAUSE - UNKNOWN. PRIOR TO A STARTUP, ALL CONTROL RODS WERE ELECTRICALLY WITHDRAWN SATISFACTORILY. DURING A STARTUP FOR CONTINUING REACTOR OPERATION, CONTROL RODS WERE WITHDRAWN ELECTRICALLY RETURNED 1 INCH FROM FULLY INSERTED POSITION. LOW POWER CRITICALITIES WERE MADE WITH THE RODS WITHDRAWN. FOLLOWING THE TESTS, THE REACTOR WAS SHUT DOWN DURING THE DUTY THE CONTAINMENT AGO WILL BE INSPECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • LACROSSE (BMS) • CONTROL RODS

113907

SET POINT SHIFT IN THREE RELIEF VALVES AT LA CROSSE

WAINTELAN POWER COOPERATIVE, LA CROSSE, WI

3 PWS, LTR N/AW TO-US TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, APRIL 9, 1970, WCAET 50-409, TYPE--BMS, RFU--AC, AE--SUT & LUNDY

CAUSE - UNKNOWN. WHILE THE PLANT WAS SHUT DOWN FOR MAINTENANCE, ROUTINE SURVEILLANCE TESTING ON PRIMARY SYSTEM RELIEF VALVES REVEALED THAT THE 3 IN SERVICE DID NOT LIFT AT THE PRESSURE FOR WHICH THEY WERE SET. ONE LIFTED AT 1075 PSIG OR 249 PSI ABOVE SET POINT. THE OTHER 2 FAILED TO LIFT AT 1500 PSI WHICH EXCEEDS THE SET POINTS BY 210 PSI AND 74 PSI, RESPECTIVELY. THE CAUSE IS UNKNOWN. THE INVESTIGATION IS CONTINUING. TWO OF 3 VALVES ARE REQUIRED FOR RELIEF.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT INTEGRITY • PRESSURE RELIEF • TEST, SYSTEM OPERABILITY • LACROSSE (BMS) • FAILURE, SIMULTANEOUS • MAIN COOLING SYSTEM • SET POINT • VALVES

115111

TWO CONTAINMENT ISOLATION VALVES HAVE EXCESS LEAKAGE AT LA CROSSE

WAINTELAN POWER COOP., LA CROSSE, WI

3 PWS, LTR N/AW TO-US TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 10, 1970, WCAET 50-409, TYPE--BMS, RFU--AC, AE--SUT & LUNDY

CAUSE - DAMAGED AND DIRTY SEATS. DURING A REACTOR SHUT DOWN, TYPE C CONTAINMENT ISOLATION VALVE LEAKAGE RATE TESTING SHOWED EXCESSIVE LEAKAGE FOR 2 VALVES. THE TEFALON SEAT OF ONE VALVE CONTAINED UNDESIRABLE RESINS DRAWN INTO THE VENTILATION SYSTEM. THE RESINS WERE REMOVED, THE VALVE CLEANED, AND SUCCESSFULLY RETESTED. ON THE SECOND VALVE THE OIL WAS REMOVED AND LAPPED, NEW SEAT WASHERS AND PACKING WERE INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • TEST, LEAK RATE • TEST, SYSTEM OPERABILITY • LACROSSE (BMS) • LEAK RATE • FAILURE, IMMINENT • VALVES

115112

HIGH PRESSURE CORE SPRAY PUMP FAILS TO START AT LA CROSSE

WAINTELAN POWER COOP., LA CROSSE, WI

3 PWS, LTR N/AW TO-US TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JUNE 10, 1970, WCAET 50-409, TYPE--BMS, RFU--AC, AE--SUT & LUNDY

CAUSE - SWITCH CONTACT MISALIGNED. DURING A TEST OF THE NEWLY INSTALLED EMERGENCY DIESEL GENERATOR WHILE THE REACTOR WAS IN COOL SHUTDOWN, HIGH PRESSURE CORE SPRAY PUMP AS FAILED TO START AUTOMATICALLY. A MANUAL START WAS SUCCESSFUL. THE STATIONARY CONTACT ASSEMBLY ON THE SWITCH WHICH CAUSES PUMP ACTUATION ON LOW REACTOR WATER LEVEL WAS MISALIGNED. IT IS THOUGHT TO BE AN ASSEMBLY DEFICIENCY IN MANUFACTURING. THE ALIGNMENT WAS CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • FAILURE, PURIFICATION SYSTEM • TEST, SYSTEM OPERABILITY

120442 CONTINUOUS
 • LACROSSE (10M) • OVALVES

120434
 ADDITIONAL INFORMATION ON CONTROL ROD DRIVE FAILURE AT LA CROSSE
 • INTRINSIC PUMP GROUP, LA CROSSE, MI
 • PDS, LTR NAL 70-02 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 1, 1970, DOCKET 50-409,
 TYPE--BAM, RF--AC, AE--SUT & LUNAT

CAUSE - ROLLER NOT WIRE FAILURE. AS PREVIOUSLY REPORTED A CONTROL ROD DRIVE MECHANISM FAILED. THE ROLLER NOT WIRE HAD FRACTURED. INTERFERENCE CAUSED BY A FRAGMENT OF THE WIRE AND ITS FRACTURED SURFACES WAS RESPONSIBLE FOR THE BINDING. FRACTURE WAS APPARENTLY CAUSED BY A SINGLE EVENTUAL LOADING, NO LASTING DEFECTS, MACHINING DEFECTS, OR OTHER ABNORMALITIES HAVE BEEN IDENTIFIED. FAILURE DID NOT PREVENT THE CONTROL ROD FROM SLAMMING NORMALLY. THE CONTROL ROD SLAMMED NORMALLY AND THEN STUCK WHEN ATTEMPTS WERE MADE TO WITHDRAW THE ROD.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • STRESS • LACROSSE (10M) • EXAMINATION • CONTROL ROD DRIVES

120400
 CURT SPRAY VALVE FAILS TO OPEN AT LA CROSSE
 • INTRINSIC PUMP GROUP, LA CROSSE, MI
 • PDS, LTR NAL 70-02 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 6, 1970, DOCKET 50-409,
 TYPE--BAM, RF--AC, AE--SUT & LUNAT

CAUSE - DIRTY CONTACTS ON KEY SWITCH. DURING A TEST OF THE LPCI SYSTEM WHILE THE REACTOR WAS SHUT DOWN AND UNPRESSURIZED, THE DC POWER SUPPLIED ALTERNATE CURT SPRAY VALVE FAILED TO OPEN WITH THE POWER SELECTOR KEY SWITCH IN AUTO POSITION. IT DID OPEN WHEN THE SWITCH WAS PLACED IN THE MANUAL POSITION. AN ELECTRICAL CONTACT AEROSOL SPRAY CLEANER WAS APPLIED TO THE SWITCH CONTACT BLOCK. THE VALVE FUNCTIONED AS REQUIRED DURING RETESTING.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CURT SPRAY • FAILURE, EQUIPMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • LACROSSE (10M) • OVALVES • LPCI

127050
 LEAK RATE OF CONTAINMENT BUILDING AIRLOCK EXCEEDS LIMIT AT LACROSSE
 • INTRINSIC PUMP GROUP, LA CROSSE, MI
 • PDS, LTR NAL 70-02 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 20, 1970, DOCKET 50-409,
 TYPE--BAM, RF--AC, AE--SUT & LUNAT

CAUSE - PRESSURE EQUALIZING VALVE LEAK. TYPE O PERIODIC LEAKAGE RATE TEST OF THE REACTOR CONTAINMENT PERSONNEL AIRLOCK DETERMINED THAT THE LEAKAGE RATE WAS 4.13 SCFM. THE ACCEPTANCE CRITERIA IS 3.75 SCFM. THE PRESSURE EQUALIZING VALVE FOR THE OUTER DOOR WAS LEAKING. THE TEFLON SEALS OF THE BALL VALVE WERE FOUND TO BE IMPREGNATED WITH DIAT WHICH MAY HAVE BEEN ADMITTED DURING EQUALIZING CYCLES. INLET AND EXHAUST FILTERS WERE INSTALLED ON BOTH EQUALIZING VALVES. THE REACTOR WAS SHUT DOWN DURING THIS PERIOD.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • TEST, LEAK RATE • CONTAINMENT AIR LOCK • CAUSE • MODIFICATION • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • LACROSSE (10M) • SEAL • LEAK RATE • OVALVES

127414
 MAIN STEAM RELIEF VALVE TESTING AT LA CROSSE
 • INTRINSIC PUMP GROUP, LA CROSSE, MI
 • PDS, LTR NAL 70-02 TO NAC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, JULY 17, 1970, DOCKET 50-409,
 TYPE--BAM, RF--AC, AE--SUT & LUNAT

CAUSE - AMBIENT CONDITION EFFECTS. DURING ROUTINE RELIEF VALVE TESTS CONDUCTED DURING THE SPRING MAINTENANCE OUTAGE OF 1970, THE LIFT PRESSURE OF 3 VALVES EXCEEDED THE SET POINT VALUE. EXTENSIVE TESTING WAS PERFORMED TO DETERMINE THE CAUSE. RESULTS INDICATE THAT VALVES IN SERVICE NORMALLY RELIEVE AT PRESSURE MUCH CLOSER TO THEIR SET POINTS THAN THE FIRST-POP COULD NITROGEN TEST RESULTS INDICATE. THE DIFFERENCE IS ATTRIBUTED TO A SLIGHT INTERFACE BONDING BETWEEN THE HEAVY POLISHED SEATING SURFACES WHEN EXPOSED TO STEAM SERVICE FOR EXTENDED PERIODS. THERE WAS ALSO SOME INTERFERENCE BETWEEN VALVE SPINDLE AND THE SOFT BRASS WASHING. THIS WAS CORRECTED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STEAM • TESTING • NITROGEN • PRESSURE RELIEF • LACROSSE (10M) • MAIN COOLING SYSTEM • SET POINT • COMPARISON • FAILURE, INHERENT • OVALVES

117002

CONTROL ROD FAILS TO SCRAM HYDRAULICALLY AT LA CROSSE

WAINFLAND POWER CORP., LA CROSSE, WI

4 PGS, LTR WFO 70-00 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 10, 1970, UCCRET 50-609, TYPE-BWR, NRC-AC, AE--SGT & LUNDY

CAUSE - O-RING PARTICLES IN SCRAM MOTOR. DURING CONTROL ROD SCRAM TIME TESTING PRIOR TO A REACTOR STARTUP, ROD 7 FAILED TO SCRAM HYDRAULICALLY. IT WAS DRIVEN IN ELECTRICALLY. A SPARE LUNEN DRIVE MECHANISM WAS INSTALLED AND THE ROD SATISFACTORILY TESTED. WHEN THE DEFECTIVE DRIVE MECHANISM WAS DISASSEMBLED, PARTICLES OF O-RINGS WERE FOUND. IT IS SUSPECTED THAT A LARGER PARTICLE MAY HAVE BEEN PRESENT IN THE SCRAM MOTOR CAUSING FAILURE AND HAD BEEN PUSHED OUT DURING BEACH TESTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

RESPONSE TIME • LUNEN • TEST, CONTROL ROD DRIVE • TEST, SYSTEM OPERABILITY • FAILURE, SCRAM MECHANISM • LACROSSE (BWR) • FAILURE, IMMEDIATE • HYDRAULIC SYSTEM • CONTROL ROD CABLES

118750

EMERGENCY DIESEL GENERATOR FAILS TO CARRY FULL TEST LOAD AT LA CROSSE

WAINFLAND POWER CORP., LA CROSSE, WI

4 PGS, LTR WFO 70-09 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 15, 1970, UCCRET 50-609, TYPE-BWR, NRC-AC, AE--SGT & LUNDY

CAUSE - MANUAL FUEL SHUTOFF NOT RESET COMPLETELY. DURING A TEST WITH THE REACTOR AT 99% POWER, EMERGENCY DIESEL GENERATOR 10 FAILED TO CARRY THE FULL TEST LOAD. INVESTIGATION FOUND THAT THE MANUAL FUEL SHUTOFF WAS NOT RESET COMPLETELY DUE TO PAINT ON THE LUNITHAL CABLE RESTRICTING ITS MOVEMENT. THE CABLE WAS CLEANED AND NORMAL ACTION RESUMED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM • EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • LACROSSE (BWR) • CABLES AND CONNECTORS • PAINT, INTERNAL COMBUSTION • GENERATOR, DIESEL

119331

SET POINT DRIFT IN NUCLEAR INSTRUMENT AT LA CROSSE

WAINFLAND POWER CORP., LA CROSSE, WI

5 PGS, LTR WFO 70-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, OCT. 19, 1970, UCCRET 50-609, TYPE-BWR, NRC-AC, AE--SGT & LUNDY

CAUSE - SHIFT IN BIAS. DURING A REACTOR SCRAM, IT WAS NOTED THAT NUCLEAR INSTRUMENT CHANNEL 5 DID NOT FUNCTION PROPERLY. INVESTIGATION FOUND THAT THE SCRAM SET POINT HAD DRIFTED DUE TO A SHIFT IN THE BIAS IN THE OSCILLATOR CIRCUIT. THE CIRCUIT WAS ADJUSTED AND SATISFACTORILY TESTED. THIS IS THE FIRST OBSERVED OCCURRENCE OF A SHIFT IN FACTORY ADJUSTED BIAS IN ABOUT 11 YEARS OF SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • RELIABILITY, COMPONENT • LACROSSE (BWR) • INSTRUMENT, POWER RANGE • SET POINT • DRIFT • FAILURE, IMMEDIATE

120422

DIESEL FUEL OIL SAMPLES FAIL TO MEET TECH SPECS AT LA CROSSE

WAINFLAND POWER CORP., LA CROSSE, WI

4 PGS, LTR WFO 70-15 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, NOV. 10, 1970, UCCRET 50-609, TYPE-BWR, NRC-AC, AE--SGT & LUNDY

CAUSE - SAMPLES TAKEN FROM TANK BOTTOM. EMERGENCY DIESEL FUEL OIL SAMPLES TAKEN WHILE THE REACTOR WAS SHUT DOWN DID NOT MEET THE TECH SPEC REQUIREMENTS FOR WATER AND SEDIMENT CONTENT. THE OIL WAS PUMPED OUT, TANKS CLEANED, AND REFILLED. SAMPLES HAD BEEN TAKEN FROM THE ACTUAL TANK BOTTOM. THE BOTTOM ACTS AS A TRAP FOR SETTLED WATER AND SEDIMENT. THEREFORE, SAMPLES FROM HERE ARE NOT REPRESENTATIVE OF THE FUEL OIL. THE INLET OF OIL SUCTION LINES IS LOCATED ABOUT 3 INCHES ABOVE THE BOTTOM. A REDEFINITION OF THE SAMPLE POINT IS BEING SOUGHT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

LACROSSE (BWR) • FUEL, FOSIL • GENERATOR, DIESEL • ENGINE, INTERNAL COMBUSTION • OIL • WATER • SAMPLING • FAILURE, ADMINISTRATIVE CONTROL • COMMUNICATION

120431

FORCED CIRCULATION LOOP DISCHARGE VALVE FAILS TO CLOSE COMPLETELY AT LA CROSSE

WAINFLAND POWER CORP., LA CROSSE, WI

4 PGS, LTR WFO 70-13 TO NRC DIRECTOR OF REGULATORY OPERATIONS, REGION III, NOV. 30, 1970, UCCRET 50-609, TYPE-BWR, NRC-AC, AE--SGT & LUNDY

120524 PLUMBING

CAUSE - IMPROPER LUBRICANT USED DURING A UNIT SETUP. IT WAS OBSERVED THE FORCED CIRCULATION LOOP'S DISCHARGE VALVE STOPPED AT A POSITION OF 204 OPEN WHILE RECEIVING A SIGNAL FOR FULL CLOSURE. DURING AUGUST 1970 A LOW TEMPERATURE LUBRICANT HAD BEEN USED ON THE VALVE ACTUATOR. IT WAS DETERMINED THAT 3 VALVES IN WHICH THE LUBRICANT HAD BEEN USED WERE PLUGGED WITH A SOLVENT AND THE PUMP'S HIGH TEMPERATURE WEAKEST INSTALLATION. THE VALVE FUNCTIONED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

CAUSSE (BOM) - VALVES - MAIN CIRCULATION SYSTEM - FLOW, ACCUMULATION - VALVE OPERATIONS - PLUMBING - FAILURE, MAINTENANCE ERROR

120525

NPES PUMP FAILED TO START AUTOMATICALLY AT LA CAUSSE

UNINTERRUPTED POWER SUPPLY, LA CAUSSE, D.C.
 3 PAGES, LTR NRCU 70-12 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 3, 1970, DUCRET 50-409, TYPE--BOM, RPU--AL, AE--SUT & LUNNY

CAUSE - WIRE PULLED LOOSE DURING MODIFICATION. DURING A ROUTINE TEST ON THE DRYING INJECTION SYSTEM WHILE THE UNIT WAS SHUT DOWN, NPES PUMP 10 DID NOT START AUTOMATICALLY. A WIRE TO THE PUMP STARTING RELAY HAD BEEN PULLED LOOSE FROM ITS TERMINAL DURING MODIFICATION WORK. A WIRE HAD BEEN ADDED TO A WIRE BUNDLE. WHEN THE BUNDLE WAS TIGHTENED, THE WIRE TO THE RELAY WAS PULLED LOOSE. IT WAS RECONNECTED AND OTHER WIRES WERE CHECKED FOR TIGHTNESS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

CAUSSE (BOM) - PUMPS - NPES - TEST, SYSTEM OPERABILITY - FAILURE, EQUIPMENT - CABLES AND CONNECTORS - CONTROL SYSTEM - RELAYS - FAILURE, INSTALLATION ERROR - MODIFICATION

120526

CONTROL ROD ACCUMULATOR LOW PRESSURE SWITCH SET POINT LOW AT LA CAUSSE

UNINTERRUPTED POWER SUPPLY, LA CAUSSE, D.C.
 3 PAGES, LTR NRCU 70-12 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 7, 1970, DUCRET 50-409, TYPE--BOM, RPU--AL, AE--SUT & LUNNY

CAUSE - ACTUATING SIGNAL LOW. WHILE SHUT DOWN FOR MAINTENANCE THE LOW WAS PRESSURE PARTIAL SCRAM SWITCH ON CONTROL RODS WAS FOUND TO ACTUATE AT 1015 PSI WHICH IS LESS THAN THE TECH SPEC LIMIT OF 1250 PSIG. THIS CHANGE IN SET POINT WAS ATTRIBUTED TO LOOSENESS OF 2 SCREWS HOLDING A SWITCH ACTUATION PLATE UNTIL THE END OF THE DRYDOWN TUBE. THE ENTIRE SWITCH ASSEMBLY WAS REPLACED BY A SPARE CALIBRATED UNIT. THE CONTROL ROD VALVE MECHANISM WAS RETURNED TO SERVICE FOLLOWING TESTING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

CAUSSE (BOM) - INSTRUMENT, SWITCH - INSTRUMENT CALIBRATION - SENSORS, PRESSURE - TEST, SYSTEM OPERABILITY - FAILURE, INSTRUMENT - SET POINT - CONTROL ROD DRIVERS - FASTENER - FAILURE, IMMERSED - REACTOR PROTECTION SYSTEM - CONTROL SYSTEM - ACCUMULATORS

120527

STATUS OF RESERVE TIE BREAKER FROM REGULATED BUS INCORRECT AT LA CAUSSE

UNINTERRUPTED POWER SUPPLY, LA CAUSSE, D.C.
 3 PAGES, LTR NRCU 70-12 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION III, DEC. 10, 1970, DUCRET 50-409, TYPE--BOM, RPU--AL, AE--SUT & LUNNY

CAUSE - PROCEDURAL DEFICIENCY. DUE TO MISINTERPRETATION OF THE DEFINITION OF REDUNDANT BUSES IN THE TECH SPEC, THE RESERVE TIE BREAKER FROM THE TURBINE BUILDING 120V REGULATED BUS TO THE 120V AC NON-INTERRUPTIBLE BUS REMAINED CLOSED UPON COMPLETION OF SPECIAL TESTING. INSTALLATION OF A SECOND DIESEL GENERATOR AND STATIC INVERTER CHANGED THE PREFERRED POWER SOURCE TO THE 120V AC NON-INTERRUPTIBLE BUS. THE RESERVE TIE BREAKER WAS OPENED. ALIGNMENT PROCEDURE HAD BEEN DEFICIENT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$20.00

POWER - PERCEIVED POWER - ELECTRIC POWER, UNINTERRUPTED - ELECTRIC POWER, ALTERNATE - FAILURE, ADMINISTRATIVE CONTROL - PROCEDURES AND MANUALS - PRECAUTION - INDEPENDENCE - CAUSSE (BOM)

120528

CONCRETE CYLINDER TESTS FAIL TO MEET COMPRESSIVE STRENGTH AT LA SALLE 1 AND 2

UNINTERRUPTED POWER SUPPLY, CHICAGO, IL
 1 PAGE, LTR NRCU 70-12 TO NRC OFFICE OF 1 & 2, JAN. 23, 1970, DUCRETS 50-373/374, TYPE--BOM, RPU--AL, AE--SUT & LUNNY

CAUSE - INSUFFICIENT CEMENT. CONCRETE CYLINDER TESTS SHOW THAT 9 CYLINDERS DO NOT MEET THE SPECIFIED 7000 PSI COMPRESSIVE STRENGTH REQUIREMENTS. A REVIEW SHOWED THAT IN ALL BUT 9 CONCRETE PLACES, THE ACTUAL STRENGTH WAS EQUAL TO OR GREATER THAN REQUIRED. ACTUAL IN-PLACE STRENGTH OF THE CONCRETE IN THE 9 PLACES WILL BE DETERMINED FROM CUBES TAKEN IN THESE AREAS. ANOTHER 10 AREAS

110500 CONTINUED
OF MARSHAL STRENGTH WILL ALSO BE TESTED. UPRAISED MIXES ARE BEING USED UTILIZING INCREASED
AMOUNTS OF CEMENT IN THE MIX.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONCRETE • TEST, PROOF • MODIFICATION • FAILURE, DESIGN ERROR • PROPERTY, MECHANICAL • CONSTRUCTION •
COMPOSITION • LA SALLE 1 (room) • LA SALLE 2 (room)

115211

CORE SPRAY COOLING SYSTEM POND SOIL CONDITIONS AT LA SALLE 1 AND 2
COMMERCIAL EDISON CO., CHICAGO, IL
2 PGS, LTR W/RT TO NAC OFFICE OF I & E, APRIL 7, 1970, JACKET 50-373/374, TYPE--BOM, REF--GUEL, AE--SUI &
LUNNY

CASE - UNSUITABLE MATERIALS WITHIN THE CSC INTERIOR FLAME EXHAUSTION & AREAS WERE UNCOVERED
BEFORE CONTAINED MATERIAL THAT MIGHT BE SUBJECT TO LIQUEFACTION WERE SUBJECT TO UTRACIL
EXAMINATIONS EQUIVALENT TO THE SSC. THE AREAS WILL BE EXCAVATED AND REPLACED WITH CONTAINED
COMPACTED COMPOSITE SILTY CLAY FILL COMPACTED TO A MINIMUM 95% OF AMPLIFIED PAVEMENT DENSITY.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

WORK SPRAY • SITING, REACTION • COMPACTION • SOIL PROPERTY • FAILURE, DESIGN ERROR • COOLING POND • DESIGN
CONSTRUCTION • LA SALLE 1 (room) • LA SALLE 2 (room)

110240

FIRE OCCURS INSIDE REACTOR VESSEL FABRICATION SILO AT LINEMARK 1
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/RT TO NAC OFFICE OF I & E, JAN. 10, 1970, JACKET 50-354, TYPE--BOM, REF--GUEL, AE--DECHTEL

CASE - NOT STATED. A FIRE STARTED IN THE REACTOR VESSEL FABRICATION SILO AS THE VESSEL WAS
COOLING AFTER POST-BURN HEAT TREATMENT OF THE UPPER 3 RING BELOS. SINCE THE VESSEL WAS IN THE
EGG-POD & RAN THE FIRE WAS ALLOWED TO BURN IN THE UPPER LEVELS OF SCAFFOLDING METAL BRACKETS
AND HANGING SCAFFOLD BARS, UNTIL THE FIRE DRIPPED TO THE LOWER LEVELS NEAR THE TEMPORARY MOUNT
ONCE IT WAS EXTINGUISHED. ONE SAFE-END HAD SOME SLIGHT SURFACE CORROSION. IT WILL BE
REPLACED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FABRICATION • OF FIRE • NOZZLE • DAMAGE • HEAT TREATMENT • MAIN COOLING SYSTEM • CONSTRUCTION • LINEMARK 1 (room) •
PRESSURE VESSELS

115933

FIRE OCCURS INSIDE REACTOR VESSEL FABRICATION SILO AT LINEMARK 1
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/RT TO NAC OFFICE OF I & E, JUNE 1, 1970, JACKET 50-354, TYPE--BOM, REF--GUEL, AE--DECHTEL

CASE - NOT STATED. ON 11/24/75, A FIRE OCCURRED IN THE ANNULAR SPACE BETWEEN THE REACTOR VESSEL
AND ITS FABRICATION SILO DURING COOLING PHASE OF THE FINAL POST BURN HEAT TREATMENT OF THE
VESSEL'S UPPER 2 RING BELOS. THE FIRE DAMAGED ELECTRICAL EQUIPMENT AND MATERIAL IN THE ANNULAR
SPACE. INSPECTIONS AND TESTS WERE MADE TO DETERMINE THE EFFECT ON THE VESSEL'S INTEGRITY FROM
HEAT EFFECTS AND CONTAMINATION. CONTAMINANTS WERE REDUCED TO A SATISFACTORY LEVEL BY CLEANING.
GAS RECIRCULATION GULCH SAFE-END HAD SOME LAMINAR PRECIPITATION. IT WAS REPLACED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

OF FIRE • FAILURE, FABRICATION ERROR • DAMAGE • HEAT TREATMENT • CONSTRUCTION • LINEMARK 1 (room) • PRESSURE
VESSELS

109459

SET POINT UNSET IN PRESSURE SWITCH AT HILLSTONE 1
NORTHWEST NUCLEAR ENERGY CO., HARTFORD, CT
2 PGS, LTR W/RT-50-245/75-27 TO NAC OFFICE OF I & E, JAN. 7, 1970, JACKET 50-492, TYPE--BOM, REF--
GUEL, AE--EASCO

CASE - INSTRUMENT UNSET. DURING TESTING OF REACTOR LOW PRESSURE LPCI PUMP START PERMISSIVE WITH
THE REACTOR AT 100% POWER, 1 OF THE 4 SWITCHES WAS FOUND TO TRIP AT 322 PSIG WHICH IS LESS THAN
THE 320 PSIG MINIMUM LIMIT. THE APPARENT CAUSE WAS INSTRUMENT UNSET. THE ALTERNATE WAY, 312-65549A
SWITCH WAS RESET AND RETURNED TO SERVICE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT •
HILLSTONE 1 (room) • UNSET • SENSOR, PRESSURE • LPCI

109924
SERVICE WATER STRAINER PLUGS AND OPERATIONS AT MILESTONE 1
NORTHWEST NUCLEAR ENERGY CO., MANTFORD, CT
3 PAGES, LTR NRU-70-25373-20 TO NRC OFFICE OF I & E, NEWTON 1, JAN. 7, 1970, UNCLAS 50-245, TYPE--BWR, NRC--6000, AC--60000

CASE - UNIT SHUTDOWN WHILE HOT IN USE. DURING A TEST ON THE EMERGENCY SERVICE WATER SYSTEM WITH THE REACTOR AT 100% POWER, THE SERVICE WATER STRAINER WAS FOUND NOT FUNCTIONING AND THE DRIVE MOTOR WAS TRIPPED ON OVERLOAD. CULFUP OF UNIT AND FUELION MATERIAL WHILE THE STRAINER WAS NOT BEING UTILIZED CAUSED FAILURE. THE STRAINER WAS DISASSEMBLED, CLEANED, LUBRICATED, AND RETURNED TO SERVICE. IT WILL BE OPERATED REGULARLY TO ASSURE OPERABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + PLUG + OPERATOR, SCREEN + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + MAINTENANCE LAGGING + EMERGENCY LAGGING + MILESTONE 1 (BWR)

109926
MILL FLOW IN CLEARING FILTER SERVICE TANK AT MILESTONE 1
NORTHWEST NUCLEAR ENERGY CO., MANTFORD, CT
3 PAGES, LTR NRU-70-25373-20 TO NRC OFFICE OF I & E, NEWTON 1, JAN. 28, 1970, UNCLAS 50-245, TYPE--BWR, NRC--6000, AC--60000

CASE - LOCALIZED CORROSION DURING FULL POWER OPERATION, AN UNANTICIPATED DROP IN THE LEVEL OF THE CLEARING FILTER SERVICE TANK PROMPTED AN INVESTIGATION WHICH REVEALED A HOLE IN THE TANK ABOUT 1-INCH IN DIAMETER. ABOUT 7000 GALLONS OF WATER CONTAINING FILTER MATERIAL DRAINED FROM THE TANK TO THE FLOOM AND WAS PROCEEDED TO ANOTHER SERVICE STORAGE TANK. THE HOLE IN THE TANK WAS LOCATED AND THE TANK WAS APPARENTLY CAUSED BY LOCALIZED CORROSION OF THE TANK WALL DUE TO LOSS OF THE COAT LAYER IN THAT AREA. THE TANK WAS PATCHED AND RETURNED TO SERVICE ON THE SAME DAY.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + WATER STORAGE + FLOOM + CORROSION + COATING + STORAGE CONTAINER + CLEAR + PLASTICS + MILESTONE 1 (BWR) + FAILURE, IMPERMENT + FILTERS

109940
MAIN STEAMLINE NAVIGATION MONITOR BEARING LOW AT MILESTONE 1
NORTHWEST NUCLEAR ENERGY CO., MANTFORD, CT
3 PAGES, LTR NRU-70-1731 TO NRC OFFICE OF I & E, NEWTON 1, FEB. 13, 1970, UNCLAS 50-245, TYPE--BWR, NRC--6000, AC--60000

CASE - AMPLIFIER UNIT. DURING ROUTINE SURVEILLANCE WITH THE REACTOR AT 100% POWER, 1 OF THE 4 MAIN STEAMLINE NAVIGATION MONITORS WAS FOUND TO HAVE AN OUTPUT OF TWO LUMEN FROM BEARING. THE AMPLIFIER WAS DRIFTED LOW AFTER RECALIBRATION, THE MONITOR APPEARED TO BE STABLE. IT IS A GE 0 BEARING NAVIGATION MONITOR.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + MILESTONE 1 (BWR) + DRIFT + ELECTRONIC FUNCTION UNITS + NAVIGATION MONITORS

109948
VACUUM BREAKER FAILED TO CLOSE AT MILESTONE 1
NORTHWEST NUCLEAR ENERGY CO., MANTFORD, CT
3 PAGES, LTR NRU-70-25373-20 TO NRC OFFICE OF I & E, NEWTON 1, FEB. 23, 1970, UNCLAS 50-245, TYPE--BWR, NRC--6000, AC--60000

CASE - TEFLON BUSHING GOT OFF HOOKS, DURING TESTING WHILE OPERATING AT 100% POWER, 1 OF THE 10 VACUUM BREAKERS FAILED TO CLOSE PROPERLY. A TEFLON BUSHING HAD COME OUT OF HOOKS CAUSING EXCESSIVE FRICTION ON THE VALVE SHAFT. THE VALVE WAS HIRED SHUT. ON A SUBSEQUENT SHUTDOWN, THE BUSHING WAS REMOVED AND REWORKED. TEFLON BUSHINGS HAVE A TENDENCY TO LOSE THEIR SHAPE WITH TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + CONTAINMENT VACUUM BREAKER + TEST, SYSTEM OPERABILITY + PLASTICS + BREAKING + MILESTONE 1 (BWR) + FAILURE, IMPERMENT + TUBES

109954
LEVEL UP ACTIVITY IN SYSTEMS CALLED IN TIMES CONTINUED VALUES AT MILESTONE 1
NORTHWEST NUCLEAR ENERGY CO., MANTFORD, CT
3 PAGES, LTR NRU-70-25373-20 TO NRC OFFICE OF I & E, NEWTON 1, FEB. 23, 1970, UNCLAS 50-245, TYPE--BWR, NRC--6000, AC--60000

CASE - NORMAL PLANT OPERATIONS. SYSTEMS WITHIN AT THE COLLECTION POINT WITHIN 500 FEET OF THE

111704 CONTINUOUS

DISCHARGE IN OCTOBER 1975 WERE FOUND TO HAVE LEVELS OF ACTIVITY THAT EXCEEDED THE DESIGN STATION VALUE BY UP TO A FACTOR OF 100. THESE LEVELS ARE OF THE CONSEQUENCE TO THE HEALTH AND SAFETY OF THE PUBLIC. LEVELS INCREASED IN EARLY 1975 FROM THE OPERATION OF UNIT 1. THAT NOW APPEARS TO BE A DECREASING TREND.

AVAILABILITY - AEC PUBLIC DOCUMENT NUMBER, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WASTE DISPOSAL • MONITORING PROGRAM, ENVIRONMENTAL • MILESTONE 1 (END) • ANIMAL, INVENTORIAL • CONCENTRATION • FAILURE, IMMINENT

111040

WATER SEALS IMPROVED ON INTAKE SCREENS AT MILESTONE 1

NORTHEAST NUCLEAR ENERGY CORP., HARTFORD, CT

2 PGS. LTR NRC-70-9740 TO USNRC, NEWTON, MASSACHUSETTS, MARCH 2, 1970, SUBJECT 50-495, TYPE--DNR, REF--WOL, AE--EASCU

CAUSE - NO APPARENT CAUSE. A TOTAL OF 34 WATER SEALS IN THE UNCLERIFIED & DOWN LEGS OF THE INTAKE SCREENS WERE MONITORED. THE CFS LIMIT IS 25. THERE WAS NO APPARENT CAUSE RELATED TO PLANT OPERATIONS.

AVAILABILITY - AEC PUBLIC DOCUMENT NUMBER, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • MILESTONE 1 (END) • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM

111047

SINGLE TUBE IN ISOLATION CONDENSER FAILS AT MILESTONE 1

NORTHEAST NUCLEAR ENERGY CORP., HARTFORD, CT

2 PGS. LTR NRC-70-9740 TO USNRC, NEWTON, MASSACHUSETTS, MARCH 3, 1970, SUBJECT 50-495, TYPE--DNR, REF--WOL, AE--EASCU

CAUSE - STRESS CORROSION CRACKING. FOLLOWING A REACTOR TRIP, A SINGLE TUBE IN THE ISOLATION CONDENSER FAILED. FAILURE ALLOWED PRIMARY STEAM INTO THE SMALL SIDE OF THE ISOLATION CONDENSER AND EVENTUALLY OUT OF THE REACTOR BUILDING VIA THE ISOLATION CONTAINER VENT. EXAMINATION INDICATED STRESS CORROSION CRACKING THAT AFFECTED 130 TUBES. ISOLATION AND THAT CRACKING OCCURRED AS A RESULT OF AN EARLIER SEA WATER INTRUSION INCIDENT. THE ENTIRE ISOLATION CONDENSER WILL BE RETUBED WITH 304S INSTEAD OF 304S AND TUBE MATERIAL IS PLACE OF THE EXISTING 304 STAINLESS STEEL. THE RADIOACTIVITY RELEASE DID NOT EXCEED LIMITS.

AVAILABILITY - AEC PUBLIC DOCUMENT NUMBER, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MANIPULATION • RADIOACTIVITY RELEASE • STRESS CORROSION • INCONEL • FAILURE, FUSING • TUBING • MILESTONE 1 (END) • NRCIC

111050

SET POINT DRIFT IN CONDENSER VACUUM SWITCH AT MILESTONE 1

NORTHEAST NUCLEAR ENERGY CORP., HARTFORD, CT

2 PGS. LTR NRC-70-9740 TO USNRC, NEWTON, MASSACHUSETTS, MARCH 9, 1970, SUBJECT 50-495, TYPE--DNR, REF--WOL, AE--EASCU

CAUSE - INSTRUMENT DRIFT. DURING TESTING ON THE CONDENSER LOW VACUUM REACTOR PROTECTION SYSTEM INPUT WHILE OPERATING AT LOW POWER, 1 OF THE 4 SWITCHES WAS FOUND TO TRIP AT 22.0 INCHES OF MERCURY VACUUM, EXCEEDING THE 23 INCH LIMIT. THE PROBLEM WAS INSTRUMENT DRIFT. THE CORRESPONDING MERCURY DITCH PRESSURE SWITCH WAS RESET.

AVAILABILITY - AEC PUBLIC DOCUMENT NUMBER, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • CONDENSER • SET POINT • MILESTONE 1 (END) • DRIFT • SENSOR, PRESSURE

111103

REACTOR REGULATION VALVE LOCKS IN AS IS POSITION AT MILESTONE 1

NORTHEAST NUCLEAR ENERGY CORP., HARTFORD, CT

4 PGS. LTR NRC-70-9740 TO USNRC, NEWTON, MASSACHUSETTS, MARCH 12, 1970, SUBJECT 50-495, TYPE--DNR, REF--WOL, AE--EASCU

CAUSE - AIR PRESSURE SENSOR FAILURE. FOLLOWING A PLANT TRIP, 2 OF THE 2 PREMATER REGULATION VALVES WAS FOUND LOCKED IN THE AS IS POSITION. REACTOR LEVEL WAS UNCONTROLLED AIR REGULATOR VALVE. THE LOCKUP WAS CAUSED BY A DIAGRAM FAILURE IN THE FISHEN PORTER, MODEL 800A, 3-ARY, AIR PRESSURE REGULATOR WHICH SIMULATED A LOSS OF CONTROL AIR PRESSURE. THE REGULATOR WAS REPAIRED, TESTED, AND RETURNED TO SERVICE.

AVAILABILITY - AEC PUBLIC DOCUMENT NUMBER, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL • FAILURE, INSTRUMENT • MAIN COOLING SYSTEM • PNEUMATIC SYSTEM • MILESTONE 1 (END) • FAILURE, IMMINENT

111103 CONTINUED
 • OPERATOR • VALVES

111111
 WAS TURBINE STARTING TIME EXCEEDS LIMIT AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 • PUS, LTR W/NU-70-01/17 TO NRC OFFICE OF I & E, REGION 1, MARCH 15, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
 AE--EASCO

CAUSE - GOVERNOR OUT OF ADJUSTMENT. WHILE THE UNIT WAS OPERATING AT 100% POWER, THE GAS TURBINE STARTING TIME WAS FOUND TO BE 49.6 SECONDS VERSUS THE ALLOWABLE 40 SECONDS. THE GOVERNOR WAS FOUND TO BE SLIGHTLY OUT OF ADJUSTMENT, THUS THE MACHINE WAS NOT ACCELERATING PROPERLY. THE GOVERNOR WAS READJUSTED, THE TURBINE WAS TESTED, AND RETURNED TO SERVICE IN ABOUT 5.5 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM • EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • TURBINE • GAS • MILLSTONE 1 (BWR)

111300
 SET POINT DRIFT IN PRESSURE SWITCH AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 • PUS, LTR W/NU-70-7/36 TO NRC OFFICE OF I & E, REGION 1, MARCH 15, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
 AE--EASCO

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 99% POWER, 1 OF 4 TURBINE CONTROL VALVE ACCELERATION RELAY PRESSURE SWITCHES WAS FOUND TO BE TRIPPING AT 167 PSIG. THE LIMIT IS 170 PSIG. THE CAUSE WAS INSTRUMENT DRIFT. THE PENN CONTROLS, MODEL P72AA-997, SWITCH WAS RECALIBRATED TO 177 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • MILLSTONE 1 (BWR) • DRIFT • SENSORS, PRESSURE

111733
 RADIOACTIVE SHIPPING CASE FOUND TO BE CONTAMINATED AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 • PG, LTR W/NU-70-10/17 TO NRC DIRECTOR OF REGULATORY OPERATIONS, MARCH 15, 1970

CAUSE - IMPROPER SURVEYS. A RADIOACTIVE SHIPPING CASE, OWNED BY AN OUTSIDE CONTRACTOR, ARRIVED AT THE SITE. THE LINER WAS LIFTED OUT AND MOVED ABOUT 20 FEET FROM THE TRAILER. SNOW AND ICE IN THE CASE WAS SHOVELLED ONTO A NEARBY AREA. THEN THE CASE WAS FOUND TO BE CONTAMINATED. IT HAD NOT BEEN CHECKED AT THE SITE SINCE THE CONTRACTOR SAID IT WAS NOT CONTAMINATED. THE SNOW AND ICE WAS PUT INTO 55 GALLON DRUMS. THE GROUND WAS DECONTAMINATED. NO MEASURABLE EXPOSURE TO PERSONNEL OCCURRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

• SHIPPING CONTAINER • WASTE HANDLING • SURVEY, RADIATION • WASTE TRANSPORTATION • CONTAMINATION • FAILURE, ADMINISTRATIVE CONTROL • MILLSTONE 1 (BWR)

111309
 WAS TURBINE FAILS TO START IN THE REQUIRED TIME AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 • PUS, LTR W/NU-70-10/17 TO NRC OFFICE OF I & E, REGION 1, MARCH 22, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E., AE--EASCO

CAUSE - GOVERNOR OUT OF ADJUSTMENT. DURING A TEST WITH THE REACTOR AT 100% POWER, THE GAS TURBINE FAILED TO START IN THE REQUIRED TIME OF 40 SECONDS. AN OVERLY PLANT SHUTDOWN WAS CONDUCTED. THE GOVERNOR WAS OUT OF ADJUSTMENT, THUS THE MACHINE COULD NOT REACH ITS RATED SPEED. IT WAS READJUSTED, THE GAS TURBINE TESTED, AND THE UNIT WAS RETURNED TO SERVICE. THE GAS TURBINE WAS BEING TESTED DAILY DUE TO THE IMPERABLE ISOLATION CONDENSER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • TURBINE • GAS • MILLSTONE 1 (BWR) • REACTOR SHUTDOWN

112202
 HYDRAULIC SMCR ABSORBER FOUND IMPERABLE AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 • PUS, LTR W/NU-70-11/17 TO NRC OFFICE OF I & E, REGION 1, MARCH 23, 1970, DOCKET 50-245, TYPE--BWR, NRC--

112102 *CONTINUED
G.E., AE--EBASCO

CAUSE - PISTON ROD PACKING LEAK. DURING ROUTINE SURVEILLANCE WHILE THE PLANT WAS IN COLD SHUTDOWN MODE, 8 BERGEN PATERSON HYDRAULIC SHOCK AND SHOT ARRESTORS WERE FOUND TO HAVE LOW OIL LEVELS. BENCH TESTS SHOWED ONLY 1 TO BE INOPERABLE. THE PISTON AND PACKING IN THE HYDRAULIC CYLINDER HAD DEGRADED ALLOWING THE OIL TO LEAK OUT. ALL 8 UNITS WERE REBUILT, TESTED, AND REINSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT * *SHOCK ABSORBER * FAILURE, DESIGN ERROR * SEAL * SUPPORT STRUCTURE * SURVEILLANCE PROGRAM * *LEAK * MILLSTONE 1 (BWR) * PIPES AND PIPE FITTINGS

112161
FISH IMPINGED ON INTAKE SCREENS AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS, LTR W/NO-70-13/40 TO NRC OFFICE OF I & E, REGION 1, MARCH 22, 1970, JACKET 50-245, TYPE--BWR, NRC--
G.E., AE--EBASCO

CAUSE - NO APPARENT CAUSE. WITH THE UNIT OPERATING NEAR FULL POWER, 26 WINTER SKATE IN THE 6-INCH LENGTH CATEGORY HAD BEEN IMPINGED AS OF MARCH 15. THIS EXCEEDS THE REPORT LEVEL OF 25 PER MONTH. THERE WAS NO APPARENT CAUSE RELATED TO CHANGES IN PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FILTER, SCREEN * MILLSTONE 1 (BWR) * *ANIMAL, FISH * MORTALITY * INTAKE * CONDENSER COOLING SYSTEM * FAILURE, INHERENT

112310
GAS TURBINE FAILS TO ACHIEVE RATED SPEED AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS, LTR W/NO-70-12/17 TO NRC OFFICE OF I & E, REGION 1, MARCH 29, 1970, JACKET 50-245, TYPE--BWR, NRC--
G.E., AE--EBASCO

CAUSE - ELECTRONIC GOVERNOR MALFUNCTION. DURING A DAILY TEST OF THE GAS TURBINE WHILE OPERATING AT 25% POWER, THE TURBINE FAILED TO REACH RATED SPEED. A PLANT SHUTDOWN WAS STARTED. THE ELECTRONIC COMPONENT BOARD DESIGNATED AS THE GOVERNOR-MAGNETIC BOARD WAS REPLACED. OTHER PLANNED MODIFICATIONS TO THE GAS TURBINE WERE MADE AT THIS TIME. THE UNIT WAS TESTED AND RETURNED TO SERVICE. THE MALFUNCTION IS ATTRIBUTED TO THE HEAVIER DUTY-CYCLE OF BEING STARTED ON A DAILY BASIS WHILE THE ISOLATION CONDENSER IS INOPERABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, COMPONENT * EMERGENCY POWER, ELECTRIC * TEST, SYSTEM OPERABILITY * *TURBINE * *GAS * MILLSTONE 1 (BWR) * REACTOR SHUTDOWN * FAILURE, INHERENT * ELECTRONIC FUNCTION UNITS

113200
FISH IMPINGE ON INTAKE SCREENS AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS, LTR W/NO-70-15/40 T, NRC OFFICE OF I & E, REGION 1, APRIL 20, 1970, JACKET 50-245, TYPE--BWR, NRC--
G.E., AE--EBASCO

CAUSE - NO APPARENT CAUSE. AS OF APRIL 10, 28 WINTER SKATE GREATER THAN 6 INCHES LONG HAD BEEN IMPINGED THEREBY EXCEEDING THE 25 PER MONTH REPORT LEVEL. THERE WAS NO APPARENT CAUSE RELATED TO CHANGES IN PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FILTER, SCREEN * MILLSTONE 1 (BWR) * *ANIMAL, FISH * MORTALITY * CONDENSER COOLING SYSTEM * FAILURE, INHERENT

113540
NUCLEAR GAS RELEASE RATE EXCEEDS REPORTING LEVEL AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS, LTR W/NO-70-17/40 TO NRC OFFICE OF I & E, REGION 1, APRIL 30, 1970, JACKET 50-245, TYPE--BWR, NRC--
G.E., AE--EBASCO

CAUSE - MINOR FUEL CLAD PERFORATIONS. WHILE OPERATING AT 100% POWER, THE 48 HOUR AVERAGE NUCLEAR GAS RELEASE RATE FROM THE STACK REACHED THE REPORTING LEVEL. MINOR FUEL CLAD PERFORATIONS CAUSED THE INCREASE AS POWER WAS INCREASED FROM 40 TO 100%. NO NEW FUEL PERFORATIONS WERE NOTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

AIRBORNE RELEASE * NUCLEAR GAS * RELEASE RATE * STACK * PLANT * FAILURE, CLADDING * MILLSTONE 1 (BWR) * FAILURE, INHERENT * FUEL ELEMENTS

113542
 SWITCHBOARD BATTERIES NOT TESTED ON SCHEDULE AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NU-70-14731 TO NRC OFFICE OF I & E, REGION 1, APRIL 30, 1976, DOCKET 50-245, TYPE--BWR, NRC--G.E., AE--EDASCO

CAUSE - ADMINISTRATIVE CONTROL. WHILE OPERATING AT 40% POWER, IT WAS FOUND THAT THE SWITCHBOARD BATTERIES WERE TESTED ONE WEEK BEYOND THE LIMIT. THE CAUSE WAS AN ADMINISTRATIVE ERROR ON THE PART OF THE INDIVIDUAL RESPONSIBLE FOR THE TEST. NO DAMAGE OCCURRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING + FAILURE, ADMINISTRATIVE CONTROL + TEST INTERVAL + MILLSTONE 1 (BWR) + BATTERIES & CHARGERS

113541
 PRIMARY CONTAINMENT ISOLATION VALVE FAILS TO CLOSE COMPLETELY AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NU-70-10711 TO NRC OFFICE OF I & E, REGION 1, MAY 4, 1976, DOCKET 50-245, TYPE--BWR, NRC--G.E., AE--EDASCO

CAUSE - INTERNAL BINDING. DURING AN INVESTIGATION OF THE DRYWELL VENT VALVE BYPASS VALVE FOR LOSS OF CLOSED INDICATION WITH THE REACTOR AT 100% POWER, IT WAS FOUND THAT THE VALVE WOULD NOT GO FULLY CLOSED EVERY TIME IT WAS CYCLED. FAILURE APPEARS TO BE ATTRIBUTABLE TO INTERNAL BINDING. THE VALVE WAS MANUALLY CLOSED. IT WILL BE REPAIRED AT THE NEXT PLANT OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + MILLSTONE 1 (BWR) + VALVES

113538
 LEVELS OF ACTIVITY IN OYSTERS EXCEED 10 TIME CONTROL AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NU-70-19740 TO NRC OFFICE OF I & E, REGION 1, MAY 7, 1976, DOCKET 50-245, TYPE--BWR, NRC--G.E., AE--EDASCO

CAUSE - WASTE DISPOSAL. OYSTERS GATHERED AT THE COLLECTION POINT WITHIN 500 FEET OF THE DISCHARGE IN FEBRUARY 1976 WERE FOUND TO HAVE LEVELS OF ACTIVITY THAT EXCEEDED THE CONTROL STATION VALUES BY OVER A FACTOR OF TEN. THERE APPEARS TO BE A DECREASING TREND SINCE EARLY 1975. THE AUGMENTED LIQUID WASTE TREATMENT SYSTEM FOR UNIT 1 HAS BEEN IN OPERATION SINCE MARCH 15, 1976.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + RADIOISOTOPE + MONITORING PROGRAM, ENVIRONMENTAL + MILLSTONE 1 (BWR) + RADIOISOTOPE UPTAKE + ANIMAL, INVERTEBRATE + CONCENTRATION

113539
 QUARTERLY OFF GAS RADIATION MONITOR TEST NOT PERFORMED AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NU-70-10731 TO NRC OFFICE OF I & E, REGION 1, MAY 7, 1976, DOCKET 50-245, TYPE--BWR, NRC--G.E., AE--EDASCO

CAUSE - INCORRECT COMPUTER SCHEDULE. THE QUARTERLY OFF GAS RADIATION MONITOR CALIBRATION MAINTENANCE SCHEDULED FOR 1/22/76 WAS NOT PERFORMED DUE TO AN INCORRECT COMPUTER SCHEDULE LISTING ERRONEOUS INFORMATION. THE COMPUTER SCHEDULE HAS BEEN CORRECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COMPUTER PROGRAM + TESTING + OFF GAS + FAILURE, ADMINISTRATIVE CONTROL + TEST INTERVAL + MILLSTONE 1 (BWR) + RADIATION MONITORS

114203
 SLUDD IMPINGED ON INTAKE SCREEN AT MILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NU-70-20740 TO NRC OFFICE OF I & E, REGION 1, MAY 24, 1976, DOCKET 50-245, TYPE--BWR, NRC--G.E., AE--EDASCO

CAUSE - NO APPARENT CAUSE. A TOTAL OF 1023 SLUDD, IN THE GREATER THAN 0 INCH CATEGORY, WERE IMPINGED DURING MAY 1976. THIS EXCEEDS THE ETS LIMIT OF 750. THERE WAS NO APPARENT CAUSE RELATED TO PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN + MILLSTONE 1 (BWR) + ANIMAL, INVERTEBRATE + MORTALITY + CONDENSER COOLING SYSTEM + FAILURE,

114203 *CONTINUED*
IMMEDIATE

114202
FISH IMPINGED ON INTAKE SCREEN AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS, LTR WFO-70-22440 TO NRC OFFICE OF I & E, REGION I, MAY 27, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
AE--EBASCO

CAUSE - NO APPARENT CAUSE. IMPINGEMENT LOSSES DURING MAY 1970 EXCEEDED ETS LIMITS FOR THE GREATER THAN 6 INCH CATEGORY FOR 4 SPECIES. LIMITS FOR FLUKE, BLACKFISH, CUMBER, AND PUFFER WERE EXCEEDED BY 6, 6, 6, AND 3 RESPECTIVELY. NO APPARENT CAUSE RELATED TO CHANGE IN PLANT OPERATION WAS FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN + HILLSTONE 1 (BWR) + ANIMAL, FISH + MORTALITY + CONDENSER COOLING SYSTEM + FAILURE, IMMEDIATE

114402
FISH IMPINGED ON INTAKE SCREENS AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS, LTR WFO-70-24440 TO NRC OFFICE OF I & E, REGION I, JUNE 3, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
AE--EBASCO

CAUSE - NO APPARENT CAUSE. DURING MAY 1970, 30 FOURSPOT FLOUNDER, IN THE GREATER THAN 6-INCH CATEGORY, WERE IMPINGED. THIS EXCEEDS THE ETS REPORT LEVEL OF 25. THERE WAS NO APPARENT CAUSE RELATED TO CHANGES IN PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN + HILLSTONE 1 (BWR) + ANIMAL, FISH + MORTALITY + CONDENSER COOLING SYSTEM + FAILURE, IMMEDIATE

114403
CONDUCTIVITY OF REACTOR COOLANT WATER EXCEEDS LIMIT AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS, LTR WFO-70-23411 TO NRC OFFICE OF I & E, REGION I, JUNE 11, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
AE--EBASCO

CAUSE - ISOLATION CONDENSER WATER. DURING ISOLATION VALVE TESTING WHILE OPERATING AT 100% POWER, THE REACTOR COOLANT WATER CONDUCTIVITY INCREASED TO 2.25 UMHO, EXCEEDING THE 2 UMHO LIMIT. IT APPEARS THAT MATERIALS AND/OR PROCESSES USED IN THE RECENT ISOLATION CONDENSER RETURN ARE CAUSING INCREASES IN WATER CONDUCTIVITY AND CHLORIDE ION CONCENTRATION IN THE CONDENSER RETURN LOG. THE CLEANUP SYSTEM WAS RETURNED TO SERVICE TO REDUCE CONDUCTIVITY. A FEED-BLEED METHOD WAS USED TO REDUCE THE CONDUCTIVITY IN THE ISOLATION CONDENSER BUT VALUES INCREASED WHEN THE FEED-BLEED WAS CEASED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + MAIN COOLING SYSTEM + COOLANT QUALITY + HILLSTONE 1 (BWR) + RCIC

115001
FISH IMPINGED ON INTAKE SCREENS AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS, LTR WFO-70-25440 TO NRC OFFICE OF I & E, REGION I, JUNE 16, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
AE--EBASCO

CAUSE - NO APPARENT CAUSE. WITH THE UNIT OPERATING AT 100% POWER, 36 PUFFER GREATER THAN 6 INCHES LONG WERE IMPINGED BY JUNE 5. THIS EXCEEDS THE REPORTING LIMIT OF 30 PER MONTH. THERE WAS NO APPARENT CAUSE RELATED TO CHANGES IN PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN + HILLSTONE 1 (BWR) + ANIMAL, FISH + MORTALITY + CONDENSER COOLING SYSTEM + FAILURE, IMMEDIATE

115516
REACTOR POWER EXCEEDS POWER-VS-FLOW LIMIT AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS, LTR WFO-70-21331 TO NRC OFFICE OF I & E, REGION I, JUNE 22, 1970, DOCKET 50-245, TYPE--BWR, NRC--G.E.,
AE--EBASCO

CAUSE - VARIATION BETWEEN ACTUAL AND LIMIT. DURING POWER ASCENSION WITH THE UNIT AT 85% POWER, IT WAS FOUND THAT THE REACTOR POWER WAS ABOVE THE DEFINED POWER-VERSUS-FLOW LIMIT. THE APPARENT

115510 *CONTINUED*

CAUSE WAS THAT THE TRUE POWER-TO-FLOW RELATIONSHIP IS NOT EXACTLY THE SAME AS THE RELATIONSHIP IN THE TECH SPECS. CONTROL AIDS WERE INSERTED TO DECREASE POWER TO THE PROPER POWER FOR THE INDICATED FLOW. MORE EXPLICIT INFORMATION AS TO TRUE FLOW WILL BE PROVIDED TO THE OPERATOR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • REACTOR POWER • FLOW • HILLSTONE 1 (ENR)

115515

FISH AND SQUID IMPINGED ON SCREENS AT HILLSTONE 1

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR N/NU-70-20/40 TO NRC OFFICE OF I & E, REGION 1, JUNE 24, 1970, DOCKET 50-245, TYPE--BWR, NRC--C.E., AE--EASCO

CAUSE - NO APPARENT CAUSE. WHILE THE UNIT WAS OPERATING AT 100% POWER, 703 SQUID GREATER THAN 6 INCHES WERE IMPINGED BY 6/17/70 EXCEEDING THE 750 LIMIT. ALSO, 71 SUMMER FLOUNDER GREATER THAN 6 INCHES WERE IMPINGED BY THE SAME DATE EXCEEDING THE MONTHLY LIMIT OF 50. THERE WAS NO APPARENT CAUSE RELATED TO CHANGES IN PLANT OPERATION. BOTH ARE MORE ABUNDANT THAN IN PAST YEARS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • HILLSTONE 1 (ENR) • ANIMAL, INVERTEBRATE • ANIMAL, FISH • MORTALITY • CONDENSER COOLING • ITEM • FAILURE, IMMERENT

115720

FISH IMPINGED ON INTAKE SCREENS AT HILLSTONE 1

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR N/NU-70-20/40 TO NRC OFFICE OF I & E, REGION 1, JUNE 24, 1970, DOCKET 50-245, TYPE--BWR, NRC--C.E., AE--EASCO

CAUSE - NO APPARENT CAUSE. BY JUNE 17, 703 SQUID AND 71 SUMMER FLOUNDER GREATER THAN 6 INCHES IN LENGTH HAD BEEN IMPINGED. REPORT LIMITS ARE 750 AND 50 PER MONTH. THERE WAS NO APPARENT CAUSE THAT COULD BE RELATED TO CHANGES IN PLANT OPERATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • HILLSTONE 1 (ENR) • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, IMMERENT

115725

SET POINT DRIFT IN REACTOR LOW PRESSURE SWITCH AT HILLSTONE 1

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR N/NU-70-27/31 TO NRC OFFICE OF I & E, REGION 1, JULY 9, 1970, DOCKET 50-245, TYPE--BWR, NRC--C.E., AE--EASCO

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE REACTOR LOW PRESSURE PERMISSIVE SWITCH WHILE OPERATING AT 100% POWER, ONE INSTRUMENT WAS FOUND TO BE TRIPPING ITS SWITCHES OUTSIDE THE ACCEPTANCE RANGE OF 330 +/- 14 PSIG. ONE SWITCH TRIPPED AT 370 PSIG AND THE OTHER AT 270 PSIG. THE CAUSE WAS ATTRIBUTED TO INSTRUMENT DRIFT. THE MELETRON CORP., MODEL NO. J72-65549A-292, SWITCH WAS RESET AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • EMERGENCY COOLING SYSTEM • HILLSTONE 1 (ENR) • DRIFT • SENSORS, PRESSURE

116208

ANOMALOUS RADIOACTIVITY OBSERVED IN AQUATIC FLORA AT HILLSTONE 1

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR N/ENV, RPT TO NRC OFFICE OF I & E, REGION 1, JULY 30, 1970, DOCKET 50-245, TYPE--BWR, NRC--C.E., AE--EASCO

CAUSE - WASTE DISPOSAL. ANALYSIS OF SAMPLES COLLECTED JUNE 8 INDICATED CONCENTRATION OF AM-241 AND CE-137 IN AQUATIC FLORA THAT EXCEEDED CONTROL STATION VALUES BY OVER A FACTOR OF 10. ACTIVITY LEVELS HAVE BEEN DECREASING SINCE THE THIRD QUARTER OF 1975. THESE CONCENTRATIONS INDICATE A DECREASE OF 3 AND 2, RESPECTIVELY, SINCE THE LAST SAMPLE TAKE IN OCTOBER 1975. THE AUGMENTED LIQUID RADIOACTIVE WASTE TREATMENT SYSTEM AT UNIT 1 HAS BEEN OPERATIONAL SINCE 3/15/76. LIQUID RADIOACTIVE DISCHARGES HAVE DECREASED SIGNIFICANTLY

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WASTE DISPOSAL • SAMPLING • WASTE DISPOSAL, LIQUID • MONITORING PROGRAM, ENVIRONMENTAL • HILLSTONE 1 (ENR) • ECOSYSTEM, AQUATIC • CONCENTRATION • FAILURE, IMMERENT

116409
ISOLATION CONDENSER VALVE FOUND INOPERABLE AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS. LTR W/NO 70-20/34 TO NRC OFFICE OF I & E, REGION I, JULY 30, 1970, DCKET 50-245, TYPE--PWR, NRC--G.E.,
AE--EDASCO

CAUSE - YONE NUT ADAPTER FAILURE. DURING TESTING WITH THE REACTOR AT 0% POWER, THE ISOLATION CONDENSER INBOARD INLET ISOLATION VALVE WAS FOUND TO BE INOPERABLE. THE REACTOR WAS SHUT DOWN FOR REPAIR. THE YONE NUT ADAPTER AND LEVEL GEAR MOUNTING OF THE MOTOR OPERATOR HAD FAILED ALLOWING THE OPERATOR TO SEPARATE FROM THE VALVE. EARLIER, THE VALVE HAD BEEN BACK SEATED TO REDUCE ARTHUR UNIDENTIFIED LEAKAGE. FAILURE IS BELIEVED TO HAVE OCCURRED DURING BACKSEATING OR REMOVAL FROM BACKSEATING. THE MOTOR OPERATOR WAS REPAIRED AND THE VALVE RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • TEST, SYSTEM OPERABILITY • MILLSTONE 1 (DWR) • REACTOR SHUTDOWN • ORCIC • VALVE OPERATORS • VALVES

116529
BLUE CRAB IMPINGED ON SCREENS AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS. LTR W/ENV, RPT ETS-MR/50-245/70-17 TO NRC OFFICE OF I & E, REGION I, AUG. 4, 1970, DCKET 50-245, TYPE--DWR, NRC--G.E., AE--EDASCO

CAUSE - NO APPARENT CAUSE. DURING POWER OPERATION WITH 4 CIRCULATING WATER PUMPS IN OPERATION, 69 BLUE CRAB, GREATER THAN 4 INCHES LONG, HAD BEEN IMPINGED AS OF 7/29/70, EXCEEDING THE ETS LIMIT OF 60. THERE WAS NO APPARENT CAUSE WHICH WAS RELATED TO CHANGES IN PLANT OPERATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • MILLSTONE 1 (DWR) • ANIMAL, INVERTEBRATE • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

116700
GAS TURBINE GENERATOR BECOMES INOPERABLE DURING PLANT TRIP AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS. LTR W/NO 50-245/70-29/17 TO NRC OFFICE OF I & E, REGION I, AUG. 24, 1970, DCKET 50-245, TYPE--DWR, NRC--G.E., AE--EDASCO

CAUSE - IMPROPER ALIGNMENT. WITH THE REACTOR AT 0% POWER, THE GAS TURBINE GENERATOR AND DIESEL GENERATOR WERE BEING RUN WITHOUT LOAD AS A PRECAUTION DUE TO THE PASSING OF HURRICANE BELLE. WHEN THE PLANT TRIPPED DURING A LOSS OF NORMAL AC POWER DUE TO SALT BUILDUP ON THE 345 KV LINES AND INSULATORS, THE GAS TURBINE GENERATOR BECAME INOPERABLE. IT TRIPPED AGAIN AFTER A SUBSEQUENT AUTOMATIC RESTART. INCORRECT ALTERNATE AC FEED TO THE GAS TURBINE AUXILIARIES CAUSED THE TRIP BOTH TIMES. TEST PROCEDURES HAD BEEN USED TO START THE SYSTEM. THIS USED THE ALTERNATE AC FEED. THERE IS A MANUAL SWITCH TO NORMAL AC FEED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • FAILURE, OPERATOR ERROR • ACCIDENT, LOSS OF POWER • PROCEDURES AND MANUALS • SCRAM, REAL • DESTRUCTIVE WIND • TURBINE • WEATHER, SEVERE • GAS • OFF SITE • MILLSTONE 1 (DWR) • GENERATORS

117070
GAS TURBINE GENERATOR BECOMES INOPERABLE AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS. LTR W/NO 50-245/70-30/17 TO NRC OFFICE OF I & E, REGION I, SEPT. 8, 1970, DCKET 50-245, TYPE--DWR, NRC--G.E., AE--EDASCO

CAUSE - SPURIOUS SWITCH OPERATION. WHILE OPERATING AT 90% POWER, THE GAS TURBINE GENERATOR BECAME INOPERABLE FOR ABOUT 5 MINUTES DUE TO AN OVERSPEED CONDITION. THE OVERSPEED CONDITION APPEARED TO BE CAUSED BY SPURIOUS OPERATION OF THE GAS GENERATOR SPEED SWITCHES. INSPECTION OF THE ELECTRONIC CONTROL ASSOCIATED WITH THE SPEED SWITCHES REVEALED A NUMBER OF DAMAGED COMPONENTS ON A PRINTED CIRCUIT BOARD THAT HAD SIGNS OF OVERHEATING. THE RELIANCE ELECTRIC CO., MODEL NO. 927-D1-031, ELECTRONIC CONTROL WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • FAILURE, INSTRUMENT • GAS • MILLSTONE 1 (DWR) • FAILURE, INHERENT • ELECTRONIC FUNCTION UNITS • GENERATORS

117079
SET POINT DRIFT IN INTERMEDIATE RANGE MONITOR AT MILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

117670 (CONTINUED)
3 PGS, LTR W/NO 50-245/70-31/3L TO NRC OFFICE OF I & E, REGION I, SEPT. 9, 1976, DOCKET 50-245, TYPE--DNR, NRC--G.E., AE--EDASCO

CAUSE - INSTRUMENT DRIFT. DURING A CALIBRATION CHECK OF INTERMEDIATE RANGE MONITOR 24 FOLLOWING A PRE-AMPLIFIER UNIT REPLACEMENT WHILE THE PLANT WAS IN A COLD SHUTDOWN CONDITION, SET POINTS FOR THE RUN BLOCK AND SCRAP FUNCTIONS WERE FOUND TO BE ABOUT 75 HIGH. FAILURE WAS ATTRIBUTABLE TO INSTRUMENT DRIFT. THE MONITOR WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • INSTRUMENT, INTERMEDIATE RANGE • SET POINT • MILLISECOND 1 (DNR) • DRIFT

110109
STACK FLOW RECORDER IMPERABLE AT MILLISECOND 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
1 PG, LTR W/NO 50-245/70-19 TO NRC OFFICE OF I & E, REGION I, SEPT. 21, 1976, DOCKET 50-245, TYPE--DNR, NRC--G.E., AE--EDASCO

CAUSE - RAIN WATER IN SENSOR. THE STACK FLOW RECORDER WAS FOUND IMPERABLE. THE SENSOR IS A U-TUBE DEVICE WITH ONE SIDE FACING INTO THE AIR STREAM AND THE OTHER SIDE FACING UPWARD. DURING A RAIN STORM, WATER GOT INTO THE U-TUBE AND INTO THE PRIMARY SENSOR. AFTER THE RAIN STOPPED AND THE SENSOR DRIED OUT, THE DEVICE BECAME OPERABLE AGAIN. THE POSSIBILITY OF SHIELDING THE DEVICE IS BEING INVESTIGATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WATER • STACK • FAILURE, INSTRUMENT • FAILURE, DESIGN ERROR • MILLISECOND 1 (DNR) • SENSORS, FLOW • RECORDERS

100000
UPDATE REPORT ON ISOLATION CONDENSER TUBE FAILURE AT MILLISECOND 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS, LTR W/NO 70-4/10 (UPDATE REPORT) TO NRC OFFICE OF I & E, REGION I, SEPT. 28, 1976, DOCKET 50-245, TYPE--DNR, NRC--G.E., AE--EDASCO

CAUSE - STRESS CORROSION CRACKING. A DETAILED METALLURGICAL EXAMINATION WAS CONDUCTED BY BATTELLE COLUMBUS LAB ON SELECTED SAMPLES OF TYPE 304 STAINLESS STEEL HEAT EXCHANGER TUBING REMOVED FROM THE ISOLATION CONDENSER WHICH FAILED 2/12/76. CONCLUSIONS WERE AS FOLLOWS. FAILURE CAUSED BY CHLORIDE ASSISTED STRESS CORROSION CRACKING. TUBING HAD UNUSUALLY HIGH RESIDUAL TENSILE STRESSES WHICH WERE SUFFICIENT TO SUPPORT STRESS CORROSION CRACKING. THE MANUFACTURING PROCESS OF LOCALLY HEAT TREATING THE TUBING CONTRIBUTED TO THE FAILURE BASED ON THE PRESENCE OF OXIDE COATING. PROBABLE SOURCE OF CHLORIDE CONTAMINATION WAS COASTAL ATMOSPHERE DURING CONSTRUCTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MILLISECOND 1 (DNR) • TUBING • CRACK • FAILURE, TUBING • STRESS CORROSION • CHLORIDE • CRACK • METALLURGY • FAILURE, FABRICATION ERROR • HEAT TREATMENT • STRESS • ATMOSPHERIC CHEMISTRY • LEAK • EXAMINATION

110795
ISOLATION CONDENSER SYSTEM REMOVED FROM SERVICE AT MILLISECOND 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
4 PGS, LTR W/NO 70-32/3L TO NRC OFFICE OF I & E, REGION I, OCT. 8, 1976, DOCKET 50-245, TYPE--DNR, NRC--G.E., AE--EDASCO

CAUSE - LEAK SUSPECTED. WITH THE REACTOR AT 92% POWER, OPERATION IN A DEGRADED MODE, PERMITTED BY A LIMITING CONDITION, OCCURRED WHEN THE ISOLATION CONDENSER SYSTEM WAS REMOVED FROM SERVICE DUE TO AN INCREASE IN UNWELL IDENTIFIED LEAKAGE. IT WAS FELT THAT THE INCREASE IN LEAKAGE WAS ATTRIBUTABLE TO AN ISOLATION CONDENSER VALVE. LEAKAGE DID NOT DECREASE. THE REACTOR WAS THEN SHUT DOWN. THE LEAKAGE WAS A PACKING LEAK IN THE LPCI SYSTEM TESTABLE CHECK VALVE. THE PACKING LEAK WAS REPAIRED AND A STARTUP COMMENCED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • FAILURE, ADMINISTRATIVE CONTROL • LEAK RATE • LEAK • MILLISECOND 1 (DNR) • CRACK

120533
IN-CORE NEUTRON SOURCE ASSEMBLY FOUND BROKEN AT MILLISECOND 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
3 PGS, LTR W/NO 70-33/3L TO NRC OFFICE OF I & E, REGION I, NOV. 23, 1976, DOCKET 50-245, TYPE--DNR, NRC--G.E., AE--EDASCO

CAUSE - UNKNOWN. WHILE PERFORMING A NEUTRON SOURCE ASSEMBLY INSPECTION WITH ALL THE FUEL REMOVED FROM THE REACTOR, THE NEUTRON SOURCE ASSEMBLY AT CORE LOCATION 24-09 WAS FOUND TO BE BROKEN. SOME OF THE PIECES WERE RETRIEVED AND OTHERS IDENTIFIED AS MISSING. AN UNDETERMINED AMOUNT OF

120533 *CONTINUED*

THIS MATERIAL COULD BE SEEN ON THE LOWER CORE SUPPORT PLATE IN VARIOUS SHAPES AND SIZES. THE FAILURE MECHANISM IS UNKNOWN AT THIS TIME. EFFORTS WERE MADE TO RETRIEVE AS MUCH OF THE BROKEN ASSEMBLY AS POSSIBLE. ALL 5 NEUTRON ASSEMBLIES WERE REPLACED WITH NEW ASSEMBLIES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (IDM) • INSTRUMENT, IN CORE • SOURCE, NEUTRON • FAILURE, INSTRUMENT • REFUELING • CORE COMPONENTS

120430

UNPLANNED CRITICALITY OCCURS AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR W/RO-70-34/17 TO NRC OFFICE OF I & E, REGION 1, NOV. 24, 1970, DUCRET 50-245, TYPE--DMR, NRC--G.E., AE--EBASCO

CAUSE - OPERATOR ERROR IN CONTROL ROD SELECTION. WHILE PERFORMING A SHUTDOWN MARGIN TEST WITH A PARTIALLY LOADED CORE, AN INADVERTENT CRITICALITY AND REACTOR TRIP OCCURRED. AN OPERATOR MADE AN ERROR IN SELECTING THE CONTROL RODS TO BE USED FOR THE TEST. THE RODS DESIGNATED TO BE USED WERE 40-23 AND 42-19, WHICH ARE DIAGONALLY ADJACENT RODS. RODS USED WERE 40-23 AND 40-19, WHICH ARE DIRECTLY ADJACENT. NO FUEL OR CLAD DAMAGE OCCURRED. NO INCREASE IN RADIATION LEVELS IN THE PLANT WERE RECORDED. NO PERSONNEL EXPOSURES OCCURRED. REFUELING AND FUEL MOVEMENT WERE SUSPENDED FOR 3 DAYS UNTIL PROCEDURES WERE REVISED. OPERATORS INVOLVED WILL NOT PERFORM LICENSED ACTIVITIES AT THIS TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (IDM) • ACCIDENT, CRITICALITY • FAILURE, OPERATOR ERROR • INCIDENT • REACTIVITY, EXCESS • TEST, SYSTEM OPERABILITY • REFUELING • TEST, PHYSICS • SHUTDOWN MARGIN • REACTOR TRANSIENT • SCRAM, REAL • CONTROL RODS

120220

WELD JOINT IN THE HEAD SPRAY SYSTEM LEAKS AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

4 PGS, LTR W/RO-70-36/17 TO NRC OFFICE OF I & E, REGION 1, NOV. 27, 1970, DUCRET 50-245, TYPE--DMR, NRC--G.E., AE--EBASCO

CAUSE - STRESS CORROSION. WHILE PERFORMING A COLD REACTOR VESSEL LEAK TEST DURING THE REFUELING OUTAGE, A WELD JOINT FAILURE WAS DISCOVERED IN A PIPING SPOOL PIECE IN THE HEAD SPRAY SYSTEM. THE FAILED JOINT IS LOCATED IN THE SPOOL PIECE WHICH JOINS THE HEAD SPRAY PIPING TO THE REACTOR HEAD PENETRATION. SIX INDICATIONS WERE FOUND ON THE 8-INCH WELD NECK FLANGE INSIDE DIAMETER, 5 OF WHICH WERE LINEAR AND ADJACENT TO THE WELD. THERMAL STRESS FROM THE COOLING SPRAY NOZZLE ARE RELATIVELY HIGH. FAILURE IS BELIEVED TO BE STRESS CORROSION WITH A THERMAL TRANSIENT BEING THE DRIVING FORCE. THE CRACKED FLANGE WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (IDM) • PIPES AND PIPE FITTINGS • FLANGE • CRACK • SHUTDOWN COOLING SYSTEM • THERMAL MECHANICAL EFFECT • STRESS CORROSION • FAILURE, PIPE • TEST, SYSTEM OPERABILITY • REFUELING • FAILURE, DESIGN ERROR • THERMAL TRANSIENT • WELDS

120229

TWO UNMONITORED LIQUID RELEASE PATHS FOUND AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR W/ENV. APT. ETS-NA/50-245/76-21 TO NRC OFFICE OF I & E, REGION 1, NOV. 29, 1970, DUCRET 50-245, TYPE--DMR, NRC--G.E., AE--EBASCO

CAUSE - DESIGN ERROR. A CATCH BASIN IN THE TRANSFORMER YARD HAD WATER VAPOR COMING FROM IT. INVESTIGATION FOUND THAT THE WARM WATER WAS HEATING BOILER CONDENSATE RETURN WATER THAT WAS BEING BYPASSED PRIOR TO ENTERING THE CONDENSATE RETURN TANK. A RECENT MODIFICATION WAS TO ROUTE THIS WATER TO THE LIQUID RADIOACTIVE SYSTEM UTILIZING THE FLOOR DRAIN SYSTEM. HOWEVER, THE FLOOR DRAINS IN THIS AREA GO TO THE STORM DRAIN SYSTEM. INVESTIGATION OF ALL DRAINS FOUND THAT A WASTE OIL SUMP NEAR THE REACTOR BUILDING WAS UNMONITORED. DURING THE INITIAL INSTALLATION IT WAS ASSUMED THAT THIS COULD BE A SOURCE OF CONTAMINATED WATER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (IDM) • RADIOACTIVITY RELEASE • WASTE MANAGEMENT • FAILURE, DESIGN ERROR • WASTE HANDLING • CONTAMINATION • DRAINAGE • BUILDING • CONDENSATION

120272

SET POINT DRIFT IN TEMPERATURE SWITCHES AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

4 PGS, LTR W/RO-70-35/36 TO NRC OFFICE OF I & E, REGION 1, DEC. 3, 1970, DUCRET 50-245, TYPE--DMR, NRC--G.E., AE--EBASCO

120472 (CONTINUED)

CAUSE - INSTRUMENT DRIFT. DURING THE REFUELING OUTAGE SURVEILLANCE ON THE STEAM TUNNEL TEMPERATURE SWITCHES, 4 OF 16 WERE FOUND TO BE TRIPPING ABOVE THE 200 F LIMIT. AS FOUND SET POINTS WERE 210, 211, 220, AND 223 F. FAILURE IS ATTRIBUTED TO SET POINT DRIFT. ALL 4 WERE READJUSTED TO WITHIN THE DESIRED RANGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • INSTRUMENT, SWITCH • INSTRUMENT CALIBRATION • SENSORS, TEMPERATURE • TEST, SYSTEM OPERABILITY • FAILURE, INSTRUMENT • SET POINT • DRIFT • REFUELING • CONTAINMENT ISOLATION

120473

FISH IMPIGED ON INTAKE SCREENS AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

2 PGS, LTR N/ENV. RPT. ETS/RR/50-245/70-22 TO NRC OFFICE OF I & E, REGION I, DEC. 15, 1970, DOCKET 50-245, TYPE--BWR, NPG--G.E., AE--EDASCO

CAUSE - INCREASED FISH POPULATION. DURING POWER ASCENSION WITH 4 CIRCULATING PUMPS OPERATING FOLLOWING THE REFUELING OUTAGE, 50 SILVER MAKE 3 TO 6 INCHES LONG WERE IMPIGED AS OF 12/8/70. THE ETS LIMIT IS 25. THE CAUSE WAS RELATED TO POWER ASCENSION AND OPERATION OF ALL RECIRCULATING WATER PUMPS SUBSEQUENT TO THE REFUELING OUTAGE. ALSO, THE SILVER MAKE POPULATION IN MIAHTIC BAY APPEARS TO HAVE INCREASED IN RECENT YEARS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • ANIMAL, FISH • MORTALITY • FILTER, SCREEN • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

120480

STRIPED KILLFISH IMPIGED ON INTAKE SCREENS AT HILLSTONE 1
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

2 PGS, LTR N/ENV. RPT. ETS/RR/50-245/70-24 TO NRC OFFICE OF I & E, REGION I, DEC. 29, 1970, DOCKET 50-245, TYPE--BWR, NPG--G.E., AE--EDASCO

CAUSE - NO APPARENT CAUSE. DURING POWER OPERATION WITH 4 MAIN CIRCULATING WATER PUMPS OPERATING, 27 STRIPED KILLFISH, 3 TO 6 INCHES LONG, WERE IMPIGED AS OF DEC. 22. THE ETS LIMIT IS 25. THERE WAS NO CHANGE IN PLANT OPERATION THAT WOULD BE RELATED TO THIS OCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • ANIMAL, FISH • MORTALITY • FILTER, SCREEN • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

120487

PERMITTEL OPERATION LESS CONSERVATIVE THAN BASES FOR LICENSE AT HILLSTONE 1

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR N/RO-70-45/17 TO NRC OFFICE OF I & E, REGION I, DEC. 30, 1970, DOCKET 50-245, TYPE--BWR, NPG--G.E., AE--EDASCO

CAUSE - OVERSIGHT IN REVIEW OF LICENSE SUBMITTAL. AN ERROR WAS DISCOVERED WHICH PERMITTED OPERATION IN A MANNER LESS CONSERVATIVE THAN THE BASES ESTABLISHED FOR CYCLE 5 LICENSE. FOR THE LICENSE SUBMITTAL, ANALYSIS OF THE ROD DROP ACCIDENT IS BASED ON OPERABILITY OF THE ROD WORTH MINIMIZER AT POWER LEVELS LESS THAN 20%. TECH SPECS AND PROCEDURES REQUIRE RHM BE OPERABLE AT POWER LEVELS LESS THAN 10%. PROCEDURES HAVE BEEN MODIFIED TO REWIRE RHM TO BE OPERABLE AT POWER LEVELS LESS THAN 20%.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • PROCEDURES AND MANUALS • INSTRUMENT, PROTECTIVE • CONTROL SYSTEM • CONTROL ROD DRIVES • FAILURE, ADMINISTRATIVE CONTROL • ACCIDENT ANALYSIS • ACCIDENT, CONTROL ROD DROPOUT • REACTIVITY EFFECT

120488

REFUEL FLOOR AREA RADIATION MONITOR OUT OF SERVICE FOR REPAIR AT HILLSTONE 1

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

3 PGS, LTR N/RO-70-39/31 TO NRC OFFICE OF I & E, REGION I, DEC. 30, 1970, DOCKET 50-245, TYPE--BWR, NPG--G.E., AE--EDASCO

CAUSE - BURNED AMPHEROL CONNECTOR. WHILE CALIBRATING THE REFUEL FLOOR AREA RADIATION MONITORS WITH THE REACTOR AT 99% POWER, ONE MONITOR WAS REMOVED FROM SERVICE TO REPAIR AN AMPHEROL CONNECTOR WHICH WAS BURNED DURING CALIBRATION. A BUILDUP OF PAINT ON THE CONNECTOR REQUIRED USE OF EXTREME FORCE TO DISCONNECT. THE CONNECTOR WAS REPLACED WITH A NEW ONE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • CABLES AND CONNECTORS • RADIATION MONITORS • TEST, SYSTEM OPERABILITY • FAILURE, INSTRUMENT • FAILURE, MAINTENANCE ERROR • MONITORING SYSTEM, RADIATION

120069

SET POINT DRIFT IN CONTAINMENT SPRAY PRESSURE SWITCH AT HILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NO 70-30/3L TO NRC OFFICE OF I & E, REGION 1, DEC. 30, 1970, DOCKET 50-245, TYPE--BWR, NRG--G.E., AE--EBASCO

CAUSE - INSTRUMENT DRIFT. WHILE TESTING THE CONTAINMENT SPRAY INTERLOCK CONTAINMENT PRESSURE SWITCHES WITH THE REACTOR AT 100% POWER, 1 OF THE 4 SWITCHES TRIPPED AT 3.5 PSIG WHICH IS LESS THAN THE 4.5 PSIG LOWER LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE MELTRON MODEL 9201-30, RANGE 0-10 PSI, PRESSURE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • INSTRUMENT, SWITCH • INSTRUMENT CALIBRATION • SENSORS, PRESSURE • TEST, SYSTEM OPERABILITY • FAILURE, INSTRUMENT • SET POINT • DRIFT • FAILURE, INSTRUMENT • CONTAINMENT SPRAY

120070

SET POINT DRIFT IN DRYWELL PRESSURE SWITCHES AT HILLSTONE 1
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 3 PGS, LTR W/NO 50-245/70-37/3L TO NRC OFFICE OF I & E, REGION 1, DEC. 30, 1970, DOCKET 50-245, TYPE--BWR, NRG--G.E., AE--EBASCO

CAUSE - INSTRUMENT DRIFT. WHILE TESTING THE DRYWELL PRESSURE SWITCHES WITH THE REACTOR AT 94% POWER, 2 OF THE 4 SWITCHES WERE FOUND TO TRIP AT VALUES ABOVE THE 2.0 PSIG LIMIT. SET POINTS WERE 2.15 PSIG AND 2.2 PSIG. FAILURE WAS ATTRIBUTABLE TO INSTRUMENT DRIFT. THE BARTON, MODEL 200, RANGE 0 TO 10 PSI, PRESSURE SWITCHES WERE ADJUSTED TO THE REQUIRED SET POINT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

HILLSTONE 1 (BWR) • INSTRUMENT, SWITCH • INSTRUMENT CALIBRATION • SENSORS, PRESSURE • TEST, SYSTEM OPERABILITY • FAILURE, INSTRUMENT • SET POINT • DRIFT • FAILURE, INHERENT • EMERGENCY COOLING SYSTEM • CONTROL SYSTEM

110931

FISH IMPINGED ON INTAKE SCREENS AT HILLSTONE 1 AND 2
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 2 PGS, LTR W/ETS-NR/50-245/70-01 AND ETS-NR/50-330/70-03 TO NRC OFFICE OF I & E, REGION 1, FEB. 5, 1970, DOCKETS 50-245/330, TYPE--BWR, NRG--G.E., AE--EBASCO

CAUSE - NO APPARENT CAUSE. DURING JANUARY, 41 WINTER SKATE GREATER THAN 6 INCHES IN LENGTH WERE IMPINGED ON THE INTAKE SCREENS OF UNIT 1 AND 32 ON UNIT 2 SCREENS. THE REPORTING LIMIT FOR EACH UNIT IS 25. THERE WAS NO APPARENT CAUSE RELATED TO CHANGES IN PLANT OPERATION. UNIT 1 WAS AT FULL POWER WITH 4 CONDENSER CIRCULATING WATER PUMPS RUNNING AND UNIT 2 IN STARTUP TESTING MODE WITH 2 PUMPS RUNNING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • HILLSTONE 2 (PWR) • HILLSTONE 1 (BWR) • ANIMAL, FISH • MORTALITY • INTAKE • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

115037

FISH IMPINGEMENT REPORT LIMITS EXCEEDED AT HILLSTONE 1 AND 2
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 5 PGS, LTR W/APT TO NRC OFFICE OF I & E, REGION 1, JULY 9, 1970, DOCKETS 50-245/330, TYPE--BWR, NRG--G.E., AE--EBASCO

CAUSE - INCREASED ABUNDANCE. DURING MAY 1970, ETS IMPINGEMENT REPORT LIMITS WERE EXCEEDED FOR SEVERAL FISH AND SHELLFISH SPECIES. REPORT LIMITS WERE EXCEEDED FOR 6 SPECIES AT UNIT 1 AND 7 SPECIES AT UNIT 2. AVAILABLE DATA SUGGESTS LIMIT OVERRUNS RESULTED FROM INCREASED ABUNDANCE AND SHIFTS IN DOMINANT SIZE CLASSES. IT IS WELL KNOWN THAT MARINE FISH POPULATIONS ARE SUBJECT TO EXTREME FLUCTUATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • HILLSTONE 2 (PWR) • HILLSTONE 1 (BWR) • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

110190

SHELLFISH IMPINGED ON INTAKE SCREENS AT HILLSTONE 1 AND 2
 NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT
 2 PGS, LTR W/RPT TO NRC OFFICE OF I & E, REGION 1, SEPT. 27, 1970, DOCKET 50-245/330, TYPE--BWR, NRG--G.E., AE--EBASCO

CAUSE - NO KNOWN CAUSE. IMPINGEMENT REPORT LIMITS WERE EXCEEDED FOR 2 SPECIES OF SHELLFISH.

110190 *CONTINUED*

LEVELS FOR BLUE CRABS WAS EXCEEDED AT UNIT 1 AND FOR SPIDER CRABS AT UNIT 2 FOR JULY. BOTH SPECIES, HOWEVER, WERE RETURNED TO LONG ISLAND SOUND WITH A GREATER THAN 94% SURVIVAL RATE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FILTER, SCREEN • MILLSTONE 2 (PWR) • MILLSTONE 1 (DNR) • ANIMAL, INWATERBATE • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

119005

IODINE-131 ACTIVITY IN MILK SAMPLES HIGH AT MILLSTONE 1 AND 2
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

2 PGS. LTR W/ENV. TECH. SPEC. RPT ETS-NR/50-245/50-336/76-02 TO NRC OFFICE OF I & E, REGION 1, NOV. 15, 1976, DOCKET 50-245/336, TYPE--DNR, NRC--G.E., AE--EBASCO

CAUSE - CHINESE NUCLEAR TEST. THE CHINESE NUCLEAR TEST RESULTED IN A SIGNIFICANT INCREASE IN RADIOACTIVE IODINE IN MILK (CUM AND WAT) STARTING ON OR ABOUT 10/2/76. THE RADIOACTIVE CLOUD PASSED OVER THE US AND LEVELS OF IODINE IN MILK OF 200 TO 400 PICOCURIES/L WERE OBSERVED AT LOCATIONS WELL BEYOND THE INFLUENCE OF THE MILLSTONE STATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MILLSTONE 1 (DNR) • MILLSTONE 2 (PWR) • IODINE • MILK • CONCENTRATION • SAMPLING • FAILURE, INHERENT • TEST, WEAPONS

120720

FISH IMPINGED ON INTAKE SCREENS AT MILLSTONE 1 AND 2
NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

2 PGS. LTR W/ENV. RPT. ETS-NR/50-245/50-336/76-27 AND ETS-NR/50-245/50-23 TO NRC OFFICE OF I & E, REGION 1, DEC. 23, 1976, DOCKET 50-245/336, TYPE--DNR, NRC--G.E., AE--EBASCO

CAUSE - NO APPARENT CAUSE. DURING POWER OPERATION WITH 4 MAIN CIRCULATING PUMPS OPERATING PER UNIT, 301 GRABBY, 3 TO 6 INCHES LONG, WERE IMPINGED AT UNIT 1 AND 298 AT UNIT 2 THROUGH DEC. 15. THE ETS LIMIT IS 200. ALL 803 WINTER FLOUNDER WERE IMPINGED AT UNIT 1 THROUGH DEC. 15. THE ETS LIMIT IS 670. THERE WAS NO APPARENT CAUSE WHICH WAS RELATED TO CHANGES IN PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MILLSTONE 1 (DNR) • MILLSTONE 2 (PWR) • ANIMAL, FISH • MORTALITY • FILTER, SCREEN • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

120729

STRONTIUM-90 CONCENTRATION IN MILK EXCEEDS REPORT LIMIT AT MILLSTONE 1 AND 2

NORTHEAST NUCLEAR ENERGY CO., HARTFORD, CT

2 PGS. LTR W/ENV. RPT. ETS-NR/50-245/50-336/76-03 TO NRC OFFICE OF I & E, REGION 1, DEC. 23, 1976, DOCKET 50-245/336, TYPE--DNR, NRC--G.E., AE--EBASCO

CAUSE - CHINESE NUCLEAR TEST. ANALYSIS OF MILK SAMPLES TAKEN OCT. 5 SHOW STRONTIUM-90 ACTIVITY MORE THAN 10 TIMES THE CONTROL VALUE. THE CHINESE NUCLEAR TEST OF LATE SEPTEMBER HAS RESULTED IN A SIGNIFICANT INCREASE IN SR-90 IN MILK STARTING IN EARLY OCTOBER. COWS IN THE CONTROL AREA HAD GREATER USE OF STORED AND SUPPLEMENTAL FEED AND THEREFORE HAD LESS EFFECT FROM FALLOUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MILLSTONE 1 (DNR) • MILLSTONE 2 (PWR) • CONCENTRATION • STRONTIUM • MILK • FOOD CHAIN • TEST, WEAPONS • FAILURE, INHERENT • SURVEILLANCE PROGRAM

112140

RELEASE OF RADIOACTIVE PARTICULATES EXCEED NEW LIMITS AT MONTICELLO

NORTHEAST NUCLEAR ENERGY CO., MINNEAPOLIS, MN

7 PGS. LTR W/ENV. RPT. ETS-NR/50-245/50-336/76-03 TO NRC OFFICE OF I & E, REGION 1, MARCH 5, 1976, DOCKET 50-245, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - NORMAL RELEASES. DURING THE FOURTH QUARTER OF 1975, THE AVERAGE RELEASE RATE OF RADIOACTIVE PARTICULATES WITH 1/2-LIVES GREATER THAN 8 DAYS WAS 2.02% OF THE MAXIMUM PERMITTED BY TECH SPEC. THIS EXCEEDED THE NEWLY IMPOSED MAXIMUM RELEASE RATE OF 2% WHICH REDUCED THE LEVEL REQUIRING REPORTING BY A FACTOR OF 50. ACTUAL RELEASES HAVE STEADILY FALLEN SINCE THE MODIFIED OFFGAS SYSTEM WAS PLACED IN OPERATION IN NOVEMBER 1974 AND ALL INITIAL CORE LOAD FUEL WAS REPLACED DURING THE AUTUMN 1975 REFUELING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

RAIDORNE RELEASE • EFFLUENT • RELEASE RATE • WASTE DISPOSAL • MONTICELLO (DNR) • FAILURE, INHERENT

112139

CONDENSATE RETURN LINE ELBOW LEAKS AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/NO-80-70-08 TO NRC OFFICE OF I & E, REGION III, MARCH 19, 1976, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - EROSION. DURING A PRE-SHUTDOWN INSPECTION OF AIR EJECTOR ROOM WHILE OPERATING AT 58 POWER, A 1/2-INCH ELBOW ON THE CONDENSATE RETURN LINE DOWN STREAM OF THE TRAP WAS FOUND TO BE LEAKING. EROSION OF THE ELBOW BELL WAS CAUSED BY HOT STEAM DRAINING FLASHING AFTER PASSING THROUGH THE TRAP. THE ELBOW WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE + CONDENSATION + EROSION + MONTICELLO (BWR) + CLEAN + FAILURE, INHERENT + PIPES AND PIPE FITTINGS

113296

RCIC TURBINE TRIPS ON HIGH EXHAUST LINE PRESSURE AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/NO-80-70-02 TO NRC OFFICE OF I & E, REGION III, APRIL 27, 1976, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - PRESSURE SPIKE ON STARTUP. DURING A TEST WITH THE REACTOR AT 90% POWER, RCIC TURBINE TRIPPED ONCE, APPARENTLY DUE TO HIGH EXHAUST LINE PRESSURE. REVIEW OF RECORDER TRACES SHOW EXHAUST PRESSURE AFTER SPIKES NEAR SET POINT OF 25 PSIG DURING THE STARTUP TRANSIENT. THE SET POINT WAS INCREASED TO 40 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, SYSTEM OPERABILITY + FAILURE, ADMINISTRATIVE CONTROL + MONTICELLO (BWR) + TURBINE + PRESSURE TRANSIENT + SET POINT + RCIC + SENSORS, PRESSURE

113955

PRIMARY CONTAINMENT OXYGEN CONCENTRATION EXCEEDS LIMIT AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/NO-80-70-03 TO NRC OFFICE OF I & E, REGION III, MAY 18, 1976, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - LEAKING AIR VALVE. DURING A TEST WHILE OPERATING AT 99% POWER, PRIMARY CONTAINMENT OXYGEN CONCENTRATION WAS FOUND TO BE 6.5%, WHICH EXCEEDS THE 5% LIMIT. AN ASCO SOLENOID VALVE, CAT. NO. 8210054, IN THE INSTRUMENT AIR LINE WAS FOUND TO BE LEAKING AIR INTO THE NITROGEN SUPPLY LINE. THE SOLENOID VALVE WAS ISOLATED. OXYGEN CONCENTRATION WAS REDUCED BELOW THE LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + OXYGEN + TEST, SYSTEM OPERABILITY + MONTICELLO (BWR) + CONTAINMENT ATMOSPHERE + LEAK + CONCENTRATION + FAILURE, INHERENT + SOLENOID + VALVES

114037

TIP BALL VALVE FAILS TO CLOSE AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/NO 50-263/70-05 TO NRC OFFICE OF I & E, REGION III, JUNE 3, 1976, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - UNDETERMINED. DURING 100% POWER OPERATION, TIP BALL VALVE NO. 3 FAILED TO CLOSE DURING ROUTINE USE OF THE TIP SYSTEM. THE REDUNDANT SPEAR VALVE WAS OPERABLE. THE VALVE WAS TAPPED AND IT CLOSED. IT WAS CLEANED, LUBRICATED, AND CLOSURE SPRING TENSION INCREASED. THE VALVE THEN OPERATED PROPERLY. CAUSE OF FAILURE WAS UNDETERMINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + INSTRUMENT, IN CORE + CONTAINMENT ISOLATION + MONTICELLO (BWR) + FAILURE, INHERENT + VALVES

114038

CRACK FOUND IN MOISTURE SEPARATOR DRAIN LINE AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/NO-80-70-04 TO NRC OFFICE OF I & E, REGION III, JUNE 11, 1976, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - FATIGUE. WHILE OPERATING AT 100% POWER, A CRACK WAS DISCOVERED AT THE VENT CONNECTION ON MOISTURE SEPARATOR DRAIN LINE. THE 6-INCH FORGED, STAINLESS STEEL BUTT WELD TEE CRACKED AT THE 3/4 INCH BRANCH CONNECTION. THE CRACK WAS ATTRIBUTED TO FATIGUE DUE TO CYCLIC RELATIVE MOTION BETWEEN THE 6 INCH DRAIN LINE AND THE 3/4 INCH LINE RESTRAINT. THE CRACK WAS REPAIRED AND THE

114638 *CONTINUED*

VENT LINE REMOVED TO PREVENT RECURRANCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE • O-RINGS • FAILURE, FATIGUE • MONTICELLO (BWR) • FAILURE, INSTALLATION ERROR • MAIN COOLING SYSTEM • CLEAN • PIPES AND PIPE FITTINGS

115500

MPCI STEAM LINE VALVE FAILS TO CLOSE COMPLETELY AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/M-RU-76-00 TO NRC OFFICE OF I & E, REGION III, JULY 2, 1976, Docket 50-263, TYPE--BWR, NRC--W.E., AE--DECHTEL

CAUSE - SET POINT DRIFT IN TORQUE SWITCH. DURING A TEST WITH THE REACTOR AT 67% POWER, MPCI STEAM LINE INBOARD ISOLATION VALVE FAILED TO CLOSE COMPLETELY. THE TORQUE SWITCH IN THE CLOSING CIRCUIT OPENED PRIOR TO FULL CLOSURE DUE TO SET POINT DRIFT. THE SWITCH WAS TEMPORARILY BYPASSED UNTIL AN OUTAGE 12 DAYS LATER. IT WAS THEN RESET TO THE PROPER VALUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • TEST, SYSTEM OPERABILITY • MONTICELLO (BWR) • SET POINT • DRIFT • VALVE OPERATORS • O-RINGS • MPCI

115000

SAFETY RELIEF VALVE FAILS TO ACTUATE AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/M-RU-76-07 TO NRC OFFICE OF I & E, REGION III, JULY 14, 1976, Docket 50-263, TYPE--BWR, NRC--W.E., AE--DECHTEL

CAUSE - AIR SUPPLY VALVE LEAKING. DURING A SPECIAL TEST WITH THE REACTOR AT 60% POWER, A SAFETY RELIEF VALVE FAILED TO ACTUATE WHEN GIVEN A MANUAL INITIATION SIGNAL. THE SOLENOID VALVE WHICH CONTROLS AIR SUPPLY TO THE AIR OPERATOR WAS LEAKING. THE THREADS WERE STRIPPED WHERE THE SOLENOID PLUNGER ASSEMBLY SCREWS INTO THE MAIN SOLENOID VALVE BODY ALLOWING AIR LEAKAGE PAST THE O-RING SEAT. THE AVCO SOLENOID VALVE MODEL C54505 WAS REPLACED IN KIND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • PRESSURE RELIEF • TEST, SYSTEM OPERABILITY • MONTICELLO (BWR) • MAIN COOLING SYSTEM • PNEUMATIC SYSTEM • SOLENOID • O-RINGS

115007

POWER TO RESERVE TRANSFORMER LOST AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/M-RU-76-08 TO NRC OFFICE OF I & E, REGION III, JULY 26, 1976, Docket 50-263, TYPE--BWR, NRC--W.E., AE--DECHTEL

CAUSE - ARCING ACROSS RELAY CONTACTS. DURING 100% POWER OPERATION, POWER WAS LOST TO RESERVE TRANSFORMER 1A DUE TO LOCKOUT OF SUBSTATION TRANSFORMER. LOCKOUT WAS DUE TO UNNECESSARY OPERATION OF THE SUDDEN PRESSURE PROTECTION DURING A LIGHTNING STRIKE. IT IS SUSPECTED THAT LIGHTNING INDUCED VOLTAGE CAUSED ARCING ACROSS THE SUDDEN PRESSURE RELAY CONTACTS. THE RELAY SCHEME HAS BEEN MODIFIED TO USE A SET OF NORMALLY CLOSED CONTACTS ON THE SUDDEN PRESSURE RELAY TO SHORT THE COIL OPERATED BY THIS RELAY WHEN IT IS NOT NEEDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ELECTRIC POWER • LIGHTNING • MODIFICATION • FAILURE, DESIGN ERROR • MONTICELLO (BWR) • RELAYS • TRANSFORMERS

116524

SET POINT DRIFT IN MAIN STEAM LINE LOW PRESSURE SWITCH AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR W/M-RU-76-09 TO NRC OFFICE OF I & E, REGION III, AUG. 10, 1976, Docket 50-263, TYPE--BWR, NRC--W.E., AE--DECHTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 100% POWER, A MAIN STEAM LINE LOW PRESSURE ISOLATION SWITCH TRIPPED AT 800 PSIG, WHICH IS LESS THAN THE 825 PSIG LIMIT. THE HANFORD MODEL 821-A1255 SWITCH WAS RESET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STEAM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • MONTICELLO (BWR) • MAIN COOLING SYSTEM • SET POINT • DRIFT • FAILURE, INHERENT • SENSORS, PRESSURE

116523

MAPLE LEAKS REDUCED FOR REDUCED CORE FLOW AT MONTICELLO
NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS. LTR NWN-80-76-12 TO NRC OFFICE OF I & E, REGION III, AUG. 11, 1976, DUCAT 50-263, TYPE--DMR, NRC--
G.E., AE--DECHTEL

CASE - HEAT TRANSFER EFFECTS. GENERIC ECCS MODEL ANALYSIS FOR DMR-3'S INDICATED THE 2900 F PCT MAY BE EXCEEDED AT REDUCED CORE FLOWS. AT REDUCED CORE FLOW WHERE THE ONSET OF TRANSITION BOILING COULD OCCUR, CONSERVATIVE HEAT TRANSFER COEFFICIENTS ARE APPLIED WHICH DECREASE HEAT TRANSFER AWAY FROM THE CLAG AND INCREASE PCT. A 5% REDUCTION IN MAPLE AT LESS THAN 85% CORE FLOW HAS BEEN IMPLEMENTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ACCIDENT ANALYSIS • CLADDING • HEAT TRANSFER • HOT SPOT • HOT CHANNEL ANALYSIS • MODIFICATION • FAILURE, DESIGN ERROR • MONTICELLO (DMR) • FLOW • TEMPERATURE

117159

CONTAINMENT ISOLATION VALVE FAILS TO CLOSE AT MONTICELLO
NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS. LTR NWN-80-76-10 TO NRC OFFICE OF I & E, REGION III, AUG. 24, 1976, DUCAT 50-263, TYPE--DMR, NRC--
G.E., AE--DECHTEL

CASE - UNKNOWN. DURING A TEST WHILE OPERATING AT 100% POWER, A TURBINE INLET VALVE FAILED TO CLOSE. IT CLOSED ON THE SIXTH ATTEMPT. VISUAL INSPECTIONS PRIOR TO AND DURING SUBSEQUENT CLOSURES DISCLOSED NO ABNORMALITIES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT PURGE • CONTAINMENT ISOLATION • TEST, SYSTEM OPERABILITY • MONTICELLO (DMR) • PUMPS • TORUS

117603

ACIC TURBINE TRIPS DUE TO OVERSPEED AT MONTICELLO
NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS. LTR NWN-80-76-11 TO NRC OFFICE OF I & E, REGION III, SEPT. 1, 1976, DUCAT 50-263, TYPE--DMR, NRC--
G.E., AE--DECHTEL

CASE - UNKNOWN. DURING TESTING WITH THE REACTOR AT 100% POWER, THE ACIC TURBINE TRIPPED DUE TO OVERSPEED. IT OPERATED SUCCESSFULLY ON 3 SUBSEQUENT TESTS. FIVE HOURS LATER A SECOND OVERSPEED TRIP WAS ENCOUNTERED. THE EXACT CAUSE IS UNKNOWN. THE INVESTIGATION IS CONTINUING. IT IS A TERRY STEAM TURBINE CO., ACIC TURBINE, TYPE GS-1, SERIAL NO. 35090.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • MONTICELLO (DMR) • TURBINE • ACIC

117652

CONTAINMENT INERTING REQUIREMENTS NOT MET AT MONTICELLO
NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS. LTR NWN-80-76-16 TO NRC OFFICE OF I & E, REGION III, SEPT. 10, 1976, DUCAT 50-263, TYPE--DMR, NRC--
G.E., AE--DECHTEL

CASE - SAMPLE PUMP LEAK. DURING STARTUP, THE PRIMARY CONTAINMENT OXYGEN CONCENTRATION WAS NOT REDUCED TO LESS THAN 5% WITHIN 24 HOURS AFTER GOING INTO THE RUN MODE. THE OXYGEN ANALYZER SAMPLE PUMP WAS FOUND TO HAVE DEVELOPED AIR INLEAKAGE WHICH CAUSED A FALSE OXYGEN CONCENTRATION INDICATION. IT WAS REPLACED IN KIND AND INERTING COMPLETED. A METAL BELLONS CO., MODEL MR-115, PUMP BELLONS FAILED ALLOWING AIR TO BE DRAWN INTO THE SAMPLE. THIS CAUSED A HIGHER THAN ACTUAL INDICATED OXYGEN CONCENTRATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • OXYGEN • SAMPLING • SEAL • MONTICELLO (DMR) • CONTAINMENT ATMOSPHERE • CONCENTRATION • FAILURE, INHERENT • PUMPS

118207

TORUS WATER VOLUME FOUND BELOW LIMIT AT MONTICELLO
NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS. LTR NWN-80-76-18 TO NRC OFFICE OF I & E, REGION III, SEPT. 22, 1976, DUCAT 50-263, TYPE--DMR, NRC--
G.E., AE--DECHTEL

CASE - TORUS/DRYWELL PRESSURE DIFFERENTIAL EFFECT. DURING 100% POWER OPERATION, INVESTIGATION OF DRYWELL-TORUS PRESSURE DIFFERENTIAL EFFECT ON TORUS WATER LEVEL-VOLUME CORRELATION DISCLOSED VOLUME SLIGHTLY BELOW TECH SPEC LIMIT. THE CORRELATION USED DID NOT ACCOUNT FOR WATER DISPLACED

110207 *CONTINUED*

FROM VENTS DUE TO PRESSURE DIFFERENTIAL. ALSO, LEVEL HAD BEEN LOWERED SLIGHTLY IN RESPONSE TO A RECENT NRC DESIRE TO STAY CLOSER TO THE LOW LIMIT. WATER VOLUME WAS INCREASED AND A NEW VOLUME VS LEVEL CORRELATION WAS ISSUED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, DESIGN ERROR • CORRELATION • PRESSURE DROP • MONTICELLO (BWR) • *SYSTEM CAPACITY • SENSORS, LEVEL • *TORUS

110208

LPCI SUCTION ISOLATION VALVE INOPERABLE AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR N/A-RU-70-15 TO NRC OFFICE OF I & E, REGION III, SEPT. 24, 1976, DOCKET 50-263, TYPE--BWR, NPG--G.E., AE--BECHTEL

CAUSE - UNDERVOLTAGE RELAY COIL FAILS. DURING 100% POWER OPERATION, LOSS OF POWER TO SHUTDOWN COOLING OUTBOARD ISOLATION VALVE WAS EXPERIENCED DUE TO FAILURE OF UNDERVOLTAGE RELAY COIL. THE VALVE WAS CLOSED AT THE TIME. THE GE MODEL 393B209 RELAY COIL HAD AN OPEN CIRCUIT WITHIN THE COIL. IT WAS REPLACED IN KIND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE • CONTAINMENT ISOLATION • FAILURE, INSTRUMENT • MONTICELLO (BWR) • SHUTDOWN COOLING SYSTEM • FAILURE, INHERENT • *VALVES • *RELAYS • LPCI

110209

TURBINE STEAM DRAIN LINE LEAKS AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR N/A-RU-70-16 TO NRC OFFICE OF I & E, REGION III, SEPT. 27, 1976, DOCKET 50-263, TYPE--BWR, NPG--G.E., AE--BECHTEL

CAUSE - STEAM EROSION. DURING AN INSPECTION OF THE CONDENSER AREA, A 1-INCH 3000 PSI ELBOW ON THE H.P. TURBINE INLET STEAM LINE U-BEND DRAIN LINE WAS FOUND TO BE LEAKING. EROSION OF THE ELBOW HALL RESULTED FROM HOT STEAM FLASHING AFTER PASSING THROUGH AN ORIFICE. THE ELBOW AND A 2 FOOT SECTION OF PIPE DOWNSTREAM OF THE ORIFICE WERE REPLACED. AN ADDITIONAL SMALL LEAK WAS DISCOVERED NEAR THE ORIFICE FLANGE DURING SUBSEQUENT RESTART. A PRESSURE RETAINING JACKET WAS INSTALLED TO STOP THE LEAK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*FAILURE, PIPE • FAILURE, DESIGN ERROR • EROSION • MONTICELLO (BWR) • ORIFICE • *LEAK • *TURBINE • DRAINAGE • PIPES AND PIPE FITTINGS

110725

MSIV TORUS COOLING INJECTION VALVE FAILS TO OPEN AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR N/A-RU-70-17 TO NRC OFFICE OF I & E, REGION III, OCT. 1, 1976, DOCKET 50-263, TYPE--BWR, NPG--G.E., AE--BECHTEL

CAUSE - STEM CLAMP SET SCREENS SHEARED. DURING 100% POWER OPERATION, A MSIV TORUS COOLING INJECTION VALVE FAILED TO OPEN FOR TORUS COOLDOWN FOLLOWING ROUTINE MPCV SURVEILLANCE. THE ANCHOR VALVE CO. 10-INCH 300-LB GLOBE VALVE FAILED TO OPEN BECAUSE THE STEM CLAMP LOOSENEED DUE TO SHEARING OF SET SCREENS. THE STEM CLAMP WAS WELDED TO THE STEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FASTENER • MODIFICATION • FAILURE, DESIGN ERROR • MONTICELLO (BWR) • *SHUTDOWN COOLING SYSTEM • COOLING • *VALVES • TORUS

119005

MSIV SCRAM RELAY FAILS TO DE-ENERGIZE AT MONTICELLO

NORTHERN STATES POWER CO., MINNEAPOLIS, MN

2 PGS, LTR N/A-RU-70-19 TO NRC OFFICE OF I & E, REGION III, OCT. 19, 1976, DOCKET 50-263, TYPE--BWR, NPG--G.E., AE--BECHTEL

CAUSE - WELDING. DURING TESTING WHILE OPERATING AT 99% POWER, 10/B MSIV NOT FULL OPEN SCRAM RELAYS DID NOT DE-ENERGIZE. ITS FUSE WAS PULLED TO DE-ENERGIZE IT. INSPECTION OF CIRCUIT COMPONENTS DID NOT REVEAL THE CAUSE. THE LIMIT SWITCH THAT DE-ENERGIZES THE GE TYPE MPA MODEL 12MPA51A99 RELAY WAS REPLACED IN KIND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • REACTOR PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM

119005 *CONTINUED*
 OPERABILITY + MONTICELLO (BWR) + MAIN COOLING SYSTEM + FAILURE, IMMINENT + VALVES + RELAYS

120299
 NUCLEAR TURBINE TRIPS ON OVERSPEED AT MONTICELLO
 NORTHERN STATES POWER CO., MINNEAPOLIS, MN
 3 PGS, LTR N/M-RO-70-11 TO NRC OFFICE OF I & E, REGION III, OCT. 27, 1970, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - FM SYSTEM VALVE LEAKAGE. DURING A TEST, NUCLEAR TURBINE TRIPPED ON OVERSPEED ON 8/27/70. ON 8/30/70 A SECOND OVERSPEED TRIP OCCURRED DURING TESTING. VALVE LEAKAGE FROM FM SYSTEM CAUSED A STEAM VOID IN THE DISCHARGE PIPING. CONDENSER COOLING SUPPLY VALVE WAS OPEN, PERMITTING VALVE REPAIR, CAUSED WARM WATER CIRCULATION THROUGH THE PUMP. THESE CONDITIONS CAUSED FAST SPEED INCREASE. THE COOLING SUPPLY VALVE WAS REPAIRED AND CLOSED. THE CONTROL OIL SYSTEM WAS MODIFIED TO IMPROVE CONTROL VALVE RESPONSE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

MONTICELLO (BWR) + TURBINE + NUCLEAR + TEST, SYSTEM OPERABILITY + FAILURE, EQUIPMENT + FAILURE, MAINTENANCE ERROR + LEAK + VALVES + COOLING

119172
 CRACK FOUND IN REACTOR FEEDPUMP INBOARD SEAL COOLER AT MONTICELLO
 NORTHERN STATES POWER CO., MINNEAPOLIS, MN
 2 PGS, LTR N/M-RO-70-20 TO NRC OFFICE OF I & E, REGION III, OCT. 29, 1970, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - VIBRATION INDUCED FATIGUE. DURING 100% POWER OPERATION, A CRACK WAS DISCOVERED AT THE CONNECTION OF REACTOR FEEDPUMP INBOARD SEAL COOLER 12 TO THE SEAL COOLING RETURN LINE. THE MELIFLOW MODEL 8X4010 HEAT EXCHANGER TUBE CONNECTION CRACKED BECAUSE OF VIBRATION INDUCED FATIGUE. IT HAS BEEN ISOLATED FROM VIBRATION BY INSTALLATION OF A FLEXIBLE HOSE IN THE RETURN LINE. THE CRACKED CONNECTION WAS REPLACED IN KIND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, PIPE + FAILURE, FATIGUE + FAILURE, DESIGN ERROR + SEAL + MONTICELLO (BWR) + VIBRATION + FEEDWATER + PUMPS + PIPES AND PIPE FITTINGS + HEAT EXCHANGERS

119725
 DIESEL GENERATOR FAILS TO START ON NO. 2 STARTING SYSTEM AT MONTICELLO
 NORTHERN STATES POWER CO., MINNEAPOLIS, MN
 2 PGS, LTR N/M-RO-70-22 TO NRC OFFICE OF I & E, REGION III, NOV. 9, 1970, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - RUST PARTICLES IN AIR RELAY. DURING A TEST WHILE OPERATING AT 100% POWER, DIESEL GENERATOR 11 FAILED TO START ON STARTING SYSTEM 2. RUST PARTICLES APPEAR TO HAVE CLOGGED THE SPALL BLEED OFF DRAIN IN THE AIR RELAY, ELECTRO-MOTIVE DIV., MODEL 999-20. THE AIR CONTROL COMPONENTS WERE CLEANED AND OPERABILITY OF STARTING SYSTEM 2 DEMONSTRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

MONTICELLO (BWR) + GENERATOR, DIESEL + TEST, SYSTEM OPERABILITY + PNEUMATIC SYSTEM + RELAYS + CRUD + FAILURE, MAINTENANCE ERROR + ENGINES, INTERNAL COMBUSTION

119740
 NSL RADIATION MONITOR NOT TESTED ON SCHEDULE AT MONTICELLO
 NORTHERN STATES POWER CO., MINNEAPOLIS, MN
 2 PGS, LTR N/M-RO-70-23 TO NRC OFFICE OF I & E, REGION III, NOV. 24, 1970, DOCKET 50-263, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - TEST OVERLOOKED. DURING A REVIEW OF SURVEILLANCE TESTS ON 9/24/70, THE COORDINATOR COULD NOT LOCATE THE MAIN STEAM LINE RADIATION MONITOR TEST SCHEDULED TO BE COMPLETED 9/12/70. THE TEST HAD BEEN OVERLOOKED AND NOT SCHEDULED. THE UNIT WAS OPERATING AT 100% POWER AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

MONTICELLO (BWR) + TEST INTERVAL + TESTING + RADIATION MONITORS + MAIN COOLING SYSTEM + STEAM + FAILURE, ADMINISTRATIVE CONTROL + REVIEW

120442
 TURBINE BYPASS HEADER DRAIN LEAKS AT MONTICELLO
 NORTHERN STATES POWER CO., MINNEAPOLIS, MN
 2 PGS, LTR N/M-RO-70-24 TO NRC OFFICE OF I & E, REGION III, DEC. 10, 1970, DOCKET 50-263, TYPE--BWR, NRC--

100442 *CONTINUED*
 U.S. AE--DECHTEL

CAUSE - STEAM EROSION. DURING AN INSPECTION OF THE CONDENSER AREA WHILE THE REACTOR WAS SHUT DOWN, A 1-INCH EROSION ON THE HP TURBINE BYPASS HEADER DRAIN LINE WAS FOUND TO BE LEAKING. EROSION OF THE EROSION WALL WAS CAUSED BY HOT STEAM FLASHING AFTER PASSING THROUGH AN ORIFICE. THE 3000 LB (SCH 40) C-50-A105-ELBOW WAS REPAIR WELDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MONTIELLO (ENR) * PIPES AND PIPE FITTINGS * TURBINE * BYPASS * EROSION * STEAM * FAILURE, PIPE * LEAK

100457
 LHM FAILS TO RESPOND DURING STARTUP AT NINE MILE POINT
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/AW 75-37 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, JAN. 8, 1976, DOCKET 50-220, TYPE--ENR, NRC--U.S. AE--NIAGARA MOHAWK

CAUSE - LOW RESISTANCE. DURING A REFUELING STARTUP, ONE INTERMEDIATE RANGE MONITOR FAILED TO RESPOND. SINCE THE REMAINING CHANNELS WERE OPERABLE, STARTUP CONTINUED. THE DETECTOR SHOWED LOW RESISTANCE. FURTHER INVESTIGATION WILL BE PERFORMED NEXT DRYWELL ENTRY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (ENR) * FAILURE, INSTRUMENT * INSTRUMENT, INTERMEDIATE RANGE * REACTOR STARTUP

100458
 SET POINT DRIFT IN PRESSURE SENSOR AT NINE MILE POINT
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/AW 75-38 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, JAN. 8, 1976, DOCKET 50-220, TYPE--ENR, NRC--U.S. AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING SURVEILLANCE TESTING WITH THE REACTOR AT 50% POWER, RE-04C INDICATED A TRIP AT 3.25 PSIG WHICH IS BELOW THE 3.447 PSIG LOWER LIMIT. NO REASON FOR THE DRIFT WAS FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (ENR) * REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * FAILURE, INHERENT * SENSORS, PRESSURE

110300
 SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT NINE MILE POINT
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/AW 76-1 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, FEB. 3, 1976, DOCKET 50-220, TYPE--ENR, NRC--U.S. AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 94% POWER, 2 CORE SPRAY INSTRUMENTS WERE FOUND TO TRIP AT 2.0 AND 3.5 PSID RESPECTIVELY WHICH IS LESS THAN THE 4 PSID LOWER LIMIT IN THE CONSERVATIVE DIRECTION. THESE SWITCHES PROVIDE ALARM ONLY. THE CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY * NINE MILE POINT 1 (ENR) * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * DRIFT * SENSORS, PRESSURE

111000
 ERROR FOUND IN KW/FT VS EXPOSURE CURVE POINTS AT NINE MILE POINT
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/AW 76-02 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, MARCH 3, 1976, DOCKET 50-220, TYPE--ENR, NRC--U.S. AE--NIAGARA MOHAWK

CAUSE - INTERPOLATION DIFFICULTIES. FOLLOWING A REVIEW WHILE OPERATING AT 94% POWER, THE KW/FT VS EXPOSURE CURVE POINTS FOR MAPHGA PLACED IN THE PROCESS COMPUTER FOR TYPE 5 FUEL (OXO) WERE FOUND TO BE IN ERROR BY NO MORE THAN 0.1 KW/FT. THE NOMINAL MAPHGA LIMIT IS 0.52 KW/FT. THE CAUSE WAS INTERPOLATION FROM TECH SPEL CURVES WITHOUT GRID OR BREAK POINTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

COMPUTER, DIGITAL * NINE MILE POINT 1 (ENR) * POWER DISTRIBUTION * FAILURE, ADMINISTRATIVE CONTROL * HOT CHANNEL * FUEL ELEMENTS

111669
SET POINT DRIFT IN DRYWELL PRESSURE SWITCH AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/RO 76-03 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION I, MARCH 3, 1976, DOCKET 50-220.
TYPE--BWR, NPG--G.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 90% POWER, 1 OF THE 4 HIGH DRYWELL PRESSURE INDICATORS TRIPPED AT 3.35 PSIG. THIS IS LESS THAN THE 3.45 PSIG LIMIT. THE CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • DRIFT • SENSORS, PRESSURE

111670
SET POINT DRIFT IN REACTOR LEVEL INDICATOR AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/RO 76-03 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION I, MARCH 3, 1976, DOCKET 50-220.
TYPE--BWR, NPG--G.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 90% POWER, THE REACTOR LO-LO-LO LEVEL INDICATOR TRIPPED AT 131 INCHES RATHER THAN THE 129.7 INCH MAXIMUM. THE CAUSE WAS INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • SET POINT • DRIFT • SENSORS, LEVEL

111671
REFUEL PLATFORM MONITOR HAS LOW RESPONSE AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/RO 76-03 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION I, MARCH 3, 1976, DOCKET 50-220.
TYPE--BWR, NPG--G.E., AE--NIAGARA MOHAWK

CAUSE - DETECTOR FAILED. DURING TESTING WITH THE REACTOR AT 90% POWER, A REFUELING PLATFORM HIGH RANGE MONITOR CALIBRATION INDICATED A RESPONSE OF 350 NR/NR RATHER THAN 600 NR/NR. THE DETECTOR HAD FAILED AND HAD BEEN REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • NINE MILE POINT 1 (BWR) • REFUELING • TEST, SYSTEM OPERABILITY • MONITORING SYSTEM, RADIATION • FAILURE, INHERENT • RADIATION MONITORS

111672
MPCI PUMP SUCTION PRESSURE SWITCH FAILS AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/RO 76-06 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION I, MARCH 3, 1976, DOCKET 50-220.
TYPE--BWR, NPG--G.E., AE--NIAGARA MOHAWK

CAUSE - LINKAGE ARM LOOSE. ONE OF THE 2 PUMPS USED IN THE MPCI SYSTEM WAS FOUND INOPERABLE DUE TO THE APPARENT FAILURE OF A PUMP SUCTION PRESSURE SWITCH. THE LINKAGE ARM ON THE MERCIDIO WAS FOUND TO BE DISCONNECTED FOR NO APPARENT REASON. THE ARM WAS RECONNECTED AND THE SWITCH TESTED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • FAILURE, MAINTENANCE ERROR • PUMPS • SENSORS, PRESSURE • MPCI

111993
SMALL CRACK FOUND IN CLEANUP SYSTEM PIPING AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
1 PG, LTR 50-220-76-09 TO U.S. NRC, MARCH 23, 1976, DOCKET 50-220, TYPE--BWR, NPG--G.E., AE--NIAGARA MOHAWK

CAUSE - UNKNOWN. WHILE THE REACTOR WAS OPERATING AT 80% POWER, AN OPERATOR NOTICED STEAM COMING FROM THE REACTOR COOLANT CLEANUP SYSTEM PIPING. WHEN THE INSULATION WAS REMOVED, STEAM WAS FOUND TO BE BLOWING FROM A SMALL CRACK IN A 6 INCH 304 STAINLESS STEEL CULK BEND SECTION. THE DEFECTIVE SECTION WAS REMOVED AND SENT TO THE HOT LAB FOR METALLURGICAL EXAMINATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

113903 CONTINUED
 NINE MILE POINT 1 (ENR) • FAILURE, PIPE • COOLANT PURIFICATION SYSTEM • LEAK • CRACK • PIPES AND PIPE FITTINGS

113905
 LEAK FOUND IN CLEANUP SYSTEM PUMP PIPING AT NINE MILE POINT
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 1 PGS, LTR W/RO-70-10 TO U.S. NRC, MARCH 23, 1970, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - UNKNOWN. WITH THE REACTOR AT 57% POWER, AN OPERATOR NOTICED A WHISP OF STEAM FROM THE AUXILIARY CLEANUP SYSTEM PUMP PIPING TO THE NONREGENERATIVE HEAT EXCHANGER. WHEN THE INSULATION WAS REMOVED, A SMALL STEAM LEAK WAS OBSERVED IN A 6-INCH 304 STAINLESS STEEL COLD BEND SECTION. THE REACTOR WAS SHUT DOWN FOR THE INVESTIGATION OF COLD BEND SECTIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (ENR) • FAILURE, PIPE • COOLANT PURIFICATION SYSTEM • LEAK • REACTOR SHUTDOWN • CRACK • PIPES AND PIPE FITTINGS

113904
 TRAVELING SCREENS NOT WASHED ON SCHEDULE AT NINE MILE POINT
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 1 PGS, LTR W/RO-70-12 TO U.S. NRC, MARCH 26, 1970, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - PROCEDURAL DEFICIENCY. DURING A MANAGEMENT REVIEW, IT WAS FOUND THAT A ONCE PER 3 HOURS RATHER THAN A ONCE PER HOUR SCHEDULE FOR WASHING THE TRAVELING SCREENS HAD BEEN IMPLEMENTED AFTER FAILURE OF THE AUTOMATIC WASH CONTROL. THIS HAD OCCURRED ON 3 DAYS. PROCEDURES WERE REVISED. THE HEADER PRESSURE WAS TOO LOW FOR THE PRIMARY TIME WASH TO FUNCTION. LOW PRESSURE WAS DUE TO THE DISCHARGE VALVE ON THE PUMP NOT OPENING FULLY. THE VALVE WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR • NINE MILE POINT 1 (ENR) • PROCEDURES AND MANUALS • FILTER, SCREEN • FAILURE, ADMINISTRATIVE CONTROL • CONDENSER COOLING SYSTEM

113944
 FISH IMPINGED ON INTAKE SCREENS AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR W/RO-70-15 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, APRIL 20, 1970, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - NO APPARENT CAUSE. DURING ROUTINE SAMPLING WHILE OPERATING AT 60% POWER, IT WAS DETERMINED THAT THE NUMBER OF FISH BEING IMPINGED ON THE TRAVELING SCREENS EXCEEDED THE ETS LIMIT OF 20,000 PER 24 HR ON 2 PERIODS. THERE WAS NO APPARENT CAUSE. THE FISH WERE ABOUT 90% ADULTS. THESE MIGRATE FOR SPAWNING AT THIS TIME OF YEAR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (ENR) • FILTER, SCREEN • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

113945
 FISH IMPINGED ON INTAKE SCREENS AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR W/RO-70-15 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, APRIL 20, 1970, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - NO APPARENT CAUSE. DURING ROUTINE SAMPLING WHILE OPERATING AT 69% POWER, IT WAS DETERMINED THAT THE NUMBERS OF FISH BEING IMPINGED ON THE TRAVELING SCREENS WERE INCREASING. THE NUMBERS WERE 60,150 (19% ADULTS) ONE DAY AND 67,320 (17% ADULTS) THE NEXT. THESE FISH MIGRATE INSHORE FOR SPAWNING AT THIS TIME OF THE YEAR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (ENR) • FILTER, SCREEN • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

113946
 FISH IMPINGED ON INTAKE SCREENS AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR W/RO-70-16 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, APRIL 20, 1970, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

113546 CONTINUED

CAUSE - NO APPARENT CAUSE. DURING ROUTINE SAMPLING WHILE OPERATING AT 70% POWER, IT WAS DETERMINED THAT 27,922 ALEWIGS FISH WERE IMPINGED IN ONE DAY. THIS EXCEEDS THE 20,000 PER DAY LIMIT. ALEWIGS MIGRATE INSHORE FOR SPAWNING AT THIS TIME OF THE YEAR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • FILTER, SCREEN • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

113906

FISH IMPINGED ON INTAKE SCREENS AT NINE MILE POINT

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

3 PGS, LTR W/RO-70-17 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, MAY 7, 1970, Docket 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - NO APPARENT CAUSE. DURING ROUTINE SAMPLING BY CONTRACTOR PERSONNEL, IT WAS FOUND THAT THE NUMBERS OF FISH BEING IMPINGED ON THE TRAVELING SCREENS EXCEEDED THE ETS LIMIT OF 20,000 PER 24 HOUR PERIOD. THERE WAS APPARENT CAUSE THAT COULD BE DIRECTLY RELATED TO CHANGES IN PLANT OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • FILTER, SCREEN • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

114196

FIVE CONTRACTOR EMPLOYEES RECEIVE OVEREXPOSURES AT NINE MILE POINT 1

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

4 PGS, LTR W/RO-70-19 TO NRC DIRECTOR OF I & E, MAY 19, 1970, Docket 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - DEFICIENCY IN CHECKING PRIOR EXPOSURES. FIVE PERSONS INVOLVED IN THE REPLACEMENT OF A SECTION OF REACTOR CLEAN-UP SYSTEM PIPING RECEIVED QUARTERLY EXPOSURES OF 3020 TO 3010 MREM BASED ON FILM BADGE DATA. RADIATION FIELDS IN THE WORK AREA VARIED FROM 50 TO 100 MR/HR. DATA FROM TLD'S AND POCKET DOSIMETERS INDICATED EXPOSURES OF 1020 TO 2013 MREM. THE 1020 MREM DID NOT INCLUDE SOME WORK IN THE EARLY PART OF THE QUARTER. FOR 3 OF THE 5, COMPARISON OF TOTAL EXPOSURE RECEIVED WITH AUTHORIZED EXPOSURE WAS NOT MADE ON A TIMELY BASIS. MORE EMPHASIS WILL BE PLACED ON DOSIMETRY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DOSIMETRY • MAINTENANCE AND REPAIR • NINE MILE POINT 1 (BWR) • PERSONNEL EXPOSURE, RADIATION • FAILURE, ADMINISTRATIVE CONTROL • RADIATION EXPOSURE, RECORD KEEPING • PIPES AND PIPE FITTINGS

114426

SET POINT DRIFT IN TURBINE PRESSURE SWITCH AT NINE MILE POINT

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/RO-70-19 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, MAY 25, 1970, Docket 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 60% POWER, A SWITCH USED FOR TURBINE ANTICIPATORY TRIP BYPASS REACTOR SCRAM WAS FOUND TO ACTUATE AT 304 PSIG, WHICH EXCEEDS THE 30% PSIG UPPER LIMIT. THE SWITCH WAS RECALIBRATED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • TURBINE • SET POINT • BYPASS • DRIFT • FAILURE, INHERENT • SENSORS, PRESSURE

114427

SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT NINE MILE POINT

NIAGARA MOHAWK POWER CORP., SYRACUSE, NY

2 PGS, LTR W/RO-70-20 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, MAY 25, 1970, Docket 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 60% POWER, SWITCH 1803C WAS FOUND TO ACTUATE AT 20.4 PSID RATHER THAN THE REQUIRED 19 PSID. THIS SWITCH IS USED TO INDICATE EMERGENCY COOLING HIGH FLOW AND ISOLATE THE SYSTEM. THE DRIFT IS WITHIN THE EXPECTED RANGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM

114427 PLUMTIMEDUP
OPERABILITY • RESET POINT • EMERGENCY COOLING SYSTEM • PURIFT • FAILURE, INHERENT • SENSORS, PRESSURE

114428
MVR VALVE FAILS TO OPEN AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-21 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, MAY 25, 1970, DOCKET 50-220, TYPE-
-DNR, NRC-6.E., AE--NIAGARA MOHAWK

CAUSE - MOTOR WINDINGS OPEN. DURING SHUTDOWN, ONE SHUTDOWN COOLING SYSTEM DE OPERATED ISOLATION VALVE FAILED TO OPEN. IT WAS MANUALLY OPENED TO ALLOW OPERATION OF THE SYSTEM. THE MOTOR WAS FOUND WITH AN OPEN WINDING. IT WILL BE REWOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • NINE MILE PLANT 1 (DNR) • CONTAINMENT ISOLATION • SHUTDOWN COOLING SYSTEM • FAILURE, INHERENT • VALVE OPERATIONS • MTCAS • OVALVES

114447
FISH IMPINGED ON INTAKE SCREENS AT NINE MILE POINT
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-22 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, MAY 28, 1970, DOCKET 50-220, TYPE-
-DNR, NRC-6.E., AE--NIAGARA MOHAWK

CAUSE - NO APPARENT CAUSE. DURING ROUTINE SAMPLING ON 5/19-20/70, IT WAS DETERMINED THAT THE NUMBER OF FISH BEING IMPINGED EXCEEDED THE ETS LIMIT OF 20000/24 HR. THIS CONDITION CONTINUED UNTIL 5/27/70. THERE WAS NO APPARENT CAUSE RELATED DIRECTLY TO STATION OPERATION. THERE APPEARS TO BE A CORRELATION BETWEEN WIND SPEED AND DIRECTION AND THE IMPINGEMENT NUMBERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE PLANT 1 (DNR) • FILTER, SCREEN • ANIMAL, FISH • MORTALITY • CONDENSER COOLING SYSTEM • FAILURE, INHERENT

115099
RECIRCULATION PUMP RELAY FOUND SMOKING AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-23 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, JULY 6, 1970, DOCKET 50-220, TYPE-
-DNR, NRC-6.E., AE--NIAGARA MOHAWK

CAUSE - SHORTED COIL. WHILE THE REACTOR WAS AT 818 POWER, THE OPERATOR NOTED SMOKE FROM A REACTOR RECIRCULATION PUMP LOW-LEVEL TRIP RELAY. THE COIL APPARENTLY SHORTED CAUSING SMOKE AND A BLOWN FUSE. THE RELAY WAS REPLACED WITH A SIMILAR ONE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE PLANT 1 (DNR) • REACTOR PROTECTION SYSTEM • FAILURE, INSTRUMENT • FAILURE, INHERENT • RELAYS

115900
SET POINT DRIFT IN TWO APRM'S AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-24 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, JULY 6, 1970, DOCKET 50-220, TYPE-
-DNR, NRC-6.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE OPERATING AT 90% POWER, 2 OF THE 8 APRM'S FAILED TO PROVIDE A SCRAM SIGNAL AT THE REQUIRED FLOW BIAS SET POINT. THE 20% FLOW TEST TRIPPED HIGHER THAN REQUIRED BY 1%. THE CAUSE WAS INSTRUMENT DRIFT. BOTH WERE RECALIBRATED TO REQUIRED SPECS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE PLANT 1 (DNR) • REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • INSTRUMENT, POWER RANGE • RESET POINT • PURIFT • FAILURE, INHERENT

115901
SET POINT DRIFT IN APRM'S AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/NO 70-25 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, JULY 6, 1970, DOCKET 50-220, TYPE-
-DNR, NRC-6.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING WHILE OPERATING AT 90% POWER, 2 OF THE 8 APRM'S FAILED TO PROVIDE A SCRAM SIGNAL AT THE REQUIRED FLOW BIAS SET POINT. THE 20% FLOW TEST TRIPPED HIGHER THAN REQUIRED BY LESS THAN 1%. THE CAUSE WAS INSTRUMENT DRIFT. THE INSTRUMENTS WERE

115001 *CONTINUED*
RECALIBRATED TO REQUIRED SPECS.

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NINE MILE POINT 1 (BWR) * REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT *
*INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * INSTRUMENT, POWER RANGE * *SET POINT * *DRIFT * FAILURE,
IMMINENT

116092
MILK SAMPLE NOT ANALYZED ON TIME AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
3 PGS, LTR W/LET 70-29 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, AUG. 13, 1976, DOCKET 50-220.
TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - HOLIDAY WEEKEND. DURING A ROUTINE MANAGEMENT REVIEW, IT WAS DISCOVERED THAT A MILK SAMPLE SENT TO A CONTRACTOR FOR I-131 ANALYSIS WAS NOT COUNTED WITHIN 8 DAYS OF COLLECTION. THE SAMPLE WAS SENT JUST PRIOR TO A HOLIDAY WEEKEND AND WAS NOT COUNTED DUE TO THE BACK LOG OF MAIL AT THE FACILITY. ARRANGEMENTS HAVE BEEN MADE TO ASSURE THAT SAMPLES ARE PROCESSED ON SCHEDULE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ISSUE * NINE MILE POINT 1 (BWR) * MILK * RADIOCHEMICAL ANALYSIS * FAILURE, ADMINISTRATIVE CONTROL *
MONITORING PROGRAM, ENVIRONMENTAL * *TEST INTERVAL

117137
CONDENSER TEMPERATURES NOT RECORDED HOURLY AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
5 PGS, LTR W/LET 70-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, AUG. 13, 1976, DOCKET 50-220.
TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - COMPUTER TYPERS DOWN. DURING THE PERIOD JULY 17-22, 1976, CONDENSER DELTA T AND DISCHARGE CANAL TEMPERATURES WERE NOT RECORDED HOURLY. THE COMPUTER TYPERS WERE DOWN DURING THIS PERIOD. ALSO, NEW INSTRUMENTATION FOR THESE MEASUREMENTS WERE INSTALLED DURING THIS TIME. CALIBRATION PROBLEMS WERE ENCOUNTERED SO HOURLY DATA RECORDED THROUGH THE END OF JULY WERE NOT VALID.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT * FAILURE, EQUIPMENT * NINE MILE POINT 1 (BWR) * TEMPERATURE GRADIENT * CONDENSER * *DATA COLLECTION *
*TEMPERATURE * CONDENSER COOLING SYSTEM * DISCHARGE * FAILURE, IMMINENT

117971
FEEDWATER PUMP FAILS TO START AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LET 70-31 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, SEPT. 3, 1976, DOCKET 50-220.
TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - TIME DELAY RELAY FAILURE. DURING A ROUTINE REACTOR STARTUP WITH THE REACTOR AT 77% POWER, FEEDWATER PUMP 11 FAILED TO START WHEN MANUALLY INITIATED. IT IS 1 OF 2 PUMPS REQUIRED FOR MPC1. AN AGASTAT TIME DELAY RELAY, MODEL 2462 PD, 120 VDC, FAILED TO FUNCTION THUS NOT ALLOWING PUMP OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

NINE MILE POINT 1 (BWR) * FAILURE, INSTRUMENT * FAILURE, IMMINENT * *FEEDWATER * *PUMPS * RELAYS * MPC1

118017
SET POINT DRIFT IN PRESSURE SWITCH AT NINE MILE POINT 1
NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
2 PGS, LTR W/LET 70-32 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, SEPT. 24, 1976, DOCKET 50-220.
TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE MAIN STEAM LINE BREAK INSTRUMENTATION WITH THE REACTOR AT 94% POWER, ONE SWITCH TRIPPED AT 100 PSIG RATHER THAN THE REQUIRED VALUE OF 105 +/- 1 PSIG. THE REASON OTHER THAN INSTRUMENT DRIFT WAS FOUND. THE BARTON MODEL 270, SERIAL NO. 759, SWITCH WAS RECALIBRATED AND RETURNED TO SERVICE.

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NINE MILE POINT 1 (BWR) * REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT *
*INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * MAIN COOLING SYSTEM * *SET POINT * *DRIFT * FAILURE,
IMMINENT * SENSORS, PRESSURE

118010
 REQUIRED SURVEILLANCE OF VACUUM BREAKERS NOT PERFORMED AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-13 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, SEPT. 24, 1976, DOCKET 50-220,
 TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - NOT POSTED ON STARTUP CHECK-OFF SHEETS. DURING A MANAGEMENT REVIEW, IT WAS REVEALED THAT
 SURVEILLANCE REQUIRED BY TECH SPECS ON VACUUM BREAKER EXERCISING FOLLOWING RELIEF VALVE DISCHARGE
 TO THE TOWER HAD NOT BEEN PERFORMED FOLLOWING 2 SCRAMS. THE SURVEILLANCE REQUIREMENTS WERE
 NEVER POSTED ON THE STARTUP CHECK-OFF SHEETS. THIS HAS BEEN CHANGED.

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NINE MILE POINT 1 (BWR) • PROCEDURES AND MANUALS • TESTING • CONTAINMENT VACUUM BREAKER • REVIEW • FAILURE,
 ADMINISTRATIVE CONTROL • TEST INTERVAL

119514
 LOCKOUT OF CONTAINMENT SPRAY PUMP DISABLES SISTER PUMP AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-10 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, OCT. 14, 1976, DOCKET 50-220,
 TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - DESIGN ERROR. DURING A REVIEW OF PLANT DESIGN, IT WAS DISCOVERED THAT IF THE CONTROL
 SWITCH FOR THE CONTAINMENT SPRAY PUMP WERE PLACED IN LOCKOUT, THE SISTER PUMP WAS DISABLED FROM
 AUTOMATIC STARTING. THE EMERGENCY POWER SUPPLY FOR THE EFFECTED SISTER PUMPS IS THE SAME EDC.
 THE PUMP COULD BE STARTED MANUALLY FROM THE CONTROL ROOM. AN ELECTRICAL CHANGE IS BEING
 CONSIDERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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CONTAINMENT SPRAY • CONTROL SYSTEM • NINE MILE POINT 1 (BWR) • FAILURE, DESIGN ERROR • REDUNDANCE • PUMPS

119105
 CHEMICAL COMPOSITE SAMPLE DISCARDED PRIOR TO ANALYSIS AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-37 TO U.S. NRC, REGION 1, OCT. 25, 1976, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA
 MOHAWK

CAUSE - NOT PROMPTLY LABELLED. THE JULY 1976 MONTHLY CHEMICAL PROPORTIONAL COMPOSITE WAS
 INADVERTENTLY DISCARDED PRIOR TO PERFORMING CHEMICAL LIQUID WASTE ANALYSES. IT WAS DISCARDED
 BECAUSE IT WAS NOT PROMPTLY LABELLED AFTER PREPARATION. THE TECHNICIAN WAS CALLED AWAY ON
 ANOTHER JOB AND THE SAMPLE WAS POURED OUT DURING ROUTINE LAB CLEANUP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
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FAILURE, OPERATOR ERROR • NINE MILE POINT 1 (BWR) • WASTE DISPOSAL • WASTE HANDLING • SAMPLING • WASTE
 DISPOSAL, LIQUID • TEST INTERVAL • IDENTIFICATION

119720
 SET POINT DRIFT IN REACTOR WATER LEVEL SWITCH AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-30 TO NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION 1, NOV. 5, 1976, DOCKET 50-220,
 TYPE--BWR, NRC--G.E., AE--NIAGARA MOHAWK

CAUSE - INSTRUMENT DRIFT. DURING SURVEILLANCE TESTING WITH THE REACTOR AT 95% POWER, LU-LO-LO
 REACTOR WATER LEVEL SWITCH AE-10A FAILED TO PROVIDE A TRIP AT THE REQUIRED 124.2, -2.0 INDICATED
 INCHES. IT TRIPPED AT 110 INCHES AND WAS RESET AT 120 INCHES. THE APPARENT CAUSE WAS INSTRUMENT
 DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

NINE MILE POINT 1 (BWR) • INSTRUMENT, SWITCH • INSTRUMENT CALIBRATION • SENSORS, LEVEL • TEST, SYSTEM
 OPERABILITY • FAILURE, INSTRUMENT • SET POINT • DRIFT • FAILURE, INHERENT • REACTOR PROTECTION SYSTEM

120220
 IODINE-131 CONCENTRATION IN MILK SAMPLE HIGH AT NINE MILE POINT 1
 NIAGARA MOHAWK POWER CORP., SYRACUSE, NY
 2 PGS, LTR N/LEA 70-39 TO U.S. NRC, REGION 1, NOV. 20, 1976, DOCKET 50-220, TYPE--BWR, NRC--G.E., AE--NIAGARA
 MOHAWK

CAUSE - CHINESE WEAPONS TESTING. A MILK SAMPLE CONTAINED A CONCENTRATION OF 19.9 +/- 0.4
 PICOCURIES/L OF I-131. THIS EXCEEDS THE REPORTING REQUIREMENT OF 19. THE APPARENT CAUSE WAS
 CHINESE WEAPONS TESTING THAT OCCURRED PRIOR TO SAMPLING.

120226 *CONTINUED*
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

NINE MILE POINT 1 (BWR) • CONCENTRATION • OILCINE • PHILA • FOOD CHAIN • TEST, WEAPONS • FAILURE, INHERENT • MONITORING PROGRAM, ENVIRONMENTAL

109654
 VACUUM BREAKER FAILED TO OPERATE AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 2 PGS, LTR W/NO 50-219/75A34/1P TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 2, 1976, DOCKET 50-219, TYPE--BWR, NPG--G.E., AE--BURNS & ROE

CAUSE - GROWTH OF TEFLON BUSHING. WHILE OPERATING AT 80% POWER, A VACUUM BREAKER FAILED TO OPERATE DURING A TEST. EXCESSIVE FORCE WAS REQUIRED TO MOVE THE VALVE. AN APPARENT GAWING PROBLEM HAS BEEN EXPERIENCED WITH THE TEFLON BUSHINGS. THE VALVE WAS CLOSED. IT WILL BE REPAIRED DURING THE PRESENT REFUELING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

OYSTER CREEK (BWR) • *CONTAINMENT VACUUM BREAKER • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • PLASTICS • *BEARING • EFFECT, AGE

109654
 SET POINT DRIFT IN PRESSURE SWITCH AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 2 PAGES, LETTER WITH NO 50-219/75-1/1P TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 12, 1976, DOCKET 50-219, TYPE--BWR, NPG--G.E., AE--BURNS & ROE

CAUSE - MERCURY SWITCH FAILED. DURING TESTING OF THE HIGH DRYWELL PRESSURE INITIATION OF CORE SPRAY SYSTEM 2 WITH THE REACTOR SHUT DOWN FOR REFUELING, ONE PRESSURE SWITCH WAS FOUND TO TRIP AT 2.75 PSIG RATHER THAN THE 2.0 PSI LIMIT. THE MERCURY SWITCH BULB WAS REPLACED AND THE BANTON IIT MODEL 270 PRESSURE SWITCH TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CORE SPRAY • OYSTER CREEK (BWR) • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • *INSTRUMENT, SWITCH • REFUELING • TEST, SYSTEM OPERABILITY • *SET POINT • *SHIFT • SENSORS, PRESSURE

110331
 LEAK RATE OF VACUUM BREAKERS EXCEED LIMITS AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 2 PGS, LTR W/NO 50-219/76/2/1P TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 14, 1976, DOCKET 50-219, TYPE--BWR, NPG--G.E., AE--BURNS & ROE

CAUSE - UNKNOWN AT PRESENT. DURING THE REFUELING OUTAGE, LOCAL LEAK RATE TESTS REVEALED THAT 2 REACTOR BUILDING TO TORUS BREAKERS HAD A COMBINED LEAKAGE RATE IN EXCESS OF LIMITS. THE CAUSE IS UNKNOWN AT THIS TIME. THEY WILL BE ADJUSTED AND/OR REPAIRED LATER. THESE ARE REPLACEMENT VALVES INSTALLED DURING 1975 REFUELING OUTAGE BECAUSE THE ORIGINAL VALVES WOULD NOT MEET THE LEAKAGE REQUIREMENTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT • OYSTER CREEK (BWR) • *CONTAINMENT VACUUM BREAKER • BUILDING • REFUELING • TEST, SYSTEM OPERABILITY • *LEAK RATE • TORUS

110330
 REACTOR BUILDING VACUUM LESS THAN LIMIT AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 2 PGS, LTR W/NO 50-219/76/3/1P TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 16, 1976, DOCKET 50-219, TYPE--BWR, NPG--G.E., AE--BURNS & ROE

CAUSE - SEALS OPEN DURING MAINTENANCE. DURING A REFUELING OUTAGE SECONDARY CONTAINMENT LEAK RATE TEST, THE REACTOR BUILDING VACUUM WAS CALCULATED TO BE 0.1243 INCHES OF WATER WHICH IS LESS THAN THE REQUIRED 0.25 INCHES. 1) THE INNER RAILROAD AIRLOCK WAS NOT CLOSED PROPERLY AND THE RAILROAD WHEEL FLANGE PACKING WAS NOT IN PLACE. 2) AN EXHAUST DUCT IN THE TANNHIM ROOM WAS DRAWING AIR FROM THE TURBINE BUILDING THROUGH A HSIV OPEN FOR MAINTENANCE. 3) THE TANNHIM ROOM DOW WAS OPEN FOR VENTILATION DURING WORK ON THE HSIV WITHOUT THE ROOM EXHAUST DUCT BEING SEALED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

MAINTENANCE AND REPAIR • OYSTER CREEK (BWR) • TEST, LEAK RATE • CONTAINMENT INTEGRITY • *BUILDING • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • *LEAK RATE

110332

ADJ WORTH MINIMIZER IMPERABLE DURING A REACTOR STARTUP AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 1 PG, LTR W/AD 50-219/70-5-1P TO NRC OFFICE OF REACTOR LICENSING, JAN. 23, 1976, DOCKET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - CONSOLE DRIVER BOARD LOOSE. PRIOR TO A REACTOR STARTUP, THE ADJ WORTH MINIMIZER BECAME IMPERABLE. IT COULD NOT BE REPAIRED BY STATION PERSONNEL IN TIME FOR STARTUP. STARTUP WAS CONDUCTED WITH A SECOND LICENSED OPERATOR AND A STATION ENGINEER VERIFYING THAT THE CONSOLE OPERATOR WAS FOLLOWING THE ADO PROGRAM. A COMPUTER SERVICE ENGINEER RESEATED IT. THE PROGRAM WAS LOADED AND THE RDM WAS PLACED IN SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ADMINISTRATIVE CONTROL • CONTROL ADO PROGRAM • COMPUTER, DIGITAL • OYSTER CREEK (BWR) • FAILURE, INSTRUMENT • REACTOR STARTUP • INSTRUMENTS, DISC.

110942

DIESEL GENERATOR AUTOMATICALLY SHUTS DOWN AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 2 PGS, LTR W/AD 50-219/70-4-1P TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, FEB. 2, 1976, DOCKET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - LOW COOLING WATER PRESSURE. DURING A TEST WITH THE REACTOR SHUT DOWN FOR REFUELING, EMERGENCY DIESEL GENERATOR 1-1 STARTED, RAN 12 MINUTES, AND THEN AUTOMATICALLY SHUT DOWN. THE CAUSE WAS LOW COOLING WATER PRESSURE DUE TO LOSS OF ENGINE COOLANT THROUGH A LEAK IN A RADIATION TUBE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • OYSTER CREEK (BWR) • WATER • REFUELING • TEST, SYSTEM OPERABILITY • PRESSURE, INTERNAL • LEAK • COOLING • FAILURE, IMMERSED • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL

111912

DIESEL GENERATOR FAILS TO DEVELOP SUFFICIENT VOLTAGE AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 3 PGS, LTR W/AD 50-219/70-5-1P TO NRC OFFICE OF I & E, REGION I, MARCH 10, 1976, DOCKET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - RELAY CONTACTS CHATTERING. DURING TESTING WHICH SIMULATES A LOSS OF POWER WITH A FAULT ON THE OPPOSITE BUS, DIESEL GENERATOR 2 STARTED IN THE FAST START MODE AS IT SHOULD BUT DID NOT DEVELOP SUFFICIENT VOLTAGE TO COME ON TO THE BUS AND ASSUME THE SEQUENTIAL LOADS. A TESTINGHOUSE FFCD RELAY FAILED TO ENERGIZE THE FIELD FLASHING CONTACTOR BECAUSE THE RELAY CONTACTS WERE CHATTERING DURING DIESEL GENERATOR OPERATION. THIS COULD HAVE BEEN CAUSED BY VIBRATION SINCE THE RELAY IS LOCATED IN THE DG COMPARTMENT. THE CONTACT WIPER WAS INCREASED TO OVERCOME VIBRATION. THE UNIT WAS IN THE REFUEL MODE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • FAILURE, EQUIPMENT • OYSTER CREEK (BWR) • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • VIBRATION • GENERATOR, DIESEL • RELAYS

112720

FLUX PEAKING FACTOR LIMIT EXCEEDED AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 3 PGS, LTR W/AD 50-219/70-7-1P TO NRC OFFICE OF I & E, REGION I, APRIL 9, 1976, DOCKET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - IMPROPER CORE MONITORING. WITH THE REACTOR AT 75% POWER, THE FLUX PEAKING FACTOR LIMIT FOR 4 TYPE III E FUEL ASSEMBLIES WAS EXCEEDED BY 0.24 FOR ABOUT 3 HOURS FOLLOWING CONTROL ROD MOVEMENT TO ACCOMMODATE CORE FLUX SHAPING. THE CORE WAS NOT PROPERLY MONITORED UPON COMPLETION OF ADO GROUP WITHDRAWALS. CONTROL RODS WERE INSERTED TO RETURN PARAMETERS TO LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FLUX DISTRIBUTION • FAILURE, OPERATOR ERROR • INSTRUMENT, IN CORE • OYSTER CREEK (BWR) • MFT SPOT • POWER DISTRIBUTION • MONITOR • FLUX TILT

113202

SET POINT DRIFT IN ONTWEILL PRESSURE SWITCH AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 2 PGS, LTR W/AD 50-219/70-8-1L TO NRC OFFICE OF I & E, REGION I, APRIL 12, 1976, DOCKET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

113202 *CONTINUED*

CAUSE - INSTRUMENT DRIFT. WHILE TESTING THE HIGH DRYWELL PRESSURE INITIATION OF CORE SPRAY SYSTEM WITH THE REACTOR AT 70% POWER, A BARTON INSTRUMENT CO. MODEL 270 PRESSURE SWITCH WAS FOUND TO HAVE TRIP POINT GREATER THAN THE 2.0 PSIG LIMIT. IT WAS OPERATING WITHIN ITS DESIGN ACCURACY. THE SWITCH WAS RESET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + CORE SPRAY + OYSTER CREEK (BWR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + DRIFT + FAILURE, IMMINENT + SENSORS, PRESSURE

113252

SET POINT DRIFT IN PRESSURE SWITCHES AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ

2 PGS, LTR W/RO 50-219/76-9-34 TC NRC OFFICE OF I & E, REGION I, APRIL 13, 1976, DUCRET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE CONTAINMENT SPRAY SYSTEM, THE TRIP POINT FOR 2 DRYWELL HIGH PRESSURE SWITCHES WAS FOUND OUTSIDE THE 2.0 PSIG LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE SWITCHES WERE RESET.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + CONTAINMENT SPRAY + OYSTER CREEK (BWR) + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + DRIFT + SENSORS, PRESSURE

113278

TORUS SPRAY VALVE FAILS TO OPEN AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ

4 PGS, LTR W/RO 50-219/76-10-34 TC NRC OFFICE OF I & E, REGION I, APRIL 26, 1976, DUCRET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - STARTER CONTACTS MISALIGNED. DURING MONTHLY PUMP OPERABILITY TEST FOR CONTAINMENT SPRAY SYSTEM 2 WITH THE REACTOR AT 60% POWER, TORUS SPRAY VALVE FAILED TO OPEN ON AUTO START SIGNAL. STARTER CONTACTS IN THE GE MODEL 7700 LINE MOTOR CONTROL CENTER BREAKER WERE MISALIGNED. THE CONTACTS WERE REPOSITIONED AND INSPECTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + OYSTER CREEK (BWR) + SPRAY + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + BREAKER + VALVES + TORUS

113347

SET POINT DRIFT IN DRYWELL PRESSURE SWITCH AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ

4 PGS, LTR W/RO 50-219/76-11-34 TC NRC OFFICE OF I & E, REGION I, MAY 4, 1976, DUCRET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - SENSOR REPEATABILITY. DURING TESTING OF THE DRYWELL HIGH PRESSURE SCRAM SENSORS WITH THE REACTOR AT 60% POWER, 1 OF THE 4 SENSORS TRIPPED AT 2.1 PSIG WHICH EXCEEDED THE 2.0 PSIG LIMIT. THE CAUSE IS ATTRIBUTED TO SENSOR REPEATABILITY. THE STATIC-O-RING CO., CAT. NO. 2H-44, PRESSURE SENSOR WAS RESET TO TRIP AT 2.0 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + OYSTER CREEK (BWR) + REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT + DRIFT + SENSORS, PRESSURE

117155

SECONDARY CONTAINMENT INTEGRITY WILLFULLY VIOLATED AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., FORKED RIVER, NJ

3 PGS, LTR W/RO 50-219/76-13-1P TC NRC DIRECTORATE OF REGULATORY OPERATIONS, REGION I, MAY 4, 1976, DUCRET 50-219, TYPE--BWR, MFG--G.E., AE--BURNS & ROE

CAUSE - CONTRACTOR ERROR. WITH THE REACTOR OPERATING AT 1754 MW, IT WAS OBSERVED THAT THE CONTRACTOR PERSONNEL, WHILE IN THE PROCESS OF TRANSFERRING EQUIPMENT THROUGH THE REACTOR BUILDING PERSONNEL AIRLOCK, HAD DEFEATED THE DOOR INTERLOCK AND HAD BOTH DOORS OPEN. THIS IS A VIOLATION OF SECONDARY CONTAINMENT INTEGRITY. THE DOORS WERE IMMEDIATELY CLOSED. THEY WERE OPEN FOR ABOUT 3 MINUTES. UPON QUESTIONING THE PERSON IN CHARGE OF THIS OPERATION, IT WAS DETERMINED THAT PLANT PROCEDURES WERE WILLFULLY VIOLATED. MANAGEMENT DIRECTED THAT THE RESPONSIBLE SUPERVISION IN CHARGE OF THIS CONTRACTOR JOB BE TERMINATED FOR FAILURE TO ADHERE TO PLANT PROCEDURES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

117155 CONTINUED
MAINTENANCE AND REPAIR • OYSTER CREEK (BWR) • CONTAINMENT AIR LOCK • ELECTRICAL INTEGRITY • INSTRUMENT,
INTERLOCK • FAILURE, ADMINISTRATIVE CONTROL

111978
SENSING LINES TO SHUT FLOW SWITCH FOUND TO BE REVERSED AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
• PUS, LTR NRC 50-219/76-12-3L TO NRC OFFICE OF I & E, REGION I, MAY 13, 1976, DOCKET 50-219, TYPE--BWR, NRC--
• E., AE--BURNS & ROE

CAUSE - UNKNOWN. MAINTENANCE PERSONNEL DISCOVERED THAT THE SENSING LINES TO THE LOW FLOW SWITCH
IN STANDBY GAS TREATMENT SYSTEM 1 WERE REVERSED AND THAT THE FLOW SWITCH WAS OUT OF CALIBRATION.
THE CAUSE OF THE LINE REVERSAL IS NOT KNOWN BUT IT IS THOUGHT TO HAVE OCCURRED DURING INITIAL
INSTALLATION. THE SENSING LINES WERE ORIENTED PROPERLY AND THE SWITCH RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

OYSTER CREEK (BWR) • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • FAILURE, INSTALLATION
ERROR • TUBING • SET POINT • STANDBY GAS TREATMENT • SENSORS, FLOW

114207
PRESSURE SWITCH SENSING LINE LEAKS AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
• PUS, LTR NRC 50-219/76-15-3L TO NRC OFFICE OF I & E, REGION I, MAY 24, 1976, DOCKET 50-219, TYPE--BWR, NRC--
• E., AE--BURNS & ROE

CAUSE - COLD CYCLE FATIGUE FAILURE. DURING TESTING OF CORE SPRAY SYSTEM 2 PUMPS WITH THE REACTOR
AT 90% POWER, A VERY SMALL LEAK WAS FOUND IN THE SENSING LINE TO A PRESSURE SWITCH. THE AFFECTED
PORTION OF THE LINE WAS REPLACED. LABORATORY ANALYSIS INDICATES THE CRACK WAS CAUSED BY COLD
CYCLE FATIGUE FAILURE. ALL SENSING LINE FITTINGS FOR THE CORE SPRAY SYSTEM LOGIC INSTRUMENTS
WILL BE DYE PENETRANT TESTED TO DETERMINE IF SIMILAR PROBLEMS EXIST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CORE SPRAY • OYSTER CREEK (BWR) • FAILURE, PIPE • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE,
FATIGUE • TUBING • LEAK • SENSORS, PRESSURE

114208
CORE SPRAY PUMP SEAL LEAKS AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
• PUS, LTR NRC 50-219/76-14-3L TO NRC OFFICE OF I & E, REGION I, MAY 24, 1976, DOCKET 50-219, TYPE--BWR, NRC--
• E., AE--BURNS & ROE

CAUSE - CARBON ROTATING WASHER CRACKED. WHILE THE REACTOR WAS OPERATING AT 89% POWER, OPERATIONS
PERSONNEL DISCOVERED THAT THE INBOARD PUMP SEAL ON A CORE SPRAY PUMP WAS CRACKED. THE LEAK RATE
WAS ABOUT 3 GPM. THE INGRESSAL-BAND CO., CAT. NO. A93-37-527 CARBON ROTATING WASHER WAS FOUND TO
BE CRACKED FOR AN UNKNOWN CAUSE. SINCE IT WAS DESTROYED IN THE REMOVAL PROCESS, FURTHER
INVESTIGATION IS NOT POSSIBLE. THE PUMP SEAL WAS REPLACED AND THE PUMP RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CARBON • FAILURE, COMPONENT • CORE SPRAY • OYSTER CREEK (BWR) • SEAL • LEAK • FAILURE, INHERENT • PUMPS

115404
NOTICE OF PROPOSED IMPOSITION OF CIVIL PENALTIES AT OYSTER CREEK
U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC
• PUS, LTR TO JERSEY CENTRAL POWER & LIGHT CO., JUNE 28, 1976, DOCKET 50-219, TYPE--BWR, NRC--G.E., AE--BURNS
& ROE

CAUSE - SECURITY PROGRAM DEFICIENCY. DURING AN INVESTIGATION, IT WAS FOUND THAT CERTAIN
ACTIVITIES APPEARED TO BE IN NONCOMPLIANCE WITH NRC REQUIREMENTS. THE SECURITY PROGRAM DID NOT
PREVENT AN UNAUTHORIZED INDIVIDUAL FROM GAINING ACCESS TO THE PROTECTED AREA, AND SUBSEQUENTLY,
AFTER HE MADE HIS PRESENCE KNOWN TO A MEMBER OF THE SECURITY FORCE, THAT HE WAS PERMITTED TO
LEAVE WITHOUT BEING IDENTIFIED. NRC PROPOSES TO IMPOSE CIVIL PENALTIES OF \$8000.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

ECONOMICS • OYSTER CREEK (BWR) • FAILURE, ADMINISTRATIVE CONTROL • LEGALISTICS • AGENCY, NRC • SECURITY

115735
NUTREL GENERATOR FAILS TO START AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
• PUS, LTR NRC 50-219/76-16-3L TO NRC OFFICE OF I & E, REGION I, JULY 6, 1976, DOCKET 50-219, TYPE--BWR, NRC--

115735 *CONTINUED*
G.E., AE--BURNS & ROE

CAUSE - NO PINION ENGAGEMENT. DURING A TEST WITH THE REACTOR AT 918 POWER, DIESEL GENERATOR 2 FAILED TO START. THE CAUSE WAS A SEQUENCE FAULT WHICH WAS INITIATED BY NO PINION ENGAGEMENT. THE OPERATOR AT THE DIESEL SAID THE STARTER MOTOR PINION ENGAGEMENT DID OCCUR AND THE UNIT DID CRANK IN THE REDUCED VOLTAGE MODE EVEN THOUGH THE STARTING CIRCUIT SAID NO PINION ENGAGEMENT. NO DEFICIENCIES WERE FOUND. THE DIESEL WAS BEEN RETESTED SUCCESSFULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*CONTROL SYSTEM * EMERGENCY POWER, ELECTRIC * FAILURE, EQUIPMENT * OYSTER CREEK (BWR) * TEST, SYSTEM OPERABILITY * ENGINES, INTERNAL COMBUSTION * GENERATOR, DIESEL

116533
OXYGEN CONCENTRATION IN TORUS EXCEEDS LIMIT AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
* P65, LTR W/NO 50-219/70-17-3P TC NRC OFFICE OF I & E, REGION I, JULY 14, 1976, DOCKET 50-219, TYPE--BWR, MW--
-G.E., AE--BURNS & ROE

CAUSE - ERRATIC BEHAVIOR OF ANALYZER. THE OXYGEN CONCENTRATION IN THE TORUS REACHED AN INDICATED LEVEL OF 5.48 WHICH EXCEEDED THE LIMIT BY 0.48. THIS WAS DUE TO ERRATIC BEHAVIOR OF THE TORUS OXYGEN ANALYZER FOLLOWING CALIBRATION. THE ERRATIC OPERATION WAS AMPLIFIED BY A GAS SAMPLE FLOW ADJUSTMENT. PURGING WAS STARTED IMMEDIATELY TO REDUCE CONCENTRATION TO LESS THAN 5%. THE ANALYZER WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*OXYGEN * OYSTER CREEK (BWR) * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * MONITOR * FAILURE, MAINTENANCE ERROR * CONTAINMENT ATMOSPHERE * CONCENTRATION * TORUS

115074
SET POINT DRIFT IN PRESSURE SWITCH AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
* P65, LTR W/NO 50-219/70-10-3L TC NRC OFFICE OF I & E, REGION I, JULY 13, 1976 DOCKET 50-219, TYPE--BWR, MW--
-G.E., AE--BURNS & ROE

CAUSE - LACK OF ACCURACY. DURING THE EMERGENCY CONDENSER AUTOMATIC ACTUATION TEST WHILE OPERATING AT 928, A PRESSURE SWITCH SET POINT WAS FOUND TO BE LESS CONSERVATIVE THAN THE 1000 PSIG LIMIT. IT WAS IMMEDIATELY RESET TO TRIP AT 1000 PSIG. THE CAUSE WAS LACK OF ACCURACY WITHIN THE DEVICE. THE INSTRUMENT WAS OPERATING WITHIN ITS DESIGN ACCURACY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OYSTER CREEK (BWR) * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * EMERGENCY COOLING SYSTEM * DRIFT * FAILURE, INHERENT * SENSORS, PRESSURE

117179
SET POINT DRIFT IN RELIEF VALVE PRESSURE SWITCH AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
* P65, LTR W/NO 50-219/70-20-3L TC NRC OFFICE OF I & E, REGION I, AUG. 17, 1976, DOCKET 50-219, TYPE--BWR, MW--
-G.E., AE--BURNS & ROE

CAUSE - INSTRUMENT DRIFT. WHILE TESTING 5 ELECTRONATIC RELIEF VALVE SWITCHES DURING THE REFUELING OUTAGE, ONE TRIPPED AT 1100 PSIG. THE VALVE WAS IN EXCESS OF THE ALLOWABLE 1084 PSIG. THE BRESSER TYPE 1539VA PRESSURE SWITCH WAS IMMEDIATELY RESET TO 1000 PSIG. THIS IS A REPETITIVE OCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OYSTER CREEK (BWR) * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * PRESSURE RELIEF * TEST, SYSTEM OPERABILITY * MAIN COOLING SYSTEM * SET POINT * DRIFT * VALVES * SENSORS, PRESSURE

117004
CONTAINMENT SPRAY SYSTEM VALVE FAILS TO OPEN AT OYSTER CREEK
JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
* P65, LTR W/NO 50-219/70-21-3L TC NRC OFFICE OF I & E, REGION I, SEPT. 2, 1976, DOCKET 50-219, TYPE--BWR, MW--
-G.E., AE--BURNS & ROE

CAUSE - DEFECTIVE INTERLOCK SWITCH. DURING MONTHLY PUMP OPERABILITY TEST FOR CONTAINMENT SPRAY SYSTEM 1, THE TORUS SPRAY VALVE FAILED TO OPEN WHEN AN AUTO START SIGNAL WAS APPLIED. AN INTERLOCK SWITCH IN THE VALVE MOTOR CONTROL WAS DEFECTIVE. THE SWITCH WAS REPLACED AND THE TEST COMPLETED. FAILURE OF THE 68, MODEL NO. C109X, AUXILIARY CONTACT SWITCH WAS ATTRIBUTED TO DIRTY CONTACTS. THE REACTOR WAS AT 908 POWER AT THE TIME.

117004 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT SPRAY + FAILURE, EQUIPMENT + OYSTER CREEK (BWR) + INSTRUMENT, INTERLOCK + INSTRUMENT, SWITCH +
 TEST, SYSTEM OPERABILITY + FAILURE, INHERENT + VALVE OPERATORS + VALVES

118430
 INSTRUMENT TRIP POINT SETTINGS FOUND TO BE NONCONSERVATIVE AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 + PUS, LTR N/AU 50-219/70-11/31 TO NRC OFFICE OF I & E, REGION 1, OCT. 9, 1976, DOCKET 50-219, TYPE--BWR, NRG--
 -WGE, AE--BLANS & ROE

CASE - PROCEDURAL DEFICIENCY. DURING A PROCEDURE REVIEW, IT WAS DISCOVERED THAT THE ACCEPTANCE
 CRITERIA IN 2 PROCEDURES FOR THE LOW AND LOW-LOW REACTOR WATER LEVEL TRIP POINTS WERE LESS
 CONSERVATIVE THAN THOSE SPECIFIED IN TECH SPECS. THE DEFICIENCIES WERE IMMEDIATELY CORRECTED AND
 THE TRIP POINT SETTINGS WERE CALIBRATED IN ACCORDANCE WITH THE REVISED PROCEDURES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

OYSTER CREEK (BWR) + PROCEDURES AND MANUALS + INSTRUMENT, SWITCH + FAILURE, ADMINISTRATIVE CONTROL + OSET
 POINT + EMERGENCY COOLING SYSTEM + SENSORS, LEVEL

119009
 SET POINT SHIFT IN LOAD SEQUENCING TIMER AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 + PUS, LTR N/AU 50-219/70-23/31 TO NRC OFFICE OF I & E, REGION 1, OCT. 15, 1976, DOCKET 50-219, TYPE--BWR, NRG--
 -WGE, AE--BLANS & ROE

CASE - INSTRUMENT SHIFT. DURING TESTING OF THE CONTAINMENT SPRAY SYSTEM WITH THE REACTOR AT 99%
 POWER, THE LOAD SEQUENCING TIMER FOR A CONTAINMENT SPRAY PUMP WAS FOUND NOT TO BE WITHIN THE 40
 +/- 5% SETTING TOLERANCE BAND. THE AGASTAT TIME DELAY RELAY, MODEL 2414PD, PROVIDES A DELAY OF
 ONLY 30 SECONDS. THE TIMER WAS IMMEDIATELY RESET TO WITHIN THE LIMITS. IT WILL BE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT SPRAY + OYSTER CREEK (BWR) + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + OSET POINT + ODRIFT
 + FAILURE, INHERENT + RELAYS

119103
 TORUS TO DAYWELL VACUUM BREAKER FAILS TO CLOSE AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 + PUS, LTR N/AU 50-219/70-24/31 TO NRC OFFICE OF I & E, REGION 1, OCT. 21, 1976, DOCKET 50-219, TYPE--BWR, NRG--
 -WGE, AE--BLANS & ROE

CASE - GROWTH OF TEFLON BUSHING. DURING TESTING WITH THE REACTOR AT 99% POWER, 1 OF THE 14 TORUS
 TO DAYWELL VACUUM BREAKER VALVES FAILED TO CLOSE BY GRAVITY AFTER BEING OPENED. FAILURE IS
 ATTRIBUTED TO EXCESS FRICTION ON THE VALVE HINGE PIN DUE TO GROWTH OF THE TEFLON BUSHING. A
 PROGRAM HAS BEEN INSTITUTED TO MODIFY A PORTION OF THE VACUUM BREAKER VALVES DURING EACH
 REFUELING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + OYSTER CREEK (BWR) + CONTAINMENT VACUUM BREAKER + INSTABILITY + TEST,
 SYSTEM OPERABILITY + FAILURE, DESIGN ERROR + PLASTICS + BEARING + TORUS

119154
 UNPLANNED RADIOACTIVITY RELEASE OCCURS THROUGH RELIEF VALVE AT OYSTER CREEK
 JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ
 + PUS, LTR N/AU 50-219/70-26/1P TO NRC OFFICE OF I & E, REGION 1, OCT. 26, 1976, DOCKET 50-219, TYPE--BWR, NRG--
 -WGE, AE--BLANS & ROE

CASE - DESIGN ERROR. DURING REGENERATION OF A CONDENSATE DEMINERALIZER WHILE OPERATING AT 99%
 POWER, IT WAS DISCOVERED THAT THE RELIEF VALVE ON THE REGENERATION HOT WATER HEATER WAS NOT
 SEATED AND WAS PASSING CONDENSATE TRANSFER SYSTEM WATER TO THE 1-5 SUMP WHICH IS AUTOMATICALLY
 PUMPED TO THE ENVIRONMENT. THE PRIMARY CAUSE WAS A DESIGN ERROR THAT RESULTED IN ROUTING OF THE
 RELIEF VALVE DISCHARGE TO THE ENVIRONMENT VIA THE 1-5 SUMP INSTEAD OF TO THE RADIOACTIVE FACILITY VIA
 THE HIGH CONDUCTIVITY TANK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

OYSTER CREEK (BWR) + PRESSURE RELIEF + RADIOACTIVITY RELEASE + FAILURE, DESIGN ERROR + VALVES + DEMINERALIZERS

120304

CONTAINMENT SPRAY VALVE FAILS TO OPEN AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ

4 PGS, LTR W/NO 50-219/76-25/34 TO NRC OFFICE OF I & E, REGION I, DEC. 10, 1976, DOCKET 50-219, TYPE--BWR, NFW--G.E., AE--BURNS & ROE

CAUSE - UNKNOWN. DURING A TEST OF CONTAINMENT SPRAY SYSTEM II WITH THE REACTOR AT 97% POWER, VALVE V-21-15 FAILED TO OPEN WHEN THE AUTO START SIGNAL WAS APPLIED. ITS CIRCUIT BREAK HAD TRIPPED. AN EXCESSIVE AMOUNT OF FORCE WAS NEEDED TO OPERATE THE VALVE MANUALLY. THE VALVE WAS CLOSED USING THE MOTOR OPERATOR AND THEN OPENED WITH A TORQUE WRENCH 10 TIMES. NO ABNORMALITIES WERE FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OYSTER CREEK (BWR) • VALVES • CONTAINMENT SPRAY • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • FAILURE, INHERENT

120472

CONTAINMENT SPRAY PUMP FOUND INOPERABLE AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ

4 PGS, LTR W/NO 50-219/76-27-34 TO NRC OFFICE OF I & E, REGION I, DEC. 10, 1976, DOCKET 50-219, TYPE--BWR, NFW--G.E., AE--BURNS & ROE

CAUSE - EXCESSIVE FRICTION IN BREAKER BEARINGS. WITH THE REACTOR AT 97% POWER, CONTAINMENT SPRAY PUMP 510 WAS FOUND INOPERABLE DURING A PUMP OPERABILITY TEST. THE CAUSE WAS EXCESSIVE FRICTION IN THE BEARINGS SUPPORTING THE TRIP SHAFT OF THE BREAKER. THE FRICTION CAUSED THE TRIP LATCH TO FAIL TO MOVE TO THE RESET POSITION. THE SHAFT BEARINGS WERE CLEANED WITH SOLVENT AND LUBRICATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OYSTER CREEK (BWR) • PUMPS • CONTAINMENT SPRAY • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • BREAKER • LUBRICATION • BEARING • FAILURE, MAINTENANCE ERROR

120673

CORE SPRAY VALVE FAILS TO OPEN AT OYSTER CREEK

JERSEY CENTRAL POWER & LIGHT CO., MORRISTOWN, NJ

4 PGS, LTR W/NO 50-219/76-28-34 TO NRC OFFICE OF I & E, REGION I, DEC. 23, 1976, DOCKET 50-219, TYPE--BWR, NFW--G.E., AE--BURNS & ROE

CAUSE - INTERMITTENT GROUND SHORT. DURING A CORE SPRAY ISOLATION VALVE ACTUATION TEST WITH THE REACTOR AT 85% POWER, VALVE V-20-15 FAILED TO OPEN ON SIGNAL. THE BREAKER SUPPLYING THE MOTOR OPERATOR WAS TRIPPED ON OVERCURRENT. THERE WAS AN INTERMITTENT GROUND SHORT IN ONE OF THE POWER FEEDS CAUSED BY A PINCHED WIRE. THE WIRE WAS PINCHED WHEN IT WAS CAUGHT IN THE LOWER FLANGE FOR THE LIMIT TORQUE OPERATOR. IT IS SUSPECTED THAT THE WIRE HAS BEEN PINCHED SINCE INITIAL INSTALLATION. THE WIRE WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OYSTER CREEK (BWR) • VALVES • CORE SPRAY • CONTAINMENT ISOLATION • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • CABLES AND CONNECTORS • VALVE OPERATORS • FAILURE, INSTALLATION ERROR

110347

RHR INJECTION VALVE MOTOR FAILS AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, RD 50-277/2-76-1734 TO U.S. NRC, JAN. 20, 1976, DOCKET 50-277, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - UNUSUAL OPERATING CONDITIONS. WHILE THE REACTOR WAS OPERATING AT 90% POWER, A RHR INJECTION VALVE MOTOR FAILED DURING TESTING. THE VALVE WAS BEING JUMMED OPEN VILE NORMAL FULL STROKE OPERATION. THE RELIANCE MOTOR, FRAME NO 32094 OVERHEATED AND, AS A RESULT OF NO OVERLOAD PROTECTION IN CONSIDERATION OF SAFETY SYSTEM ACCIDENT CRITERIA, DID NOT TRIP UNTIL ITS WINDINGS WERE DAMAGED. THE MOTOR CENTRAL CENTER FEEDER TRIPPED WHEN THE WINDINGS FAILED. VALVES WHICH HAVE NO OVERLOAD PROTECTION WILL BE FITTED WITH PROTECTION CIRCUITRY FOR NORMAL OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • MODIFICATION • TEST, SYSTEM OPERABILITY • SHUTDOWN COOLING SYSTEM • PEACH BOTTOM 2 (BWR) • FAILURE, INHERENT • VALVE OPERATORS

110345

RHR INJECTION VALVE FAILS TO OPEN AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, RD 50-277/2-76-4717 TO U.S. NRC, JAN. 29, 1976, DOCKET 50-277, TYPE--BWR, NFW--G.E., AE--BECHTEL

CAUSE - APPARENT BINDING IN THE VALVE. DURING A TEST WITH THE REACTOR AT 100% POWER, A RHR

110345 CONTINUED

INJECTION VALVE FAILED TO OPEN. THE VALVE WAS BEING TESTED BECAUSE RMR LOOP B WAS TEMPORARILY INOPERABLE DURING MAINTENANCE ON A VALVE. LIMITORQUE SHAFT MOTOR SHAFT-TO-PINION GEAR KEY HAD SHEARED DUE TO APPARENT BINDING OF THE VALVE. THE OPERATOR AND PINION GEAR WERE REPLACED, TORQUE AND LIMIT SWITCHES ADJUSTED, AND THE VALVE TESTED SATISFACTORILY. BOTH RMR LOOPS WERE INOPERABLE FOR ABOUT 3 HOURS WHILE BOTH VALVES WERE REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + STRESS + TEST, SYSTEM OPERABILITY + SHUTDOWN COOLING SYSTEM + PEACH BOTTOM 2 (BWR) + FAILURE, INHERENT + VALVE OPERATORS + VALVES

111700

ACIC STEAM SUPPLY VALVE FAILS TO OPERATE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC POWER CO., PHILADELPHIA, PA

1 PG, LER 2-70-8/24 TO U.S. NRC, MARCH 3, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - PACKING TOO TIGHT. DURING A TEST WITH THE REACTOR AT 70% POWER, THE ACIC OUTBOARD STEAM SUPPLY ISOLATION VALVE FAILED TO STROKE. THE VALVE PACKING, RECENTLY REMOVED, WAS TOO TIGHT. IT WAS LOOSEMED AND THE OPEN TORQUE SWITCH SETTING WAS SLIGHTLY INCREASED. THIS IS A MAINTENANCE 3 INCH 600 PSIG MOTOR OPERATED RECIRC GATE VALVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SEAL + PEACH BOTTOM 2 (BWR) + ACIC + VALVES

112142

GASEOUS RELEASE EXCEEDS LIMIT TWICE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-70-14/11 TO U.S. NRC, MARCH 13, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - RECOMBINER COMPRESSOR LEAKS. DURING TESTING SUBSEQUENT TO DISCHARGE VALVE REPAIRS, RECOMBINER MECHANICAL COMPRESSOR 20 LEAKED CAUSING THE ALLOWABLE GASEOUS RELEASE RATE TO BE EXCEEDED BY 51% FOR 10 MINUTES. FOLLOWING FURTHER MAINTENANCE, THE RELEASE RATE WAS AGAIN EXCEEDED BY 97% FOR 15 MINUTES. ADDITIONAL REPAIRS WERE SUCCESSFUL. THE LEAKS WERE ASSOCIATED WITH THE SUMMER COMPRESSOR, TYPE 400-24, HEAD O-RINGS AND VALVE COVERS. THE O-RINGS WERE REPLACED AND THE COVERS TIGHTENED. BOTH RELEASES TOTALLED 5.04 CI. THE REACTOR WAS OPERATING AT 100% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PAIRWANE RELEASE + RELEASE RATE + FAILURE, MAINTENANCE ERROR + SEAL + PEACH BOTTOM 2 (BWR) + LEAK + BLOWERS + RECOMBINERS

112202

GASEOUS RELEASE RATE EXCEEDS LIMIT AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG, LER 50-277-70-15/11 TO NRC, MARCH 18, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - RWCU FILTER DEMINERALIZER BACKWASH. WITH THE REACTOR OPERATING AT 99% POWER, THE GASEOUS RELEASE RATE EXCEEDED THE LIMIT BY A FACTOR OF 3.0. TOTAL TIME ABOVE THE LIMIT WAS 55 MINUTES RELEASING 174.0 CI TOTAL. RWCU FILTER DEMINERALIZER BACKWASH WAS DELAYED TO IMPLEMENT A MODIFIED BACKWASH PROCEDURE. DELAYS ALLOW RE TIME TO BUILD UP AND BE RELEASED TO THE ROOF VENT. MODIFIED PROCEDURES SPREAD THE RELEASE OVER A LONGER PERIOD OF TIME BUT THE LIMIT WAS STILL EXCEEDED. ANOTHER MODIFICATION IS BEING INVESTIGATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PAIRWANE RELEASE + RELEASE RATE + FAILURE, DESIGN ERROR + COOLANT PURIFICATION SYSTEM + PEACH BOTTOM 2 (BWR) + DEMINERALIZERS

112199

SETTLING BASIN EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PA

2 PGS, LTR W/EO 50-277/270-70-15 TO NRC, MARCH 19, 1976, DOCKETS 50-277/270, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - HIGH SOLIDS LEVELS IN RIVER WATER. ROUTINE ANALYSIS SHOWED THAT THE SUSPENDED SOLIDS CONCENTRATION OF THE SETTLING BASIN EFFLUENT WAS 94 PPM GREATER THAN THAT OF THE RIVER WATER. HIGH SUSPENDED SOLIDS LEVEL IN RIVER WATER PROCESSED BY THE RAW WATER PLANT RESULTED IN A BUILDUP OF SOLIDS IN THE SETTLING BASIN AND CARRY-OVER IN THE EFFLUENT. THE SETTLING BASIN WAS ISOLATED TO LET THE SOLIDS SETTLE. SOLIDS WERE PUMPED OUT AND NORMAL OPERATIONS RESUMED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

112199 OCCURRED
 EFFLUENT • WATER TREATMENT • WATER QUALITY • PEACH BOTTOM 2 (BWR) • PEACH BOTTOM 3 (BWR) • CONDENSER COOLING
 SYSTEM • FAILURE, INHERENT

112703
 DRYWELL RADIATION MONITOR HAS NO SAMPLE FLOW AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-16/34 TO U.S. NRC, MARCH 31, 1976, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - SOLENOID VALVE FAILURE. DURING A ROUTINE PLANT INSPECTION, THE DRYWELL RADIATION MONITOR
 WAS FOUND TO HAVE NO FLOW. THE ISOLATION VALVE ON THE RETURN TO THE DRYWELL LINE WAS CLOSED.
 THE AUTOMATIC SOLENOID VALVE TYPE DYNO 15-044 HAD A DEFECTIVE COIL. THE COIL WAS REPLACED AND
 THE SYSTEM RETURNED TO NORMAL OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.001

CONTAINMENT • FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • FLOW BLOCKAGE • PEACH BOTTOM 2 (BWR) • FLOW •
 FAILURE, INHERENT • SOLENOID • RADIATION MONITORS

112898
 GASEOUS RELEASE RATE EXCEEDS LIMIT AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-277-2-70-18/17 TO U.S. NRC, APRIL 12, 1976, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - DEPRESSURIZATION OF REACTOR. DURING A SHUTDOWN COOLING OPERATION, THE REACTOR WAS
 DEPRESSURIZED TO THE CONDENSER WHICH WAS NOT UNDER VACUUM. GASES LEAKED THROUGH THE TURBINE
 SEALS AND VACUUM BREAKERS INTO THE TURBINE BUILDING AND UP THE VENT. THE RELEASE RATE EXCEEDED
 THE LIMIT BY A FACTOR OF 11.9 FOR 20 MINUTES. DEPRESSURIZATION WAS SUSPENDED. NORMAL VACUUM WAS
 RE-ESTABLISHED AND DEPRESSURIZATION RESTARTED SATISFACTORILY. TOTAL RELEASE WAS 141 CI OF MAINLY
 INERT GASES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.001

AIRBORNE RELEASE • FAILURE, OPERATOR ERROR • INERT GAS • RELEASE RATE • MAIN COOLING SYSTEM • PEACH BOTTOM 2
 (BWR)

113302
 DISCHARGE PRESSURE OF HPSH PUMP LOW AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-17/34 TO U.S. NRC, APRIL 15, 1976, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - NOT STATED. DURING TESTING OF THE HPSH SYSTEM WHILE OPERATING AT 100% POWER, THE PRESSURE
 DELIVERED BY 1 OF THE 4 HPSH PUMPS WAS SLIGHTLY LESS THAN REQUIRED BY TECH SPECS. THE LATRE-
 JEWLER MODEL 10 FAN 0-STAGE PUMP HAS BEEN DISASSEMBLED AND REPAIRS ARE UNDER WAY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.001

FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • PEACH BOTTOM 2 (BWR) • FAILURE, INHERENT • SERVICE WATER
 SYSTEM • PUMPS

113305
 UNEXPLAINED LOSS OF REACTOR WATER OCCURS AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-22/17 TO U.S. NRC, APRIL 15, 1976, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - LEAK TO TORUS. DURING THE REFUELING OUTAGE, AN UNEXPLAINED LOSS OF REACTOR WATER WAS
 ASSUMED TO HAVE BEEN DISCHARGED TO CONDENSING POND. INVESTIGATION FOUND THAT THE LOSS OF WATER
 WAS TO THE TORUS VIA RHR PUMP MINIMUM FLOW VALVE. NO REPORTING OF THIS EVENT WAS REQUIRED. THE
 REACTOR LEVEL DECREASED 32 INCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.001

REACTOR COOLANT • REFUELING • RADIOACTIVITY RELEASE • PEACH BOTTOM 2 (BWR) • LEAK • PRESSURE VESSELS • TORUS

113303
 UNPLANNED RELEASE OF RADIOACTIVE LIQUID AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-19/34 TO U.S. NRC, APRIL 27, 1976, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - RHR HEAT EXCHANGER LEAK. DURING THE REFUELING OUTAGE AND BETWEEN 3/15 AND 3/28, RHR HEAT
 EXCHANGER 2A LEAKED AN ESTIMATED 1,700,000 GALLONS OF RADIOACTIVE WATER FROM THE CONDENSATE
 STORAGE TRANSFER SYSTEM TO THE RIVER VIA HPSH SYSTEM. THERE WERE 2 LEAKING TUBES AND A FAILED
 INTERNAL BELLOWS IN THE PRAPER CORP. SIZE NO. 51-240 TYPE LES HEAT EXCHANGER. THE UNIT WAS

113303 RELATIVES

REPAIRED AND LEAK TESTED. IMPROVED MONITORING OF WATER INVENTORIES WAS INITIATED TO ENHANCE EARLY DETECTION. TOTAL ACTIVITY RELEASED WAS 33 X 10⁴-31 CI. LEAK RATE WAS 92 GPM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + RADIOACTIVITY RELEASE + SHUTDOWN COOLING SYSTEM + FAILURE, TUBING + PEACH BOTTOM 2 (BWR) + LEAK + FAILURE, IMMERENT + SERVICE WATER SYSTEM + HEAT EXCHANGERS

113306

TURNS VOLUME BELOW TECH SPEC LIMIT AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG. LER 50-277-2-70-20/31 TC U.S. NRC, APRIL 27, 1970, DUCRET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - OPERATOR ERROR. WHILE TRANSFERRING WATER FROM THE TOWNS AS THE REACTOR WAS BEING SHUT DOWN FOR A PLANNED OUTAGE, THE OPERATOR INADVERTENTLY PERMITTED THE LEVEL TO DROP BELOW THE ALLOWABLE LIMIT. THE VOLUME WAS RESTORED TO NORMAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + PEACH BOTTOM 2 (BWR) + SYSTEM CAPACITY + TURNS

113307

ARM LOGIC DEFICIENCY FOUND AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG. LER 50-277-2-70-20/31 TC U.S. NRC, APRIL 27, 1970, DUCRET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - DESIGN DEFICIENCY. DURING THE REFUELING OUTAGE, A REVIEW OF ARM LOGIC IDENTIFIED A DESIGN DEFICIENCY WHICH WOULD RESULT IN STARTING ONLY 2 ARM PUMPS DURING A LOCA CONCURRENT WITH A LOSS OF OFFSITE POWER. CIRCUITRY ON UNIT 3 HAS BEEN MODIFIED. SIMILAR MODIFICATIONS WILL BE PERFORMED ON UNIT 2 PRIOR TO STARTUP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTACT SYSTEM + MODIFICATION + REFUELING + FAILURE, DESIGN ERROR + SYSTEM OPERABILITY IN ACCIDENT + SHUTDOWN COOLING SYSTEM + PEACH BOTTOM 2 (BWR) + PUMPS

113308

FEEDWATER CHECK VALVES HAVE UNACCEPTABLE LEAKAGE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG. LER 50-277-2-70-21/31 TC U.S. NRC, APRIL 29, 1970, DUCRET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - RUST SCALE ON SEATING SURFACES. DURING THE REFUELING OUTAGE, RESULTS OF THE LOCAL LEAK RATE TESTING SHOWED THAT 4 FEEDWATER CHECK VALVES HAD UNACCEPTABLE LEAKAGE. LEAKAGE WAS APPARENTLY CAUSED BY RUST SCALE ON THE SEATING SURFACES OF THE ATWOOD AND MURRILL, 24 INCH, CARBON STEEL, 1700 PSI, SWING CHECK VALVE SEATS AND FLAPPERS. ALL WILL BE RELAPPED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT ISOLATION + TEST, LEAK RATE + CRUD + REFUELING + TEST, SYSTEM OPERABILITY + PEACH BOTTOM 2 (BWR) + LEAK RATE + VALVE, CHECK + FAILURE, IMMERENT + FEEDWATER

113311

DRYWELL PRESSURE SWITCHES FOUND VALVED OUT OF SERVICE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG. LER 50-277-2-70-23/31 TC U.S. NRC, MAY 4 1970, DUCRET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - MAINTENANCE ERROR. DURING THE REFUELING OUTAGE TESTING, 2 OF THE 8 DRYWELL HIGH PRESSURE SWITCHES WERE FOUND VALVED OUT OF SERVICE. APPARENTLY, THE SWITCHES WERE NOT VALVED BACK IN SERVICE FOLLOWING TESTING DURING THE PREVIOUS MONTH. VERIFICATION OF PROPER VALVE LINE UP AFTER TESTS IN, EMPHASIZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + CONTAINMENT ISOLATION + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + PEACH BOTTOM 2 (BWR) + VALVES + SENSORS, PRESSURE

113700

REACTOR LEVEL SWITCH BOUNCES WHEN TRIP SIGNAL APPLIED AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

113700 (CONTINUED)

1 PG, LER 50-277-2-76-27/3L TO U.S. NRC, MAY 5, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - DEFECTIVE MICROSWITCH. DURING THE REFUELING OUTAGE TESTING, A REACTOR LEVEL SWITCH WAS OBSERVED TO BOUNCE WHEN A TRIP SIGNAL WAS APPLIED MAKING IT IMPOSSIBLE TO ACCURATELY DETERMINE SWITCH RESPONSE TIME. THE PROBLEM WAS CAUSED BY A DEFECTIVE MICROSWITCH IN THE BARTON MODEL 2404A LEVEL INDICATING SWITCH. THE MICROSWITCH WAS REPLACED, CALIBRATED, AND TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + INSTRUMENT, SWITCH + REFUELING + TEST, SYSTEM OPERABILITY + PEACH BOTTOM 2 (BWR) + FAILURE, INHERENT + PRESSURE VESSELS + SENSORS, LEVEL

113701

RELIEF VALVE BELLOW LEAK DETECTOR SWITCH FAILS TO TRIP AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-76-27/3L TO U.S. NRC, MAY 7, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - BROKEN WIRE. DURING THE REFUELING OUTAGE TESTING, A RELIEF VALVE BELLOW LEAK DETECTOR SWITCH FAILED TO TRIP AS A RESULT OF A BROKEN WIRE IN THE CONNECTOR PLUG FOR HELETRON MODEL 1402-4-400-7 PRESSURE SWITCH. DIFFICULTIES ENCOUNTERED REPAIRING THE DEVICE MADE CONNECTOR REPLACEMENT NECESSARY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, SWITCH + ONCAUTION + REFUELING + PEACH BOTTOM 2 (BWR) + LEAK + CABLES AND CONNECTORS + FAILURE, INHERENT + SENSORS, PRESSURE

113702

CONTROL ROOM RADIATION MONITOR FAILS AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-76-27/3L TO U.S. NRC, MAY 7, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - LOGIC CHIP VIBRATED LOOSE. DURING THE REFUELING OUTAGE, THE CONTROL ROOM RADIATION MONITOR FAILED IN THE LOW COUNT DIRECTION. CONTROL ROOM EMERGENCY VENTILATION SYSTEM WAS IMMEDIATELY PLACED IN SERVICE AS A TEMPORARY CORRECTIVE ACTION. A LOGIC CHIP HAD VIBRATED OUT FROM ITS SOCKET ON THE INTEGRATED CIRCUIT BOARD IN THE TRAPELO DM-100 RATEMETER. IT WAS REINSERTED AND THE UNIT OPERATED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + SOLID STATE DEVICE + REFUELING + VIBRATION + PEACH BOTTOM 2 (BWR) + CONTROL PANEL/ROOM + FAILURE, INHERENT + RADIATION MONITORS

113901

HYDRAULIC SNUBBER FOUND INOPERABLE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG, LER 50-277-2-76-21/11 TO U.S. NRC, MAY 12, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SEALS. DURING A ROUTINE REFUELING OUTAGE INSPECTION, 11 HYDRAULIC SNUBBER ON THE MAIN STEAM RELIEF VALVE DISCHARGE LINES WERE FOUND INOPERABLE-100 BECAUSE OF A ROTATED RESERVOIR. THE GRINDEL MODEL AM-1373-2 1/2-INCH SNUBBER'S EMPTY RESERVOIRS WERE DUE TO DEFECTIVE SEALS AND O-RINGS WHICH WERE REPLACED WITH ETHYLENE-PROPYLENE SEALS AND O-RINGS. NO CAUSE WAS FOUND FOR THE ROTATION OF THE RESERVOIR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + MODIFICATION + REFUELING + SMOKE ABSORBER + FAILURE, DESIGN ERROR + SEAL + SUPPORT STRUCTURE + PEACH BOTTOM 2 (BWR) + SURVEILLANCE PROGRAM + LEAK + PIPES AND PIPE FITTINGS

114303

MPC1 HYDRAULIC SNUBBER FOUND INOPERABLE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA

1 PG, LER 50-277-2-76-30/11 TO U.S. NRC, MAY 12, 1976, DOCKET 50-277, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SEALS. DURING A ROUTINE INSPECTION WITH THE UNIT IN THE REFUELING OUTAGE, 2 HYDRAULIC SNUBBER ON THE MPC1 SYSTEM WERE FOUND INOPERABLE BECAUSE OF EMPTY RESERVOIRS. THE GRINDEL MODEL AM-1373-2 1/2 INCH SNUBBER'S HAD DEFECTIVE SEALS AND O-RINGS. THEY WERE REPLACED WITH ETHYLENE-PROPYLENE SEALS AND O-RINGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MODIFICATION + REFUELING + SMOKE ABSORBER + FAILURE, DESIGN ERROR + SEAL + SUPPORT STRUCTURE + PEACH BOTTOM 2 (BWR) + SURVEILLANCE PROGRAM + LEAK + PIPE AND PIPE FITTINGS

114304
RING PEACHER SHROUDERS FOUND INOPERABLE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA
1 PG, LER 50-277-2-70-32/17 TO U.S. NRC, MAY 12, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SEALS. DURING A ROUTINE INSPECTION WHILE IN THE REFUELING OUTAGE, 2 HYDRAULIC SHROUDERS ON THE MAIN STEAM LINE RING HEADER WERE FOUND INOPERABLE BECAUSE OF EMPTY RESERVOIRS. THE GRINNEL MODEL AM-1373 SHROUDERS HAD DEFECTIVE SEALS AND O-RINGS WHICH WERE REPLACED WITH ONES OF ETHYLENE-PROPYLENE MATERIAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MUJIFICATION + REFUELING + SMOKE ABSORBER + FAILURE, DESIGN ERROR + SEAL + SUPPORT STRUCTURE + PEACH BOTTOM 2 (BWR) + SURVEILLANCE PROGRAM + CLEAN + PIPES AND PIPE FITTINGS

114305
RECIRC PUMP SYSTEM HYDRAULIC SHROUDER INOPERABLE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA
1 PG, LER 50-277-2-70-33/17 TO U.S. NRC, MAY 12, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SEALS. DURING A ROUTINE INSPECTION WHILE IN THE REFUELING OUTAGE, A GRINNEL MODEL AM-1372 HYDRAULIC SHROUDER ON THE RECIRCULATION PUMP SYSTEM WAS FOUND INOPERABLE DUE TO AN EMPTY RESERVOIR. THE SEALS AND O-RINGS WERE DEFECTIVE. THEY WERE REPLACED WITH ONES OF ETHYLENE-PROPYLENE MATERIAL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MUJIFICATION + REFUELING + SMOKE ABSORBER + FAILURE, DESIGN ERROR + SEAL + SUPPORT STRUCTURE + PEACH BOTTOM 2 (BWR) + SURVEILLANCE PROGRAM + CLEAN + PIPES AND PIPE FITTINGS

114306
RUCV SYSTEM HYDRAULIC SMOKE ABSORBER INOPERABLE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA
1 PG, LER 50-277-2-70-34/17 TO U.S. NRC, MAY 12, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SEALS. DURING A ROUTINE INSPECTION WITH THE UNIT IN A REFUELING OUTAGE, A GRINNEL MODEL AM-1373-2 1/2 INCH HYDRAULIC SMOKE ABSORBER ON THE RUCV SYSTEM WAS FOUND INOPERABLE DUE TO AN EMPTY RESERVOIR. THE SEALS AND O-RINGS WERE DEFECTIVE. THEY WERE REPLACED WITH ETHYLENE-PROPYLENE TYPE O-RINGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MUJIFICATION + REFUELING + SMOKE ABSORBER + FAILURE, DESIGN ERROR + SEAL + SUPPORT STRUCTURE + PEACH BOTTOM 2 (BWR) + SURVEILLANCE PROGRAM + CLEAN + PIPES AND PIPE FITTINGS

114307
CORE SPRAY SYSTEM HYDRAULIC SHROUDERS INOPERABLE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA
1 PG, LER 50-277-2-70-35/17 TO U.S. NRC, MAY 12, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - FLUID RESERVOIRS ROTATED. DURING A ROUTINE INSPECTION WITH THE UNIT IN THE REFUELING OUTAGE, 2 HYDRAULIC SHROUDERS ON THE CORE SPRAY SYSTEM WERE FOUND INOPERABLE DUE TO THEIR FLUID RESERVOIRS HAVING ROTATED TO A HORIZONTAL POSITION. THIS PREVENTED FLUID FROM ENTERING VALVE BLOCKS. THE LOCK NUTS WERE FOUND TIGHT. NO CAUSE WAS DETERMINED. THESE ARE GRINNEL MODEL AM-1375-2 1/2 INCH SHROUDERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + REFUELING + SMOKE ABSORBER + SUPPORT STRUCTURE + PEACH BOTTOM 2 (BWR) + SURVEILLANCE PROGRAM + PIPES AND PIPE FITTINGS

114308
PELONATER SYSTEM HYDRAULIC SHROUDERS INOPERABLE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA
1 PG, LER 50-277-2-70-36/17 TO U.S. NRC, MAY 12, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - DEFECTIVE SEALS. DURING ROUTINE INSPECTION WHILE THE UNIT WAS IN THE REFUELING OUTAGE, 3 HYDRAULIC SHROUDERS ON THE PELONATER SYSTEM WERE FOUND INOPERABLE - 2 BECAUSE OF DEFECTIVE SEALS AND O-RINGS AND 1 BECAUSE OF A ROTATED RESERVOIR. THE SEALS AND O-RINGS WERE REPLACED WITH ONES OF ETHYLENE-PROPYLENE. LOCK NUTS WERE TIGHTENED ON THE UNIT WITH THE HORIZONTAL RESERVOIR. NO CAUSE WAS FOUND. THESE WERE GRINNEL MODEL AM 1373-2 1/2 INCH AND AM 1373-3 1/4 INCH SHROUDERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

114308 *CONTINUED*

MODIFICATION • REFUELING • *SHOCK ABSORBER • FAILURE, DESIGN ERROR • *SEAL • SUPPORT STRUCTURE • MAIN COOLING SYSTEM • PEACH BOTTOM 2 (BWR) • SURVEILLANCE PROGRAM • *LEAK • FEEDWATER • PIPES AND PIPE FITTINGS

114173

SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA

1 PG, LER 50-277-2-70-29/3L TO U.S. NRC, MAY 26, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE UNIT IN A REFUELING OUTAGE, THE SET POINT OF THE SECONDARY CONTAINMENT TO TORUS VACUUM BREAKER D P SWITCH WAS FOUND TO BE 0.001 PSID ABOVE THE LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE BARTON MODEL 277 OPIS WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • CONTAINMENT VACUUM BREAKER • BUILDING • FAILURE, INSTRUMENT • *INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • PEACH BOTTOM 2 (BWR) • *SET POINT • *DRIFT • SENSORS, PRESSURE • TORUS

114309

DRYWELL AIR LOCK INNER DOOR LEAKAGE UNACCEPTABLE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA

1 PG, LER 50-277-2-70-40/3L TO U.S. NRC, MAY 27, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - OVERSIZED GASKET. WHILE OPERATING AT 35% POWER, RESULTS OF LOCAL LEAK RATE TESTS SHOWED THE DRYWELL AIR LOCK INNER DOOR TO HAVE UNACCEPTABLE LEAKAGE. THE OUTER DIAMETER OF THE GASKET, 40 OUNCES SILICONE RUBBER GASKET WAS FOUND TO BE OVERSIZED CAUSING THE GASKET TO CRACK AND LEAK. THE GASKET WAS REPLACED AND SUBSEQUENTLY TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TEST, LEAK RATE • CONTAINMENT AIR LOCK • TEST, SYSTEM OPERABILITY • *SEAL • FAILURE, INSTALLATION ERROR • PEACH BOTTOM 2 (BWR) • *LEAK RATE

114427

GAMMA SCANS NOT PERFORMED PRIOR TO TWO LIQUID RELEASES AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-40/3L TO U.S. NRC, JUNE 3, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - GAMMA SCAN ANALYZER FAILURE. A GAMMA SCAN WAS NOT PERFORMED PRIOR TO TWO LIQUID EFFLUENT RELEASES. THE CAUSE WAS GAMMA SCAN MULTI-CHANNEL ANALYZER FAILURE AND LACK OF RADIOACTIVE STORAGE CAPACITY. GROSS BETA ACTIVITY WAS REVIEWED PRIOR TO THE RELEASES AND, BASED ON PREVIOUS DATA, IT WAS DETERMINED THAT THE NPC'S WOULD NOT BE EXCEEDED. POST GAMMA SCANS SHOWED THE MOST LIMITING ISOTOPE TO BE 12.0 TIMES LESS THAN NPC BEFORE DILUTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT • WASTE DISPOSAL • *GROSS GAMMA • SURVEY, RADIATION • *WASTE DISPOSAL, LIQUID • FAILURE, INSTRUMENT • RADIOACTIVITY RELEASE • FAILURE, ADMINISTRATIVE CONTROL • PEACH BOTTOM 2 (BWR)

115052

SRA SURVEILLANCE NOT PERFORMED AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-39/3L TO U.S. NRC, JUNE 7, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - OTHER ACTIVITIES IN PROGRESS. WHILE THE REACTOR WAS IN THE REFUELING OUTAGE, THE REQUIRED STARTUP RANGE MONITOR SURVEILLANCE TEST WAS NOT DONE DUE TO LPRM STAINING REPLACEMENT. THE ERROR WAS DISCOVERED DURING A RECORD REVIEW. IMPORTANCE OF TEST COMPLETION WAS EMPHASIZED TO PERSONNEL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • TESTING • REFUELING • *INSTRUMENT, STARTUP RANGE • *TEST INTERVAL • PEACH BOTTOM 2 (BWR)

115051

REACTOR PUMP DISCHARGE VALVE FAILS TO CLOSE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-41/3L TO U.S. NRC, JUNE 18, 1970, DOCKET 50-277, TYPE--BWR, MFG--G.E., AE--BECHTEL

CAUSE - BROKEN WIRE. REACTOR RECIRCULATION PUMP A DISCHARGE VALVE COULD NOT BE CLOSED FOLLOWING MINOR MODIFICATION OF THE VALVE CONTROL CIRCUIT. A WIRE IN THE CLOSING CONTROL CIRCUIT HAD BROKEN PREVENTING VALVE CLOSURE. THE WIRE WAS REPAIRED AND THE VALVE STROKED SATISFACTORILY. THE UNIT WAS IN THE REFUELING OUTAGE.

115051 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + MAIN COOLING SYSTEM + PEACH BOTTOM 2 (BWR)
 + CABLES AND CONNECTORS + VALVE OPERATIONS + VALVES

115717
 RADIOACTIVE RELEASES MADE WITH GROSS ACTIVITY MONITOR INOPERABLE AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 A PR, LER 50-277-2-70-46/31 TO U.S. NRC, JULY 1, 1970, Docket 50-277, TYPE--BWR, NRC--GEC, AE--BECHTEL

CAUSE - DEFECTIVE AMPLIFIER. DURING THE REFUELING OUTAGE, 3 LIQUID RADIOACTIVE RELEASES WERE MADE
 WITH THE GROSS ACTIVITY MONITOR INOPERABLE. THE MONITOR AND ITS ALARMS AND THE HIGH ACTIVITY
 TRIP UNIT WERE OPERABLE. THE GE MODEL 1095400707 RECORDER AMPLIFIER WAS DEFECTIVE. IT WAS
 REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + EFFLUENT + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + REFUELING + PEACH BOTTOM 2 (BWR) +
 FAILURE, INHERENT + ELECTRONIC FUNCTION UNITS + RADIATION MONITORS + RECORDERS

115718
 MAIN STEAM RELIEF VALVE FAILS TO OPEN AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 A PR, LER 50-277-2-70-47/17 TO U.S. NRC, JULY 9, 1970, Docket 50-277, TYPE--BWR, NRC--GEC, AE--BECHTEL

CAUSE - PILOT VALVE SEAT LEAKAGE. WHILE OPERATING AT 70% POWER, A MAIN STEAM RELIEF VALVE FAILED
 TO OPEN DUE TO PILOT VALVE SEAT LEAKAGE. THE PLANT WAS SHUT DOWN. THE TARGET RUCK WMP., MODEL
 87F PILOT OPERATED SAFETY/RELIEF VALVE WAS REPLACED WITH A REQUIRT VALVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + STEAM + PRESSURE RELIEF + MAIN COOLING SYSTEM + PEACH BOTTOM 2 (BWR) + REACTOR SHUTDOWN
 + FAILURE, INHERENT + VALVES

115809
 ALL RECOMBINER HYDROGEN ANALYZERS VALVES OUT OF SERVICE AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 A PR, LER 50-277-2-70-49/17 TO U.S. NRC, JULY 12, 1970, Docket 50-277, TYPE--BWR, NRC--GEC, AE--BECHTEL

CAUSE - PROCEDURAL DEFICIENCY. AFTER THE UNIT HAD BEEN AT POWER FOR 3 DAYS, ALL 4 RECOMBINER
 HYDROGEN ANALYZERS WERE FOUND TO BE VALVED OUT OF SERVICE. THEY WERE REMOVED FROM SERVICE DURING
 THE EXTENDED OUTAGE AND NOT RETURNED TO SERVICE PRIOR TO STARTUP DUE TO PROCEDURAL DEFICIENCY.
 THEY WERE RETURNED TO SERVICE. PROCEDURES WERE MODIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

HYDROGEN + PROCEDURES AND MANUALS + MONITORING + TEST, SYSTEM OPERABILITY + FAILURE, ADMINISTRATIVE CONTROL +
 CONTAINMENT ATMOSPHERE + PEACH BOTTOM 2 (BWR)

115808
 CANALST VENT RADIATION MONITORS FAIL DOWNSCALE AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 A PR, LER 50-277-2-70-49/31 TO U.S. NRC, JULY 19, 1970, Docket 50-277, TYPE--BWR, NRC--GEC, AE--BECHTEL

CAUSE - POWER SUPPLY FAILURE. WHILE THE UNIT WAS SHUT DOWN, THE REFUEL FLOW EXHAUST VENT
 RADIATION MONITOR AND THE REACTOR BUILDING EXHAUST VENT RADIATION MONITOR FAILED DOWNSCALE. THE
 CAUSE WAS A DEFECTIVE GE AL-136623504 POWER SUPPLY. THE POWER SUPPLY WAS REPLACED WITH A
 SPARE. THIS IS A COMMON POWER SUPPLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

VENTILATION SYSTEM + ELECTRIC POWER + FAILURE, INSTRUMENT + PEACH BOTTOM 2 (BWR) + FAILURE, INHERENT +
 RADIATION MONITORS

116255
 SAMPLE FLOW TO MAIN STACK SAPPING SYSTEM DISTURBED AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 A PR, LER 50-277-2-70-51/17 TO U.S. NRC, JULY 23, 1970, Docket 50-277, TYPE--BWR, NRC--GEC, AE--BECHTEL

CAUSE - LIGHTNING BLEN FUSES. DURING NORMAL OPERATION AT 70% POWER, SAMPLE FLOW TO THE MAIN STACK
 SAPPING SYSTEM WAS DISTURBED WHEN LIGHTNING BLEN FUSES IN THE FLOW CONTROL VALVE CIRCUITRY.

110255 *CONTINUE*

SUFFICIENT FLOW FOR RELIABLE GASEOUS ACTIVITY MONITORING CONTINUED. FLOW TO IODINE AND PARTICULATE CARTRIDGES WAS RESTORED IN 6 MINUTES. DAMAGED FLOW TRANSMITTER WAS RESTORED AND OTHER FUSES REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, PROTECTIVE + MONITOR, STACK + LIGHTNING + SAMPLING + DAMAGE + PEACH BOTTOM 2 (BWR) + FLOW + FAILURE, INHERENT + RADIATION MONITORS + SENSORS, FLOW

110254

MAIN STEAM RELIEF VALVE FAILS OPEN AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-53/17 TO U.S. NRC, JULY 27, 1970, DUCRET 50-277, TYPE--BWR, NRC--U.S., AE--DECMTEL

CAUSE - PILOT VALVE SEAT LEAKAGE. DURING A STARTUP, A MAIN STEAM RELIEF VALVE FAILED OPEN CAUSING THE UNIT TO BE SHUT DOWN. THE TARGET ROCK COMP. PILOT OPERATED SAFETY RELIEF VALVE, MODEL BT F, FAILED DUE TO PILOT VALVE SEAT LEAKAGE. IT WAS REPLACED WITH A REBUILT VALVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + OPRESSURE RELIEF + MAIN COOLING SYSTEM + PEACH BOTTOM 2 (BWR) + REACTOR SHUTDOWN + VALVES

110253

MPCI TURBINE SPEED COULD NOT BE CONTROLLED AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-54/17 TO U.S. NRC, AUG. 2, 1970, DUCRET 50-277, TYPE--BWR, NRC--U.S., AE--DECMTEL

CAUSE - DEFECTIVE ZENER DIODES. DURING TESTING WITH THE REACTOR AT 74% POWER, MPCI TURBINE SPEED COULD NOT BE CONTROLLED BY ITS CONTROLLER ON TEST PUT. INOPERABILITY OF THE DOWNWARD EUM SPEED CONTROLLER WAS CAUSED BY 2 DEFECTIVE 2100 ZENER DIODES AND A DEFECTIVE 747 INTEGRATED CIRCUIT CHIP IN THE RAMP GENERATOR AND SIGNAL CONVERTER ASSEMBLY. THE DEFECTIVE ELECTRONIC COMPONENTS WERE REPLACED AND THE MPCI TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + CONTROL SYSTEM + TEST, SYSTEM OPERABILITY + PEACH BOTTOM 2 (BWR) + TURBINE + FAILURE, INHERENT + ELECTRONIC FUNCTION UNITS + MPCI

110518

TIP PROBE FAILS TO WITHDRAW COMPLETELY AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-54/31 TO U.S. NRC, AUG. 2, 1970, DUCRET 50-277, TYPE--BWR, NRC--U.S., AE--DECMTEL

CAUSE - SPURIOUS OPERATION OF LIMIT SWITCH. TIP PROBE NO. 1 STOPPED ONE INCH BEFORE REACHING ITS PRESET SHIELD LIMIT DURING WITHDRAWAL AND THE MACHINE'S BALL VALVE DID NOT CLOSE. THE DRIVE CONTROL UNIT WAS IMMEDIATELY TURNED OFF TO CLOSE THE BALL VALVE. THE TIP MACHINE SHIELD LIMIT SWITCH OPERATED SPURIOUSLY. THE SWITCH WAS READJUSTED AND TESTED SATISFACTORILY. THE REACTOR WAS OPERATING AT 70% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT, IN CURE + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + FAILURE, MAINTENANCE ERROR + INSTRUMENT, POSITION + PEACH BOTTOM 2 (BWR)

110519

QUARTERLY AVERAGE RELEASE RATE FOR IODINE AND PARTICULATES HIGH AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PG, LER 50-277-2-70-53/31 TO U.S. NRC, AUG. 4, 1970, DUCRET 50-277, TYPE--BWR, NRC--U.S., AE--DECMTEL

CAUSE - UNIT SHUTDOWN AND DEPRESSURIZATIONS. THE 1970 SECOND QUARTER AVERAGE RELEASE RATE FOR IODINE AND PARTICULATE EXCEEDED TECH SPECS. THE APRIL RELEASE RATE WAS DUE TO SHUTDOWN AND DEPRESSURIZATION OF UNIT 2 FOR REFUELING. DEFECTIVE FUEL WAS REPLACED. MAY-JUNE RELEASE RATE WAS DUE TO 3 SHUTDOWNS AND DEPRESSURIZATION IN A 30-DAY PERIOD. TOTAL 1-1971 RELEASE WAS 0.241 CURIE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PERIODIC RELEASE + IODINE + RELEASE RATE + REFUELING + PEACH BOTTOM 2 (BWR) + REACTOR SHUTDOWN + FAILURE, INHERENT

110703

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (10 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

214042

CRACKS IDENTIFIED IN FUEL LINES FROM LEAKAGE BUNDLES REMOVED DURING REFUELING AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

414784

CONTROL ROOM VENTILATION RADIATION MONITOR DISPLAYS ABNORMAL READING AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PA
1 PG, LER 50-277-2-70-5033 L TO U.S. NRC, AUG. 23, 1976, JUCRET 50-277, TYPE--BWR, RW--4E, AK--DECHTEL

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (60 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

117045

HYDRAULIC SHOCK SUPPRESSOR RESERVOIR FOUND EMPTY AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 PU, LER 50-277-2-70-0211 TC U.S. NRC, SEPT. 8, 1976, UOCRET 50-277, TYPE--BUN, REV--6,0, AE--DECMTEL

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D. C. 20545 (100 LENTS/PAGE -- MINIMUM CHARGE \$2.00)

417040

RAYTHELL RADIOACTIVE GAS SAMPLE SYSTEM OUT OF SERVICE AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
A PH. LER 50-277-2-70-01/3L TG U.S. NAC, SEPT. 10, 1970, DGCRT 50-277, TYPE--GMA, RFU--U.S., AT--BECHTEL

AVAILABILITY - MAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CONTAINMENT • FAILURE, INSTRUMENT • MONITORING SYSTEM, RADIATION • CONTAINMENT ATMOSPHERE • PEACH BOTTOM 2 (ADM) • FAILURE, INHERENT • RELAYS

110207

DAYWELL WATHELL RADIOACTIVE GAS SAMPLE OBTAINED AT PEACH BOTTOM 2
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-277-2-70-0073L TC U.S. NRC, SEPT. 10, 1970, DUCRET 50-277, TYPE--BAR, RF--G.E., AE--BECHTEL

CAUSE - LEAK THROUGH FITTING. WITH THE REACTOR AT 55% POWER, THE DAYWELL RADIOACTIVE GAS SAMPLING SYSTEM OBTAINED AN IMPROPER SAMPLE DUE TO INLEAKAGE. A FITTING ON AN ELECTRICAL PENETRATION INTO THE PARTICULATE SAMPLE ELEMENT HADNED LOOSE. THE FITTING WAS TIGHTENED STOPPING THE LEAK.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT * SAMPLING * MONITORING SYSTEM, RADIATION * CONTAINMENT ATMOSPHERE * PEACH BOTTOM 2 (BAR) * CONTAINMENT PENETRATION, ELECTRICAL * LEAK * FAILURE, INHERENT

110210

DAYWELL PURGE EXHAUST VALVE FAILS TO OPEN COMPLETELY AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-0073L TC U.S. NRC, SEPT. 15, 1970, DUCRET 50-277, TYPE--BAR, RF--G.E., AE--BECHTEL

CAUSE - SKEWED ALIGNMENT KEY. WHILE PURSUING THE DAYWELL TO STANDBY GAS TREATMENT AFTER A STOPDOWN, THE DAYWELL PURGE EXHAUST VALVE WAS FOUND TO BE PARTIALLY CLOSED. THE ALIGNMENT KEY BETWEEN THE ACTUATOR AND THE FISHER CONTINENTAL 10-INCH TYPE 9200 T-21A BUTTERFLY VALVE WAS SKEWED ALLOWING INCOMPLETE OPENING OF THE VALVE. A NEW KEY WAS INSTALLED AND THE VALVE TESTED SUCCESSFULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * CONTAINMENT * CONTAINMENT PURGE * OFF GAS * PEACH BOTTOM 2 (BAR) * FAILURE, INHERENT * VALVES

110219

LPCI PUMP FLOWS LIMITED BY VALVING AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-0073L TC U.S. NRC, SEPT. 16, 1970, DUCRET 50-277, TYPE--BAR, RF--G.E., AE--BECHTEL

CAUSE - INCOMPLETE COMMUNICATION FOR CHANGE. INDIVIDUAL LPCI PUMP FLOWS ARE LIMITED BY VALVING TO 10000 GPM WHILE 10000 GPM IS REQUIRED. COMMUNICATION OF THE CHANGE IN LPCI PUMP FLOW CRITERIA FOR THE LPCI MODIFICATION WAS NOT INCLUDED IN THE INFORMATION EXCHANGE BETWEEN THE NRC AND THE LICENSEE. MAXIMUM WAS REQUIRED BY 28 ASSUMING SAFE POST LOCA CONDITIONS. CORRECT VALVE POSITIONING WILL BE ACCOMPLISHED AFTER A REVIEW BY NRC AND THE LICENSEE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MODIFICATION * FAILURE, DESIGN ERROR * NOT CHANGED * PEACH BOTTOM 2 (BAR) * FLOW * COMMUNICATION * LPCI

110227

CAJ SYSTEM BECAME IMPERMEABLE AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-0073L TC U.S. NRC, SEPT. 21, 1970, DUCRET 50-277, TYPE--BAR, RF--G.E., AE--BECHTEL

CAUSE - RELIEF VALVE FAILS TO RESET. WHILE OPERATING AT 100% POWER, THE CAJ SYSTEM BECAME IMPERMEABLE BECAUSE THE CAJ LIQUID NITROGEN TANK RELIEF VALVE OPERATED AND FAILED TO RESET BECAUSE OF THE CONTENTS BEING LIMITED. THE CAJ RELIEF VALVE, MODEL JMB-10, LIFTED AT THE PROPER PRESSURE BUT FAILED TO RESET UPON PRESSURE REDUCTION. REPLACEMENT OF THE BLOWBACK RING CORRECTED THE PROBLEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT * FAILURE, EQUIPMENT * OPRESSURE RELIEF * BLOWDOWN * PEACH BOTTOM 2 (BAR) * FAILURE, INHERENT * VALVES

110228

SET POINT DRIFT IN APAM AT PEACH BOTTOM 2

PHILADELPHIA ELECTRIC CO., PA
 1 PG, LER 50-277-2-70-0073L TC U.S. NRC, SEPT. 21, 1970, DUCRET 50-277, TYPE--BAR, RF--G.E., AE--BECHTEL

CAUSE - INSTRUMENT DRIFT. WHILE OPERATING AT 55% POWER, APAM A TRIP POINTS WERE FOUND TO BE LESS CONSERVATIVE THAN TEST SPEC REQUIRED. THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE INSTRUMENT WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * INSTRUMENT,

110210 CONTINUED
POWER RANGE = PEACH BUTTON 2 (1000) + SET POINT + DRIFT + FAILURE, INHERENT

110220
CONTAINMENT SPRAY PERMISSIVE LEVEL SWITCH FOUND INOPERATIVE AT PEACH BUTTON 2
PHILADELPHIA ELECTRIC CO., PA
1 Pw, LER 50-277-2-70-073L TC U.S. NRC, SEPT. 27, 1970, Docket 50-277, TYPE--BWR, RFU--U.S. NRC, AC--DECNTEL

CAUSE - CRACKED BELLOWS. DURING TESTING WITH THE REACTOR AT 998 POWER, A CONTAINMENT SPRAY PERMISSIVE SWITCH WAS FOUND TO BE INOPERATIVE. THE BELLOWS ON THE VAPOR MOUNTED VALVE LEVEL SWITCH CRACKED. THE SWITCH WAS REPAIRED AND RETURNED TO SERVICE. A MANUAL OVERRIDE IS PROVIDED FOR THIS SWITCH.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT SPRAY + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + PEACH BUTTON 2 (1000) + FAILURE, INHERENT + SENSORS, LEVEL

110745
PERMISSIVE SET POINT FOR CORE SPRAY AND LPCI IMPROPER AT PEACH BUTTON 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 Pw, LER 50-277-2-70-0011 TC U.S. NRC, OCT. 5, 1970, Docket 50-277, TYPE--BWR, RFU--U.S. NRC, AC--DECNTEL

CAUSE - INADEQUATE COMMUNICATION. WHILE OPERATING AT 998 POWER, THE PERMISSIVE TRIP LEVEL SETTING FOR CORE SPRAY AND LPCI INJECTION VALVES AND RECIRCULATION PUMP DISCHARGE VALVE WAS FOUND TO BE SET AT THE IMPROPER LEVEL OF 325 PSIG. NSSS ADVISES THE PERMISSIVE SPRAYED VALVE AT 450 PSIG FOR LPCI AND CORE SPRAY VALVE OPENING AND AT 225 PSIG FOR RECIRCULATION PUMP DISCHARGE VALVE OPENING. THERE MAY BE INADEQUATE COMMUNICATION BETWEEN NSSS AND LICENSEE. AN ALTERNATE WAS REQUESTED FOR MODIFICATION OF SETTINGS. MAPLEMAN WAS ADVISED TO 95443 A CONSERVATIVE MEASURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY + INSTRUMENT, SWITCH + EQUIPMENT DESIGN + FAILURE, ADMINISTRATIVE CONTROL + PEACH BUTTON 2 (1000) + ENGINEERED SAFETY FEATURE + SET POINT + COMMUNICATION + VALVES + LPCI

110975
WASCOUS RELEASE RATE EXCEEDS LIMIT AT PEACH BUTTON 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 Pw, LER 50-277-2-70-0911 TC U.S. NRC, OCT. 12, 1970, Docket 50-277, TYPE--BWR, RFU--U.S. NRC, AC--DECNTEL

CAUSE - VACUUM PUMP TRIP. WHILE THE REACTOR WAS SHUT DOWN, THE WASCOUS RELEASE RATE EXCEEDED THE ALLOWABLE LIMIT BY 1.70. WHILE THE CONDENSER WAS BEING FLOODED TO LOCATE A VACUUM LEAK, THE VACUUM PUMP TRIPPED CAUSING THE CONDENSER INVENTORY TO VENT THROUGH VACUUM BREAKERS TO THE TURBINE BUILDING. TECH SPEC LIMIT WAS EXCEEDED FOR 10 MINUTES. A TOTAL OF 5.0 LB OF ACTIVITY WAS RELEASED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WASCOUS RELEASE + FAILURE, EQUIPMENT + FISSION GAS RELEASE + RELEASE RATE + PEACH BUTTON 2 (1000) + CONDENSER + FAILURE, INHERENT + PUMPS

110970
IMPROPER CATWELL GAS SAMPLE OBTAINED AT PEACH BUTTON 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 Pw, LER 50-277-2-70-703L TC U.S. NRC, OCT. 24, 1970, Docket 50-277, TYPE--BWR, RFU--U.S. NRC, AC--DECNTEL

CAUSE - AIR INLEAKAGE THROUGH SEAL. WITH THE UNIT OPERATING AT 998 POWER, THE CATWELL NAUCLAVE GAS SAMPLING SYSTEM OBTAINED AN IMPROPER SAMPLE DUE TO INLEAKAGE. A FITTING ON AN ELECTRICAL PENETRATION INTO THE WASCOUS SAMPLE ELEMENT DID NOT SEAL. THE SEALING GASKET WAS CLEANED AND RESEATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + SAMPLING + MONITOR + SEAL + CONTAINMENT ATMOSPHERE + PEACH BUTTON 2 (1000) + LEAK + FAILURE, INHERENT

110101
SET POINT DRIFT IN LPCI FLOW SWITCH AT PEACH BUTTON 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 Pw, LER 50-277-2-70-733L TC NRC, OCT. 20, 1970, Docket 50-277, TYPE--BWR, RFU--U.S. NRC, AC--DECNTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE UNIT AT 998 POWER, THE LPCI STEAM LINE HIGH

119601 CONTINUOUS

FROM SETPOINT TRIP SETTING EXCEEDS THE 2.5 INCH H₂O LIMIT BY 7 INCHES. THE CAUSE WAS INSTRUMENT
UNIFT. THE BARTON MODEL 400 DIFFERENTIAL PRESSURE SWITCH WAS IMMEDIATELY RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + PEACH BUTT 2
(100) + SET POINT + UNIFT + FAILURE, IMMERENT + SENSING, FLUX + NUCI

119672

SET POINT UNIFT UP AOS LVL LEVEL SWITCH AT PEACH BUTT 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PWT, LER 50-277-4-70-71/36 TC U.S. NRC, NOV. 2, 1970, DUCRET 50-277, TYPE--BWR, NRU--U.S., AE--BECHTEL

CASE - INSTRUMENT UNIFT. DURING TESTING WITH THE REACTOR AT 99% POWER, THE SET POINT OF AOS
COMPENSATORY LVL LEVEL SWITCH L15-2-4-3-03A WAS 0.00 INCH LUMEN FROM THE 0 INCH LIMIT. THE CAUSE
WAS ALOUT INSTRUMENT UNIFT. THE TARRANT, MODEL 44100, LEVEL INDICATING SWITCH WAS IMMEDIATELY
RECALIBRATED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

INSTRUMENT CALIBRATION + PROTECTION SYSTEM + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM
OPERABILITY + PEACH BUTT 2 (100) + SET POINT + UNIFT + FAILURE, IMMERENT + SENSING, LEVEL

119698

NUC TRIP TRIPPER VALVE FAILS TO RESET AT PEACH BUTT 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PWT, LER 50-277-4-70-71/36 TC U.S. NRC, NOV. 5, 1970, DUCRET 50-277, TYPE--BWR, NRU--U.S., AE--BECHTEL

CASE - UNKNOWN NUC TRIP SCRAM. DURING TESTING WITH THE REACTOR AT 99% POWER, NUC TRIP
TRIPPER VALVE WOULD NOT RESET AFTER BEING TRIPPED. A WIRE ON THE TRIPPER VALVE SCRAM, MODEL
4200, WAS UNKNOWN. THE SCRAM WAS REPAIRED. THE TRIP TRIPPER VALVE WAS TRIPPED AND RESET
SATISFACTORILY ON TEST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

FAILURE, EQUIPMENT + CONTACT + TEST, SYSTEM OPERABILITY + PEACH BUTT 2 (100) + WIRE AND CONNECTIONS +
FAILURE, IMMERENT + SCRAM + NUC + VALVES

119707

SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BUTT 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PWT, LTR 50-277-4-70-70/40 TC U.S. NRC OFFICE OF NUCLEAR REACTOR REGULATION, NOV. 8, 1970, DUCRETS 50-
277/470, TYPE--BWR, NRU--U.S., AE--BECHTEL

CASE - HIGH FLUX. DAILY STABILITY MEASUREMENT OF THE SEWAGE PLANT EFFLUENT WAS HIGH AND A
UNWITTING ANALYSIS FOR TOTAL SUSPENDED SOLIDS WAS RUN. THE NET TOTAL SUSPENDED SOLIDS WAS 339
PPM GREATER THAN THE RIVER SAMPLE. HIGH FLUX COINCIDED WITH AN ABOVE NORMAL BUILDUP OF SEDIMENT
IN THE AERATION TANK CAUSING THE SETTLING CLARIFIER OVERFLOW. THE EXHAUSTION CONTACT TANK WAS
CLEANED. THE AERATION TANK WAS PUMPED OUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

PEACH BUTT 2 (100) + PEACH BUTT 3 (100) + WATER QUALITY + SEWAGE + EFFLUENT + FAILURE, IMMERENT +
SOLID

119845

RELEASE RATE FOR IODINE AND PARTICULATES EXCEEDS LIMIT AT PEACH BUTT 2

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PWT, LER 50-277-4-70-70/36 TC U.S. NRC, NOV. 17, 1970, DUCRET 50-277, TYPE--BWR, NRU--U.S., AE--BECHTEL

CASE - HIGH RELEASE OF PRIMARY COOLANT. THE THIRD QUARTER 1970 AVERAGE RELEASE RATE FOR IODINE
AND PARTICULATES EXCEEDED 1000 SPEC LIMIT. BOTH UNITS OPERATED NORMALLY DURING THE PERIOD.
PRIMARY COOLANT OF PRIMARY COOLANT FROM VALVE PACKING, PUMP SEALS, AND HEAT EXCHANGER FLANGES IN
THE REACTOR WATER CLEANUP SYSTEM ALLOWED IODINE RELEASE THROUGH THE DILUENT VENTILATION SYSTEM.
AS LEAKS WERE DISCOVERED, CORRECTIVE ACTION WAS TAKEN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$20.00

PEACH BUTT 2 (100) + RELEASE RATE + AIRBORNE RELEASE + IODINE + PARTICLE, RADIOACTIVE + EFFLUENT + REACTOR
COOLANT + LEAK + SEAL + FLANGE + FAILURE, IMMERENT

120237
THREE HYDRAULIC SNUGGERS FOUND WITH EMPTY RESERVOIRS AT PEACH BOTTOM 2
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 PG, LTR 50-277-270-79/11 TO U.S. NRC, NOV. 24, 1970

CAUSE - LEAKS/DAMAGED RESERVOIR. DURING AN INSPECTION WHILE THE UNIT WAS SHUTDOWN, 3 HYDRAULIC SNUGGERS WERE FOUND WITH EMPTY RESERVOIRS. ONE HAD LEAKING FITTINGS, NO WASKET DEGRADATION. NEW WASKETS INSTALLED. ONE HAD A DAMAGED RESERVOIR THAT WAS REPAIRED. THE OTHER HAD A LEAKING RESERVOIR THAT WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PEACH BOTTOM 2 (BWR) * SHOCK ABSORBER * PIPES AND PIPE FITTINGS * SURVEILLANCE PROGRAM * FAILURE, EQUIPMENT * CLEAR * DAMAGE * FAILURE, INHERENT * SUPPORT STRUCTURE

110304
SEWAGE PLANT EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/50-277/270-70-2 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 15, 1970, DUCKETS 50-277/270, TYPE--BWR, MFU--G.E., AE--BECHTEL

CAUSE - INADEQUATE SLUDGE RETURN. ROUTINE GRAVIMETRIC ANALYSIS SHOWED THAT THE SUSPENDED SOLIDS CONCENTRATION OF THE SEWAGE PLANT EFFLUENT WAS 64 PPM GREATER THAN THAT OF THE RIVER WATER. SOLIDS HAD BEEN CARRIED OVER FROM THE SETTLING ZONE INTO THE CHLORINE CONTACT TANK DUE TO INADEQUATE SLUDGE RETURN AND FROM THE CHLORINE CONTACT TANK TO THE EFFLUENT DUE TO HIGH FLOW. THE CHLORINE CONTACT TANK WAS PUMPED OUT AND THE SLUDGE RETURN LINE CLEANED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT * WATER QUALITY * PEACH BOTTOM 2 (BWR) * CONCENTRATION * PEACH BOTTOM 3 (BWR) * WASTE, SEWAGE * FAILURE, INHERENT

110305
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/50-277/270-70-1 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 15, 1970, DUCKETS 50-277/270, TYPE--BWR, MFU--G.E., AE--BECHTEL

CAUSE - WORN MOTOR BEARINGS. WITH UNIT 3 SHUT DOWN, UNIT 2 OPERATING AT 71.2% POWER, AND COOLING TOWER A OUT OF SERVICE DUE TO A PREVIOUS LIFT PUMP BEARING FAILURE, FAN E ON COOLING TOWER B TRIPPED DUE TO HIGH VIBRATION. FAN K WAS OUT OF SERVICE FOR MAINTENANCE. FURTHER INSPECTION REVEALED FAN L MOTOR WAS RUNNING BUT THE FAN WAS NOT TURNING DUE TO FAILURE OF THE GEAR REDUCER DRIVE UNIT. FANS K AND E FAILED DUE TO WORN MOTOR BEARINGS. THE MOTOR ON FAN K WAS REPLACED AND THE FAN RETURNED TO SERVICE. REPAIRS TO FAN E MOTOR ARE IN PROGRESS. FAN L WILL BE REPAIRED AS EXPEDITIOUSLY AS POSSIBLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT * PEACH BOTTOM 2 (BWR) * COOLING TOWER * BEARING * PEACH BOTTOM 3 (BWR) * FAILURE, INHERENT * MOTORS * PULVERS

110904
UNIT OPERATED ABOVE 20% POWER WITH ALL COOLING TOWERS INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/50-277/270-70-3 TO NRC OFFICE OF I & E, REGION 1, JAN. 19, 1970, DUCKETS 50-277/270, TYPE--BWR, MFU--G.E., AE--BECHTEL

CAUSE - SEVERE COLD WEATHER AND ICING. BOTH UNITS WERE OUT OF SERVICE FOR ABOUT 24 HOURS. DURING THIS PERIOD, AIR TEMPERATURES WERE WELL BELOW FREEZING WITH ICE COVERING THE MOUTH OF THE RIVER AND INTAKE PIPES. UNIT 2 WAS THEN OPERATED AT 23 TO 33% POWER WITH ALL COOLING TOWERS IN OPERATION TO HEAT THE DISCHARGE POND ENOUGH TO PREVENT SEVERE ICING OF THE TOWERS. MAY THE TOWERS BEEN OPERATED WITH THE INTAKE WATER AT 32 DEG F, SEVERE ICING WOULD HAVE OCCURRED. THIS COULD HAVE CAUSED THE TOWERS TO COLLAPSE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PEACH BOTTOM 2 (BWR) * PEACH BOTTOM 3 (BWR) * COOLING TOWER * WEATHER, SEVERE * WASTE HEAT MANAGEMENT * CONDENSER COOLING SYSTEM

110905
SEWAGE PLANT EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/50-277/270-70-4 TO NRC OFFICE OF I & E, REGION 1, JAN. 22, 1970, DUCKETS 50-277/270, TYPE--BWR, MFU--G.E., AE--BECHTEL

110905 PLANTINUM

CAUSE - INADEQUATE SLUDGE RETURN. ROUTINE GRAVIMETRIC ANALYSIS SHOWED THAT THE SUSPENDED SOLIDS CONCENTRATION OF THE SEWAGE PLANT EFFLUENT WAS 53 PPM GREATER THAN THAT OF THE RIVER WATER. SOLIDS MAY BEEN LAAGED OVER FROM THE SETTLING TANK INTO THE CHLORINE CONTACT TANK DUE TO INADEQUATE SLUDGE RETURN AND FROM THE CHLORINE CONTACT TANK DUE TO HIGH FLOW. THE CHLORINE TANK WAS PUMPED OUT AND SLUDGE RETURN FLOW WAS INCREASED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT • FAILURE, OPERATION ERROR • PEACH BOTTOM 2 (BOR) • FLOW • RATE • SOLID • CONCENTRATION • PEACH BOTTOM 2 (BOR) • WASTE, SEWAGE

110903

SETTLING BASIN EFFLUENT PH EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/A 50-277/270-70-3 TO NRC OFFICE OF I & E, REGION 1, JAN. 23, 1970, DOKETS 50-277/270, TYPE--BOR, NFO--GEO, AE--BECHTEL

CAUSE - IMPROPER VALVE LINE-UP. WHILE UNIT 2 WAS OPERATING AT 99% POWER AND UNIT 3 WAS SHUT DOWN, ROUTINE ANALYSIS INDICATED THAT THE SETTLING BASIN EFFLUENT PH WAS 11.3, WHICH EXCEEDS THE ETS LIMIT. THE NEUTRALIZING TANK WAS DISCHARGED TO THE SETTLING BASIN WITHOUT BEING NEUTRALIZED DUE TO AN IMPROPER VALVE LINE-UP. THE SETTLING BASIN WAS IMMEDIATELY ISOLATED AND NEUTRALIZED. THE VALVE IN THE SECONDARY FLOW PATH FROM THE NEUTRALIZING TANK WAS LOCKED CLOSED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT • FAILURE, OPERATION ERROR • WASTE DISPOSAL • WATER QUALITY • PEACH BOTTOM 2 (BOR) • PEACH BOTTOM 3 (BOR) • COMPOSITION

110903

USEFULS ACTIVITY RELEASE RATE EXCEEDS 48 OF ALLOWABLE AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/A 50-277/270-70-3 TO NRC OFFICE OF I & E, REGION 1, JAN. 27, 1970, DOKETS 50-277/270, TYPE--BOR, NFO--GEO, AE--BECHTEL

CAUSE - FUEL CLADDING PERFORATIONS. ON JAN. 15, A STEP CHANGE INCREASE IN THE ACTIVITY AT THE SAME OCCURRED WHILE OPERATING UNIT 2 AT 99% POWER WITH NO UNUSUAL POWER CHANGES. THE CAUSE WAS ALL TO FUEL CLADDING PERFORATIONS. PRELIMINARY ANALYSIS INDICATE 13 TO 20 LEAKS EXIST. TYPE 1 FUEL ASSEMBLIES MAY CONTAIN THE MAJORITY OF DEFECTS. THESE WERE FABRICATED PRIOR TO PELLETS PLACING IMPROVEMENTS WHICH DECREASE LOCAL PELLET CLADDING INTERACTION. THEY DO NOT CONTAIN HYDROGEN GETTERS. FUEL ASSEMBLIES WILL BE SIPPED DURING THE REFUELING OUTAGE SCHEDULED FOR MARCH 27. RELEASE RATE PEAKED AT 25% OF ALLOWABLE AND THEN DECREASED TO 5.5%.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

POISONING RELEASE • FUEL INT. QUALITY • RELEASE RATE • FAILURE, DESIGN ERROR • FAILURE, CLADDING • OFF GAS • PEACH BOTTOM 2 (BOR) • PEACH BOTTOM 3 (BOR) • FUEL CLAD INTERACTION • FUEL ELEMENTS

111001

EXCESSIVE USAGE OF CHEMICALS AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/A 50-277/270-70-8 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, FEB. 23, 1970, DOKETS 50-277/270, TYPE--BOR, NFO--GEO, AE--BECHTEL

CAUSE - INSPECTION OF AUXILIARY BUILDS. ALUM, SODIUM SULFITE, THIO-SULPHUR PHOSPHATE, AND BORIC ACID USAGE EXCEEDED 2 TIMES THE ESTIMATED YEARLY USAGE. USAGE OF THE FIRST 3 WAS AGGRAVATED BY INSPECTION REQUIREMENTS FOR THE AUXILIARY BUILDS WHICH NECESSITATED COMPLETE DRAINING, REFILLING, AND RETREATMENT. BALL PUMP SEAL LEAKAGE AND SURVEILLANCE TESTING ACCOUNT FOR THE BORIC ACID USAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING • WATER TREATMENT • PEACH BOTTOM 2 (BOR) • SURVEILLANCE PROGRAM • PEACH BOTTOM 3 (BOR) • EFFLUENT, CHEMICAL • FAILURE, INHERENT • AUXILIARY • HEATERS

111040

SHUTTING DOWN INOPERABLE AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/A 50-277/270-70-9 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, FEB. 24, 1970, DOKETS 50-277/270, TYPE--BOR, NFO--GEO, AE--BECHTEL

CAUSE - BOLTS ON LIFT PUMP FAIL. WHILE UNIT 2 WAS OPERATING AT 80% POWER AND UNIT 3 AT 99% POWER, CHILLING TOWER LIFT PUMP WAS FOUND TO BE NOT PUMPING WATER AND WAS REMOVED FROM SERVICE. BOLTS HOLDING THE SULFUR BELL HOUSING TO THE PUMP CASING FAILED, CAUSING THE HOUSING TO FALL TO THE BOTTOM OF THE LIFT PUMP PIT. THE CAUSE OF FAILURE HAS NOT YET BEEN DETERMINED. THE PIT IS BEING

111040 *CONTINUED*
EMPTIED FOR REPAIR OF THE PUMP.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FASTENER + PEACH BOTTOM 2 (BWR) + COOLING TOWER + PEACH BOTTOM 3 (BWR) + PUMPS

111639
SETTLING BASIN EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR WRO 50-277/270-70-11 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, FEB. 20, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - HIGH SOLIDS LEVEL IN RIVER. ROUTINE ANALYSIS SHOWED THAT THE SUSPENDED SOLIDS CONCENTRATION OF THE SETTLING BASIN EFFLUENT WAS 45 PPM GREATER THAN THAT OF THE RIVER WATER. HIGH SOLIDS LEVEL IN THE RIVER WATER RESULTED IN A BUILD-UP OF SOLIDS IN THE SETTLING BASIN AND ALSO HIGH BLOWDOWN FLOWS FROM THE RAW WATER CLARIFIER RESULTING IN CARRY-OVER IN THE EFFLUENT. SOLIDS WERE PUMPED OUT OF THE SETTLING BASIN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + SURFACE WATER, SUSPENDED MATERIAL + WATER QUALITY + PEACH BOTTOM 2 (BWR) + SOLID + PEACH BOTTOM 3 (BWR) + FAILURE, INHERENT

111638
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR WRO 50-277/270-70-13 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MARCH 5, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - DISTRIBUTION HEADER LEAK. WHILE UNIT 2 AND 3 WERE OPERATING AT 84% AND 58% POWER RESPECTIVELY AND COOLING TOWER A WAS OUT OF SERVICE DUE TO THE PREVIOUS LIFT PUMP FAILURE, A LARGE LEAK IN THE SOUTH SIDE WATER DISTRIBUTION HEAD AT THE TOP OF TOWER B NECESSITATED SHUTDOWN OF THE TOWER. WATER SPRAYED OVER THE SIDE OF THE TOWER CAUSING ICE BUILDUP ON THE LOWER SIDE COLUMNS. THE DISTRIBUTION HEADER WAS REPAIRED THE SAME DAY AS THE FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PEACH BOTTOM 2 (BWR) + COOLING TOWER + PEACH BOTTOM 3 (BWR) + FAILURE, INHERENT + PIPES AND PIPE FITTINGS

112057
TWO COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR WRO 50-277/270-70-17 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MARCH 24, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - LUBRICATING WATER LINES PLUGGED. WHILE UNIT 2 WAS OPERATING AT 100% POWER, UNIT 3 WAS OFF, AND COOLING TOWER A WAS OUT OF SERVICE DUE TO A PREVIOUS LIFT PUMP FAILURE. COOLING TOWER C LIFT PUMP TRIPPED. THE LUBRICATING WATER LINES PLUGGED DUE TO HIGH SILT CONTENT OF THE RIVER CAUSED BY HIGH RIVER FLOWS. LIFT PUMP C WAS RETURNED TO SERVICE IN LESS THAN 2 HOURS AFTER FLUSHING THE LINES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CRUD + LUBRICATION + PEACH BOTTOM 2 (BWR) + COOLING TOWER + PEACH BOTTOM 3 (BWR) + FAILURE, INHERENT + PUMPS + PIPES AND PIPE FITTINGS

113308
TWO COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PA
2 PGS, LTR WRO 50-277/270-70-19 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, APRIL 12, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--DECHTEL

CAUSE - BEARING FAILURES. WITH UNIT 3 AT FULL POWER AND UNIT 2 DOWN FOR REFUELLING, COOLING TOWER A WAS OUT OF SERVICE DUE TO A PREVIOUS LIFT PUMP FAILURE AND FAN L ON TOWER B WAS OUT OF SERVICE DUE TO A PREVIOUS FAILURE OF THE GEAR REDUCER DRIVE UNIT. FAN E ON TOWER B TRIPPED DUE TO HIGH VIBRATION. THE MOTOR BEARINGS WERE WORN AND LINE BEARING BOX SEIZED. FAN L WAS RETURNED TO SERVICE THAT SAME DAY RESTORING THE TOWER TO OPERABLE STATUS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FAILURE, SIMULTANEOUS + PEACH BOTTOM 2 (BWR) + COOLING TOWER + BEARING + PEACH BOTTOM 3 (BWR) + FAILURE, INHERENT + BLOWERS

133304
PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PA
2 PGS, LTR W/NO DU-277/278-70-20 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, APRIL 23, 1976, DUCRETS 50-277/278, TYPE--BNA, NRU--UCL, AE--BECHTEL

CAUSE - UNKNOWN. WHILE THE SETTLING BASIN WAS OPERATING WITH MAXIMUM MAKE-UP AND THE 3RD WATER PUMP WAS IN AUTOMATIC MODE, A REALTIME GRAV SAMPLE FROM THE SETTLING BASIN INDICATED A PH OF 10.4. A FOLLOWUP SAMPLE TAKEN 2 HOURS LATER WAS WITHIN THE ALLOWABLE RANGE. ALL OTHER INDICATIONS APPEARED NORMAL. NO CAUSE WAS FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + WASTE DISPOSAL + SAMPLING + WASTE DISPOSAL, LIQUID + TEST, SYSTEM OPERABILITY + PEACH BOTTOM 2 (BNA) + PEACH BOTTOM 3 (BNA) + COMPOSITION

133310
TWO COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PA
2 PGS, LTR W/NO DU-277/278-70-21 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, APRIL 29, 1976, DUCRETS 50-277/278, TYPE--BNA, NRU--UCL, AE--BECHTEL

CAUSE - BRACKET WEAR REDUCED BRACKET. WHILE UNIT 3 WAS AT FULL POWER AND UNIT 2 WAS OFF FOR REFUELING, COOLING TOWER A WAS OUT OF SERVICE DUE TO PREVIOUS LIFT PUMP FAILURE AND FAN 3 ON TOWER B WAS OUT OF SERVICE DUE TO BEARING FAILURES. FAN 4 ON TOWER B TRIPPED DUE TO HIGH VIBRATION. A WEAR REDUCED BRACKET WAS BROKEN. THE FAN WAS REPAIRED AND RETURNED TO SERVICE WITHIN 2 DAYS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + SUPPORT STRUCTURE + FAILURE, SIMULTANEOUS + PEACH BOTTOM 2 (BNA) + COOLING TOWER + PEACH BOTTOM 3 (BNA) + FAILURE, INHERENT + BLINDERS

133324
TWO COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/NO DU-277/278-70-23 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MAY 7, 1976, DUCRETS 50-277/278, TYPE--BNA, NRU--UCL, AE--BECHTEL

CAUSE - TOWER MAINTENANCE. WITH UNIT 3 AT FULL POWER, UNIT 2 OFF FOR REFUELING, AND COOLING TOWER A OUT OF SERVICE DUE TO A PREVIOUS LIFT PUMP BEARING FAILURE, TOWER C WAS REMOVED FROM SERVICE FOR 12 HRS TO ERECT SCAFFOLDING AND REPAIR A SECTION OF THE TOWER STRUCTURE. THE STRUCTURE WAS PREVIOUSLY DAMAGED WHEN A SHIFT LINE BEARING HUNGING WAS THROWN FREE AND FELL THROUGH THE STRUCTURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + MAINTENANCE AND REPAIR + DAMAGE + PEACH BOTTOM 2 (BNA) + COOLING TOWER + PEACH BOTTOM 3 (BNA) + FAILURE, INHERENT

133330
TWO COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/NO DU-277/278-70-24 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MAY 7, 1976, DUCRETS 50-277/278, TYPE--BNA, NRU--UCL, AE--BECHTEL

CAUSE - PLUGGED LUBRICATING WATER LINES. WITH UNIT 3 AT FULL POWER, UNIT 2 OFF FOR REFUELING, AND COOLING TOWER A OUT OF SERVICE DUE TO A PREVIOUS LIFT PUMP BEARING FAILURE, TOWER C LIFT PUMP TRIPPED. A FLOW SWITCH INDICATED LOSS OF LUBE WATER TO THE LIFT PUMP. SILT HAD ACCUMULATED IN THE LUBRICATING WATER LINES. THE LINES WERE FLUSHED AND THE PUMP AND TOWER RETURNED TO SERVICE THE SAME DAY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

LOUL + FLOW BLOCKAGE + LUBRICATION + PEACH BOTTOM 2 (BNA) + COOLING TOWER + PEACH BOTTOM 3 (BNA) + FAILURE, INHERENT + PUMPS + PIPES AND PIPE FITTINGS

133902
TWO COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PGS, LTR W/NO DU-277/278-70-24 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MAY 12, 1976, DUCRETS 50-277/278, TYPE--BNA, NRU--UCL, AE--BECHTEL

CAUSE - LIFT PUMP FAILURES. WITH UNIT 2 OFF FOR REFUELING, UNIT 3 OPERATING AT 70% POWER, AND

113962 *CONTINUED*

COOLING TOWER A OUT OF SERVICE DUE TO A PREVIOUS LIFT PUMP FAILURE, THE BOLTS HOLDING THE SECTION BELL HOUSING THE TOWER B LIFT PUMP CASING FAILED, CAUSING THE HOUSING TO FALL TO THE BOTTOM OF THE LIFT PUMP PIT. THE LIFT PUMP DISCHARGE PIPING WAS CRACKED AND THE BASE PLATE OF THE PUMP WAS SHIFTED. THE CAUSE OF THE FAILURE HAS NOT BEEN DISCOVERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FASTENER + FAILURE, SIMULTANEOUS + PEACH BOTTOM 2 (100R) + COOLING TOWER + PEACH BOTTOM 3 (100R) + CONDENSER COOLING SYSTEM + PUMPS

113963

THREE COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/ENR 50-277/270-70-25 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MAY 14, 1970, DOCKETS 50-277/270, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - LIFT PUMP INADVERTENTLY TRIPPED. WITH UNIT 3 OPERATING AT 50% POWER, UNIT 2 OFF FOR REFUELING, AND COOLING TOWERS A AND B OUT OF SERVICE DUE TO PREVIOUS LIFT PUMP FAILURES, TOWER C WAS INADVERTENTLY TRIPPED DURING BUS SWITCHING. THE LIFT PUMP BREAKER WOULD NOT RECLOSE DUE TO A FLOW SWITCH INDICATING LOSS OF LOW WATER TO THE LIFT PUMP. SILT HAD ACCUMULATED IN THE LOW WATER LINES. THE LINES WERE FLUSHED OUT AND THE LIFT PUMP RETURNED TO SERVICE IN ABOUT 9 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FLOW BLOCKAGE + FAILURE, SIMULTANEOUS + PEACH BOTTOM 2 (100R) + COOLING TOWER + COOLING + BEARING + PEACH BOTTOM 3 (100R) + CONDENSER COOLING SYSTEM + FAILURE, INHERENT + PUMPS

113964

SEWAGE PLANT EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/ENR 50-277/270-70-26 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MAY 14, 1970, DOCKETS 50-277/270, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - SLUDGE RETURN PUMP FAILURE. ROUTINE GRAVIMETRIC ANALYSIS SHOWED THE SUSPENDED SOLIDS CONCENTRATION OF THE SEWAGE PLANT EFFLUENT WAS 3407 PPM GREATER THAN THAT OF THE RIVER WATER. THE SLUDGE RETURN PUMP WAS NOT WORKING BECAUSE OF AN OBSTRUCTION IN THE RETURN PIPE TO THE DEGRADATION TANK. SLUDGE WAS CARRIED OVER TO THE CHLORINE CONTACT TANK AND DISCHARGED TO THE EFFLUENT. THE OBSTRUCTION WAS REMOVED. SLUDGE WAS REMOVED FROM THE SETTLING ZONE AND THE CHLORINE CONTACT TANK. THE SLUDGE RETURN PUMP WAS BLOWN BACK AND WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + TEST, SYSTEM OPERABILITY + WATER QUALITY + FLOW BLOCKAGE + PEACH BOTTOM 2 (100R) + CONCENTRATION + PEACH BOTTOM 3 (100R) + WASTE, SEWAGE + FAILURE, INHERENT

113969

THREE COOLING TOWERS SIMULTANEOUSLY INOPERABLE AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/ENR 50-277/270-70-27 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, MAY 17, 1970, DOCKETS 50-277/270, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - LIFT PUMP FAILURE. WITH UNIT 3 OPERATING AT 85% POWER, UNIT 2 OFF FOR REFUELING, AND COOLING TOWERS A AND B OUT OF SERVICE DUE TO PREVIOUS LIFT PUMP FAILURES, THE BOLTS HOLDING THE IMPELLER HOUSING TO PUMP C DIFFUSER SECTION FAILED CAUSING THE HOUSING TO FALL TO THE BOTTOM OF THE LIFT PUMP PIT. SHORTLY AFTER TOWER C FAILURE, UNIT 3 WAS SHUT DOWN DUE TO OTHER DIFFICULTIES. POWER WILL BE LIMITED TO 20% FOR UNIT 3 UNTIL ENVIRONMENTAL TECH SPECS ARE MODIFIED. INVESTIGATION INTO THE CAUSE OF PUMP FAILURES IS CONTINUING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + FASTENER + FAILURE, SIMULTANEOUS + PEACH BOTTOM 2 (100R) + COOLING TOWER + PEACH BOTTOM 3 (100R) + CONDENSER COOLING SYSTEM + PUMPS

113990

SUSPENDED SOLIDS IN SEWAGE EFFLUENT EXCEED LIMIT AT PEACH BOTTOM 2 AND 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR N/ENR RPT 50-277/270-70-28 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JUNE 17, 1970, DOCKETS 50-277/270, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - SLUDGE RETURN PUMP FAILURE. ROUTINE GRAVIMETRIC ANALYSIS SHOWED THAT THE SUSPENDED SOLIDS CONCENTRATION OF THE SEWAGE PLANT EFFLUENT WAS 88 PPM GREATER THAN THAT OF THE RIVER WATER. THE SLUDGE RETURN PUMP BECAME INOPERABLE RESULTING IN A CARRY OVER OF SLUDGE FROM THE SETTLING ZONE TO THE CHLORINE CONTACT TANK AND DISCHARGE TO THE EFFLUENT. THE PUMP WAS RETURNED TO SERVICE. SLUDGE WAS REMOVED FROM THE TANK.

115045 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + FAILURE, EQUIPMENT + WATER QUALITY + PEACH BOTTOM 2 (SRR) + PEACH BOTTOM 3 (SRR) + WASTE, DEMAND + FAILURE, IMMINENT + PUMPS

115046
 ALUMINE-122 CONCENTRATION IN A MILK SAMPLE EXCEEDS REPORT LEVEL AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 3 PAGES, LTR MEMO, RPT 50-277/270-70-25 TO NRC DIVISION OF OPERATING REGULATION, JUNE 18, 1970, DOKETS 50-277/270, TYPE--SRR, MFU--UCC, AE--DECELTEL

CAUSE - RELEASE FROM UNIT 3. OF THE 6 MILK SAMPLES FROM 6 DIFFERENT LOCATIONS, ONE INDICATED A CONCENTRATION OF 1-151 OF 14 PC/LITER WHICH EXCEEDS THE REPORT LEVEL OF 9.0 PC/LITER. IN A SAMPLE TAKEN A WEEK LATER, THE CONCENTRATION HAD DRIPPED TO 2 PC/LITER. THE PRESENCE OF 1-151 IN THE MILK SAMPLE COLLECTED FIRST CORRELATED WITH THE INCREASED LEVELS OF 1-231 OBSERVED IN THE EFFLUENT FROM UNIT 3 FOR THE PRIOR 2 WEEKS. FOR THIS PERIOD THE RELEASE RATE WAS 77% OF THE LIMIT. IT THEN DRIPPED TO 2% OF THE LIMIT. THE SOURCE OF THE 1-231 IS UNDER INVESTIGATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ALUMINE RELEASE + PIPING + PHILA + MAINTENANCE PROGRAM, ENVIRONMENTAL + PEACH BOTTOM 2 (SRR) + FLOW CHAIN + PEACH BOTTOM 3 (SRR)

115047
 PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 4 PAGES, LTR MEMO, RPT 50-277/270-70-30 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JULY 10, 1970, DOKETS 50-277/270, TYPE--SRR, MFU--UCC, AE--DECELTEL

CAUSE - LACK OF SODA ASH. THE PH OF 2 GRAB SAMPLES TAKEN FROM THE SETTLING BASIN MEASURED 9.0 AND 9.4. A SAMPLE TAKEN 4 HOURS LATER WAS 10.0. THE PH RETURNED TO THE ALLOWABLE RANGE, 8.0 TO 9.0, WITHIN 4 HOURS OF THE ORIGINAL SAMPLING. THE INITIAL LOW VALUE WAS DUE TO A LACK OF SODA ASH ADDITION TO THE CLARIFIER DURING CONTINUING ALUM FEED. THIS RESULTED IN A LOW PH IN THE RAW WATER SUMP WHICH IS PUMPED TO THE SETTLING BASIN. THERE WAS NO APPARENT CAUSE FOR THE HIGH VALUE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + FAILURE, EQUIPMENT + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + WATER QUALITY + PEACH BOTTOM 2 (SRR) + PEACH BOTTOM 3 (SRR)

115048
 PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PA
 4 PAGES, LTR MEMO, RPT 50-277/270-70-31 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, AUGUST 13, 1970, DOKETS 50-277/270, TYPE--SRR, MFU--UCC, AE--DECELTEL

CAUSE - DEFECTIVE PH METER. THE PH OF A ROUTINE GRAB SAMPLE TAKEN FROM THE SETTLING BASIN EFFLUENT MEASURED 11.0. A SAMPLE TAKEN 1/2 HOUR LATER MEASURED 9.0. A FAULTY PH METER ON THE NEUTRALIZING TANK DISCHARGE TO THE SETTLING BASIN HAD ALLOWED A TANK THAT WAS NOT NEUTRALIZED TO BE DISCHARGED. THE SETTLING BASIN WAS ISOLATED IMMEDIATELY AND NEUTRALIZED. WHEN THE PH WAS WITHIN THE 8.0 TO 9.0 RANGE, THE FAULTY PH METER WAS REPAIRED AND RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + WATER QUALITY + PEACH BOTTOM 2 (SRR) + PEACH BOTTOM 3 (SRR) + FAILURE, IMMINENT + INSTRUMENTS, MISL

117101
 SETTLING BASIN EFFLUENT PH EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 4 PAGES, LTR MEMO, RPT 50-277/270-70-32 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, AUGUST 23, 1970, DOKETS 50-277/270, TYPE--SRR, MFU--UCC, AE--DECELTEL

CAUSE - DEFECTIVE PH METER. THE DAILY GRAB SAMPLE FROM THE SETTLING BASIN EFFLUENT MEASURED A PH OF 11.0. A NEUTRALIZING TANK (15000 GALLON VOLUME) HAD BEEN DISCHARGED TO THE SETTLING BASIN WITH A HIGH PH. THE TANK PH METER WAS TESTED AND FOUND TO BE READING LOW. THE SETTLING BASIN WAS ISOLATED AND NEUTRALIZED AFTER WHICH IT WAS RETURNED TO NORMAL OPERATION. THE METER WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + FAILURE, INSTRUMENT + MONITOR + WATER QUALITY + PEACH BOTTOM 2 (SRR) + PEACH BOTTOM 3 (SRR)

117102
SETTLING BASIN EFFLUENT PH EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PWS, LTR W/ENV. APT. 50-277/270-70-33 TO NRC OFFICE OF NUCLEAR REACTION REGULATION, ADJ. 23, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - ALUM FEEDER TO CLARIFIER OVERFLOWED. A DAILY GRAB SAMPLE FROM THE SETTLING BASIN EFFLUENT MEASURED A PH OF 3.7. THE ALUM FEEDER TO THE CLARIFIER OVERFLOWED TO THE RAW WATER SUMP. THE RAW WATER SUMP, WHEN FULL, PUMPED THE LOW PH WATER TO THE SETTLING BASIN. THE LOW PH ALARM ON THE RAW WATER SUMP PUMP DISCHARGE LINE FAILED TO OPERATE. THE SETTLING BASIN WAS ISOLATED AND THE RAW WATER SUMP PUMP STOPPED. THE SETTLING BASIN AND RAW SUMP WERE NEUTRALIZED. THE OVERFLOW WAS STOPPED. THE WATER SUPPLY VALVE, WHOSE LEAKAGE HAD FAILED, WAS CLEANED. THE HIGH-LOW PH ALARM WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + FAILURE, EQUIPMENT + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + FAILURE, MAINTENANCE ERROR + WATER QUALITY + FLOW BLOCKAGE + PEACH BOTTOM 2 (BWR) + PEACH BOTTOM 3 (BWR) + VALVES

117044
SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PWS, LTR W/ENV. APT. TO NRC OFFICE OF NUCLEAR REACTION REGULATION, DEPT. 3, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - INCREASED USAGE. ACUTIME ANALYSIS SHOWED THAT THE SUSPENDED SOLIDS CONCENTRATION OF THE SEWAGE PLANT EFFLUENT WAS 422 PPM AND 60 PPM GREATER THAN THE RIVER SAMPLE ON 2 DAYS. THE CONCENTRATION WAS WITHIN LIMITS WITHIN 1 HOUR. INCREASED WATER USAGE DUE TO AN INCREASE IN PAPERWORK ON SHIFT BECAUSE OF A UNIT 2 OUTAGE CAUSED NEW FLOW THAT CARRIED SOLIDS OVER FROM THE AERATION TANK INTO THE CHEMICAL CONTACT TANK AND THEN INTO THE EFFLUENT. THE CHEMICAL CONTACT TANK WAS CLEANED AND THE SETTLED SOLIDS PUMPED OUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + WATER QUALITY + PEACH BOTTOM 2 (BWR) + PEACH BOTTOM 3 (BWR) + WASTE, SEWAGE + FAILURE, INHERENT

110221
PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PWS, LTR W/ENV. APT. 50-277/270-70-35 TO NRC OFFICE OF NUCLEAR REACTION REGULATION, DEPT. 23, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - VALVING ERROR. THE DAILY GRAB SAMPLE FROM THE SETTLING BASIN EFFLUENT MEASURED A PH OF 4.0. ONE OF THE 2 NEUTRALIZING TANKS WAS BEING DISCHARGED, AFTER SAMPLING, TO THE SETTLING BASIN. REGENERATION OF A CATION DEMINERALIZER WAS BEGUN AND, DUE TO A VALVING ERROR, THE ALU FROM THE REGENERATION WAS ROUTED TO THE NEUTRALIZING TANK BEING DISCHARGED. THE INLINE PH METER FAILED TO DETECT THE DROP IN PH BECAUSE THE CABLE BETWEEN THE PH PROBE AND THE METER BECAME GAGGED DUE TO MOISTURE LEAKAGE. THE VALVING ERROR WAS CORRECTED. THE SETTLING BASIN WAS ISOLATED AND NEUTRALIZED. THE PH METER WAS REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + FAILURE, OPERATOR ERROR + WASTE DISPOSAL + SAMPLING + FAILURE, INSTRUMENT + MONITOR + WATER QUALITY + PEACH BOTTOM 2 (BWR) + PEACH BOTTOM 3 (BWR)

110222
PH OF SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
2 PWS, LTR W/ENV. APT. 50-277/270-70-36 TO NRC OFFICE OF NUCLEAR REACTION REGULATION, DEPT. 24, 1970, DUCRETS 50-277/270, TYPE--BWR, NRC--G.E., AE--BECHTEL

CAUSE - ACID USED FOR CLEANING. A GRAB SAMPLE FROM THE SEWAGE PLANT EFFLUENT MEASURED PH OF 5.0. TECH SPEC RANGE IS 8.0 TO 9.0. A COMMERCIAL CLEANING SOLUTION CONTAINING 30% HYDROCHLORIC ACID WAS USED IN THE WASH ROOM TO REMOVE STAINS. THIS WAS FLUSHED TO THE SEWAGE PLANT AND REDUCED THE PH OF THE WHOLE SYSTEM. THE SEWAGE PLANT WAS NEUTRALIZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + SAMPLING + FAILURE, MAINTENANCE ERROR + WATER QUALITY + PEACH BOTTOM 2 (BWR) + PEACH BOTTOM 3 (BWR) + WASTE, SEWAGE

110223
TOTAL SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

110422 PHILADELPHIA
 4 PUS, LIA MEMO. RPT. SO-277/270-70-27 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, SEPT. 27, 1970, DUCKETS
 SO-277/270, TYPE--BWR, RW--WGL, AE--DECNTEL

CASE - HIGH INLET FLOW TO TREATMENT PLANT. THE DAILY TONNAGE MEASUREMENT OF THE SEWAGE PLANT
 EFFLUENT WAS HIGH AND A GRAVIMETRIC ANALYSIS FOR TOTAL SUSPENDED SOLIDS WAS RUN. THE NET
 SUSPENDED SOLIDS WAS 12% PM GREATER THAN THE RIVER SAMPLE. AN ADDITIONAL SUMP PUMP HAS BEEN
 USED TO REMOVE WATER FROM THE SEWAGE PLANT BASEMENT WHICH HAD FLOWED DURING HEAVY RAINS. THIS
 PUMP FLOW CARRIED SOLIDS OVER FROM THE AERATION TANK. THE PUMPOUT WAS COMPLETED BY THE TIME THE
 ANALYSIS WAS FINISHED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EFFLUENT + WATER QUALITY + PEACH BOTTOM 2 (BWR) + WEATHER, SEVERE + PEACH BOTTOM 3 (BWR) + WASTE, SEWAGE +
 FAILURE, INHERENT

110740
 SETTLING BASIN EFFLUENT PH EXCEEDS LIMITS AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 4 PUS, LIA MEMO. RPT. SO-277/270-70-30 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, OCT. 2, 1970, DUCKETS SO-
 277/270, TYPE--BWR, RW--WGL, AE--DECNTEL

CASE - UNKNOWN. A DAILY ROUTINE WRAB SAMPLE FROM THE SETTLING BASIN EFFLUENT MEASURED A PH OF
 10.5. THE 1:1 OF INPUTS TO THE SETTLING BASIN WERE CHECKED AND FOUND TO BE WITHIN LIMITS. THE
 DEVIATION MAY HAVE BEEN CAUSED BY A MECHANICAL FAILURE OF THE SODA ASH FEEDER A FEW HOURS
 EARLIER. THIS FAILURE WAS REPAIRED BEFORE THE DEVIATION WAS DISCOVERED. THE SETTLING BASIN WAS
 ISOLATED AND NEUTRALIZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EFFLUENT + WASTE DISPOSAL + SAMPLING + WASTE DISPOSAL, LIQUID + TEST, SYSTEM OPERABILITY + WATER QUALITY +
 PEACH BOTTOM 2 (BWR) + PEACH BOTTOM 3 (BWR) + FAILURE, INHERENT

110747
 PH FOR SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 4 PUS, LIA MEMO. RPT. SO-277/270-70-35 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, OCT. 8, 1970, DUCKETS SO-
 277/270, TYPE--BWR, RW--WGL, AE--DECNTEL

CASE - SODA ASH SOLUTION VIA TANK OVERFLOWED. THE DAILY WRAB SAMPLE FROM THE SETTLING BASIN
 EFFLUENT MEASURED A PH OF 9.35. THE SODA ASH SOLUTION VIA TANK OVERFLOWED TO THE RAW WATER SUMP
 WHEN THE SUCTION LINE OF THE SOLUTION PUMP PLUNGED. THE UNNEUTRALIZED SUMP WAS AUTOMATICALLY
 DISCHARGED TO THE SETTLING BASIN BECAUSE THE RAW WATER SUMP PUMP DISCHARGE PH METER RANGE SWITCH
 WAS SET ON AN IMPROPER RANGE AND WOULD NOT TRIP THE PUMP. THE SETTLING BASIN WAS ISOLATED AND
 NEUTRALIZED. THE SUCTION LINE WAS CLEANED. THE PH METER WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EFFLUENT + FAILURE, EQUIPMENT + WASTE DISPOSAL + INSTRUMENT CALIBRATION + WASTE DISPOSAL, LIQUID + MONITOR +
 STORAGE CONTAINER + WATER QUALITY + FLOW BLOCKAGE + PEACH BOTTOM 2 (BWR) + ADJUSTIVE + PEACH BOTTOM 3 (BWR) +
 PIPES AND PIPE FITTINGS

110748
 PH FOR SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 4 PUS, LIA MEMO. RPT. SO-277/270-70-40 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, OCT. 8, 1970, DUCKETS SO-
 277/270, TYPE--BWR, RW--WGL, AE--DECNTEL

CASE - PH METER SET ON IMPROPER RANGE. THE DAILY WRAB SAMPLE FROM THE SETTLING BASIN EFFLUENT
 MEASURED A PH OF 11.00. DURING THE DISCHARGE TO THE SETTLING BASIN OF NEUTRALIZING TANK B, WHICH
 CONTAINED HIGH PH WATER, OVERFLOWED TANK B TO TANK A. THE INLINE PH METER ON THE TANK DISCHARGE
 SYSTEM FAILED TO STOP THE DISCHARGE BECAUSE ITS RANGE SWITCH WAS SET ON AN IMPROPER RANGE. THE
 SETTLING BASIN WAS ISOLATED AND NEUTRALIZED. THE RANGE OF THE INLINE PH METER WAS PERMANENTLY
 SET TO THE PROPER SCALE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EFFLUENT + FAILURE, OPERATION ERROR + WASTE DISPOSAL + SAMPLING + INSTRUMENT CALIBRATION + WASTE DISPOSAL,
 LIQUID + MONITOR + TEST, SYSTEM OPERABILITY + WATER QUALITY + PEACH BOTTOM 2 (BWR) + PEACH BOTTOM 3 (BWR)

110749
 SUSPENDED SOLIDS IN SETTLING BASIN EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 4 PUS, LIA MEMO. RPT. SO-277/270-70-41 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, OCT. 20, 1970, DUCKETS SO-
 277/270, TYPE--BWR, RW--WGL, AE--DECNTEL

119174 NEGATIVE

CAUSE - HEAVY RAINS. DAILY TURBIDITY MEASUREMENT OF THE SETTLING BASIN EFFLUENT WAS HIGH AND A GRAVIMETRIC ANALYSIS FOR TOTAL SUSPENDED SOLIDS INDICATED 128 PPM, WHICH WAS 90 PPM HIGHER THAN THE RIVER SAMPLE. DUE TO HIGH SUSPENDED SOLIDS OF 72 PPM IN THE RIVER FROM HEAVY RAINS, HIGHER THAN NORMAL DOWNGOING RATES HAD TO BE ESTABLISHED ON THE RAW WATER CLARIFIER IN THE WATER PLANT. THIS CAUSED SOLIDS TO CARRY OVER INTO THE EFFLUENT. THE SETTLING BASIN WAS ISOLATED. SOLIDS WERE ALLOWED TO SETTLE AND WERE PUMPED OUT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 108 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EFFLUENT + SURFACE WATER, SUSPENDED MATERIAL + WATER QUALITY + PEACH BOTTOM 2 (DNR) + WEATHER, SEVERE + PEACH BOTTOM 3 (DNR) + FAILURE, IMMINENT

119300

PH OF SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR W/ENCL. RPT 50-277/278-76-42 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, OCT. 28, 1976, DOKETS 50-277/278, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - ACID SOLUTION OF UNKNOWN ORIGIN. THE DAILY GRAB SAMPLE FROM THE SEWAGE PLANT EFFLUENT MEASURED A PH OF 5.5. ACIDIC SOLUTION OF UNKNOWN ORIGIN REDUCED THE PH. THE SEWAGE PLANT WAS ISOLATED, NEUTRALIZED, AND THEN RETURNED TO NORMAL OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 108 CENTS/PAGE -- MINIMUM CHARGE \$2.00

SAMPLING + WATER QUALITY + PEACH BOTTOM 2 (DNR) + PEACH BOTTOM 3 (DNR) + WASTE, SEWAGE + FAILURE, IMMINENT

120230

IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT LEVEL AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR W/ENCL. RPT TO NRC OFFICE OF I & E, REGION I, NOV. 17, 1976, DOKETS 50-277/278, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - FREQUENT BUT DIFFERENT EQUIPMENT FAILURES. THE IODINE AND PARTICULATE AVERAGE RELEASE RATE FOR THE THIRD QUARTER OF 1976 WAS DETERMINED TO BE 31.4% OF TECH SPEC LIMIT. THIS WAS CAUSED BY 1-131 RELEASES. RELEASES WERE FROM UNITS 2 AND 3 REACTOR AND TURBINE BUILDING VENTILATION SYSTEM EXHAUST STACKS. NO SINGLE CAUSE MAY BE CITED. MOST RELEASES WERE CAUSED BY FREQUENT BUT DIFFERENT EQUIPMENT FAILURES THAT OCCURRED IN THE REACTOR WATER CLEANUP SYSTEMS. REPAIRS WERE INITIATED AS SOON AS THE CAUSE WAS DETERMINED. MODIFICATIONS ARE IN PROGRESS THAT SHOULD REDUCE RELEASES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 108 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PEACH BOTTOM 2 (DNR) + PEACH BOTTOM 3 (DNR) + RELEASE RATE + AIRBORNE RELEASE + IODINE + VENTILATION SYSTEM + BUILDING + FAILURE, EQUIPMENT + COOLANT PURIFICATION SYSTEM + FAILURE, IMMINENT + LEAK

120490

IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR W/ENCL. RPT TO NRC OFFICE OF I & E, REGION I, DEC. 9, 1976, DOKET 50-277/278, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - LEAKS IN REACTOR WATER CLEANUP SYSTEM. PLANT IODINE AND PARTICULATE RELEASE RATE EXCEEDED 48 OF TECH SPEC LIMIT AVERAGED OVER THE FOURTH QUARTER. SOURCES WERE LEAKS IN THE REACTOR WATER CLEANUP SYSTEMS, IN UNIT 2 INSTANTANEOUS NITROGEN COMPRESSOR, AND DURING NORMAL DEPRESSURIZATION ASSOCIATED WITH A REACTOR SHUTDOWN. WHEN LEAKS WERE LOCATED, REPAIRS WERE INITIATED IMMEDIATELY. ALSO, EQUIPMENT MODIFICATIONS ARE BEING MADE WHICH WILL REDUCE LEAKAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20543 108 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PEACH BOTTOM 2 (DNR) + PEACH BOTTOM 3 (DNR) + RELEASE RATE + AIRBORNE RELEASE + EQUIPMENT + COOLANT PURIFICATION SYSTEM + IODINE + LEAK

120734

ALUM USE EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

2 PGS, LTR W/ENCL. RPT. 50-277/278-76-45 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, DEC. 27, 1976, DOKETS 50-277/278, TYPE--DNR, NRC--G.E., AE--BECHTEL

CAUSE - HIGH DEMINERALIZER WATER CONSUMPTION. FOR THE FIRST 6 MONTHS IN 1976, THE USE OF ALUM EXCEEDED 2 TIMES THE ESTIMATED YEARLY USAGE. THE LARGE USAGE WAS DUE TO HIGH DEMINERALIZER WATER CONSUMPTION MAINLY ATTRIBUTABLE TO HIGH MAKEUP TO THE AUXILIARY BUILDERS AND INCREASED MAKEUP TO THE MAIN UNITS DUE TO A TEMPORARY REDUCTION IN RECLAIMABLE LIQUID AND WASTE. RAD-WASTE EQUIPMENT FAILURES HAVE BEEN REPAIRED. TECH SPEC LIMIT ON USAGE HAS BEEN INCREASED.

140724 PHILADELPHIA
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

PEACH BOTTOM 2 (BOR) + PEACH BOTTOM 3 (BOR) + WATER TREATMENT + SYSTEM CAPACITY + ENVIRONMENT + FAILURE,
 EQUIPMENT

163447
 AMM TORUS COOLING RETURN VALVE LEAKS EXCESSIVELY AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 C PWS, LTR N/AJ 50-270-75-77 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 2, 1970, DCKET 50-270, TYPE--
 DMR, MFG--GEC, AE--DECMTEL

CAUSE - TO BE DETERMINED. IN PREPARATION FOR THE LPRM OUTAGE, A PRELIMINARY LOCAL LEAK TEST
 IDENTIFIED THROUUGH LEAKAGE OF THE TORUS COOLING RETURN VALVE. THE UNIT WAS OPERATING AT 50%
 POWER. THE CAUSE WILL BE DETERMINED AND THE VALVE REPAIRED DURING THE OUTAGE. THE VALVE IS
 SUBJECT TO THROUING OPERATION DURING TORUS COOLING OPERATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, SYSTEM OPERABILITY + SHUTDOWN COOLING SYSTEM + LEAK RATE + COOLING + PEACH BOTTOM
 3 (BOR) + VALVES + TORUS

163448
 WYTHELL RADIATION MONITOR FOUND IMPERFECT AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 C PWS, LTR N/AJ 50-270-75-78 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 5, 1970, DCKET 50-270, TYPE--
 DMR, MFG--GEC, AE--DECMTEL

CAUSE - PLUGGED SAMPLE LINE. DURING A PLANT INSPECTION WITH THE REACTOR AT 50% POWER, IT WAS
 OBSERVED THAT NO SAMPLE FLOW WAS PASSING THROUGH THE WYTHELL RADIATION MONITORING SYSTEM. FLOW
 OBSTRUCTION WAS OCCURRING IN THE IN STREAM SAMPLE LINE 11 OF 7 AVAILABLE. THE SAMPLE POINT WAS
 CHANGED TO ANOTHER LINE. CORRECTIVE ACTION AWAITS AN APPROPRIATE OPPORTUNITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

CONTAINMENT + FAILURE, EQUIPMENT + SAMPLING + FLOW OBSTRUCTION + MONITORING SYSTEM, RADIATION + TUBING + PEACH
 BOTTOM 3 (BOR) + FAILURE, INTERNAL + RADIATION MONITOR

163449
 LEAK RATE OF TORUS SPRAY VALVE AND TORUS COOLING VALVE EXCESSIVE AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 C PWS, LTR N/AJ 50-270-75-79 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 6, 1970, DCKET 50-270, TYPE--
 DMR, MFG--GEC, AE--DECMTEL

CAUSE - TO BE DETERMINED. IN PREPARATION FOR LPRM OUTAGE, PRELIMINARY LOCAL LEAK TESTS IDENTIFIED
 THROUING LEAKAGE ON THE AMM TORUS SPRAY VALVE AND TORUS COOLING RETURN VALVE WHILE THE REACTOR WAS
 AT 50% POWER. THESE VALVES ARE SUBJECT TO THROUING OPERATION DURING TORUS COOLING M. E. THE
 CAUSE WILL BE DETERMINED AND THE VALVES REPAIRED DURING THE UPCOMING OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + SPRAY + TEST, SYSTEM OPERABILITY + SHUTDOWN COOLING SYSTEM + LEAK RATE + COOLING + PEACH
 BOTTOM 3 (BOR) + VALVES + TORUS

110301
 DC FEED BREAKER TO DIESEL GENERATOR FOUND OPEN AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 C PWS, LTR N/AJ 50-277-2-70-2/24 TO U.S. NRC, JAN. 20, 1970, DCKET 50-277, TYPE--DMR, MFG--GEC, AE--DECMTEL

CAUSE - OPERATOR ERROR. DURING AN INVESTIGATION OF A DIESEL TROUBLE ALARM WHILE OPERATING AT 80%
 POWER, THE DC FEED BREAKER TO DIESEL GENERATOR E3 WAS DISCOVERED TO BE OPEN PREVENTING THE DIESEL
 FROM STARTING. IT HAD BEEN OPENED AT 3 AM WHILE TRYING TO ISOLATE A DC SYSTEM WOUND. THE
 BREAKER WAS RECLOSING AND THE SYSTEM SATISFACTORILY TESTED FOR OPERABILITY. THE IMPORTANCE OF
 PROPER RE-ESTABLISHMENT OF CIRCUITS DURING WOUND INVESTIGATION WAS STRONGLY EMPHASIZED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

EMERGENCY POWER, ELECTRIC + FAILURE, OPERATOR ERROR + PEACH BOTTOM 2 (BOR) + BREAKER + ENGINES, INTERNAL
 COMBUSTION + GENERATOR, DIESEL

110302
 THREE REACTOR VESSEL STABILIZERS SLIGHTLY DEFORMED AT PEACH BOTTOM 3

110340 "CONTINUED"
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, RG 50-270/3-70-4/17 TO US, NRC, JAN. 21, 1970, DUCRET 50-270, TYPE--DNR, MFU--UOL, AE--DECHTEL

CASE - BINDING DURING HEAT UP. DURING A SPECIAL INSPECTION WHILE THE UNIT WAS IN SHUTDOWN, SLIGHT DEFORMATION OF 3 REACTOR VESSEL STABILIZERS WAS NOTED. OPERATIONAL DATA WAS SENT TO NSSS SUPPLIER FOR FATIGUE ANALYSIS. RESULTS INDICATE THAT THE STABILIZERS WERE ACCEPTABLE FOR CONTINUED USE AT LEAST UNTIL THE NEXT REFUEL OUTAGE. DEFORMATION WAS DUE TO BINDING DURING HEAT UP AND COOL DOWN OF THE SYSTEM. A SIMILAR OCCURRENCE WAS OBSERVED ON UNIT 2.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

STRESS + THERMAL MECHANICAL EFFECT + STRESS ANALYSIS + DEFORMATION + SHAPE ABSORBER + FAILURE, DESIGN ERROR + SUPPORT STRUCTURE + THERMAL TRANSIENT + PEACH BOTTOM 3 (DNR) + PRESSURE VESSELS

110340
 REACTOR PUMP HYDRAULIC SHIMMER IMPERABLE AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, RG 50-270/3-70-7/17 TO US, NRC, JAN. 20, 1970, DUCRET 50-270, TYPE--DNR, MFU--UOL, AE--DECHTEL

CASE - LEAKING FITTINGS AND SEALS. DURING AN INSPECTION WITH THE REACTOR SHUT DOWN, A HYDRAULIC SHIMMER ON REACTOR RELIANT PUMP A WAS FOUND TO BE IMPERABLE BECAUSE ITS RESERVOIR WAS EMPTY. THE UNIMMEL 3 1/4-INCH SHIMMER (SS-5-2) HAD LEAKING FITTINGS, O-RINGS, AND WASKETS. ALL DEFECTIVE PARTS WILL BE REPLACED IN KIND. THE SHIMMER WILL BE CHECKED IN A TEST STAND PRIOR TO REINSTALLATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + OSMOCK ABSORBER + SEAL + SUPPORT STRUCTURE + MAIN COOLING SYSTEM + SURVEILLANCE PROGRAM + LEAK + PEACH BOTTOM 3 (DNR) + FAILURE, INHERENT + PUMPS

110341
 HYDRAULIC SHIMMERS FOUND IMPERABLE AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, RG 50-270/3-70-8/17 TO US, NRC, JAN. 20, 1970, DUCRET 50-270, TYPE--DNR, MFU--UOL, AE--DECHTEL

CASE - LEAKS IN FITTINGS AND SEALS. DURING AN INSPECTION WHILE THE UNIT WAS SHUT DOWN, AN HYDRAULIC SHIMMER ON THE MAIN STEAM LINE WAS FOUND TO BE IMPERABLE BECAUSE ITS RESERVOIR WAS EMPTY. THE UNIMMEL 3 1/4-INCH SHIMMER (SS-5-2) HAD LEAKING FITTINGS, O-RINGS, AND WASKETS. ALL DEFECTIVE PARTS WILL BE REPLACED IN KIND. THE SHIMMER WILL BE CHECKED IN A TEST STAND PRIOR TO REINSTALLATION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + OSMOCK ABSORBER + SEAL + SUPPORT STRUCTURE + SURVEILLANCE PROGRAM + LEAK + PEACH BOTTOM 3 (DNR) + FAILURE, INHERENT + PIPES AND PIPE FITTINGS

110342
 THREE HYDRAULIC SHIMMERS FOUND IMPERABLE AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, RG 50-270/3-70-5/17 TO US, NRC, JAN. 20, 1970, DUCRET 50-270, TYPE--DNR, MFU--UOL, AE--DECHTEL

CASE - LEAKING FITTINGS AND SEALS. DURING AN INSPECTION WHILE THE UNIT WAS SHUT DOWN, 3 HYDRAULIC SHIMMERS WERE FOUND TO BE IMPERABLE BECAUSE THEIR RESERVOIRS WERE EMPTY. THE UNIMMEL 2 1/2-INCH SHIMMERS HAD LEAKING FITTINGS, O-RINGS, AND WASKETS. ALL DEFECTIVE PARTS WILL BE REPLACED IN KIND. SHIMMERS WILL BE CHECKED IN A TEST STAND BEFORE BEING REINSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + OSMOCK ABSORBER + SEAL + SUPPORT STRUCTURE + SURVEILLANCE PROGRAM + LEAK + PEACH BOTTOM 3 (DNR) + FAILURE, INHERENT + PIPES AND PIPE FITTINGS

110344
 MSIV FAILS TO CLOSE AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, RG 50-270/3-70-1/16 TO US, NRC, JAN. 20, 1970, DUCRET 50-270, TYPE--DNR, MFU--UOL, AE--DECHTEL

CASE - OPERATOR PILOT ASSEMBLY DAMAGED. DURING A PLANT SHUTDOWN, AN OUTQUART MSIV FAILED TO CLOSE. THE VALVE OPERATOR PILOT ASSEMBLY WAS INSPECTED. ALLIED CONTAIN CO SUPPLIED VALVE, CAT. NO. 320A-30, SEAT SURFACE HAD BEEN DAMAGED BY PIPE THREAD SEALING MATERIAL. A VALVE REPAIR KIT WAS ORDERED AND WILL BE INSTALLED UPON RECEIPT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

110344 CONTINUED
CONTAINMENT ISOLATION + STEAM + LEAK + FAILURE, MAINTENANCE ERROR + MAIN COOLING SYSTEM + PEACH BOTTOM 3 (BWR) + SENSORS + OVERVIEW

110346
SET POINT DRIFT IN RADIATION MONITOR AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 PWR AC 50-270-3-70-2/3L TO USS. NRC, JAN. 20, 1970, UCARET 50-270, TYPE--BWR, MFU--GEC, AE--BECTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR SHUT DOWN, A MAIN STEAM LINE RADIATION MONITOR DID NOT TRIP AT THE DESIRED HIGH TRIP SET POINT. A SMALL SET POINT DRIFT ON THE LUMINISCENT SCALE WAS CORRECTED BY A MINOR READJUSTMENT. THE UC 194029007 RADIATION INDICATING UNIT WAS RETESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + INSTRUMENT, LUMINISCENT + SET POINT + PEACH BOTTOM 3 (BWR) + DRIFT + FAILURE, INSTRUMENT + RADIATION MONITOR

110382
LOW WITHDRAW PERMISSIVE LIGHT BLINKING DURING FUEL MOVEMENT AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 PWR AC 50-270-3-70-2/3L TO USS. NRC, JAN. 20, 1970, UCARET 50-270, TYPE--BWR, MFU--GEC, AE--BECTEL

CAUSE - LIMIT SWITCH OUT OF ADJUSTMENT. DURING FUEL MOVEMENT, THE REACTOR OPERATOR NOTED THE LOW WITHDRAW PERMISSIVE LIGHT BLINKING ON WHILE THE REFUEL CHARGE WAS OVER THE CURVE. THE UC LIMIT SWITCH MOVING CONTACT WAS CLEANED AND OPENING ON LUB SPOTS ON THE CAMMING SURFACE. THE SWITCH WAS ADJUSTED TO REMAIN OPEN OVER THE ENTIRE CAM SURFACE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FUEL HANDLING + INSTRUMENT, INTERLOCK + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + FAILURE, MAINTENANCE ERROR + PEACH BOTTOM 3 (BWR) + CENTRAL LOG DRIVES

110382
SET POINT DRIFT IN PRESSURE SWITCH AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 PWR AC 50-270-3-70-2/3L TO USS. NRC, JAN. 29, 1970, UCARET 50-270, TYPE--BWR, MFU--GEC, AE--BECTEL

CAUSE - CORROSION. DURING A TEST WHILE THE REACTOR WAS IN SHUTDOWN, AN ATROS RECALCULATION PUMP TRIP SWITCH DID NOT TRIP AT THE REQUIRED SET POINT. DURING PREVIOUS TESTING, MOISTURE WAS FOUND IN THIS STATIC-OPENING PRESSURE SWITCH, MODEL 44-440-1A11T. THIS DRIFT WAS APPARENTLY DUE TO CORROSION. THE SWITCH WAS RELEASED AND RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + CORROSION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + SET POINT + PEACH BOTTOM 3 (BWR) + DRIFT + SENSORS, PRESSURE

110392
TURBINE OXYGEN LEVEL EXCEEDS LIMIT AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
1 PWR AC 50-270-3-70-2/3L TO USS. NRC, MARCH 11, 1970, UCARET 50-270, TYPE--BWR, MFU--GEC, AE--BECTEL

CAUSE - NOT IDENTIFIED. DURING A TEST WITH THE REACTOR AT 83% POWER, THE OXYGEN TURBINE CONCENTRATION WAS 46 WHILE THE TURBINE CONCENTRATION WAS 30.6. A NITROGEN PURGE OF THE TURBINE WAS STARTED IMMEDIATELY. THE CONCENTRATION RETURNED TO NORMAL IN 4 MINUTES. NO SPECIFIC CAUSE COULD BE IDENTIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

OXYGEN + TEST, SYSTEM OPERABILITY + CONTAINMENT ATMOSPHERE + CONCENTRATION + PEACH BOTTOM 3 (BWR) + FAILURE, INSTRUMENT + TURBINE

110401
RECALCULATION PUMP DISCHARGE VALVE FAILS AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PA
1 PWR AC 50-270-3-70-2/3L TO NRC, MARCH 25, 1970, UCARET 50-270, TYPE--BWR, MFU--GEC, AE--BECTEL

CAUSE - VALVE MOTOR SHORT CIRCUIT. WHILE THE REACTOR WAS OPERATING AT 83% POWER, THE RECALCULATION PUMP DISCHARGE VALVE INDICATING LIGHTS WERE OBSERVED TO BE OUT. THE CONTROL POWER TRANSFORMER HAD FAILED BECAUSE OF A SECONDARY CIRCUIT WOUND INSIDE THE UNIT. THE REACTOR WAS

114000

SPOT LEAKS. THERE WAS A SHORT CIRCUIT OF THE SECONDARY WIRING IN THE VALVE MOTOR OPERATION DUE TO VIBRATION BEING TRANSMITTED THE WIRING INSULATION. THE INSULATION WAS REPAIRED AND THE WIRE REROUTED TO ELIMINATE BEANS. THE TRANSFORMER WAS REPLACED.

AVAILABILITY - ARC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2600

FAILURE, EQUIPMENT + MAIN COOLING SYSTEM + FLUID RECIRCULATION + REACTION SIMULUM + PEACH BUTTOM 3 (004) + FAILURE, INHERENT + BEAN + VALVES + TRANSFORMER

114000

UNDELL AIR LOCK LEAK RATE UNACCEPTABLE AT PEACH BUTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

A POC LER 50-270-3-70-4754 IL USG NRC, MARCH 23, 1970, DUCRET 50-270, TYPE--BOM, NFW--0000, AE--BECHTEL

CASE - PERMANENT SET IN WASSET FROM USAGE. LOCAL LEAK RATE TESTING WHILE OPERATION AT 996 POWER SMALL THAT THE UNDELL AIR LOCK INCH DOWN HAD UNACCEPTABLE LEAKAGE. LEAKAGE WAS APPARENTLY CAUSED BY A PERMANENT SET IN THE WASSET, 90 WASHMETER, SILICONE RUBBER WASSET DUE TO NORMAL USE RELATED TESTING. THE WASSET WAS REPLACED AND THE PACHING WASHMETER THE MANUAL DOWN OPERATION SPEEDS WERE INCREASED.

AVAILABILITY - ARC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2600

CONTAINMENT VENTILATION + TEST, LEAK RATE + CONTAINMENT AIR LOCK + TEST, SYSTEM OPERABILITY + SEAL + LEAK RATE + PEACH BUTTOM 3 (004) + EFFECT, AUC + FAILURE, INHERENT + BEAN + ELASTOMER

114000

RECIRCULATION PUMP VALVE FAILS TO CLOSE AT PEACH BUTTOM 3

PHILADELPHIA ELECTRIC CO., PA

A POC LER 50-270-3-70-3475 IL USG NRC, APRIL 17, 1970, DUCRET 50-270, TYPE--BOM, NFW--0000, AE--BECHTEL

CASE - CONTROL CIRCUIT WIRING SHORTED WHILE THE REACTOR WAS OPERATING AT 996 POWER, RECIRC. PUMP SO MU SET TRIPPED DUE TO AN ELECTRICAL MALFUNCTION. THE PUMP DISCHARGE VALVE FAILED TO CLOSE. THE PLANT WAS IMMEDIATELY SHUT DOWN FOR REPAIRS. THE LIMITING VALVE OPERATION MODEL SMO-S FAILED TO OPERATE THE VALVE BECAUSE A CONTROL CIRCUIT WIRING WERE SHORTED AT THE LRU IN THE VALVE LIMIT SWITCH TERMINAL. REPAIRS WERE MADE AND THE VALVE TESTED SATISFACTORILY.

AVAILABILITY - ARC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2600

FAILURE, EQUIPMENT + MAIN COOLING SYSTEM + FLUID RECIRCULATION + REACTION SIMULUM + CABLES AND CONNECTORS + PEACH BUTTOM 3 (004) + FAILURE, INHERENT + VALVE OPERATIONS + PUMPS + VALVES

114000

MPCI TURBINE TRIPS ON HIGH STEAM FLOW AT PEACH BUTTOM 3

PHILADELPHIA ELECTRIC CO., PA

A POC LER 50-270-3-70-3763 IL USG NRC, MAY 19, 1970, DUCRET 50-270, TYPE--BOM, NFW--0000, AE--BECHTEL

CASE - RAPID OPENING OF TURBINE VALVE. FOLLOWING A SCRAM VESSEL LEVEL AUTOMATICALLY INITIATED MPCI OPERATION. DURING START OPERATION, HIGH STEAM FLOW IN THE MPCI SUPPLY LINE TRIPPED. HIGH STEAM FLOW WAS CAUSED BY RAPID OPENING OF THE TURBINE STOP VALVE. THE VALVE WAS REPAIRED AND THE TURBINE SUCCESSFULLY OPERATED.

AVAILABILITY - ARC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2600

FAILURE, EQUIPMENT + RESPONSE TIME + TURBINE + PEACH BUTTOM 3 (004) + FAILURE, INHERENT + VALVES + MPCI

114000

LEAKA FLUOR IN RECIRC PUMP PIPING INSTRUMENT LINE AT PEACH BUTTOM 3

PHILADELPHIA ELECTRIC CO., PA

A POC LER 50-270-3-70-4043 IL USG NRC, MAY 21, 1970, DUCRET 50-270, TYPE--BOM, NFW--0000, AE--BECHTEL

CASE - PUMP VIBRATION. WITH THE UNIT SHUT DOWN, A DRY WELL INSPECTION REVEALED A LEAKA IN A 1-INCH INSTRUMENT LINE FROM RECIRC PUMP B DISCHARGE PIPING. THE LEAKA WAS IN THE HEAT AFFECTED LINE OF A WASSET BELT TO A HALF COUPLING IN THE 20-INCH RECIRC PIPING. IT WAS REWELDED. PUMP VIBRATION COULD HAVE BEEN THE CAUSE. THE CAUSE OF THE PUMP VIBRATION IS UNDER INVESTIGATION.

AVAILABILITY - ARC PUBLIC DOCUMENT NUMBER 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2600

FAILURE, PIPE + BELT + TEST, SYSTEM OPERABILITY + VIBRATION + MAIN COOLING SYSTEM + LEAKA + PEACH BUTTOM 3 (004) + LEAKA + PIPES AND PIPE FITTINGS

114000

114025 CONTINUED

MAIN STEAM LINE HIGH TEMPERATURE SWITCH FAILS TO TRIP AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pw, LER 50-270-3-70-40/3L TC U.S. NRC, JUNE 3, 1970, DUCRET 50-270, TYPE--300, MW--1000, AC--DEUTEL

CAUSE - DIRTY CONTACT ON CIRCUIT BOARD. JUMPING TESTS ON MAIN STEAM LINE HIGH TEMP. NATURE SWITCHES, WERE FAILED TO TRIP VIA THE LOCAL TRIP TEST PUSH-BUTTON. DIRTY CONTACTS WERE FOUND ON THE PUMP-FLASH MODEL LS2 FLOW-IN TYPE PRINTED CIRCUIT BOARD WHICH PREVENTED THE SWITCH FROM TRIPPING. THE CONTACTS WERE CLEANED AND THE SWITCH TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: SYSTEM - FAILURE, INSTRUMENT - PCARD - INSTRUMENT, SWITCH - TEST, SYSTEM OPERABILITY - MAIN COOLING SYSTEM - PROBES AND CONNECTIONS - PEACH BOTTOM 3 (ORNL) - FAILURE, INSTRUMENT - SENSORS, TEMPERATURE - ELECTRONIC FUNCTION UNITS

115040

RELIAC PUMP VALVE FAILS TO CLOSE AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pw, LER 50-270-3-70-30/3L TC U.S. NRC, JUNE 3, 1970, DUCRET 50-270, TYPE--300, MW--1000, AC--DEUTEL

CAUSE - BROKEN CONTROL WIRES. RELIAC NO. 20 TRIPPED DUE TO ELECTRICAL MALFUNCTION. JUMPING ATTEMPT TO CLOSE THE RELIAC PUMP DISCHARGE VALVE (LPEL SYSTEM VALVE). CONTROL PUMP WAS LOST. POWER REDUCTION WAS COMMENCED FROM ONE PUMP. THE LIMITING VALVE OPERATION MODELS 303-3 WAS FOUND TO HAVE SEVERAL BROKEN CONTROL WIRES AT TERMINAL CONNECTIONS. REPAIRS WERE MADE AND THE VALVE TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: EQUIPMENT - MAIN COOLING SYSTEM - REACTOR SMITHSON - PROBES AND CONNECTIONS - PEACH BOTTOM 3 (ORNL) - VALVE OPERATORS - VALVES - LPEL

114020

MPCI TURBINE EXHAUST SHAIN PUT VALVE FAILS TO OPEN AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pw, LER 50-270-3-70-30/3L TC U.S. NRC, JUNE 4, 1970, DUCRET 50-270, TYPE--300, MW--1000, AC--DEUTEL

CAUSE - BROKEN LEVEL SWITCH. WHILE OPERATING AT 30% POWER, A MPCI TURBINE EXHAUST SHAIN PUT HIGH LEVEL ALARM WAS RECEIVED INDICATING THAT THE SHAIN VALVE HAD NOT OPENED AUTOMATICALLY. IT WAS OPENED MANUALLY. THE MISC SWITCH IN THE LEVEL SWITCH HAD A SPILL CASING SEAM PREVENTING AUTO OPERATION. THE MISC SWITCH IN THE SUBSTANTIAL MODEL 303-3 LEVEL SWITCH WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: INSTRUMENT - INSTRUMENT, SWITCH - TURBINE - PEACH BOTTOM 3 (ORNL) - FAILURE, INSTRUMENT - SENSORS, LEVEL - MPCI

115004

PORTION OF SURVEILLANCE TEST NOT COMPLETED AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pw, LER 50-270-3-70-42/3L TC U.S. NRC, JUNE 4, 1970, DUCRET 50-270, TYPE--300, MW--1000, AC--DEUTEL

CAUSE - MISINTERPRETATION OF PROCEDURE. WHEN THE MPCI SUBSYSTEM BECAME INOPERABLE WHILE OPERATING AT 70% POWER, SURVEILLANCE TESTS WERE IMMEDIATELY SCHEDULED BY LPEL, AECU, AND AUCU. THE PORTION OF LPEL TEST PROVING INJECTION OPERABILITY WAS NOT COMPLETED DUE TO A MISINTERPRETATION OF TEST PROCEDURE. THE TEST WAS COMPLETED THE NEXT DAY WHEN THE ERROR WAS DISCOVERED. PROCEDURES WILL BE CLARIFIED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE: OPERATOR ERROR - PROCEDURES AND MANUALS - TESTING - TEST INTERVAL - PEACH BOTTOM 3 (ORNL) - COMMUNICATION - LPEL

115005

SET POINT SHIFT IN LOGIC TIMER AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pw, LER 50-270-3-70-30/3L TC U.S. NRC, JUNE 4, 1970, DUCRET 50-270, TYPE--300, MW--1000, AC--DEUTEL

CAUSE - INSTRUMENT DRIFT. DURING ADS LOGIC SYSTEM TESTING INQUIRY BECAUSE MPCI WAS INOPERABLE WITH THE REACTOR AT 70% POWER, LOGIC TIMER WAS FOUND TO BE SET AT 1.2000 SECONDS. THIS EXCEEDED THE 1.00 SECONDS UPPER LIMIT. AN UNDERLY PLAY SMUTUUM WAS COMPLETED. THE DE MODEL 303-3 D-410000 SERIES A TIME DELAY RELAY WAS RESET AND TESTED. LOGIC RECOVERY WAS CONTAINED AND LOGIC RECOVERED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20543 100 CENTS/PAGE -- MINIMUM

115005 OCCURRENCE
CHANGE 02.001

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + TEST, SYSTEM OPERABILITY + SET POINT + EMERGENCY COOLING
SYSTEM + PEACH BOTTOM 3 (BWR) + PURIFT + FAILURE, INHERENT + DELAYS

115006
SET POINT SHIFT IN APRM AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
A POC, LER 50-270-3-70-41/31 TC U.S. NRC, JUNE 7, 1970, DUCRET 50-270, TYPE--BWR, MFW--G.E., AE--BECHTEL

CAUSE - DEFECTIVE ZERON DIODE. DURING TESTING WITH THE REACTOR AT 70% POWER, CHANNEL B APRM WAS
PLUNGED TO TRIP AT FLUX LEVELS HIGHER THAN LIMITS. THE SET POINT SHIFT WAS CAUSED BY A DEFECTIVE
1A73A ZERON DIODE IN THE FLUX CONTROL REFERENCE UNIT. THE DIODE WAS REPLACED AND THE CHANNEL
RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

REACTOR PROTECTION SYSTEM + SOLID STATE DEVICE + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT,
SWITCH + TEST, SYSTEM OPERABILITY + INSTRUMENT, POWER RANGE + SET POINT + PEACH BOTTOM 3 (BWR) + PURIFT +
FAILURE, INHERENT

115047
CONTROL ROD FAILS TO FULLY INSERT AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
A POC, LER 50-270-3-70-45/31 TC U.S. NRC, JUNE 8, 1970, DUCRET 50-270, TYPE--BWR, MFW--G.E., AE--BECHTEL

CAUSE - NO SPECIFIC CAUSE IDENTIFIED. DURING A CONTROLLED SHUT DOWN, THE REACTOR WAS MANUALLY
SCRAMMED AT 30% POWER. CONTROL ROD 10-25 FAILED TO FULLY INSERT ON AUTO SCRAM SIGNAL.
INDIVIDUAL SCRAM SIGNAL FULLY INSERTED IT. NO SPECIFIC CAUSE WAS IDENTIFIED. THE ROD WAS
SUCCESSFULLY FRICTION TESTED AND CONSIDERED OPERABLE. ALL OTHER RODS INSERTED FULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

FAILURE, EQUIPMENT + SCRAM, REAL + PEACH BOTTOM 3 (BWR) + CONTROL RODS

115048
TORUS WATER LEVEL DROPS SLIGHTLY BELOW LIMIT AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
A POC, LER 50-270-3-70-47/31 TC U.S. NRC, JUNE 17, 1970, DUCRET 50-270, TYPE--BWR, MFW--G.E., AE--BECHTEL

CAUSE - OPERATOR ERROR. WHILE OPERATING THE REACTOR AT 80% POWER WITH THE TORUS WATER CLEANUP
PLANT ON, THE OPERATOR INADVERTENTLY ALLOWED THE TORUS WATER LEVEL TO DROP 0.3 FEET BELOW THE
ALLOWABLE LIMIT. UPON DISCOVERY, THE LEVEL WAS RESTORED TO ABOVE THE LOW LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

FAILURE, OPERATOR ERROR + SYSTEM CAPACITY + PEACH BOTTOM 3 (BWR) + TORUS

115495
REFUEL FLOW RADIATION MONITOR FAILS AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
A POC, LER 50-270-3-70-49/31 TC U.S. NRC, JUNE 25, 1970, DUCRET 50-270, TYPE--BWR, MFW--G.E., AE--BECHTEL

CAUSE - DEFECTIVE MONITOR. WHILE OPERATING AT 100% POWER, A REFUEL FLOW EXHAUST VENT RADIATION
MONITOR EXHIBITED UPSCALE AND UNSCALE DEFLECTIONS CAUSING ALARMS. THE GE NO. 1490-002612
RADIATION MONITOR WAS DEFECTIVE. IT WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

CONTINUED + VENTILATION SYSTEM + FAILURE, INSTRUMENT + MONITORING SYSTEM, RADIATION + PEACH BOTTOM 3 (BWR) +
FAILURE, INHERENT + RADIATION MONITORS

115063
APRM ROD BLOCK COULD NOT BE OBTAINED AT PEACH BOTTOM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
A POC, LER 50-270-3-70-50/31 TC U.S. NRC, JULY 16, 1970, DUCRET 50-270, TYPE--BWR, MFW--G.E., AE--BECHTEL

CAUSE - DEFECTIVE RELAY. DURING TESTING WITH THE REACTOR AT 75% POWER, A APRM ROD BLOCK COULD NOT
BE OBTAINED FROM SIMULATED HIGH FLUX CONDITION DUE TO A DEFECTIVE RELAY. THE GE MODEL 35AT00001
RELAY WAS REPLACED AND THE APRM TESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM

115002 CONTINUED
CHARGE \$2.00

REACTION PROTECTION SYSTEM • FAILURE, INSTRUMENT • TEST, SYSTEM OPERABILITY • INSTRUMENT, PUMP ASSEMBLY • PEACH BUTTUM 3 (SRR) • RELAYS

110517

MAIN STEAM RELIEF VALVE FAILS OPEN AT PEACH BUTTUM 3
PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PW, LER 50-270-3-70-50/17 TC U.S. NRC, AUG. 3, 1970, DUCRET 50-270, TYPE--DRA, RFU--UCL, AE--DECHTEL

CAUSE - PILOT VALVE SEAT LEAKAGE. DURING LOW POWER OPERATION, MAIN STEAM RELIEF VALVE 710 FAILED OPEN. THE PLANT WAS SHUT DOWN AND THE RELIEF VALVE REPLACED WITH A NEWER VALVE. THE TARGET NUCR COMP. PILOT OPERATED SAFETY/RELIEF VALVE MODEL 070 FAILED OPEN DUE TO PILOT VALVE SEAT LEAKAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • STEAM • PRESSURE RELIEF • SHUTDOWN • MAIN COOLING SYSTEM • PRESSURE TRANSIENT • REACTION SHUTDOWN • PEACH BUTTUM 3 (SRR) • VALVES

110248

SHOCK ABSORBER FOUND WITH EMPTY RESERVOIR AT PEACH BUTTUM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PW, LER 50-270-3-70-50/17 TC U.S. NRC, AUG. 9, 1970, DUCRET 50-270, TYPE--DRA, RFU--UCL, AE--DECHTEL

CAUSE - DEFECTIVE ADJUSTING SCREW SEALS. DURING AN INSPECTION WHILE THE REACTOR WAS SHUT DOWN, A HYDRAULIC SHOCK SUPPRESSOR ON THE CONTROL ROD DRIVE RETURN LINE WAS FOUND WITH AN EMPTY RESERVOIR. THE ORIFICE MODEL AM 1423 SUPPRESSOR HAD DEFECTIVE ADJUSTING SCREW SEALS. THE SEALS WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • SHOCK ABSORBER • SEAL • SUPPORT STRUCTURE • SURVEILLANCE PROGRAM • LEAK • PEACH BUTTUM 3 (SRR) • FAILURE, INHERENT • PIPES AND PIPE FITTINGS

110249

HYDRAULIC SHOCK ABSORBER FOUND INOPERABLE AT PEACH BUTTUM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PW, LER 50-270-3-70-50/17 TC U.S. NRC, AUG. 9, 1970, DUCRET 50-270, TYPE--DRA, RFU--UCL, AE--DECHTEL

CAUSE - IMPROPER INSTALLATION. DURING AN INSPECTION OF THE HYDRAULIC SHOCK SUPPRESSORS, ONE UNIT ON REACTOR PUMP B WAS FOUND INOPERABLE DUE TO LOSS OF ATTACHMENT BETWEEN THE SUPPRESSOR AND THE PLUMP. THE ORIFICE MODEL AM 1372 SUPPRESSOR ATTACHMENT LOSS WAS DUE TO IMPROPER INSTALLATION OF A COTTER PIN. WHEN THE MISSING CLEVIS PIN AND COTTER PINS WERE FOUND, ONE PIN WAS NOT SPREADER PLATE ATTACHMENT WAS RE-ESTABLISHED AND SHOCKER OPERABILITY RESTORED. THE REACTOR WAS IN SHUTDOWN CONDITION AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FASTENER • SHOCK ABSORBER • FAILURE, INSTALLATION ERROR • MAIN COOLING SYSTEM • SURVEILLANCE PROGRAM • PEACH BUTTUM 3 (SRR) • PUMPS

110250

HYDRAULIC SHOCK SUPPRESSORS FOUND WITH EMPTY RESERVOIRS AT PEACH BUTTUM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PW, LER 50-270-3-70-50/17 TC U.S. NRC, AUG. 9, 1970, DUCRET 50-270, TYPE--DRA, RFU--UCL, AE--DECHTEL

CAUSE - DEFECTIVE SEALS AND O-RINGS. DURING AN INSPECTION OF HYDRAULIC SHOCK SUPPRESSORS, 3 UNITS ON THE MAIN STEAM RELIEF VALVE DISCHARGE LINES WERE FOUND WITH EMPTY RESERVOIRS. DEFECTIVE SEALS AND O-RINGS IN THE ORIFICE MODEL AM-1373 SUPPRESSORS WERE REPLACED. THE REACTOR WAS IN SHUTDOWN AT THIS TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20540 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • SHOCK ABSORBER • SEAL • SUPPORT STRUCTURE • SURVEILLANCE PROGRAM • LEAK • PEACH BUTTUM 3 (SRR) • FAILURE, INHERENT • PIPES AND PIPE FITTINGS

110251

MSIV CLOSURE TIME EXCEEDS LIMIT AT PEACH BUTTUM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 PW, LER 50-270-3-70-50/17 TC U.S. NRC, AUG. 9, 1970, DUCRET 50-270, TYPE--DRA, RFU--UCL, AE--DECHTEL

110251 CONTINUOUS

CAUSE - UNDETERMINED. DURING SURVEILLANCE TESTING WITH THE UNIT AT 25% POWER, MSIV BOB CLOSURE TIME WAS GREATER THAN TECH SPEC LIMIT. A DRYWELL ENTRY WAS MADE AND THE HYDRAULIC FLUID NEEDLE VALVE ON THE VALVE OPERATOR WAS ADJUSTED TO DECREASE CLOSURE TIME. THE SPECIFIC CAUSE WAS UNDETERMINED. THE VALVE WAS RETESTED WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$25.00

CONTAINMENT ISOLATION • PRESENCE TIME • TEST, SYSTEM OPERABILITY • MAIN COOLING SYSTEM • PEACH BOTTOM 3 (BANK) • VALVES

110222

ACIC SPEED CONTROL CIRCUIT FOUND IMPERFECT AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pwr, LER 50-270-3-70-03/SL TC U.S. NRC, AUG. 9, 1970, UGCR 50-270, TYPE--BWR, MW--U.S., AE--GECHTEL

CAUSE - DEFECTIVE RESISTOR. DURING TESTING WITH THE REACTOR AT 97% POWER, ACIC SPEED CONTROL CIRCUIT WAS FOUND TO BE IMPERFECT. THE VOLTAGE TAPPING ASSEMBLY RESISTOR IN THE SPEED CONTROL CIRCUIT OF THE TERRY TYPE GS-1 TURBINE WAS DEFECTIVE. THE DEFECTIVE POWER SUPPLY RESISTOR WAS REPLACED. ACIC WAS SATISFACTORILY TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$25.00

FAILURE, SUPPLEMENT • CONTROL SYSTEM • TEST, SYSTEM OPERABILITY • TURBINE • PEACH BOTTOM 3 (BANK) • FAILURE, INHERENT • NRCIL

110224

LPCL PUMP FLOWS LIMITED BY VALVING AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pwr, LER 50-270-3-70-03/SL TC U.S. NRC, SEPT. 10, 1970, UGCR 50-270, TYPE--BWR, MW--U.S., AE--GECHTEL

CAUSE - INCOMPLETE COMMUNICATION FOR CHANGE. INDIVIDUAL LPCL PUMP FLOWS ARE LIMITED BY VALVING TO 10000 GPM WHILE 10000 GPM IS REQUIRED. COMMUNICATION OF THE CHANGE IN LPCL PUMP FLOW CRITERIA FOR THE LPCL MODIFICATION WAS NOT INCLUDED IN THE INFORMATION EXCHANGE BETWEEN THE NSSS AND THE LICENSEE. MAPLUR WAS REDUCED BY 24 ASSURING SAFE POST LOCA CONDITIONS. CORRECT VALVE POSITIONING WILL BE ACCOMPLISHED AFTER A REVIEW BY NSSS AND THE LICENSEE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$25.00

MODIFICATION • FAILURE, DESIGN ERROR • HOT CHANNEL • PEACH BOTTOM 2 (BANK) • FLOW • COMMUNICATION • PLPCI

110720

DAYWELL RADIATION MONITORING SYSTEM FLOW STOPS AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pwr, LER 50-270-3-70-03/SL TC U.S. NRC, OCT. 1, 1970, UGCR 50-270, TYPE--BWR, MW--U.S., AE--GECHTEL

CAUSE - DIET PLUS PRESSURE CONTROL VALVE. WHILE OPERATING AT 100% POWER, THE OPERATOR OBSERVED THAT NO FLOW WAS PASSING THROUGH THE DAYWELL RADIATION MONITORING SYSTEM. A RESTRICTION WAS FOUND IN THE PRESSURE CONTROL VALVE. DIET WAS CLEANED FROM THE VALVE INTERNALS. THE SYSTEM WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$25.00

CONTAINMENT • FAILURE, EQUIPMENT • CONTROL • CAUD • FAILURE, MAINTENANCE ERROR • PRESSURE, INTERNAL • FLOW • DAYWELL • MONITORING SYSTEM, RADIATION • FLOW • PEACH BOTTOM 3 (BANK) • VALVES • RADIATION MONITORS

110724

TJMS ATMOSPHERE SAMPLING VALVE LEAKAGE EXCESSIVE AT PEACH BOTTOM 3

PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA

1 Pwr, LER 50-270-3-70-03/SL TC U.S. NRC, OCT. 1, 1970, UGCR 50-270, TYPE--BWR, MW--U.S., AE--GECHTEL

CAUSE - DIET ON SEAT. WHILE THE REACTOR WAS OPERATING AT 90% POWER, THE TJMS ATMOSPHERE SAMPLING THROUGH AUTOMATIC ISOLATION VALVE LEAKED THROUGH DURING LEAK. THE 1/2 INCH AUTOMATIC VALVE CO. 0700 TYPE SOLENOID VALVE HAD HIGH SEAT LEAKAGE. THE SEAT WAS CLEANED AND THE VALVE SATISFACTORILY TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$25.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • TEST, LEAK RATE • SAMPLING • CAUD • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • CONTAINMENT ATMOSPHERE • LEAK RATE • PEACH BOTTOM 3 (BANK) • SOLENOID • VALVES

110730

118730 CONTINUED

DAYWELL TC NITROGEN COMPRESSOR VALVE FAILS TO CLOSE AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-270-3-70-05/24 TC U.S. NRC, OCT. 1, 1970, DUCRET 50-270, TYPE--BWR, RFU--UCL, AE--DECHTEL

CAUSE - STICKING PLUNGER IN SOLENOID. DURING BLOCKING FOR MAINTENANCE WITH THE REACTOR AT 50% POWER, A DAYWELL TC NITROGEN COMPRESSOR ISOLATION VALVE FAILED TO RESPOND TO A MANUAL CLOSE SIGNAL. THE ASC SOLENOID VALVE CATALOG NO. 0300 COLO, WHICH OPERATES THE VALVE, DID NOT VENT ITS ACTUATING AIR PLUNGER WHEN DE-ENERGIZED DUE TO A STUCK PLUNGER. THE PLUNGER WAS FREED AND THE VALVE OPERATED PROPERLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT * FAILURE, EQUIPMENT * CONTAINMENT ISOLATION * NITROGEN * PNEUMATIC SYSTEM * PEACH BOTTOM 3 (BWR) * FAILURE, IMMERSED * SOLENOID * VALVES

118731

PERMISSIVE SET POINT FOR CORE SPRAY AND LPCI IMPROPER AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-270-3-70-06/17 TC U.S. NRC, OCT. 5, 1970, DUCRET 50-270, TYPE--BWR, RFU--UCL, AE--DECHTEL

CAUSE - INADEQUATE COMMUNICATION. WHILE OPERATING AT 60% POWER, THE TRIP LEVEL SETTING FOR PERMISSIVE FOR CORE SPRAY AND LPCI INJECTION VALVES AND RECIRCULATION PUMP DISCHARGE VALVE WERE FOUND TO BE SET AT THE IMPROPER LEVEL OF 325 PSIG FOR LPCI AND CORE SPRAY VALVE OPENING AND AT 225 PSIG FOR RECIRCULATION PUMP DISCHARGE VALVE OPENING. THERE HAD BEEN INADEQUATE COMMUNICATION BETWEEN NSSS AND LICENSEE. AN AGREEMENT WAS REQUESTED FOR MODIFICATION OF SETTINGS. MODIFIER WAS REDUCED TO 90% AS A CONSERVATIVE MEASURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CORE SPRAY * INSTRUMENT, SWITCH * EQUIPMENT DESIGN * FAILURE, ADMINISTRATIVE CONTROL * ENGINEERED SAFETY FEATURE * SET POINT * PEACH BOTTOM 3 (BWR) * COMMUNICATION * VALVES * LPCI

119001

SET POINT DRIFT IN CONDENSER LOW VACUUM SWITCH AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-270-70-07/11 TC U.S. NRC, OCT. 14, 1970, DUCRET 50-270, TYPE--BWR, RFU--UCL, AE--DECHTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 90% POWER, 1 OF THE 4 CONDENSER LOW VACUUM SWITCHES TRIPPED 0.20 INCH HG BELOW THE 23.0 INCH LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE MARKSABLE MODEL WIT-MOSS PRESSURE SWITCH WAS CALIBRATED, RETESTED, AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * CONDENSER * SET POINT * PEACH BOTTOM 3 (BWR) * DRIFT * FAILURE, IMMERSED * SENSORS, PRESSURE

119474

SET POINT DRIFT IN APRM HAD BLOCK SETTING AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-270-3-70-08/31 TC U.S. NRC, NOV. 2, 1970, DUCRET 50-270, TYPE--BWR, RFU--UCL, AE--DECHTEL

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 69% POWER, THE HAD BLOCK SETTING ON APRM 4 WAS FOUND TO BE 30% HIGHER THAN TECH SPEC REQUIREMENT. THE CAUSE WAS A SLIGHT DRIFT ON THE GE APRM ELECTRONIC TRIP UNIT. THE TRIP CARD WAS IMMEDIATELY RECALIBRATED AND TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * SET POINT * PEACH BOTTOM 3 (BWR) * DRIFT * FAILURE, IMMERSED * INSTRUMENTS, MISC.

119475

CORE FLOW BIAS TO THE A LOGIC APRM STRING HIGH AT PEACH BOTTOM 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 1 PG, LER 50-270-3-70-09/31 TC U.S. NRC, NOV. 2, 1970, DUCRET 50-270, TYPE--BWR, RFU--UCL, AE--DECHTEL

CAUSE - ABSENCE OF OFFSET SIGNAL. DURING 90% POWER, THE CORE FLOW BIAS INPUT TO THE A LOGIC APRM STRING WAS FOUND TO BE 4% HIGH. THE CAUSE WAS ABSENCE OF AN OFFSET SIGNAL IN THE GE FLOW BIAS PROPORTIONAL AMPLIFIER. A FLOW BIAS ALARM WAVE INDICATION OF THE FAILURE. WHEN THE AMPLIFIER WAS REMOVED FROM SERVICE, THE SIGNAL NORMALIZED. THE AMPLIFIER WAS RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * INSTRUMENT, POWER RANGE * PEACH BOTTOM

11975 - CONTINUOUS
 3 (CONT) - FAILURE, IMMERENT - ELECTRONIC FUNCTION UNITS

11976
 DEL POINT SHIFT IN MAIN STEAM LINE FLOW SWITCH AT PEACH BUTTUP 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 2 PAGES, LTR 50-270-3-70-70736 TO USDO, NAL, NOV. 24, 1970, URGENT 50-270, TYPE--BOM, MFU--WUCC, AE--DECHTEL

CAUSE - INSTRUMENT UNITS. DURING TESTING WITH THE REACTOR AT 736 POWER, MAIN STEAM LINE FLOW SWITCH OPERATING TRIP LEVEL WAS 2.44 HIGHER THAN THE TECH SPEC LIMIT. THE CAUSE WAS A SHIFT ON THE DARTON PRESS AND DIFFERENTIAL PRESSURE SWITCH. THE SWITCH WAS RECALIBRATED.

AVAILABILITY - NAL PUBLIC DOCUMENT GROUP, 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE 12000

REACTOR PROTECTION SYSTEM - INSTRUMENT CALIBRATION - FAILURE, INSTRUMENT - INSTRUMENT, SWITCH - TEST, SYSTEM OPERABILITY - MAIN COOLING SYSTEM - DEL POINT - PEACH BUTTUP 3 (CONT) - CAUSE - FAILURE, IMMERENT - SENSORS, FLOW

11978
 UNTRUCK FLOW MAIN ISOLATION VALVE FAILS TO CLOSE AT PEACH BUTTUP 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 2 PAGES, LTR 50-270-3-70-72761 TO USDO, NAL, NOV. 24, 1970, URGENT 50-270, TYPE--BOM, MFU--WUCC, AE--DECHTEL

CAUSE - SOLENOID VALVE FAILURE. DURING SURVEILLANCE TESTING WITH THE REACTOR AT 906 POWER, THE UNTRUCK FLOW MAIN ISOLATION VALVE FAILED TO CLOSE. THE ASU SOLENOID VALVE, TYPE TESUUGG800, ASU VAL HAD FAILED. THE SOLENOID WAS REPLACED AND THE ISOLATION VALVE STUCKED SATISFACTORILY.

AVAILABILITY - NAL PUBLIC DOCUMENT GROUP, 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE 12000

PEACH BUTTUP 3 (CONT) - ANALYSIS - CONTAINMENT ISOLATION - CONTAINMENT - TEST, SYSTEM OPERABILITY - FAILURE, EQUIPMENT - SOLENOID

11979
 SODIUM PENTABORATE CONCENTRATION BELOW LIMIT AT PEACH BUTTUP 3
 PHILADELPHIA ELECTRIC CO., PHILADELPHIA, PA
 2 PAGES, LTR 50-270-3-70-72761 TO USDO, NAL, NOV. 24, 1970, URGENT 50-270, TYPE--BOM, MFU--WUCC, AE--DECHTEL

CAUSE - DILUTION DUE TO NORMAL MAKEUP. WHILE OPERATING AT 906 POWER, SURVEILLANCE TEST ANALYSIS OF THE WEIGHT PERCENTAGE OF SODIUM PENTABORATE IN SOLUTION INDICATED 12.46. THE MINIMUM CONCENTRATION LIMIT WAS 12.056 FOR THE VOLUME OF SOLUTION PRESENT. DILUTION WAS DUE TO NORMAL MAKEUP FOR SYSTEM LEAKAGE, WATER EVAPORATION, AND TEST SAMPLE USAGE. THE CONCENTRATION WAS RESTORED TO TECH SPEC LIMIT WITHIN 15 MINUTES.

AVAILABILITY - NAL PUBLIC DOCUMENT GROUP, 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE 12000

PEACH BUTTUP 3 (CONT) - CONCENTRATION - OPERATING, SOLUBLE - SHUTOFF SYSTEM, SECONDARY - TEST, SYSTEM OPERABILITY - FAILURE, ADMINISTRATIVE CONTROL - SAMPLING - CHEMICAL ANALYSIS

11980
 SALT SERVICE WATER PUMP FAILS AT PILGRIM
 DUSTON ELECTRIC CO., DUSTON, MA
 2 PAGES, LTR 50-270-3-70-75245 TO NRC OFFICE OF E & E, NEWTON 17, JAN. 17, 1970, URGENT 50-270, TYPE--BOM, MFU--WUCC, AE--DECHTEL

CAUSE - SHAFT BEARING, BROKEN SHAFT. WHILE THE REACTOR WAS OPERATING AT 036 POWER, SALT SERVICE WATER PUMP WAS FOUND TO BE INOPERABLE. THE SHAFT BEARINGS WERE BURN AND THE PUMP SHAFT WAS BROKEN. ALSO, A PACKING LEAK SEAL FOLLOWER STU WAS SEVERED, CAUSING EXCESSIVE LEAKAGE. THE PUMP WAS REPAIRED, TESTED SATISFACTORILY, AND RETURNED TO SERVICE IN 17 DAYS.

AVAILABILITY - NAL PUBLIC DOCUMENT GROUP, 1717 N STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE 12000

FAILURE, EQUIPMENT - FAILURE, EQUIPMENT - AUXILIARY, COOLING - PILGRIM 1 (CONT) - BEARING - FAILURE, IMMERENT - PUMPS

11981
 SALT SERVICE WATER PUMP FAILS AT PILGRIM
 DUSTON ELECTRIC CO., DUSTON, MA
 2 PAGES, LTR 50-270-3-70-75245 TO NRC OFFICE OF E & E, NEWTON 17, JAN. 23, 1970, URGENT 50-270, TYPE--BOM, MFU--WUCC, AE--DECHTEL

CAUSE - SHAFT BEARING, BROKEN SHAFT. WHILE THE REACTOR WAS OPERATING AT 016 POWER, SALT SERVICE WATER PUMP WAS FOUND TO BE INOPERABLE. THE SHAFT BEARINGS WERE BURN AND THE SHAFT WAS

110291 CONTINUED

SEPARATED. AN APPROVED DESIGN CHANGE WAS IMPLEMENTED ON THIS PUMP THAT UTILIZES A MARINE OUTBOARD TYPE BEARING. THE PUMP WAS TESTED AND RETURNED TO SERVICE AFTER REPAIRS WERE COMPLETED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • FAILURE, EQUIPMENT • MODIFICATION • FAILURE, DESIGN ERROR • AVAILABLE CUES • PLOUGH & LOMB • BREKING • PUMP

110294

DIESEL GENERATION FAILS TO START IN 10 SECONDS AT PILGRIM

DUSTON ECISL CO., PLYMOUTH, MA

3 PAGES, LTR W/LET 70-1731 TO NRC OFFICE OF I & E, REGION 1, FEB. 2, 1970, Docket 50-493, TYPE--DNR, REF--UG-1, AE--DECTEL

CASE - TURBO ASSIST VALVES MALFUNCTION DURING TESTING WITH THE REACTOR AT 524 PPM, DIESEL GENERATION D START TIME WAS 12 SECONDS, EXCEEDING THE 10 SECOND LIMIT. THE TURBO ASSIST VALVES WERE NOT FUNCTIONING CORRECTLY. THEY WERE CLEANED AND RETURNED TO SERVICE. STARTING TIME WAS THEN REDUCED AS 7.5 SECONDS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • RESPONSE TIME • TEST, SYSTEM OPERABILITY • PILGRIM & LOMB • FAILURE, INHERENT • VALVES • ENGINES, INTERNAL COMBUSTION • GENERATION, DIESEL

110301

REACTION BUILDUP VENT RADIATION MONITOR FAILS AT PILGRIM

DUSTON ECISL CO., PLYMOUTH, MA

2 PAGES, LTR W/LET 70-1731 TO NRC OFFICE OF I & E, REGION 1, FEB. 4, 1970, Docket 50-493, TYPE--DNR, REF--UG-1, AE--DECTEL

CASE - SAMPLE PUMP STOPPED WHILE THE REACTOR WAS OPERATING AT 516 PPM. THE REACTION BUILDUP VENT PROCESS RADIATION MONITOR FAILED. THE SAMPLE PUMP WAS STOPPED AND OVERLOADING ITS INPUT POWER SUPPLY CIRCUIT. THE STANDBY PUMP WAS PLACED IN SERVICE. THE DEFECTIVE PUMP WAS CLEANED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • FAILURE, EQUIPMENT • VENTILATION SYSTEM • PILGRIM & LOMB • FAILURE, INHERENT • PUMPS • RADIATION MONITORS

110355

SET POINT DRIFT IN PRESSURE SWITCHES AT PILGRIM

DUSTON ECISL CO., PLYMOUTH, MA

2 PAGES, LTR W/LET 70-1731 TO NRC OFFICE OF I & E, REGION 1, FEB. 20, 1970, Docket 50-493, TYPE--DNR, REF--UG-1, AE--DECTEL

CASE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR SHUT DOWN, A LOW PRESSURE MAIN STEAM LINE SWITCH (PRELIM) THE LOW SPEC LIMIT OF 5 PSI EACH. MINOR SET POINT DRIFT IS A RECURRING PROBLEM. THE SWITCHES WERE RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • PILGRIM & LOMB • SET POINT • DRIFT • SECONDS, PRESSURE

111776

POSITION INDICATING SWITCH FOR VACUUM BREAKERS MALFUNCTION AT PILGRIM

DUSTON ECISL CO., PLYMOUTH, MA

3 PAGES, LTR W/LET 70-1731 TO NRC OFFICE OF I & E, REGION 1, FEB. 23, 1970, Docket 50-493, TYPE--DNR, REF--UG-1, AE--DECTEL

CASE - OUT OF ADJUSTMENT. DURING A 4 DAY PERIOD WHILE OPERATING AT 47 TO 524 PPM, 3 VENT-RELIEF SUPPRESSION CHAMBER VACUUM BREAKERS APPEARED TO BE INCOMPLETELY CLOSED ON 4 DIFFERENT OCCASIONS. TWICE THE REACTOR WAS SHUT DOWN. THE LAST TIME WAS ALSO FOR A SCHEDULED REFUELING OUTAGE. EACH TIME, THE PROBLEM WAS THAT THE POSITION INDICATING LIMIT SWITCHES WERE OUT OF ADJUSTMENT. A DESIGN CHANGE WILL BE IMPLEMENTED DURING THE REFUELING OUTAGE TO GIVE REDUNDANT INDICATION FOR ALL VACUUM BREAKERS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • CONTAINMENT VACUUM BREAKER • INSTRUMENT, SWITCH • FAILURE, DESIGN ERROR • PILGRIM & LOMB • INSTRUMENT, POSITION • REACTOR SHUTDOWN • DRIFT • TURNS

116005
INDICATIONS FLOW ON REACTOR VESSEL FEEFWATER NOZZLES AT PILGRIM I
BOSTON Edison Co., MA
3 PGS, LTR N/LEN 70-7/11 TO NRC OFFICE OF I & E, REGION I, MARCH 29, 1970, Docket 50-293, TYPE--BWR, NRC--
WEE, AE--DECMTEL

CAUSE - THERMAL CYCLING DURING THE REFUELING OUTAGE. LIQUID PENETRANT INSPECTION OF THE 4 REACTOR VESSEL FEEFWATER NOZZLES REVEALED INDICATIONS OF CRACKS ON THE INNER BEAM ANGLE OF ALL 4 NOZZLES. CRACKS RESULTED FROM THERMAL CYCLING IN THE REGION OF THE SPARGER THERMAL SLEEVES AND VESSEL NOZZLES AS A RESULT OF LEAKAGE PAST THERMAL SLEEVES. ALL UNACCEPTABLE INDICATIONS WERE REMOVED BY GRINDING. THE MAXIMUM PENETRATION WAS 0.05 INCH INTO THE VESSEL BASE METAL. NEW FEEFWATER SPARGERS ARE BEING INSTALLED WHICH INCORPORATE AN INTERFERENCE FIT WHICH MINIMIZES VIBRATION AND THERMAL CYCLING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INTERNAL MECHANICAL EFFECT • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, DESIGN ERROR • NOZZLE • VIBRATION
• PILGRIM I (BWR) • MAIN COOLING SYSTEM • PLUM • CRACK • FEEFWATER • PRESSURE VESSELS • FAILURE, COMMON MODE

116726
REACTOR VESSEL JET PUMP RESTRAINER BOLT KEEPER WELDS FAIL AT PILGRIM
BOSTON Edison Co., MA
3 PGS, LTR N/LEN 70-7/11 TO NRC OFFICE OF I & E, REGION I, APRIL 2, 1970, Docket 50-293, TYPE--BWR, NRC--
WEE, AE--DECMTEL

CAUSE - PROBABLY INSUFFICIENT PRELOAD DURING THE REFUELING OUTAGE. VISUAL INSPECTION OF CERTAIN REACTOR VESSEL INTERIOR SURFACES WITH INTEGRALLY WELDED INTERNAL SUPPORTS REVEAL 9 REACTOR VESSEL JET PUMP RESTRAINER BOLT KEEPER TACK WELDS HAVE SEPARATED ON 6 PUMPS. THERE WAS NO INDICATION OF KEEPER ROTATION OR NO STRUCTURAL DEGRADATION. TACK WELD SEPARATION IS BELIEVED TO BE CAUSED BY INSUFFICIENT JET PUMP BEAM BOLT PRELOAD DURING THE ORIGINAL INSTALLATION WHICH PERMITTED JET PUMP VIBRATION. IT IS EXPECTED THAT TACK WELDS WILL BE REMADE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

HELUS • FASTENER • REFUELING • PUMP, JET • FAILURE, INSTALLATION ERROR • PILGRIM I (BWR) • PRESSURE VESSELS
• INSERVICE INSPECTION

116318
MPC1 SYSTEM WELD HAS FLAW AT PILGRIM I
BOSTON Edison Co., PLANTUIN, MA
3 PGS, LTR N/LEN 70-10/11 TO NRC OFFICE OF I & E, REGION I, APRIL 27, 1970, Docket 50-293, TYPE--BWR, NRC--
WEE, AE--DECMTEL

CAUSE - ORIGINAL WELD FLAW. DURING THE REFUELING OUTAGE PRIMARY SYSTEM BOUNDARY INSERVICE INSPECTION, A REVIEW OF RADIOGRAPHS OF A WELD ON MPC1 SYSTEM PRIMARY CONTAINMENT INWARD ISOLATION VALVE INDICATED A WELD CRACK WITH ASSOCIATED MINUTE CRACKS AND 2 QUESTIONABLE AREAS. A COMPARISON WITH PRESERVICE RADIOGRAPHS SHOW NO DISCERNIBLE GROWTH DURING OPERATION. PLANS ARE BEING MADE TO REPAIR THE WELD DURING THIS OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONTAINMENT ISOLATION • HELUS • FLAW • FAILURE, FABRICATION ERROR • REFUELING • PILGRIM I (BWR) • VALVES •
MPC1 • INSERVICE INSPECTION

11707
UNEXPECTED INFORMATION ON HV JET PUMP BOLT KEEPER HELUS AT PILGRIM I
BOSTON Edison Co., BOSTON, MA
3 PGS, LTR N/LEN 70-9/11 REVISION B2 TO NRC OFFICE OF I & E, REGION I, JUNE 2, 1970, Docket 50-293, TYPE--BWR,
NRC--WEE, AE--DECMTEL

CAUSE - SLIGHT VIBRATION. ON 4/2/70 FAILURE OF REACTOR VESSEL JET PUMP RESTRAINER BOLT KEEPER HELUS WAS REPORTED. SINCE THAT REPORT, IT HAS BEEN DETERMINED THAT THE SEPARATION OF THE TACK WELD WAS THE RESULT OF A SMALL AMOUNT OF VIBRATION AND NOT RELATED TO THE PRELOAD ON THE BEAM BOLTS. TACK WELDS HAVE ALL BEEN RE-ESTABLISHED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

HELUS • FASTENER • REFUELING • PUMP, JET • VIBRATION • PILGRIM I (BWR) • INSERVICE INSPECTION

11708
PRIMARY CONTAINMENT INTEGRITY VIOLATED AT PILGRIM I
BOSTON Edison Co., BOSTON, MA
2 PGS, LTR N/LEN 70-11/11 TO NRC OFFICE OF I & E, REGION I, JUNE 3, 1970, Docket 50-293, TYPE--BWR, NRC--
WEE, AE--DECMTEL

114700 CONTINUOUS

CAUSE - MISUNDERSTANDING OF REQUIREMENTS. DURING A REACTOR VESSEL HYDROSTATIC TEST WHILE IN THE REFUELING OUTAGE, THE REACTOR VESSEL WATER TEMPERATURE INCREASED TO 235 F AND PRIMARY CONTAINMENT HAD NOT BEEN ESTABLISHED. TECH SPECS REQUIRE PRIMARY CONTAINMENT TO BE MAINTAINED WHEN THE TEMPERATURE IS ABOVE 212 F AND FUEL IS IN THE VESSEL OR WHEN THE REACTOR IS CRITICAL. WATER TEMPERATURE WAS REDUCED BELOW 212 F. THERE WAS A MISUNDERSTANDING OF REACTOR VESSEL TEMPERATURE REQUIREMENTS WHILE PERFORMING SPECIAL ACOUSTICAL EMISSIONS TEST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR • CONTAINMENT INTEGRITY • REACTOR COOLANT • TEST, SYSTEM OPERABILITY • PILGRIM 1 (COMM) • TEMPERATURE • COMMUNICATION • PRESSURE VESSELS

110220

EMPLOYEE RECEIVES APPARENT OVEREXPOSURE AT PILGRIM 1

BOSTON EDISON CO., PLYMOUTH, MA

2 PGS, LTR W/LEN 70-12/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 8, 1970, WCAET 50-293, TYPE--DMM, MFU--
WEE, AE--BECHTEL

CAUSE - NOT DETERMINED. RADIATION EXPOSURE PERSONNEL DOSIMETER DEVICES ASSIGNED TO AN INDIVIDUAL WERE EXPOSED TO 3.167 REM DURING THE SECOND QUARTER. DURING ONE DAY, THE DOSIMETER WAS OFF SCALE FOR REASONS THAT COULD NOT BE ASCERTAINED. IT IS BELIEVED THAT THE DOSIMETER AND LOG WERE EITHER ACCIDENTALLY OR INTENTIONALLY EXPOSED TO RADIATION WHILE THEY WERE NOT ON THE INDIVIDUAL. DOSE RATES IN THE WORK AREA VARIED BETWEEN 0 TO 500 MR/HR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DOSIMETRY • MAINTENANCE AND REPAIR • WASTE HANDLING • PERSONNEL EXPOSURE, RADIATION • PILGRIM 1 (COMM)

115140

INSTRUMENT SURVEILLANCE TESTS NOT PERFORMED AS REQUIRED AT PILGRIM 1

BOSTON EDISON CO., PLYMOUTH, MA

2 PGS, LTR W/LEN 70-12/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 13, 1970, WCAET 50-293, TYPE--DMM, MFU--
WEE, AE--BECHTEL

CAUSE - MISUNDERSTANDING OF REQUIREMENTS. AN ADMINISTRATIVE REVIEW DISCOVERED THAT OF 2 DAYS INM SURVEILLANCE TEST AND APM SET POINT SURVEILLANCE TEST WERE NOT PERFORMED AS REQUIRED. THEY WERE THEN SUCCESSFULLY PERFORMED. THIS RESULTED FROM A MISUNDERSTANDING OF THE TEST REQUIREMENTS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR • PROCEDURES AND MANUALS • TESTING • INSTRUMENT, POWER RANGE • PILGRIM 1 (COMM) • INSTRUMENT, INTERMEDIATE RANGE • TEST INTERVAL • COMMUNICATION

115405

STANDBY LIQUID CONTROL SYSTEM FOUND INOPERABLE AT PILGRIM 1

BOSTON EDISON CO., PLYMOUTH, MA

2 PGS, LTR W/LEN 70-14/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 20, 1970, WCAET 50-293, TYPE--DMM, MFU--
WEE, AE--BECHTEL

CAUSE - RELIEF VALVE OPENING TOO LOW A PRESSURE. DURING THE REFUELING OUTAGE, STANDBY LIQUID CONTROL SYSTEM B WAS DETERMINED TO BE INOPERABLE. THE CRUDDY RELIEF VALVE WAS OPENING AT TOO LOW A PRESSURE TO ALLOW MINIMUM PUMP FLOW RATE OF 39 GPM TO BE MAINTAINED. THE SOLC SYSTEM WAS REPAIRED AND RETURNED TO SERVICE 5 DAYS LATER. DURING THE PERIOD WHEN THE SYSTEM WAS INOPERABLE, AN UNSCHEDULED TEST TO EXERCISE THE CONTROL RODS WAS PERFORMED. TECH SPECS PRECLUDE CONTROL ROD MOVEMENT WITH SOLC INOPERABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

PRESSURE RELIEF • REFUELING • FAILURE, MAINTENANCE ERROR • SHUTDOWN SYSTEM, SECONDARY • PILGRIM 1 (COMM) • SET POINT • VALVES

115702

PROCESS RADIATION MONITORING SYSTEM FOUND INOPERABLE AT PILGRIM 1

BOSTON EDISON CO.

2 PGS, LTR W/LEN 70-15/31 TO NRC OFFICE OF I & E, REGION 1, JULY 2, 1970, WCAET 50-293, TYPE--DMM, MFU--
WEE, AE--BECHTEL

CAUSE - NO SAMPLE FLOW. TWICE, THE SHUT OFF WAS PROCESS RADIATION MONITORING SYSTEM WAS DETERMINED TO BE INOPERABLE. PLANT SHUTDOWN WAS INITIATED EACH TIME. ON EACH OCCASION, IMMEDIATE INVESTIGATION REVEALED THAT NO SAMPLE FLOW EXISTED. VALVE ADJUSTMENT RETURNED THE SYSTEM TO NORMAL SAMPLE FLOW AND THE PLANT RESUMED NORMAL OPERATION. INVESTIGATION IS CONTINUING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20543 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

115702 PLANTINQUE
FAILURE, EQUIPMENT * SAMPLING * OFF GAS * MONITORING SYSTEM, NAUTICAN * PILGRIM I (ORR) * PLUM * NAUTICAN
MONITORS

115705
JET POINT UNIT IN PRESSURE SWITCH AT PILGRIM I
DUSTON ELLISON CO., PLYMOUTH, MA
A PWS, LTR N/EN 70-18731 TO AEC OFFICE OF I & E, NEWTON 1, JULY 20, 1970, WCRET 50-293, TYPE--BWR, RFU--
VOC, AC--DEUMTEL

CAUSE - INSTRUMENT UNIT. DURING TESTING WITH THE REACTOR AT 85% POWER, A PRESSURE SWITCH WAS FOUND TO ACTUATE AT 437 PSIG EXCEEDING ITS UPPER LIMIT OF 425 PSIG. THIS INSTRUMENT PROVIDES A LOW-LEVEL FUNCTION PERMISSIVE FOR OPENING CORE SPRAY AND LPL INJECTION VALVES. THE CAUSE WAS INSTRUMENT UNIT. THE SWITCH WAS IMMEDIATELY RECALIBRATED AND SATISFACTORILY TESTED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * PILGRIM I
(ORR) * JET POINT * EMERGENCY COOLING SYSTEM * UNIT * FAILURE, INHERENT * SENSORS, PRESSURE

115708
JET POINT UNIT IN LOW REACTOR PRESSURE SWITCH AT PILGRIM I
DUSTON ELLISON CO., PLYMOUTH, MA
A PWS, LTR N/EN 70-17731 TO AEC OFFICE OF I & E, NEWTON 1, AUG 10, 1970, WCRET 50-293, TYPE--BWR, RFU--
VOC, AC--DEUMTEL

CAUSE - INSTRUMENT UNIT. DURING TESTING WHILE OPERATING AT 75% POWER, PRESSURE SWITCH ACTUATED AT 40 PSIG WHICH IS BELOW THE 50 PSIG LOWER LIMIT. THE INSTRUMENT PROVIDES A LOW REACTOR PRESSURE ISOLATION SIGNAL TO THE MPCs STEAM SUPPLY VALVES. THE CAUSE WAS INSTRUMENT UNIT. THE INSTRUMENT WAS IMMEDIATELY RECALIBRATED AND SATISFACTORILY TESTED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INSTRUMENT CALIBRATION * FAILURE, INSTRUMENT * INSTRUMENT, SWITCH * TEST, SYSTEM OPERABILITY * PILGRIM I
(ORR) * JET POINT * UNIT * FAILURE, INHERENT * SENSORS, PRESSURE * MPCs

115709
PRIMARY SYSTEM COOLANT LEAKAGE AIR SAMPLING INOPERABLE AT PILGRIM I
DUSTON ELLISON CO., PLYMOUTH, MA
A PWS, LTR N/EN 70-18731 TO AEC OFFICE OF I & E, NEWTON 1, AUG 12, 1970, WCRET 50-293, TYPE--BWR, RFU--
VOC, AC--DEUMTEL

CAUSE - MAINTENANCE ACTIVITY. THE PRIMARY SYSTEM COOLANT LEAKAGE AIR SAMPLING WAS MADE INOPERABLE FOR MAINTENANCE TO ELIMINATE AIR LEAKAGE AROUND THE FILTER ACCESS COVER WHICH WAS AFFECTING PROPER SAMPLING FLUX. PERIODIC MAINTENANCE REQUIRES CHANGEOUT OF PARTICULATE FILTER PAPER WHICH NECESSITATES REMOVAL OF THE FILTER ACCESS COVER. UNUSUAL DETERIORATION OF SOME NUTS AND THE SHIFTING OF STUD POSITIONS WHILE BEING TIGHTENED RESULTED IN IMPROPER COMPRESSION OF THE FILTER COVER WASHER. THE SYSTEM WAS RETURNED TO SERVICE AFTER COMPLETION OF MAINTENANCE.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

MAINTENANCE AND REPAIR * SAMPLING * SEAL * PILGRIM I (ORR) * PLANTINMENT LEAK MONITOR * LEAK * FAILURE,
INHERENT * REAM

117030
MPCs STEAM SUPPLY VALVE DECLARED INOPERABLE AT PILGRIM I
DUSTON ELLISON CO., PLYMOUTH, MA
A PWS, LTR N/EN 70-18731 TO AEC OFFICE OF I & E, NEWTON 1, SEPT. 10, 1970, WCRET 50-293, TYPE--BWR, RFU--
VOC, AC--DEUMTEL

CAUSE - UNDERVOLTAGE RELAY FAILURE. DURING AN INVESTIGATION OF THE LACK OF POSITION INDICATION ON PANEL 703 FOR A MPCs STEAM SUPPLY VALVE WHILE OPERATING AT 75% POWER, A CUTLER HAMMER UNDERVOLTAGE RELAY, MONITORING THE VALVE MOTOR SUPPLY VOLTAGE, WAS FOUND TO HAVE A BURNED OUT COIL. THIS INTERRUPTED THE VALVE'S 125 V DC MOTOR CONTROL CIRCUITS WHICH INHIBITED VALVE OPERATION. THE VALVE WAS REPAIRED AND RETURNED TO SERVICE 3 HOURS LATER.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 N STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT * STEAM * PILGRIM I (ORR) * FAILURE, INHERENT * VALVES * RELAYS * MPCs

118730
REACTOR BUILDUP VENT NAUTICAN POSITION INOPERABLE AT PILGRIM I
DUSTON ELLISON CO., PLYMOUTH, MA

110730 CONTINUED
2 PGS, LTR W/ENR 70-22/3L TO AEC OFFICE OF I & E, REGION I, OCT. 5, 1970, URGENT 50-493, TYPE--DM, RFO--GEO,
AE--DECHTEL

CASE - SAMPLE PUMP BINDING. WHILE OPERATING AT 75% POWER, THE REACTOR BUILDUP VENT PROCESS RADIATION MONITOR WAS DETERMINED TO BE INSUPERABLE. THE SAMPLE PUMP WAS PLACED IN SERVICE AND THE SYSTEM RETURNED TO NORMAL OPERATION. THE BINDING PUMP WAS DISASSEMBLED, CLEANED, AND RETURNED TO SERVICE AS THE STANDBY PUMP.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • VENTILATION SYSTEM • SAMPLING • BUILDUP • CAU • FAILURE, MAINTENANCE ERROR • PIGLIM 1 (BMR) • PUMPS • RADIATION MONITORS

110737
LEAK FOUND IN RECU SYSTEM U BEND AT PIGLIM 1
JUSTIN ELISON CLO, PLYMOUTH, MA
2 PGS, LTR W/ENR 70-21/3L TO AEC OFFICE OF I & E, REGION I, OCT. 6, 1970, URGENT 50-493, TYPE--DM, RFO--GEO,
AE--DECHTEL

CASE - STRESS-ASSISTED CRACK. DURING A TEST WHILE OPERATING AT 75% POWER, A LEAK WAS VISUALLY DETECTED IN A PIPING SINGLE U BEND FITTING LOCATED BETWEEN 2 REACTOR WATER CLEANUP SYSTEM HEAT EXCHANGERS. THE JOINT FITTING WAS FABRICATED FROM 4 CLAMHELL PIECES JOINED BY LONGITUDINAL WELDS ALONG THE OUTER AND INNER RAUILL. A 1-INCH CRACK WAS FOUND IN THE WELD NEAR AFFLUECTED JUNE. THE BEND WAS REPLACED WITH A SIMILAR ONE FABRICATED FROM SLODS.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE • WELDS • FAILURE, FABRICATION ERROR • TEST, SYSTEM OPERABILITY • FLUENT PURIFICATION SYSTEM • DAMAGE • HEAT TREATMENT • PIGLIM 1 (BMR) • LEAK • CRACK • PIPES AND PIPE FITTINGS

110902
MAIN STACK RADIATION MONITOR FAILS AT PIGLIM 1
JUSTIN ELISON CLO, PLYMOUTH, MA
2 PGS, LTR W/ENR 70-23/3L TO AEC OFFICE OF I & E, REGION I, OCT. 8, 1970, URGENT 50-493, TYPE--DM, RFO--GEO,
AE--DECHTEL

CASE - SAMPLE PUMP BINDING. WHILE OPERATING AT 75% POWER, THE MAIN STACK PROCESS RADIATION MONITOR SYSTEM MALFUNCTIONED AS INDICATED BY AN ANNUNCIATOR ALARM. A BLOWN FUSE WAS IMMEDIATELY REPLACED BUT IT BLEW AGAIN. THE SAMPLE PUMP WAS FOUND TO BE BINDING AND OVERLOADING ITS INPUT POWER SUPPLY CIRCUIT. THE STANDBY SAMPLE PUMP WAS PLACED IN SERVICE. THE BINDING PUMP WAS CLEANED AND RETURNED TO SERVICE AS THE STANDBY PUMP. THIS IS A WAST RPT. COMP. PUMP MODEL 2005-2200 FRAME 50, 1 HP, SINGLE PHASE 1725 RPM, 115/230 VOLT.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • MONITOR, STACK • SAMPLING • STACK • PIGLIM 1 (BMR) • FAILURE, INHERENT • PUMPS • RADIATION MONITORS

110998
DET POINT SHIFT IN DIFFERENTIAL PRESSURE SWITCH AT PIGLIM 1
JUSTIN ELISON CLO, PLYMOUTH, MA
2 PGS, LTR W/ENR 70-24/3L TO AEC OFFICE OF I & E, REGION I, OCT. 14, 1970, URGENT 50-493, TYPE--DM, RFO--GEO,
AE--DECHTEL

CASE - INSTRUMENT SHIFT. DURING A TEST OF THE CORE SPRAY SPARKER TO REACTOR PRESSURE VESSEL DIFFERENTIAL PRESSURE SWITCH WITH THE REACTOR AT 75% POWER, ONE SWITCH ACTUATED AT 300 PSIG, WHICH IS LESS THAN THE 325 PSIG LOWER LIMIT. THE CAUSE WAS LIMITED INSTRUMENT SHIFT. THE SWITCH WAS RECALIBRATED AND SATISFACTORILY TESTED.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WIRE SPRAY • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • PIGLIM 1 (BMR) • DET POINT • DRIFT • FAILURE, INHERENT • SENSORS, PRESSURE

110915
SMALL LEAKS FROM DIESEL GENERATOR EXHAUST MANIFOLD AT PIGLIM 1
JUSTIN ELISON CLO, PLYMOUTH, MA
3 PGS, LTR W/ENR 70-25/3L TO AEC OFFICE OF I & E, REGION I, OCT. 21, 1970, URGENT 50-493, TYPE--DM, RFO--GEO,
AE--DECHTEL

CASE - FILLET WELD FAILURE. DURING TESTING WITH THE REACTOR AT 75% POWER, BLACK SMOKE WAS OBSERVED LEAKING FROM DIESEL GENERATOR EXHAUST MANIFOLD. AN EXPANSION BELLOWS CONNECTOR ON THE EXHAUST MANIFOLD PIPE HAD SEPARATED DUE TO FAILURE OF A SMALL FILLET WELD ON THE INTERNAL SURFACE OF THE FLANGE TO BELLOWS CONNECTION. THE BELLOWS CONNECTOR WAS REPLACED IN KIND. THE WELD

117315 ACUSTANUOP

FAKLEN MATERIAL HAS CHANGEL AND THE FLANGE PRESENT REQUIREMENT WAS MODIFIED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + MEAS + FAILURE, FABRICATION ERROR + TEST, SYSTEM OPERABILITY + PULSAR 1 (BWR) + ENGINES, INTERNAL COMBUSTION + GENERATOR, DIESEL + PIPES AND PIPE FITTINGS

117476

COOLANT LEAKAGE AIR SAMPLING SYSTEM FOUND INOPERABLE AT PULSAR 1

JOHN E. LISCHE CO., PLYMOUTH, PA

4 PAGES, LTR W/LEN 70-20731 TO NAC OFFICE OF I & E, REGION 1, OCT. 20, 1970, URGENT 50-293, TYPE--BWR, MFG--WRE, AC--DECTEL

CAUSE - BROKEN SENSING LEADS. WHILE OPERATING AT 75% POWER, TESTING DETERMINED THAT THE PRIMARY SYSTEM BOUNDARY COOLANT LEAKAGE AIR SAMPLING SYSTEM WAS INOPERABLE BECAUSE THE LOWING ACTIVITY INDICATOR WAS READING UNSCALE. THE LEADS FEEDING SENSING INFORMATION TO THE INDICATOR WERE CRACKED AT A REAR TERMINAL CONNECTION. IT IS BELIEVED THAT WORKMAN WHILE CLEANING THE SYSTEM ACCIDENTALLY BROKE THESE WIRES. THE WIRES WERE REPAIRED, THE INSTRUMENT PLOW INDICATOR REPLACED, AND THE SYSTEM CHECKED AND RETURNED TO SERVICE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ENGINE + FAILURE, INSTRUMENT + MEASUR + FAILURE, MAINTENANCE ERROR + PULSAR 1 (BWR) + CONTAINMENT LEAK MONITOR + CABLES AND CONNECTIONS

117475

COOLANT LEAKAGE AIR SAMPLING SYSTEM ERRATIC AT PULSAR 1

JOHN E. LISCHE CO., PLYMOUTH, PA

3 PAGES, LTR W/LEN 70-27731 TO NAC OFFICE OF I & E, REGION 1, OCT. 20, 1970, URGENT 50-293, TYPE--BWR, MFG--WRE, AC--DECTEL

CAUSE - MOISTURE IN INSTRUMENT. WHILE OPERATING AT 75% POWER, TESTING FOUND THE OPERATION OF THE PRIMARY SYSTEM BOUNDARY COOLANT LEAKAGE AIR SAMPLING SYSTEM TO BE ERRATIC. THIS WAS ATTRIBUTED TO MOISTURE BUILDUP WITHIN THE INSTRUMENT. THE INSTRUMENT WAS UNIED, CLEANED, TESTED, AND RETURNED TO SERVICE. ALSO, THE UNIT WAS MOVED TO REMOVED SAMPLE LINE PIPING TO SAMPLE ATMOSPHERE WITH LESS MOISTURE CONTENT.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WATER + SAMPLING + FAILURE, INSTRUMENT + FAILURE, DESIGN ERROR + PULSAR 1 (BWR) + CONTAINMENT LEAK MONITOR + RADIATION MONITORS

117495

SALT SERVICE WATER PUMP FOUND TO BE VIBRATING AT PULSAR 1

JOHN E. LISCHE CO., PLYMOUTH, PA

4 PAGES, LTR W/LEN 70-28731 TO NAC OFFICE OF I & E, REGION 1, NOV. 4, 1970, URGENT 50-293, TYPE--BWR, MFG--WRE, AC--DECTEL

CAUSE - ASSEMBLY PROCEDURAL DEFICIENCY. SALT SERVICE WATER PUMP WAS UNRELIABLE INOPERABLE BECAUSE OF EXCESSIVE VIBRATION AND NOISE. AN ASSEMBLY PROCEDURAL DEFICIENCY CONTRIBUTED TO THE MALFUNCTION. A NEW SHAFT BEARING, THROTTLE BUSHING, INLET BOWL BUSHING, TAPER LOCK, SAND GULLAW, AND SHAFT WAS INSTALLED IN THE PUMP. THE PUMP WAS TESTED AND RETURNED TO SERVICE. A DETAILED MAINTENANCE ASSEMBLY PROCEDURE FOR ALL SSW PUMPS IS BEING DEVELOPED. THE REACTION WAS OPERATING AT 75% POWER.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + PROCEDURES AND MANUALS + FAILURE, ADMINISTRATIVE CONTROL + VIBRATION + PULSAR 1 (BWR) + SERVICE WATER + PUMPS

117500

SALT SERVICE WATER PUMP HOLD-DOWN BOLTS FOUND TO BE LOOSE AT PULSAR 1

JOHN E. LISCHE CO., PLYMOUTH, PA

4 PAGES, LTR W/LEN 70-29731 TO NAC OFFICE OF I & E, REGION 1, NOV. 4, 1970, URGENT 50-293, TYPE--BWR, MFG--WRE, AC--DECTEL

CAUSE - DEFENSIFICATION OF SULE PLATE THERAUS. WHILE OPERATING AT 25% POWER, SALT SERVICE WATER PUMP A WAS UNRELIABLE INOPERABLE BECAUSE THE HOLD-DOWN BOLTS FASTENING THE PUMP TO ITS SULE PLATE WERE LOOSE AND THE PUMP WAS MOVING FREELY. THE THERAUS IN THE SULE PLATE HAD WORK DOWN DUE TO VIBRATION AND WERE TO THE POINT WHERE THEY EVENTUALLY LOOSED. A NEW SULE PLATE WAS FABRICATED AND INSTALLED. THE PUMP WAS TESTED AND RETURNED TO SERVICE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

119500 CONTINUED
FAILURE, EQUIPMENT • FASTENERS • SUPPORT STRUCTURE • FILTRIM 1 (HWR) • SEWAGE WATER • FAILURE, INHERENT • BEAR
• PUMPS

119720
MAIN STACK PROCESS RADIATION MONITOR SYSTEM MALFUNCTIONS AT PILGRIM 1
BOSTON DESIGN CO., PLYMOUTH, MA
2 PGS, LTR W/LEN 70-30731 TO AEC OFFICE OF I & E, REGION 1, DEC 9, 1970, JCR# 50-293, TYPE--BOM, RFO--GEC,
AE--DECTEL

CAUSE - BLOWN FUSE. WHILE OPERATING AT 75% POWER, MAIN STACK PROCESS RADIATION MONITOR (MS-PRI)
SYSTEM MALFUNCTIONED AS INDICATED BY AN ANNUNCIATOR ALARM. POST INVESTIGATIONS HAVE REVEALED
THAT THE SAMPLE PUMP DENIED AND OVERLOADED ITS INPUT POWER SUPPLY CIRCUIT. THE BLOWN FUSE WAS
REPLACED AND MS-PRI RETURNED TO SERVICE WITHIN 1 HOUR.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

PILGRIM 1 (HWR) • RADIATION MONITORS • MONITOR, STACK • INSTRUMENT, PROTECTIVE • FAILURE, INSTRUMENT •
FAILURE, DESIGN ERROR • PUMPS • MONITORING SYSTEM, RADIATION

120275
BLACK SMOKE COMES FROM DIESEL GENERATOR EXHAUST MANIFOLD AT PILGRIM 1
BOSTON DESIGN CO., PLYMOUTH, MA
3 PGS, LTR W/LEN 70-31731 TO AEC OFFICE OF I & E, REGION 1, DEC 1, 1970, JCR# 50-293, TYPE--BOM, RFO--GEC,
AE--DECTEL

CAUSE - FILLET WELD FAILURE. DURING TESTING WITH THE REACTOR AT 80% POWER, BLACK SMOKE WAS
OBSERVED LEAKING FROM DIESEL GENERATOR EXHAUST MANIFOLD. A SIMILAR FILLET WELD ON THE INTERNAL
SURFACE OF THE FLANGE TO EXPANSION BELLOWS CONNECTION AT THE ENGINE END FAILED ALLOWING EXHAUST
GASES TO ENTER THE W/LOOP. THE EXPANSION BELLOWS CONNECTION WAS REPLACED IN 1 HOUR.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

PILGRIM 1 (HWR) • DIESEL • PIPES AND PIPE FITTINGS • GENERATOR, DIESEL • ENGINES, INTERNAL COMBUSTION •
TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT

120440
SODIUM PENTABARATE CONCENTRATION IN WCS FLUCTUATES AT PILGRIM 1
BOSTON DESIGN CO., PLYMOUTH, MA
4 PGS, LTR W/LEN 70-32731 TO AEC OFFICE OF I & E, REGION 1, DEC 8, 1970, JCR# 50-293, TYPE--BOM, RFO--GEC,
AE--DECTEL

CAUSE - UNKNOWN. WHILE PREPARING FOR A ROUTINE ADDITION OF SODIUM PENTABARATE TO THE STANBY
LIQUID CONTROL SYSTEM WITH THE REACTOR AT 70% POWER, ANALYSIS OF A SAMPLE INDICATED A
CONCENTRATION OF 30.724 AT A VOLUME OF 4000 GALLONS. THIS IS BELOW TECH SPEC LIMIT. A PLANT
SHUTDOWN WAS IMMEDIATELY INITIATED. IN 240 HOURS THE CONCENTRATION HAD BEEN RESTORED AND THE
PLANT RESUMED NORMAL OPERATION. AN INVESTIGATION WAS MADE TO DETERMINE THE REASON FOR THIS
SAMPLE BEING LOWER THAN ONE TAKEN THE DAY BEFORE. NO CAUSE WAS FOUND FOR THE FLUCTUATION.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

PILGRIM 1 (HWR) • CONCENTRATION • WCS, SOLUBLE • W/LOOP SYSTEM, SECONDARY • SAMPLING

120710
REACTOR BUILDING VENT RADIOACTIVE RELEASE RATE HIGH AT PILGRIM 1
BOSTON DESIGN CO., PLYMOUTH, MA
4 PGS, LTR W/LEN 70-33731 TO AEC OFFICE OF I & E, REGION 1, DEC 29, 1970, JCR# 50-293, TYPE--BOM, RFO--
GEC, AE--DECTEL

CAUSE - AIR LOOP SEAL DISRUPTED. WHILE OPERATING AT 80% POWER, AN ANNUNCIATOR ALARM INDICATING
HIGH REACTOR BUILDING VENT RADIOACTIVE RELEASE RATE WAS RECEIVED IN THE CONTROL ROOM. REACTOR
POWER WAS REDUCED TO 40%. INVESTIGATION REVEALED THAT WATER HAD BEEN FORCED OUT OF AN AUGMENTED
GPP WAS MOISTURE SEPARATOR LOOP SEAL AFTER THE SYSTEM PREFILTERS HAD PLUGGED WITH WATER. THE
PREFILTERS WERE DRAINED AND THE SEAL REESTABLISHED. REACTOR POWER WAS RESTORED AFTER 2100 HOURS.

AVAILABILITY - AEC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

PILGRIM 1 (HWR) • RELEASE RATE • RADIOACTIVE RELEASE • BUILDING • VENTILATION SYSTEM • PIPES AND PIPE FITTINGS •
OFF GAS • SEAL • WATER • FLOW BLOCKAGE • FILTER, • FILTER, PREFILTER • FAILURE, INHERENT

120715
MAIN STACK RADIATION MONITOR MALFUNCTIONS AT PILGRIM 1
BOSTON DESIGN CO., PLYMOUTH, MA

800785 MONTINUED
 3 PUS, LTR W/NO 70-29736 TO NAC OFFICE OF I & E, REGION I, DEC 23, 1970, JCRAT 50-293, TYPE--BMR, RFU--
 URG, AE--DECTEL

CAUSE - SUCTON LINE BLOCKED WITH ICE WHILE OPERATING AT 814 POWER. MAIN STACK PROCESS RADIATION
 MONITOR SYSTEM MALFUNCTIONED AS INDICATED BY AN ANNUNCIATOR ALARM. THE SUCTON LINE WAS FOUND TO
 BE BLOCKED WITH ICE. MAINTENANCE CLEARED THE BLOCKAGE AND TEMPORARILY INSTALLED HEAT TRACING ON
 THE PIPING TO PREVENT REOCCURENCE. FREEZING OCCURED WITHIN A HORIZONTAL SECTION OF THE LINE. THE
 LINE WILL BE MODIFIED TO ESTABLISH A CONTINUOUSLY DOWNWARD SLOPE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FIGURE 1 (CONT) • OPERATOR MONITOR • STACK • MONITOR, STACK • FLOW BLOCKAGE • PIPES AND PIPE FITTINGS •
 WEATHER, SEVERE • WATER • SUPPLY • FAILURE, DESIGN ERROR • FAILURE, INSTANT

100341
 PENNILE LEAK FOUND IN VESSEL INSTRUMENTATION PENETRATION AT WUW CITIES 1
 COMMUNHEALTH EUSON CO., CUNULVA, IL
 4 PUS, LTR W/NO 50-25470-1 TO NAC OFFICE OF I & E, REGION III, JAN 10, 1970, JCRAT 50-254, TYPE--BMR, RFU--
 URG, AE--SUT & LUNOT

CALL - IMPROPER FILLET WELD. WHILE THE UNIT WAS IN SHUTDOWN FOR REFUELING, A VISUAL INSPECTION
 OF THE WELLS FOUND A PENNILE LEAK IN A WELDLINE TO INSTRUMENTATION PENETRATION SEAL. THE
 FILLET WELD AT THE PIPE PENETRATION JOINT WAS IMPROPER. THE WELD WILL BE REMOVED OUT AND REWELDED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

PROCESS • REFUELING • WUW CITIES 1 (CONT) • FAILURE, INSTALLATION ERROR • CONTAINMENT PENETRATION, PIPE •
 LEAK • INSTRUMENTS, MISG • CONTAINMENT PENETRATION

800354
 CRACKS FOUND IN BOTH RECIRCULATION LOOP BYPASS LINES AT WUW CITIES 1
 COMMUNHEALTH EUSON CO., CUNULVA, IL
 4 PUS, LTR W/NO 50-25470-4 TO NAC OFFICE OF I & E, REGION III, JAN 22, 1970, JCRAT 50-254, TYPE--BMR, RFU--
 URG, AE--SUT & LUNOT

CAUSE - APPARENTLY STRESS ASSISTED CORROSION. DURING THE REFUELING OUTAGE, ULTRASOUND INSPECTION
 FOUND CRACK INDICATION ON BOTH RECIRCULATION LOOP BYPASS LINES IN THE HEAT AFFECTED ZONE OF
 BELUS. THE APPARENT CAUSE IS INTERGRANULAR STRESS ASSISTED CORROSION. ONE CRACK WAS ON THE
 DOWNSTREAM SIDE OF THE VALVE-TO-PIPE WELD. THE OTHER WAS ON THE FIRST PIPE-TO-PIPE WELD
 DOWNSTREAM OF THE VALVE. THE BYPASS PIPING ON BOTH LOOPS WILL BE REMOVED AND THE ENDS CAPPED.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

FAILURE, PIPE • PROCESS • MODIFICATION • REFUELING • TEST, SYSTEM OPERABILITY • STRESS CORROSION • WUW CITIES
 1 (CONT) • MAIN COOLING SYSTEM • FLOW, BYPASS • ULTRASOUND • CRACK • PIPES AND PIPE FITTINGS

800355
 EXCESSIVE LEAKAGE FOUND IN CONTAINMENT ISOLATION VALVES AT WUW CITIES 1
 COMMUNHEALTH EUSON CO., CUNULVA, IL
 4 PUS, LTR W/NO 50-25470-2 TO NAC OFFICE OF I & E, REGION III, FEB 2, 1970, JCRAT 50-254, TYPE--BMR, RFU--
 URG, AE--SUT & LUNOT

CAUSE - WAT ON SEAT, PACKING LEAKS. DURING THE REFUELING OUTAGE, LEAK RATE TESTING
 IDENTIFIED OCCURRENCES OF EXCESSIVE LEAKAGE OF PRIMARY CONTAINMENT VALVES. LEAKS RESULTED FROM
 WAT ON THE SEAT, LOOSE PACKING, LOOSE PLUNGERS, AND MISADJUSTED TURQUE SWITCHES. ALL 18 VALVES
 AND CHECK VALVES WILL BE REPAIRED PRIOR TO SHUTDOWN.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$20.00

CONTAINMENT ISOLATION • TEST, LEAK RATE • CONTAINMENT INTEGRITY • CRU • REFUELING • TEST, SYSTEM OPERABILITY
 • FAILURE, MAINTENANCE ERROR • WUW CITIES 1 (CONT) • LEAK RATE • VALVE, CHECK • FAILURE, INHERENT • VALVES

800429
 THREE SHAFTS SHOWN TO BE IMPERABLE AT WUW CITIES 1
 COMMUNHEALTH EUSON CO., CUNULVA, IL
 4 PUS, LTR W/NO 50-25470-3 TO NAC OFFICE OF I & E, REGION III, FEB 4, 1970, JCRAT 50-254, TYPE--BMR, RFU--
 URG, AE--SUT & LUNOT

CAUSE - NOT YET DETERMINED. DURING A REFUELING OUTAGE SURVEILLANCE OF BERVEN PATENSON HYDRAULIC
 SHAFTS, 3 UNITS WERE FOUND TO HAVE EMPTY OIL RESERVOIRS. NONE HAD ANY APPARENT SIGNS OF OIL
 LEAKAGE. ALL WILL BE TESTED AFTER REMOVAL TO DETERMINE THE FAULTY COMPONENT. NECESSARY REPAIRS
 WILL BE MADE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM

110925 CONTINUOUS
CHARGE \$2.00

FAILURE, EQUIPMENT • REFUELING • OSMUCK ABSORBER • QUAD CITIES 1 (BOM) • SUPPORT STRUCTURE • SURVEILLANCE
PROGRAM • PIPES AND PIPE FITTINGS

110945
DIESEL GENERATOR FAILS TO START AT QUAD CITIES 1
COMMONWEALTH EDISON CO., CORVUS, IL
4 PWS, LTR W/NO 50-254/76-5 TO NAC OFFICE OF I & E, REGION III, FEB. 12, 1976, JUGRET 50-254, TYPE--BOM, PRU--
WEE, AE--SUT & LUNDT

CAUSE - DIRTY SUREMUM VALVE. DURING THE REFUELING OUTAGE, THE DIESEL GENERATOR FAILED TO START
WHEN THE MUTE SWITCH WAS FLIPPED TO START. THE AIR STARTING SOLENOID WAS STUCK PARTIALLY OPEN,
IT WAS RESTRICTING SUFFICIENT AIR FLOW TO THE AIR STARTING MOTOR. THE VALVE WAS DIRTY. THE AIR
STARTING MOTORS AND THE AIR STARTING SOLENOID WERE DISMANLED AND CLEANED. THE UNIT WAS
SATISFACTORILY TESTED AND RETURNED TO SERVICE. SEMI-ANNUAL INSPECTION OF THESE VALVES WILL BE
INCLUDED IN STATION MAINTENANCE PROCEDURES.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT • CHOW • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • QUAD CITIES 1
(BOM) • PNEUMATIC SYSTEM • SOLENOID • VALVES • ENGINES, INTERNAL COMBUSTION • GENERATORS, DIESEL

111702
CRACKS FOUND IN PERMATEX SPARKERS AND NOZZLES AT QUAD CITIES 1
COMMONWEALTH EDISON CO., CORVUS, IL
5 PWS, LTR W/NO 50-254/76-6 TO NAC OFFICE OF I & E, REGION III, FEB. 20, 1976, JUGRET 50-254, TYPE--BOM, PRU--
WEE, AE--SUT & LUNDT

CAUSE - FLOW INDUCED VIBRATION FATIGUE. DURING THE REFUELING OUTAGE, ONE PERMATEX EXAMINATION
REVEALED AN INDICATION OF CRACKING ON EACH OF 2 SPARKERS. THE LINEAR INDICATION PROPAGATED
THROUGH THE JUNCTION OF BLA-TC-THERMAL SLEEVE WELD. CRACKS CAN BE ATTRIBUTED TO FATIGUE OF THE
SPARKERS CAUSED BY FLOW INDUCED VIBRATION AND COMPOUNDED BY THERMAL STRESS. THE SPARKERS WERE
REPLACED BY ONES OF A MODIFIED DESIGN. NUMEROUS LINEAR INDICATIONS WERE OBSERVED ON ALL 4
NOZZLES. THESE WERE WELDING CUT. MAXIMUM DEPTH INTO THE BASE METAL WAS 0.32 INCH.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, PIPE • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, FATIGUE • FAILURE, DESIGN ERROR • QUAD CITIES 1
(BOM) • VIBRATION • MAIN LOGGING SYSTEM • FLOW • CRACK • PERMATEX • PRESSURE VESSELS • FAILURE, COMMON
MUTE • PIPES AND PIPE FITTINGS

112724
WYTHILL HEAD ACCESS MATCH HAS EXCESSIVE LEAKAGE AT QUAD CITIES
COMMONWEALTH EDISON, CORVUS, IL
4 PWS, LTR W/SUPPLEMENT TO RU 50-254/76-2 TO NAC OFFICE OF I & E, REGION III, MARCH 3, 1976, JUGRET 50-254,
TYPE--BOM, RFG--WEE, AE--SUT & LUNDT

CAUSE - INSUFFICIENT COMPRESSION OF WASKET. A LOCAL LEAK RATE TEST ON THE WYTHILL HEAD ACCESS
MATCH DURING THE REFUELING OUTAGE SHOWED EXCESSIVE LEAKAGE THROUGH THE INNER SEAL. UPON OPENING
THE MATCH, PERSONNEL DETERMINED THAT THERE WAS INSUFFICIENT COMPRESSION OF THE INNER WASKET BY
THE KNIFE EDGE OF THE MATCH WEDGE. THE MATCH BOLTS WERE TIGHTENED. RETESTING SHOWED AN ACCEPTABLE
LEAK RATE. THIS IS A SUPPLEMENT TO AN EARLIER REPORT.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

TEST, LEAK RATE • MOUNTAIN AIR LOCK • REFUELING • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR •
SEAL • QUAD CITIES 1 (BOM) • LEAK RATE

112725
INSTRUMENT LINE CHECK VALVE FAILS TO SEAT AT QUAD CITIES 1
COMMONWEALTH EDISON, CORVUS, IL
4 PWS, LTR W/NO 50-254/76-9 TO NAC OFFICE OF I & E, REGION III, APRIL 16, 1976, JUGRET 50-254, TYPE--BOM, PRU--
WEE, AE--SUT & LUNDT

CAUSE - INSUFFICIENT FLOW DURING REFUELING OUTAGE TESTING OF INSTRUMENT SERVING LINE HIGH FLOW
CHECK VALVES FOR THE RECIRCULATION PUMP SEALS, ONE VALVE WOULD NOT CHECK. NEW INTERFACES WERE
INSTALLED BUT THE VALVE AGAIN FAILED TO CLOSE. IT WAS TESTED SUCCESSFULLY ON THE BEING. NEW
MECHANICAL SEALS HAD JUST BEEN INSTALLED IN THIS PUMP AND LEAKAGE THROUGH THE NEW SEALS WAS NOT
SUFFICIENT TO SEAT THE CHECK VALVE.

AVAILABILITY - NAC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

TEST, LEAK RATE • REFUELING • TEST, SYSTEM OPERABILITY • QUAD CITIES 1 (BOM) • LEAK RATE • VALVE, CHECK •

112700: PLANTINERUP
FAILURE, INHERENT

112205
NUON INTERLOCK SYSTEM FAILS AT QUAD CITIES 1
COMMUNHEALTH EDISON CO., CAROLINA, IL
+ PUS, LTR N/NU 50-254/70-10 TO NRC OFFICE OF I & E, REGION III, APRIL 2, 1970, WCKET 50-254, TYPE--BWR, NRC--
GCE, AE--SUT & LUNDY

CAUSE - DEFECTIVE LATCH AND FRAME. WHILE EXITING THE REACTOR BUILDING THROUGH THE INTERLOCK SYSTEM TO THE TURBINE BUILDING, UPON OPENING THE INTERLOCK DOOR, THE OTHER DOOR OPENED INDICATING FAILURE OF THE INTERLOCK SYSTEM. FAILURE WAS DETERMINED TO BE A DEFECTIVE LATCH AND FRAME. THE LATCH AND FRAME WERE REPAIRED. A DESIGN REVISION OF THESE DOORS IS IN PROGRESS. THE UNIT WAS SHUT DOWN FOR REFUELING AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + CONTAINMENT AIR LOCK + CONTAINMENT INTEGRITY + REFUELING + FAILURE, DESIGN ERROR + QUAD CITIES 1 (BWR)

112401
NUON CH RIMS SERVICE WATER PUMP VALVE LEAKS EXCESSIVELY AT QUAD CITIES 1
COMMUNHEALTH EDISON CO., CAROLINA, IL
+ PUS, LTR N/NU 50-254/70-12 TO NRC OFFICE OF I & E, REGION III, APRIL 9, 1970, WCKET 50-254, TYPE--BWR, NRC--
GCE, AE--SUT & LUNDY

CAUSE - KNIFE EDGE PUMP. DURING THE REFUELING OUTAGE, LEAK RATE TESTING FOUND RMA SYSTEM IS SERVICE WATER VALVE SUBMERSE OVER LEAKED THROUGH A SMALL AREA ALONG THE GASKET. THE GASKET IN THAT AREA HAD GRIED OUT AND THE ADJACENT KNIFE EDGE WAS ADJUSTED. THE KNIFE EDGE WAS POLISHED WITH AN ABRASIVE CLOTH. THE GASKET WAS LUBRICATED WITH A SILICONE LUBRICANT. RETESTING FOUND TO LEAK RATE TO BE WITHIN SPECIFICATIONS.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + TEST, LEAK RATE + REFUELING + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + QUAD CITIES 1 (BWR) + SHUTDOWN COOLING SYSTEM + LEAK RATE + COMPARTMENT + SERVICE WATER SYSTEM + PUMPS

112402
RADWASTE DISCHARGE RATE EXCEEDS LIMIT AT QUAD CITIES 1
COMMUNHEALTH EDISON CO., CAROLINA, IL
+ PUS, LTR N/NU 50-254/70-14 TO NRC OFFICE OF I & E, REGION III, APRIL 9, 1970, WCKET 50-254, TYPE--BWR, NRC--
GCE, AE--SUT & LUNDY

CAUSE - PERSONNEL ERROR. A RADWASTE WATCH FROM THE CHEMICAL WASTE SAMPLE TANK WAS DISCHARGED AT AN INCORRECT RATE RESULTING IN ACTIVITY GREATER THAN 1 A (01-7TH) MICROCURIE/ML ABOVE BACKGROUND. THE CALCULATED RATE WAS A FACTOR OF 10 HIGH. THE SHIFT ENGINEER FAILED TO DETECT THE ERROR WHEN HE CHECKED THE CALCULATION. THE ERROR WAS FOUND DURING A REVIEW BUT THE DISCHARGE WAS COMPLETE. UNIT 1 WAS SHUT DOWN AND UNIT 2 WAS OPERATING AT 1593 MW AT THE TIME.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR + RELEASE RATE + RIVER + WASTE DISPOSAL + WASTE DISPOSAL, LIQUID + QUAD CITIES 1 (BWR) + MATHEMATICAL TREATMENT + RIVER, MISSISSIPPI

112400
MSIV PILOT VALVE TEMPERATURE EXCEEDS LIMIT AT QUAD CITIES 1
COMMUNHEALTH EDISON CO., CAROLINA, IL
+ PUS, LTR N/NU 50-254/70-13 TO NRC OFFICE OF I & E, REGION III, APRIL 13, 1970, WCKET 50-254, TYPE--BWR, NRC--
GCE, AE--SUT & LUNDY

CAUSE - NUCM COOLERS OFF. WHILE OPERATING AT 174 POWER, THE OUTWARD MAIN STEAM ISOLATION VALVE PILOT VALVE TEMPERATURE REACHED 153 F, EXCEEDING THE 150 F LIMIT. THE MSIV NUCM COOLERS HAD BEEN SHUT OFF DURING THE PRE-STARTUP CHECK AND THE SHIFT ENGINEER HAD NOT BEEN INFORMED.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + STEAM + FAILURE, MAINTENANCE ERROR + QUAD CITIES 1 (BWR) + MAIN COOLING SYSTEM + COOLING + TEMPERATURE + COMPARTMENT + VALVES

112149
DIESEL GENERATOR OUT OF SERVICE TOO LONG FOR MAINTENANCE AT QUAD CITIES 1
COMMUNHEALTH EDISON CO., CAROLINA, IL
+ PUS, LTR N/NU 50-254/70-13 TO NRC OFFICE OF I & E, REGION III, APRIL 13, 1970, WCKET 50-254, TYPE--BWR, NRC--

113199 "CONTINUED"
-G.E., AE--SGT & LUNDY

CAUSE - COMMUNICATION PROBLEM. WHILE OPERATING AT 97% POWER, DIESEL GENERATOR 1/4 WAS REMOVED FROM SERVICE FOR 1 HR 35 MIN FOR PREVENTATIVE MAINTENANCE. THIS EXCEEDED THE TEST SPEC TIME LIMIT. A COMMUNICATION PROBLEM BETWEEN THE OPERATING DEPARTMENT AND THE MAINTENANCE DEPARTMENT PROVIDED INEFFECTIVE TIMING TO RETURN IT TO SERVICE WITHIN THE ALLOWABLE TIME. A PRECAUTION WILL BE ADDED TO PROCEDURES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC • FAILURE, OPERATION ERROR • MAINTENANCE AND REPAIR • WAB CITIES 1 (BWR) • COMMUNICATION • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL

113750
SOIL SYSTEM PUMP MALFUNCTIONS AT WAB CITIES 1
COMMONWEALTH EDISON CO., CONROCK, IL
3 PGS, LTR NWD 50-254/70-15 TO NRC OFFICE OF I & E, REGION III, APRIL 29, 1970, JACKET 50-254, TYPE--BWR, RFU--
-G.E., AE--SGT & LUNDY

CAUSE - LEAKING INTERNAL CHECK VALVES. DURING A REFUELING OUTAGE TEST, STANDBY LIQUID CONTROL SYSTEM B HAD DISCHARGE PRESSURE FLUCTUATIONS AND EXCESSIVE PUMP NOISE. INITIAL CAUSE WAS ATTRIBUTED TO SET POINT OFFSET OF THE RELIEF VALVE. FURTHER INVESTIGATION FOUND LEAKING INTERNAL CHECK VALVES IN THE PUMP. THEY WERE RESURFACED AND THE PUMP RETESTED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • REFUELING • TEST, SYSTEM OPERABILITY • SHUTDOWN SYSTEM, SECONDARY • WAB CITIES 1 (BWR) • LEAK • VALVE, CHECK • FAILURE, INHERENT • PUMPS

113751
NUAL INDICATION RECEIVED FOR TWO MSIV'S AT WAB CITIES 1
COMMONWEALTH EDISON CO., CONROCK, IL
2 PGS, LTR NWD 50-254/70-17 TO NRC OFFICE OF I & E, REGION III, APRIL 30, 1970, JACKET 50-254, TYPE--BWR, RFU--
-G.E., AE--SGT & LUNDY

CAUSE - LIMIT SWITCH OUT OF ADJUSTMENT. DURING TESTING WHILE THE REACTOR WAS SHUT DOWN, NUAL INDICATION WAS RECEIVED FOR 2 MSIV'S. BOTH VALVES WERE CLOSED. THE OPEN LIMIT SWITCHES WERE FOUND TO BE OUT OF ADJUSTMENT. ALSO, A MINOR AIR LEAK WAS FOUND IN A VALVE OPERATOR ASSEMBLY. IT WAS CORRECTED BY INSTALLING A NEW SEAL RING.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • WAB CITIES 1 (BWR) • MAIN COOLING SYSTEM - INSTRUMENT, POSITION • VALVES

114425
SET POINT DRIFT IN REACTOR WATER LEVEL SWITCH AT WAB CITIES 1
COMMONWEALTH EDISON CO., CONROCK, IL
2 PGS, LTR NWD 50-254/70-17 TO NRC OFFICE OF I & E, REGION III, MAY 27, 1970, JACKET 50-254, TYPE--BWR, RFU--
-G.E., AE--SGT & LUNDY

CAUSE - INSTRUMENT DRIFT. DURING A LOW REACTOR WATER LEVEL TEST WHILE OPERATING AT 97% POWER, THE SWITCH TRIPPED AT 9.0 INCHES WHICH EXCEEDED THE 8.0 INCH LIMIT. THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE SWITCH WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • WAB CITIES 1 (BWR) • SET POINT • DRIFT • PRESSURE VESSELS • SENSORS, LEVEL

115509
HYDRAULIC SHOCK ABSORBER FOUND INOPERABLE AT WAB CITIES 1
COMMONWEALTH EDISON CO., CONROCK, IL
2 PGS, LTR NWD 50-254/70-18 TO NRC OFFICE OF I & E, REGION III, JUNE 21, 1970, JACKET 50-254, TYPE--BWR, RFU--
-G.E., AE--SGT & LUNDY

CAUSE - MISALIGNMENT AND WEAR OF SEALS. DURING ROUTINE SHOCKER SURVEILLANCE WITH THE UNIT SHUT DOWN, A SHOCKER SHOCKER ON THE AIR TO FUEL POOL CROSS-TIE LINE WAS FOUND TO HAVE AN EMPTY OIL RESERVOIR DUE TO A LEAKING RESERVOIR SHAFT SEAL. THIS RESULTED FROM MISALIGNMENT AND WEAR OF THE SEALS AND O-RINGS WHICH WERE OF THE ORIGINAL DESIGN. SHOCKER INTERNALS HAVE BEEN REPLACED WITH A SHOCKER REPAIR KIT WHICH FEATURES NEW TYPE OF SEALS AND O-RINGS MADE OF ETHYLENE PROPYLENE.

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125504 CONTINUOUS
MULTIPLICATION • POWER ABSENCE • FAILURE, DESIGN ERROR • OSCILLATION • WIND CITIES 1 (ONR) • SUPPORT STRUCTURE • SURVEILLANCE PROGRAM • OPERA • REAR • PIPES AND PIPE FITTINGS

125872
MPC1 MOTOR SPEED CHANGER FAILS TO OPERATE AT WIND CITIES 1
COMMUNICABLE EDISON CO., COLUMBIA, IL
C PWS, LTR W/NO 50-25470-17 TO NRC OFFICE OF I & E, REGION III, JULY 1, 1970, DUCRET 50-254, TYPE--BWR, NRC--
WEEK, AE--SGT & LUNNY

CAUSE - INADEQUATE LUBRICATION. WHILE OPERATING AT 374 POWER, MPC1 MOTOR SPEED CHANGER FAILED TO OPERATE DURING TESTING. IT WOULD NOT MOVE OFF THE LOW SPEED STOP BECAUSE ITS LUBRICATION WAS INSUFFICIENT. THE MAINTENANCE FREEZE THE LUBRICATION. INSPECTION REVEALED NO MECHANICAL ABNORMALITY OR EXCESSIVE WEAR. WEAR WAS DUE TO INADEQUATE LUBRICATION. A LUBRICATION SCHEDULE HAS BEEN ESTABLISHED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • WIND CITIES 1 (ONR) • LUBRICATION • MOTORS • MPC1

125920
CONTAINMENT SPRAY VALVE INOPERABLE AT WIND CITIES 1
COMMUNICABLE EDISON CO., COLUMBIA, IL
C PWS, LTR W/NO 50-25470-20 TO NRC OFFICE OF I & E, REGION III, JULY 29, 1970, DUCRET 50-254, TYPE--BWR, NRC--
WEEK, AE--SGT & LUNNY

CAUSE - MOTOR MOUNTING BOLTS LOOSE. WHILE THE REACTOR WAS SHUT DOWN FOR GENERATOR MAINTENANCE, A LOSS OF INDICATION AND OPERABILITY OCCURRED IN CONTAINMENT SPRAY LOOP & OUTBOARD VALVE. AFTER INSULATION WAS RESTORED, THE VALVE BROKE TRIPPER DURING SUBSEQUENT CHECKS. LOOSE MOUNTING BOLTS MAY HAVE CAUSED THE VALVE LIMITING MOTOR INOPERABLE. THE BOLTS WERE TIGHTENED AND THE VALVE WAS SATISFACTORILY OPERATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • FASTENER • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • WIND CITIES 1 (ONR) • VALVE OPERATORS • MOTORS • VALVES

126000
CRACK FOUND IN CONTAINMENT PURGE SYSTEM SPOOL PIECE AT WIND CITIES 1
COMMUNICABLE EDISON CO., COLUMBIA, IL
C PWS, LTR W/NO 50-25470-25 TO NRC OFFICE OF I & E, REGION III, AUG 12, 1970, DUCRET 50-254, TYPE--BWR, NRC--
WEEK, AE--SGT & LUNNY

CAUSE - UNHYDROLYZED LIQUID NITROGEN. WHILE PREPARING FOR CONTAINMENT DEINERTING WITH THE REACTOR AT 800 POWER, A CRACK WAS NOTICED ON THE SPOOL PIECE BETWEEN THE VENTUREL AND 2 SUPPRESSION CHAMBER PURGE VALVES. TESTS DISCOVERED VALVE SEAT DAMAGE ON 3 VALVES. THE POSTULATED INTRODUCTION OF UNHYDROLYZED LIQUID NITROGEN TO THE SPOOL PIECE AND VALVE SEATS CAUSED THE IN FAILURE. THE VALVE, WERE REPAIRED AND THE SPOOL PIECE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT PURGE • FAILURE, PIPE • NITROGEN • CRYOGENICS • WIND CITIES 1 (ONR) • LEAK • LIQUID • CRACK • VALVES • PIPES AND PIPE FITTINGS

126703
TWO CONTROL RODS WITHDRAWN SIMULTANEOUSLY DURING ROD DRIVE REPLACEMENT AT WIND CITIES 1
COMMUNICABLE EDISON CO., COLUMBIA, IL
C PWS, LTR W/NO 50-25470-26 TO NRC OFFICE OF I & E, REGION III, AUG 7, 1970, DUCRET 50-254, TYPE--BWR, NRC--
WEEK, AE--SGT & LUNNY

CAUSE - FAILURE TO FOLLOW PROCEDURES. WITH THE UNIT SHUT DOWN IN REFUEL MODE, CONTROL ROD DRIVE REPLACEMENT WAS TO BE PERFORMED ON 5 RODS CONSECUTIVELY AND NOT SIMULTANEOUSLY ON ANY 2 RODS. OPERATING PERSONNEL DID NOT FOLLOW ESTABLISHED PROCEDURES. TWO RODS WERE WITHDRAWN SIMULTANEOUSLY. THE MODE SWITCH WAS IN STARTUP AND THE STATUS WAS SUCH THAT A UNIT STARTUP COULD HAVE COMMENCED. HOWEVER, SHUTDOWN MANUAL WAS MAINTAINED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR • MAINTENANCE AND REPAIR • PROCEDURES AND MANUALS • SHUTDOWN MANUAL • REACTOR CONTROL • WIND CITIES 1 (ONR) • CONTROL RODS

117175

117175 *CONTINUED*

AND MATH MINIMIZER OCCURS IMPERABLE AT WIND CITIES 1

COMMONWEALTH EDISON CO., CORDOVA, IL

2 PGS, LTR N/A 50-25470-20 TO NRC OFFICE OF I & E, REGION III, AUG. 20, 1970, SUBJECT 50-254, TYPE--BWR, MW--

W.E., AE--SGT & LUNDY

CAUSE - DEFECTIVE POWER SUPPLY. A RSC MATH MINIMIZER MULTIPLE OUTPUT DISTRIBUTION ERROR WAS DETECTED BY THE RSC MATH MINIMIZER DURING WITHDRAWAL OF THE FIRST 22 CATHODIC ARCS DURING A UNIT STARTUP. CATHODIC PUD BLANKS WERE NOT RECEIVED AND THE RSC MATH MINIMIZER DISPLAY OF THE SIXTH RSC DID NOT CHANGE FOR SUBSEQUENT RSC WITHDRAWALS. A DRIFTING POWER SUPPLY RESULTED IN BUREAU GUY WIRE RUNS ON A RELAY BEING RESPONSIBLE FOR SUPPLYING RSC BLANKS IN THE EVENT OF A MULTIPLE OUTPUT DISTRIBUTION ERROR. THE POWER SUPPLY WAS REPLACED AND THE RELAY BOARD REPAIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • CONTROL RSC INTERACTION • CONTROL SYSTEM • INSTRUMENT, PROTECTIVE • REACTOR PROTECTION SYSTEM • ELECTRIC POWER • WIND CITIES 1 (BWR) • CABLES AND CONNECTIONS • FAILURE, ELEMENT • REACTOR STARTUP • CONTROL RSC DRIVES

117003

OPERABILITY TEST ON CONTAINMENT COOLING LOOP PERFORMED ON MAIN UNIT AT WIND CITIES 1

COMMONWEALTH EDISON CO., CORDOVA, IL

2 PGS, LTR N/A 50-25470-22 TO NRC OFFICE OF I & E, REGION III, AUG. 20, 1970, SUBJECT 50-254, TYPE--BWR, MW--

W.E., AE--SGT & LUNDY

CAUSE - SUPERVISOR ERROR. WHILE RETURNING RSC SERVICE WATER PUMP TO SERVICE WITH THE UNIT AT 034 POWER, IT WAS DISCOVERED THAT THE OPERABILITY TESTING ON THE CONTAINMENT COOLING LOOP REQUIRED PRIOR TO RETURNING THE PUMP FROM SERVICE WAS PERFORMED ON THE MAIN UNIT. THE SUPERVISOR ON DUTY MISSED INSTRUCTIONS TO THE UNIT 2 OPERATOR RESULTING IN THE TESTS BEING PERFORMED ON UNIT 2, NOT UNIT 1.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TESTING • FAILURE, ADMINISTRATIVE CONTROL • WIND CITIES 1 (BWR) • CONTAINMENT COOLING SYSTEM • SERVICE WATER SYSTEM

110193

DIESEL GENERATOR OUT OF SERVICE TOO LONG DURING INSPECTION AT WIND CITIES 1

COMMONWEALTH EDISON CO., CORDOVA, IL

2 PGS, LTR N/A 50-25470-23 TO NRC OFFICE OF I & E, REGION III, AUG. 22, 1970, SUBJECT 50-254, TYPE--BWR, MW--

W.E., AE--SGT & LUNDY

CAUSE - UNWARE OF TIME LIMIT. WHILE OPERATING AT 208 POWER, DIESEL GENERATOR 1/2 WAS OUT OF SERVICE FOR THE MONTHLY INSPECTION FOR 2 HOURS 25 MINUTES, WHICH IS 55 MINUTES LONGER THAN THE TEST SPEC LIMIT. THE MAINTENANCE MAN WAS NOT AWARE OF THE TIME LIMIT. THE PROCEDURE WILL BE REVISED TO INCLUDE THE TIME LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • WIND CITIES 1 (BWR) • COMMUNICATION • ENGINES, INTERNAL COMBUSTION • GENERATION, DIESEL

117001

SET POINT DRIFT IN VACUUM BREAKER PRESSURE SWITCH AT WIND CITIES 1

COMMONWEALTH EDISON CO., CORDOVA, IL

2 PGS, LTR N/A 50-25470-24 TO NRC OFFICE OF I & E, REGION III, AUG. 20, 1970, SUBJECT 50-254, TYPE--BWR, MW--

W.E., AE--SGT & LUNDY

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE REACTOR BUILDING TO SUPPRESSION CHAMBER VACUUM BREAKER PRESSURE SWITCHES WITH THE REACTOR SHUT DOWN, A PRESSURE SWITCH TRIPPED AT 0.250 PSI WHICH EXCEEDS THE 0.5 PSI LIMIT. THE CAUSE WAS INSTRUMENT DRIFT. THE STATIC-41400, MODEL NO. 1222A015-V, RANGE +/- 40 PSI, WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D.C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

INSTRUMENT CALIBRATION • PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • WIND CITIES 1 (BWR) • SET POINT • DRIFT • SENSORS, PRESSURE

110194

POSITION INDICATION ON REACTOR WATER CLEANUP SYSTEM VALVE LOST AT WIND CITIES 1

COMMONWEALTH EDISON CO., CORDOVA, IL

3 PGS, LTR N/A 50-25470-20 TO NRC OFFICE OF I & E, REGION III, SEPT. 7, 1970, SUBJECT 50-254, TYPE--BWR, MW--

W.E., AE--SGT & LUNDY

CAUSE - RELAY SHORTED OUT. WHILE OPERATING AT 728 POWER, POSITION INDICATION WAS LOST ON A

110194 CONTINUED

REAL TIME WATER CLEANUP SYSTEM ISOLATION VALVE. A PRIMARY CONFINEMENT ISOLATION DELAY WAS SPOTED LTO. THIS THEN BUREAU UP THE CONTROL TRANSDUCERS. BOTH DEFECTIVE UNITS WERE REPLACED WITHIN 150 MINUTES. THE VALVE WAS TESTED AND RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION + FAILURE, INSTRUMENT + COOLANT PURIFICATION SYSTEM + WAND CITIES 1 (FORM) + INSTRUMENT, POSITIVE + FAILURE, INSTRUMENT + VALVES + RELAYS + TRANSDUCERS

110155

PRIMARY CONTAINMENT WATER CONCENTRATION EXCEEDS LIMIT AT WAND CITIES 1

COMMONWEALTH EDISON CO., CHICAGO, IL

3 PGS, LTR NRC 50-254/70-29 TO NRC OFFICE OF I & E, REGION III, SEPT. 9, 1970, Docket 50-254, TYPE--BWR, NRC--WCC, AE--SUT & LUNDY

CAUSE - DRIFT IN WATER ANALYZER. WITH THE REACTOR AT ONE POWER, NORMAL SURVEILLANCE OF THE PRIMARY CONTAINMENT WATER CONCENTRATION REVEALED AN INCREASE FROM 4.28 TO 4.06 IN 24 HOURS. A SAMPLE FROM THE WATERILL INDICATED 5.7. WATER WHICH IS IN EXCESS OF THE 5.08 LIMIT. CONCENTRATION WAS REDUCED TO BELOW THE LIMIT BY PURGING IN 2.3 HOURS. THE WATER ANALYZER WAS RECALIBRATED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT + WATER + MONITOR, AIR + FAILURE, INSTRUMENT + MONITOR + WAND CITIES 1 (FORM) + CONTAINMENT ATMOSPHERE + CONCENTRATION + DRIFT + FAILURE, INSTRUMENT + TCAUS

110001

UPDATE REPORT ON WITHDRAWAL OF THE CONTROL RODS DURING MAINTENANCE AT WAND CITIES 1

COMMONWEALTH EDISON CO., CHICAGO, IL

3 PGS, LTR NRC 50-254/70-21 TO NRC OFFICE OF I & E, REGION III, SEPT. 29, 1970, Docket 50-254, TYPE--BWR, NRC--WCC, AE--SUT & LUNDY

CAUSE - OPERATION ERROR. FOLLOWING MAINTENANCE TO REPLACE THE ROD DRIVE WHILE THE REACTOR WAS SHUT DOWN, LAD L-00 WAS VENTED AND TIED. THE SHIFT FOREMAN THEN INSTRUCTED THE CONTROL ROOM OPERATOR TO LEAVE THE CAD FULLY INSERTED. THE OPERATOR INADVERTENTLY LEFT IT FULLY WITHDRAWN. CAD A-10 COULD NOT BE WITHDRAWN FOR MAINTENANCE DUE TO A ROD BLOCK. THERE WAS A DRIFT ALARM ON CAD F-13 THAT COULD CAUSE A ROD BLOCK. KNOWING THIS, THE SHIFT ENGINEER INSTRUCTED THE FOREMAN TO HAVE THE OPERATOR PUT THE MODE SWITCH FROM REFUEL TO STARTUP TO WITHDRAW CAD A-10. THE NEXT DAY IT WAS DISCOVERED THAT 2 RODS WERE FULLY WITHDRAWN. BOTH WERE IMMEDIATELY INSERTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WAND CITIES 1 (FORM) + REACTOR CONTROL + CONTROL RODS + SHUTDOWN MAINTENANCE + FAILURE, OPERATION ERROR + MAINTENANCE AND REPAIR

110109

CONTAINMENT SPRAY VALVE BREAKER TRIPS AT WAND CITIES 1

COMMONWEALTH EDISON CO., CHICAGO, IL

3 PGS, LTR NRC 50-254/70-20 TO NRC OFFICE OF I & E, REGION III, SEPT. 30, 1970, Docket 50-254, TYPE--BWR, NRC--WCC, AE--SUT & LUNDY

CAUSE - EXCESS GREASE IN OPERATOR. WHILE OPERATING AT ONE POWER, THE CIRCUIT BREAKER OF CONTAINMENT SPRAY LUMP A VALVE TRIPPED AT THE END OF THE CLOSURE STROKE DURING TESTING. AN EXCESSIVE GREASE LUBRICANT LEVEL RESULTED IN GREASE COMPACTION AND AN OVERLOAD CONDITION ON THE VALVE OPERATOR, THEREBY CAUSING THE CIRCUIT BREAKER TO TRIP. THE EXCESSIVE GREASE WAS REMOVED. THE ACTUAL FILL LEVEL WAS REDUCED PRIOR TO REASSEMBLY. THE VALVE WAS CYCLED 3 TIMES SUCCESSFULLY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT SPRAY + FAILURE, EQUIPMENT + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR + WAND CITIES 1 (FORM) + LUBRICATION + VALVE OPERATORS + VALVES

110170

ERRATA FLAW IN CRITICAL POWER RATIO LIMIT FOR ABNORMAL TRANSIENT AT WAND CITIES 1

COMMONWEALTH EDISON CO., CHICAGO, IL

3 PGS, LTR NRC 50-254/70-21 TO NRC OFFICE OF I & E, REGION III, OCT. 4, 1970, Docket 50-254, TYPE--BWR, NRC--WCC, AE--SUT & LUNDY

CAUSE - WRONG CONCLUSIONS. THE STATION WAS INFORMED BY US OF AN ERROR IN THE RELUAD-2 LICENSING SUBMITTAL IN DETERMINING THE MAXIMUM CHANGE IN THE CRITICAL POWER RATIO DUE TO AN ABNORMAL OPERATING TRANSIENT. THE ACTUAL TRANSIENT ANALYSIS WERE CORRECT BUT THE WRONG CONCLUSIONS WERE DRAWN IN DETERMINING THE OPERATING LIMIT FOR MINIMUM CPM. ACD BLOCK MONITOR TRIP LEVEL HAS BEEN CORRECTED FROM 1104 TO 1070. A TURBINE TRIP WITHOUT STEAM BYPASS ALLEVIANT WAS USED FOR LIMITING CONDITIONS WHEN A ROD WITHDRAWAL ERROR SHOULD HAVE BEEN USED.

119170 *CONTINUED*
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

*ACCIDENT ANALYSIS * ACCIDENT * ADMINISTRATIVE CONTROL * REACTOR TRANSIENT * POWER DISTRIBUTION * FAILURE, DESIGN ERROR * WJWC CITIES 1 (OWN) * TRANSIENT * CONTROL ROOM

119171
 MAIN CHIMNEY AND REACTOR BUILDING SAMPLE SYSTEM MALFUNCTION AT WJWC CITIES 1
 COMMONWEALTH EDISON CO., CHICAGO, IL
 4 PGS, LTR W/NO 50-254/70-22 TC NRC OFFICE OF I & E, REGION III, OCT. 12, 1970, DUCRET 50-254, TYPE--BWR, RFU--
 W.E., AE--SGT & LUNDY

CAUSE - SAMPLE PUMP FLEXIBLE HOSE FAILURE. A REVIEW OF RECENT PROBLEMS DETERMINED THAT THE MAIN CHIMNEY MONITORING SYSTEM AND THE REACTOR BUILDING VENT SAMPLE SYSTEMS HAD NOT BEEN FUNCTIONING PROPERLY FOR A PERIOD OF TIME. THE FLEXIBLE SUCTION HOSES ON THE SAMPLE PUMPS CRACKED AS A RESULT OF DAILY FLEXING DURING THE REMOVING OF SAMPLES, CARTRIDGES, AND FILTERS. THE HOSES WERE REPLACED. PROCEDURES WERE MODIFIED TO INCLUDE LEAK CHECKING AFTER A NEW ISOLINE CARTRIDGE AND PARTICULATE FILTER IS INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT * MONITOR, STACK & VENTILATION SYSTEM * SAMPLING * STACK * POLLUTION * MONITORING SYSTEM, RADIATION * WJWC CITIES 1 (OWN) * LEAK * FAILURE, INHERENT * WEAR * PIPES AND PIPE FITTINGS

120994
 UPDATE REPORT ON RW NORTH MINIMIZER MALFUNCTION AT WJWC CITIES 1
 COMMONWEALTH EDISON CO., CHICAGO, IL
 8 PGS, LTR W/UPDATE RPT TC NO 50-254/70-20 TO NRC OFFICE OF I & E, REGION III, OCT. 30, 1970, DUCRET 50-254, TYPE--BWR, RFU--
 W.E., AE--SGT & LUNDY

CAUSE - DIGIT ERROR/ERROR IN LOADING. DURING CONTROL ROD WITHDRAWAL IN ANTICIPATION OF STARTUP, WITHDRAWAL WAS HALTED AFTER THE 50TH ROD BECAUSE THE ROD NORTH MINIMIZER WAS STILL DISPLAYING THE 0TH ROD. THE REACTOR WAS THEN SHUT DOWN FOR ANOTHER REASON. A ISSUE IN THE ROD POSITION/ERROR MESSAGE OUTPUT WINDOW DISPLAY CIRCUITRY HAD FAILED. IT WAS REPLACED. THE TECHNICIAN REINITIALIZED THE ROD WITH THE MAIN ROD SEQUENCE LOADED. IT WAS IDENTICAL TO THE CORRECT ONE FOR THE FIRST 6 GROUPS, REVERSE ORDER FOR 7 AND 8 AND DIFFERENT FOR 9 UP. IT WAS A SAFE SEQUENCE. THE ERROR WAS NOT DISCOVERED UNTIL GROUP 9 WAS STARTED. THE ROD WAS THEN BYPASSED AND AN EXTRA OPERATOR USED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WJWC CITIES 1 (OWN) * CONTROL SYSTEM * CONTROL ROD DRIVES * INSTRUMENT, CONTROL * FAILURE, COMPONENT * FAILURE, MAINTENANCE ERROR * REACTOR CONTROL * REACTOR STARTUP

120232
 NRC SYSTEM PUMP FAILS AT WJWC CITIES 1
 COMMONWEALTH EDISON CO., CONDOVA, IL
 7 PGS, LTR W/NO 50-254/70-33 TC NRC OFFICE OF I & E, REGION III, NOV. 10, 1970, DUCRET 50-254, TYPE--BWR, RFU--
 W.E., AE--SGT & LUNDY

CAUSE - PROCEDURAL DEFICIENCY. WHILE PERFORMING ROUTINE REACTOR CORE ISOLATION COOLING SYSTEM PUMP TESTING WITH THE REACTOR AT 94% POWER, THE PUMP FAILED TO ACHIEVE THE REQUIRED FLOW AND PRESSURE. TWO OF THE 5 STAGES OF THE PUMP WERE FOUND TO BE SEVERELY DAMAGED. PAULOWITZ FOR STARTING STATES THAT THE TEST RETURN VALVE BE OPEN PRIOR TO ROLLING THE NRC TUNING (NO RESISTANCE TO FLOW). THE PUMP COULD PUMP ITSELF OUT AND THE RESULTING WATER SLUG WOULD HAVE JOLTED THE 2 IMPELLERS LOOSE. CONTINUED RUNNING DAMAGED THEM. THE PUMP WAS SENT OUT FOR REBUILDING. A NEW ROTATING ELEMENT WAS ORDERED. THE PUMP WAS RETURNED TO SERVICE IN 12 DAYS. STARTING PROCEDURES WERE REVISED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WJWC CITIES 1 (OWN) * PUMPS * NRC * DAMAGE * FAILURE, EQUIPMENT * FAILURE, ADMINISTRATIVE CONTROL * TEST, SYSTEM OPERABILITY * PROCEDURES AND MANUALS * HYDRAULIC EFFECT

120439
 TWO ELECTROMAGNETIC RELIEF VALVES FAIL TO OPEN AT WJWC CITIES 1
 COMMONWEALTH EDISON CO., CONDOVA, IL
 4 PGS, LTR W/NO 50-254/70-34 TC NRC OFFICE OF I & E, REGION III, NOV. 14, 1970, DUCRET 50-254, TYPE--BWR, RFU--
 G.E., AE--SGT & LUNDY

CAUSE - STEAM LEAKAGE. DURING STARTUP FOR UNIT 2, THE ELECTROMAGNETIC RELIEF VALVES WERE TESTED. TWO FAILED TO OPEN. THE UNIT 1 RELIEF VALVES WERE THEN TESTED WHILE OPERATING AT 77% POWER. TWO FAILED TO OPEN. THE REACTOR WAS SHUT DOWN. FAILURE WAS CAUSED BY EXCESSIVE STEAM LEAKAGE INTO THE AREA BELOW THE VALVE DISC. THIS PREVENTED VENTING THIS AREA WHEN THE PILOT VALVE OPENED. IN ONE FAILED VALVE, THE DISC RETAINER LOCK ARM AND LOCK SCREW WERE MISSING AND THEREAS OF THE

120639 CONTINUED

LEAK ACTUATOR WERE BURNED. THE VALVE WAS REPLACED WITH A SPARE. THE OTHER VALVE WAS OVERHAULED. PIPING KLENS AND VALVE WELD WOULD WERE REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

VALUES • OPERATING RELIEF • OPERA COOLING SYSTEM • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • REACTOR SHUTDOWN • FAILURE, CUMMINS MECH • FAILURE, INHERENT • WARD CITIES 1 (HWR)

120702

NRC RECEIVING COMMON SCTION HEADERS FLOWING TO BE AIR-LOCKED AT WARD CITIES 1

COMMUNHEALTH EUISON CO., CAROLINA, IL

2 PGS, LTR W/NO 50-254/70-30 TO NRC OFFICE OF I & E, REGION III, DEC. 30, 1970, DUCRET 50-254, TYPE--BWR, NRC--W. E., AE--SUT & LUNDY

CAUSE - PROCEEDURAL DEFICIENCY. WHEN AWR SERVICE WATER PUMP 1A WAS STARTED WITH THE REACTOR AT 90% POWER, IT FAILED TO INDICATE ANY FLOW OR PRESSURE. THEN WHILE TESTING DGL, IT TRIPPED ON HIGH ENGINE TEMPERATURE. INVESTIGATION REVEALED THAT THE COMMON SCTION HEADER SERVING BOTH SYSTEMS WAS PRESSURIZED WITH AIR. THE HEADER WAS VENTED AND BOTH RETURNED TO SERVICE. AN AIR LINE WAS FOUND TO BE CONNECTED TO AWR SERVICE WATER PUMP 1A CASING. IT MAY BE USED TO PRESSURIZE THE LUBRICATING OIL THE PUMP PACKING TO FACILITATE PACKING REMOVAL. AIR MAY LEAKED THROUGH THE PUMP SCTION VALVE AND MAY PRESSURIZED THE COMMON HEADER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WARD CITIES 1 (HWR) • PUMPS • SHUTDOWN COOLING SYSTEM • AIR • PIPES AND PIPE FITTINGS • FAILURE, MAINTENANCE • DRAIN • PROCEDURES AND MANUALS

120730

NRC NORTH MINIMIZER NONCONSERVATIVE AT WARD CITIES 1 AND 2

COMMUNHEALTH EUISON CO., CAROLINA, IL

2 PGS, LTR W/NO 50-254/70-35 TO NRC OFFICE OF I & E, REGION III, DEC. 10, 1970, DUCRETS 50-254/205, TYPE--BWR, NRC--W. E., AE--SUT & LUNDY

CAUSE - MISUNDERSTANDING OF REQUIREMENT. TECH SPEC STATES THAT THE NRC NORTH MINIMIZER SHALL BE OPERABLE BELOW 10% POWER. HOWEVER, THE GENERIC ANALYSIS FOR THE ADO UNOP ACCIDENT FOR BWR 3'S STATES THAT THE AWR SHOULD BE OPERABLE BELOW 20% POWER. WE PROPOSED THE GENERIC BARRER POSITION WITHHOLDING SEQUENCES AND AT THE SAME TIME RAISED THE AWR OPERABILITY REQUIREMENTS TO 20%. SINCE WARD CITIES DID NOT USE THE BPNs, THEY DID NOT REALIZE THAT THE CHANGE IN AWR OPERABILITY WAS REQUIRED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WARD CITIES 1 (HWR) • WARD CITIES 2 (HWR) • PROCEDURES AND MANUALS • INSTRUMENT, PROTECTIVE • CONTROL SYSTEM • CONTROL ROD DRIVES • FAILURE, ADMINISTRATIVE CONTROL • ACCIDENT ANALYSIS • ACCIDENT, CONTROL ROD DROPOUT • REACTIVITY EFFECT

117002

ERRORS FOUND IN ECCS ANALYSIS AT WARD CITIES 1 AND 2

COMMUNHEALTH EUISON CO., CAROLINA, IL

2 PGS, LTR W/NO 50-254/70-27 TO NRC OFFICE OF I & E, REGION III, AUG. 19, 1970, DUCRETS 50-254/205, TYPE--BWR, NRC--W. E., AE--SUT & LUNDY

CAUSE - SEVERE CONSERVATISMS IN MODEL. AN ECCS ANALYSIS PERFORMED BY WE RESULTED IN A CALCULATED PEAK CLAW TEMPERATURE GREATER THAN 2200 F FOR REDUCED CORE FLOWS. THE APPARENT CAUSE IS THE SEVERITY OF CONSERVATISMS ASSOCIATED WITH USING THE APPROVED APPENDIX K ECCS EVALUATION MODEL AT LESS THAN RATED CORE FLOWS. AS AN INTERIM CORRECTIVE ACTION, A 5% REDUCTION IN MAXIMUM AVERAGE PLANNED LINEAR HEAT GENERATION RATE LIMITS WAS IMPOSED FOR CORE FLOWS LESS THAN 45%.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

ACCIDENT ANALYSIS • CLADDING • ACCIDENT, LOSS OF COOLANT • ANALYTICAL MODEL • MUT CHANNEL ANALYSIS • FAILURE, DESIGN ERROR • WARD CITIES 1 (HWR) • FLOW • FUEL ROD • WARD CITIES 2 (HWR) • TEMPERATURE

120770

ERRORS DISCOVERED IN CORE INPUTS TO ECCS ANALYSIS AT WARD CITIES 1 AND 2

COMMUNHEALTH EUISON CO., CAROLINA, IL

2 PGS, LTR W/NO 50-254/70-30 TO NRC OFFICE OF I & E, REGION III, DEC. 20, 1970, DUCRETS 50-254/205, TYPE--BWR, NRC--W. E., AE--SUT & LUNDY

CAUSE - INCORRECTLY APPLIED DATA. ON 12/3/70, WE NOTIFIED COMMUNHEALTH EUISON THAT NRC HAD DISCOVERED ERRORS IN THE ECCS APPENDIX K ANALYSIS. ON 12/15/70, WE STATED THAT PRELIMINARY CONSEQUENCE OF THE INPUT ERRORS WAS A 4% REDUCTION IN THE MAXIMUM AVERAGE PLANNED LINEAR HEAT GENERATION RATE CURVES. WE INCORRECTLY APPLIED DATA FOR THEIR ANALYSIS. BOTH UNITS OPERATE CONSIDERABLY BELOW THE PLANNED LIMITS, THEREFORE, THE CONSEQUENCES OF THIS OCCURRENCE ARE

120770 *CONTINUED*

MINIMAL. THE CURVES USED BY THE PROCESS COMPUTER WERE REDUCED BY 48 FOR 60TH UNITS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WANO CITIES 1 (BWR) + WANO CITIES 2 (BWR) + ACCIDENT ANALYSIS + ACCIDENT, LOSS OF COOLANT + HOT CHANNEL ANALYSIS + HOT CHANNEL + FAILURE, DESIGN ERROR + MODIFICATION + MATHEMATICAL TREATMENT + EMERGENCY COOLING CONSIDERATIONS

123459

EMPLOYEE RECEIVES OVEREXPOSURE AT WANO CITIES 1 AND 2

COMMONWEALTH EDISON CO., CORONA, IL

4 PGS, LTR W/NO 50-203/75-30 TO NRC OFFICE OF 1 & E, APRIL 29, 1970, JUCLET 50-203, TYPE--BWR, NRC--600, AE--SGT & LUNDY

CASE - FAILURE TO LOG DOSIMETER EXPOSURES. WHILE REVIEWING THE PERSONNEL EXPOSURE REPORT FOR THE PERIOD 1/12/70 TO 3/21/70, IT WAS DISCOVERED THAT A MAINTENANCE FIREMAN HAD RECEIVED A WHOLE BODY EXPOSURE OF 3.000 REM FOR THE PERIOD. FOR THE SAME PERIOD, FILM BADGE INDICATED 2.900 REM. FILM BADGE READING FOR THE NEXT 2 WEEKS INDICATED 0.070 REM. INVESTIGATION FOR THE DIFFERENCES AMONG THE OVEREXPOSURES SHOWED THAT THE EMPLOYEE HAD FAILED TO LOG HIS PERSONAL DOSIMETER READINGS WHEN NOT WORKING UNDER TIMEKEEPING SURVEILLANCE. ALSO, HE WORE A TEMPORARY BADGE DURING THIS PERIOD. THIS READING WAS NOT ADDED TO OTHER FILM READINGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WISIDNEY + MAINTENANCE AND REPAIR + PERSONNEL EXPOSURE, RADIATION + FAILURE, ADMINISTRATIVE CONTROL + WANO CITIES 1 (BWR) + RADIATION EXPOSURE, RECORD KEEPING + WANO CITIES 2 (BWR)

129452

RECIRC PUMP DISCHARGE VALVE BYPASS PIPING REMOVED AT WANO CITIES 2

COMMONWEALTH EDISON CO., CORONA, IL

2 PGS, LTR W/NO 50-203/75-30 TO NRC OFFICE OF NUCLEAR REACTOR REGULATION, JAN. 9, 1970, JUCLET 50-203, TYPE--BWR, NRC--600, AE--SGT & LUNDY

CASE - PIPE CRACKING. RECIRCULATION PUMP DISCHARGE VALVE BYPASS PIPE WAS REMOVED AS A RESULT OF CRACK INDICATIONS IN ONE UPPER WELD-O-LET. THE CRACKING WAS REPAIRED EARLIER. THE EXISTING BYPASS PIPING AND VALVE WERE REMOVED. SPOOL PIECES, 10 INCHES LONG WITH CAPS ON THE OUTWARD END, WERE INSTALLED AT BOTH WELD-O-LETS ON EACH RECIRCULATION LOOP. A NEW WELDING SCHEME WAS DEVELOPED TO ELIMINATE THE CONTROL AND INTERLOCK FUNCTION OF THE REMOVED BYPASS VALVES AND TO PROVIDE FOR A RECIRCULATION PUMP TRIP UPON GREATER THAN LOS CLOSURE OF THE PUMP DISCHARGE VALVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM + FAILURE, PIPE + WELDS + MODIFICATION + MAIN COOLING SYSTEM + FLOW, RECIRCULATION + BYPASS + WANO CITIES 2 (BWR) + CRACK + PIPES AND PIPE FITTINGS

110315

ACIC TRIP THROTTLE VALVE MECHANISM FAILS TO RELATCH AFTER TEST AT WANO CITIES 2

COMMONWEALTH EDISON CO., CORONA, IL

4 PGS, LTR W/NO 50-203/75/47 TO NRC OFFICE OF 1 & E, REGION III, JAN. 16, 1970, JUCLET 50-203, TYPE--BWR, NRC--600, AE--SGT & LUNDY

CASE - REPLACEMENT TAPPET TOO LONG. WITH THE REACTOR AT 90% POWER, THE ACIC TURBINE TRIP THROTTLE VALVE MECHANICAL OPERATION WOULD NOT RELATCH AFTER A SUCCESSFUL ACIC TEST. THE NEW TAPPET, WHICH HAD BEEN INSTALLED IN THE TAPPET/BALL ASSEMBLY EARLIER, WAS LONGER THAN THE ORIGINAL. THIS RESULTED IN BINDING IN THE MECHANICAL TRIP. THE TAPPET WAS SHORTENED 0.5 INCH TO MAKE IT THE SAME LENGTH AS THE ORIGINAL PIECE. THE TURBINE TRIP THROTTLE VALVE MECHANISM THEN OPERATED SATISFACTORILY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT + FAILURE, FABRICATION ERROR + TEST, SYSTEM OPERABILITY + TURBINE + WANO CITIES 2 (BWR) + ACIC

110340

HIGH DIFFERENTIAL PRESSURE ACROSS SSGT TRAIN AT WANO CITIES 2

COMMONWEALTH EDISON CO., CORONA, IL

4 PGS, LTR W/NO 50-203/75-40 TO NRC OFFICE OF 1 & E, REGION III, JAN. 20, 1970, JUCLET 50-203, TYPE--BWR, NRC--600, AE--SGT & LUNDY

CASE - POULED HIGH EFFICIENCY FILTER. WHILE TESTING STAND-BY WAS TREATMENT TRAIN A AFTER INSTALLATION OF NEW CHARCOAL FILTERS, A HIGH PRESSURE DIFFERENTIAL WAS MEASURED. THE REACTOR WAS OPERATING AT 80% POWER. THE HIGH EFFICIENCY PREFILTER AND DEMISTER BECAME FOULED DURING NORMAL OPERATION. NEW HIGH EFFICIENCY PREFILTERS WERE INSERTED AND THE DEMISTER CLEANED.

110300 CONTINUOUS
 AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FINISH MAINTENANCE • FILTER, HIGH EFFICIENCY • TEST, WOP FILTER • TEST, SYSTEM OPERABILITY • COMPRESSURE UNCO •
 WMO CITIES 2 (DNR) • FAILURE, IMMERENT • STANDBY WAS TREATMENT

111000
 SET POINT DRIFT IN PRESSURE SWITCH AT WMO CITIES 2
 COMMONWEALTH EDISON CO., CHICAGO, IL
 • PWS, LTR N/NO 50-205/70-1 TC NRC OFFICE OF I & E, REGION III, FEB. 27, 1970, DOCKET 50-205, TYPE--DNR, NRC--
 W.E., AE--SGT 6 LUNBY

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 906 POWER, A CONE SPRAY FILL SYSTEM
 PRESSURE SWITCH WAS FOUND TO TRIP AT 75.5 PSIG, EXCEEDED THE 70 PSIG LIMIT. THE CAUSE WAS
 INSTRUMENT DRIFT. THE STATIC-O-RING COIL, MODEL 00-13 SWITCH WAS RESET TO TRIP AT 72.0 PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

INSTRUMENT CALIBRATION • PROTECTION SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM
 OPERABILITY • SET POINT • WMO CITIES 2 (DNR) • DRIFT • SENSORS, PRESSURE

113200
 SUPPRESSION CHAMBER WATER LEVEL BELOW LIMIT AT WMO CITIES 2
 COMMONWEALTH EDISON CO., CHICAGO, IL
 • PWS, LTR N/NO 50-205/70-1 TC NRC OFFICE OF I & E, REGION III, APRIL 13, 1970, DOCKET 50-205, TYPE--DNR, NRC--
 W.E., AE--SGT 6 LUNBY

CAUSE - LEVEL TRANSMITTER DRIFT. DURING TESTING WITH THE REACTOR AT 706 POWER, THE SUPPRESSION
 CHAMBER WATER LEVEL TRANSMITTER WAS FOUND TO BE READING -0.0 INCH WHILE THE ACTUAL LEVEL WAS -2.0
 INCHES WHICH IS 0.0 INCH BELOW THE LIMIT. FAILURE WAS ATTRIBUTED TO INSTRUMENT DRIFT. THE LEVEL
 TRANSMITTER WAS RECALIBRATED AND RETURNED TO SERVICE. THE SUPPRESSION CHAMBER LEVEL WAS
 INCREASED TO WITHIN LIMITS.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

INSTRUMENT CALIBRATION • TEST, SYSTEM OPERABILITY • SET POINT • SYSTEM CAPACITY • WMO CITIES 2 (DNR) • DRIFT
 • SENSORS, LEVEL • TENDS

113297
 MSIV FAILS TO CLOSE AT WMO CITIES 2
 COMMONWEALTH EDISON CO., CHICAGO, IL
 • PWS, LTR N/NO 50-205/70-3 TC NRC OFFICE OF I & E, REGION III, APRIL 16, 1970, DOCKET 50-205, TYPE--DNR, NRC--
 W.E., AE--SGT 6 LUNBY

CAUSE - FOREIGN MATERIAL IN PILOT VALVE. DURING A REACTOR SHUTDOWN, WHILE CLOSING THE OUTBOARD
 MSIVS TO MAINTAIN REACTOR PRESSURE, ONE VALVE FAILED TO CLOSE. THE INBOARD MSIV WAS SUBSEQUENTLY
 CLOSED BUT HAD BOTH AN OPEN AND CLOSED INDICATION. EXERCISING THE VALVE CLEARED THE DOUBLE
 INDICATION. SMALL PIECES OF FOREIGN MATERIAL WERE FOUND IN THE PILOT ASSEMBLY OF THE OUTBOARD
 MSIV. NO PILOT ASSEMBLY DEGRADATION WAS FOUND.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, COMPONENT • CONTAINMENT ISOLATION • STEAM • COND • FAILURE, MAINTENANCE ERROR • MAIN COOLING SYSTEM •
 WMO CITIES 2 (DNR) • VALVES

114424
 APS CHANNEL A RPS TRIP FAILED DURING TEST AT WMO CITIES 2
 COMMONWEALTH EDISON CO., CHICAGO, IL
 • PWS, LTR N/NO 50-205/70-5 TC NRC OFFICE OF I & E, REGION III, MAY 20, 1970, DOCKET 50-205, TYPE--DNR, NRC--
 W.E., AE--SGT 6 LUNBY

CAUSE - CIRCUIT RESET TOO SOON. WHILE OPERATING AT 776 POWER, A CHANNEL A RPS TRIP WAS NOT
 RECEIVED DURING MSIV TESTING. THE VALVE CLOSURE TEST CIRCUIT APPARENTLY RESET BEFORE THE VALVE
 CLOSED FOR ENOUGH TO TRIP THE CONTACTS FOR CHANNEL A SCRAM SIGNAL. DURING SUBSEQUENT TESTING,
 THE TEST BUTTON WAS HELD SLIGHTLY LONGER AND THE VALVE TRIPPED ALL CONTACTS INVOLVED. THE
 INVOLVED SWITCHES WERE MARKED SLIGHT LIMIT SWITCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT NUM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, OPERATION ERROR • REACTOR PROTECTION SYSTEM • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY •
 INSTRUMENT, POSITION • WMO CITIES 2 (DNR)

114423
SET POINT DRIFT IN ECCS FILL SYSTEM PRESSURE SWITCH AT QUAD CITIES 2
COMMONWEALTH EDISON CO., COVINGA, IL
2 PGS, LTR W/NO 50-205/70-0 TO NRC OFFICE OF I & E, REGION III, MAY 27, 1970, Docket 50-205, TYPE--BWR, NRC--
6.0E, AE--S&T & LUNDY

CAUSE - INSTRUMENT DRIFT. DURING TESTING WITH THE REACTOR AT 914, ECCS FILL SYSTEM DISCHARGE
HEADER PRESSURE SWITCH WAS FOUND TO TRIP AT 77.5 PSIG INCREASING WHICH EXCEEDED THE LIMIT. THE
CAUSE WAS INSTRUMENT DRIFT. THE STATIC-O-RING CO. MODEL ON-LD PRESSURE SWITCH WAS RESET TO 73.5
PSIG.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + SET POINT +
QUAD CITIES 2 (BWR) + EMERGENCY CIRCULING SYSTEM + DRIFT + FAILURE, INHERENT + SENSORS, PRESSURE

110204
UNVAL INDICATION RECEIVED FOR UNSTEADY VACUUM BREAKER AT QUAD CITIES 2
COMMONWEALTH EDISON CO., COVINGA, IL
2 PGS, LTR W/NO 50-205/70-9 TO NRC OFFICE OF I & E, REGION III, JULY 20, 1970, Docket 50-205, TYPE--BWR, NRC--
6.0E, AE--S&T & LUNDY

CAUSE - LIMIT SWITCH FAILURE. DURING A TEST WHILE OPERATING AT 746 POWER, A UNVAL INDICATION WAS
RECEIVED FOR A DRYWELL/TEGALS VACUUM BREAKER. A MICRO-SWITCH TYPE BAW 1-24A LIMIT SWITCH FAILED
TO GIVE CLOSED INDICATION WHEN THE VALVE CLOSED. REPAIR WILL BE MADE DURING THE NEXT OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

CONTAINMENT + CONTAINMENT VACUUM BREAKER + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM
OPERABILITY + INSTRUMENT, POSITION + QUAD CITIES 2 (BWR) + TEGALS

110205
REFUEL FLOOR RADIATION MONITOR OUT OF SERVICE AT QUAD CITIES 2
COMMONWEALTH EDISON CO., COVINGA, IL
2 PGS, LTR W/NO 50-205/70-8 TO NRC OFFICE OF I & E, REGION III, JULY 20, 1970, Docket 50-205, TYPE--BWR, NRC--
6.0E, AE--S&T & LUNDY

CAUSE - PROCEDURAL INADEQUACY. WHILE OPERATING AT 778 POWER, REFUEL FLOOR RADIATION MONITOR NO
WAS FOUND TO BE OUT OF SERVICE. IT HAD BEEN OUT OF SERVICE FOR MORE THAN THE 24-HOUR LIMIT.
IDENTIFICATION OF THE REFUEL FLOOR RADIATION MONITORS WAS UNCLEAR ON OUTAGE REPORT GUS 1700-01
REV. 1. A PROCEDURE REVISION WAS MADE TO CORRECT THIS DEFICIENCY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

PROCEDURES AND MANUALS + FAILURE, ADMINISTRATIVE CONTROL + MONITORING SYSTEM, RADIATION + QUAD CITIES 2 (BWR)
+ RADIATION MONITORS

110004
SUPPRESSION CHAMBER PURGE VALVE FAILS TO CLOSE AT QUAD CITIES 2
COMMONWEALTH EDISON CO., COVINGA, IL
2 PGS, LTR W/NO 50-205/70-10 TO NRC OFFICE OF I & E, REGION III, AUG 10, 1970, Docket 50-205, TYPE--BWR, NRC--
6.0E, AE--S&T & LUNDY

CAUSE - STUCK SOLENOID. WITH THE REACTOR OPERATING AT 808 POWER, A SUPPRESSION CHAMBER PURGE
VALVE FAILED TO CLOSE DURING TESTING. AFTER TAPPING ON THE PILOT SOLENOID, THE VALVE WAS ABLE TO
BE CLOSED. THE SOLENOID STUCK AND THUS FAILED TO GIVE AN AIR SIGNAL TO THE 4-WAY VERSA PILOT
VALVE. THE VALVE WAS OPERATED 3 TIMES SUCCESSFULLY 24 HOURS LATER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.00

FAILURE, EQUIPMENT + CONTAINMENT PURGE + TEST, SYSTEM OPERABILITY + QUAD CITIES 2 (BWR) + SOLENOID + VALVES
+ TEGALS

117004
FOUR DRYWELL PRESSURE SWITCHES INOPERABLE AT QUAD CITIES 2
COMMONWEALTH EDISON CO., COVINGA, IL
2 PGS, LTR W/NO 50-205/70-11 TO NRC OFFICE OF I & E, REGION III, AUG 20, 1970, Docket 50-205, TYPE--BWR, NRC--
6.0E, AE--S&T & LUNDY

CAUSE - BLOCKED SENSING LINE. WHILE THE REACTOR WAS OPERATING AT 324 POWER, 4 DRYWELL PRESSURE
SWITCHES WERE RENDERED INOPERABLE DUE TO AN APPARENT BLOCKED SENSING LINE. THE LINE WAS BLOWN
CLEAR WITH INSTRUMENT AIR. THE ROOT VALVE WILL BE INSPECTED AT THE NEXT SCHEDULED OUTAGE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM

117004 CONTINUOUS
CHANGE 02.001

CONTAINMENT + FAILURE, INSTRUMENT + CROW + INSTRUMENT, SWITCH + QUAD CITIES 2 (DM) + EMERGENCY COOLING
SYSTEM + SENSORS, PRESSURE

119155
ECCS DRYWELL HIGH PRESSURE SWITCH FOUND VALVED OUT AT QUAD CITIES 2
COMMUNHEALTH EUISON CO., CORONA, IL
3 PWS, LTR N/AU 50-205/70-12 TO NRC OFFICE OF I & E, REGION III, SEPT. 23, 1970, DUCRET 50-205, TYPE--DM, MFG--
WECO, AC--SUT & LUNDY

CAUSE - PERSONNEL ERROR. DURING TESTING OF ECCS DRYWELL HIGH PRESSURE SENSORS WHILE OPERATING AT 700 POWER, ONE SWITCH WAS FOUND VALVED OUT. THE WIRE SEAL, NORMALLY USED TO LOCK OPEN THE ISOLATION VALVE, WAS IN PLACE BUT WAS NOT STAMPED AND LOCKED. THE SWITCH WAS INADVERTENTLY LEFT ISOLATED AFTER COMPLETION OF TESTING FOR THE PRIOR MONTH. THE SWITCH WAS SUCCESSFULLY TESTED, AND THE ISOLATION VALVE LEFT OPEN AND LOCK-WIRE SEALED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

CONTAINMENT + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, MAINTENANCE ERROR
+ QUAD CITIES 2 (DM) + EMERGENCY COOLING SYSTEM + VALVES + SENSORS, PRESSURE

119701
HYDRAULIC SHAMBER OIL RESERVOIRS FOUND EMPTY AT QUAD CITIES 2
COMMUNHEALTH EUISON CO., CORONA, IL
3 PWS, LTR N/AU 50-205/70-14 TO NRC OFFICE OF I & E, REGION III, OCT. 24, 1970, DUCRET 50-205, TYPE--DM, MFG--
WECO, AC--SUT & LUNDY

CAUSE - OIL LEAKAGE AROUND SHAFTS. DURING A REFUELING OUTAGE INSPECTION OF HYDRAULIC SHAMBERS, 3 GASKET AND 1 O-RING-PATRON SHAFTS WERE FOUND TO HAVE EMPTY OIL RESERVOIRS. ALL 4 WERE FOUND TO HAVE OIL LEAKAGE AROUND THE SHAFTS THROUGH THE O-RINGS. THE RINGS WERE OBSERVED TO BE WORN OUT AND CHANGED IN SEVERAL PLACES. EACH SHAMBER WAS REBUILT WITH NEW O-RINGS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

QUAD CITIES 2 (DM) + SPECIAL ANALYSIS + SUPPORT STRUCTURE + PIPES AND PIPE FITTINGS + SURVEILLANCE PROGRAM +
FAILURE, EQUIPMENT + SEAL + LEAK + FAILURE, INHERENT + REFUELING

120275
SET POINT SHIFT IN AREA TEMPERATURE SWITCHES AT QUAD CITIES 2
COMMUNHEALTH EUISON CO., CORONA, IL
4 PWS, LTR N/AU 50-205/70-15 TO NRC OFFICE OF I & E, REGION III, NOV. 10, 1970, DUCRET 50-205, TYPE--DM, MFG--
WECO, AC--SUT & LUNDY

CAUSE - INSTRUMENT SHIFT. DURING THE REFUELING OUTAGE TESTING OF REACTOR CORE ISOLATION COOLING TUBING AREA HIGH TEMPERATURE SWITCHES, 5 OF THE 10 SWITCHES WERE FOUND TO TRIP AT TEMPERATURES EXCEEDING 200 F. TRIP POINTS RANGED FROM 204 F TO 235 F. THE APPARENT CAUSE WAS INSTRUMENT SHIFT. THE SWITCHES WERE RECALIBRATED TO TRIP AT SET POINTS LESS THAN 200 F. SWITCHES ARE MANUFACTURED BY PENNELL, INC., MODEL LT002-40, WITH RANGE -100 TO 600 F.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

INSTRUMENT, SWITCH + INSTRUMENT CALIBRATION + SENSORS, TEMPERATURE + TEST, SYSTEM OPERABILITY + FAILURE,
INSTRUMENT + SET POINT + PURITY + CONTAINMENT ISOLATION + ACIC + COMPARTMENT + REFUELING + QUAD CITIES 2
(DM)

120443
ELECTROMATIC RELIEF VALVES FAIL TO OPEN AT QUAD CITIES 2
COMMUNHEALTH EUISON CO., CORONA, IL
4 PWS, LTR N/AU 50-205/70-16 TO NRC OFFICE OF I & E, REGION III, NOV. 15, 1970, DUCRET 50-205, TYPE--DM, MFG--
WECO, AC--SUT & LUNDY

CAUSE - STEAM LEAKAGE. WHILE COMMENCING START-UP FOLLOWING REFUELING WITH THE UNIT AT 200 POWER, MANUAL OPERATION OF THE MAIN STEAM ELECTROMATIC RELIEF VALVES FOUND THAT TWO FAILED TO OPEN. THE REACTOR WAS SHUT DOWN AND THE PILOT ASSEMBLIES WERE ADJUSTED. THE REACTOR WAS RESTARTED BUT THE VALVE AGAIN FAILED TO OPERATE. THE UNIT WAS SHUT DOWN AGAIN. INSPECTION FOUND BOTH TO HAVE APPARENT VALVE DISC WIRE CORROSION LEADING BOTH TO POSSIBLE PISTON RING BINDING OR LEAKAGE. ALSO, THE THREAD CONNECTION SEALING THE DISC RETAINING PLATE WAS LOOSE DUE TO DAMAGED THREADS IN ONE VALVE. BOTH VALVES WERE REBUILT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHANGE 02.001

QUAD CITIES 2 (DM) + VALVES + PRESSURE RELIEF + MAIN COOLING SYSTEM + TEST, SYSTEM OPERABILITY + FAILURE,
EQUIPMENT + REACTOR SHUTDOWN + FAILURE, CORROSION + FAILURE, INHERENT

120703

MUTUALISM SHROUDER RESERVOIR FOUND TO BE EMPTY AT JUNE CITIES 2
COMMONWEALTH ENVISION CO., CONJUG. IL
3 PGS, LTR W/RT TO NRC OFFICE OF I & E, REGION III, DEC. 30, 1970, UGCRET 5-205, TYPE--DM, MFG--GUL., AE--GUL., AE--361 & LUNDY

CAUSE - RESERVOIR END CAP BASKETS LEAK. WHILE PERFORMING ROUTINE MUTUALISM SHROUDER SURVEILLANCE WITH THE REACTOR SHUT DOWN, WINNELL CORP. SHROUDER 475 WAS FOUND TO HAVE AN EMPTY OIL RESERVOIR CAUSED BY LEAKAGE THROUGH THE RESERVOIR END CAP BASKETS. THE SHROUDER WAS REBUILT AND A NEW RESERVOIR THAT HAS A MORE EFFECTIVE SEAL SYSTEM WAS INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

JUNE CITIES 2 (DM) • OSCEOLA ASSESSOR • SUPPORT STRUCTURE • PIPES AND PIPE FITTINGS • SURVEILLANCE PROGRAM • FAILURE, EQUIPMENT • OLEA • SEAL • FAILURE, IMMINENT

120704

DEFECTS IN CONTROL ROD DRIVE PENETRATIONS OF CONTAINMENT LINER AT SHOREMAN
LONG ISLAND LIGHTING CO., MAHON RIVER, NY
5 PGS, LTR W/RT TO NRC OFFICE OF I & E, REGION I, SEPT. 9, 1970, UGCRET 50-322, TYPE--DM, MFG--GUL., AE--STONE & WEBSTER

CAUSE - UNKNOWN. IN THE COURSE OF INSTALLING THE INITIAL ROD PIPING, INSULATIONS WERE EVIDENT IN THE DISJUNCTION WELOS OF THE PENETRATIONS. THEY WERE FOUND DURING PAINT REMOVAL IN PREPARATION FOR JOINING THE ROD PIPING TO THE PENETRATIONS. INSPECTION FOUND INDICATIONS IN THE 202 ROD PENETRATIONS. BUT ALL INDICATIONS HAVE BEEN CLASSIFIED AS CRACKS. THE INVESTIGATION IS CONTINUING TO DETERMINE THE MODE OF FAILURE AND DEVELOPMENT OF AN ADEQUATE REPAIR.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WELOS • FAILURE, FABRICATION ERROR • SHOREMAN (DM) • CONSTRUCTION • CONTAINMENT ROD DRIVES • CONTAINMENT PENETRATION

120807

CRACKING OCCURS IN CONTROL ROD DRIVE PENETRATIONS AT SHOREMAN
LONG ISLAND LIGHTING CO., MAHON RIVER, NY
4 PGS, LTR W/RT TO NRC OFFICE OF I & E, REGION I, DEC. 30, 1970, UGCRET 50-322, TYPE--DM, MFG--GUL., AE--STONE & WEBSTER

CAUSE - HIGH DILUTION OF WELD FILLER METAL. THE INVESTIGATION OF CRACKING OF THE CONTROL ROD DRIVE PENETRATIONS HAS BEEN EXPANDED TO INCLUDE THE 144 INSTANTANEOUS PENETRATIONS. FROM THE RESULTS OF TESTS, IT HAS BEEN CONCLUDED THAT THE TRANSVERSE CRACK OBSERVED IN THE WELD BEAM WAS PROPAGATED IN A ZONE WHERE HIGH DILUTION OF THE FILLER METAL WITH THE CARBON STEEL CAUSE A MARTENSITIC STRUCTURE IN THE BEAM. ALL CAD AND INSTANTANEOUS PENETRATIONS WILL BE REPAIRED BY INSTALLING A SLEEVE OVER EACH PENETRATION AFTER THE DISJUNCTION WELD HAS BEEN WELDED PLAT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

SHOREMAN (DM) • CONSTRUCTION • CONTAINMENT PENETRATION • WELOS • CRACK • CONTROL ROD DRIVES • INSTANTANEOUS, IN CORE • FAILURE, FABRICATION ERROR • MAINTENANCE AND REPAIR

120931

NONCONFORMING AGGREGATE NOT CONTROLLED AT SUSQUEHANNA 1 AND 2
PENNSYLVANIA POWER & LIGHT CO., ALLENTOWN, PA
9 PGS, LTR W/RT TO U.S. NRC, REGION I, JULY 12, 1970, UGCRETS 50-307/300, TYPE--DM, MFG--GUL., AE--BECHTEL

CAUSE - QUALITY CONTROL DEFICIENCY. WASH TEST RESULTS SHOWED MATERIAL FINER THAN 200 SIEVE TO BE GREATER THAN 1.5% FOR COARSE CONCRETE AGGREGATE. THE RESPONSIBLE ENGINEER INITIATED A NONCONFORMANCE REPORT. WELD TAGS WERE PLACED ON THE AREAS OF THE STRUCTURES WHICH WERE AFFECTED. HOWEVER, NO EFFORT WAS MADE BY THE FIELD FORCE TO RESTRICT USE OF THE AGGREGATE OR TO SUSPEND CONCRETE PRODUCTION. THE PROBLEM WITH FINES CONTINUED FOR SEVERAL DAYS. EIGHT CONCRETE PLACEMENTS WERE IDENTIFIED AS BEING PUMPED DURING THIS TIME. THE NONCONFORMING AGGREGATE WAS THEN REMOVED FROM SITE. THE CONCRETE WILL BE EVALUATED AFTER THE 90-DAY TEST.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONCRETE • MATERIAL • FAILURE, ADMINISTRATIVE CONTROL • QUALITY ASSURANCE • CONSTRUCTION • SUSQUEHANNA 1 (DM) • SUSQUEHANNA 2 (DM)

120939

USE OF NONCONFORMING AGGREGATE NOT PROPERLY CONTROLLED AT SUSQUEHANNA 1 AND 2
PENNSYLVANIA POWER & LIGHT CO., ALLENTOWN, PA
25 PGS, LTR W/RT TO U.S. NRC, REGION I, SEPT. 20, 1970, UGCRETS 50-307/300, TYPE--DM, MFG--GUL., AE--BECHTEL

110815 CONTINUUM

CAUSE - QUALITY CONTROL FAILURE. AS A RESULT OF A QUALITY CONTROL FAILURE, CONCRETE AGGREGATE CONTAINING EXCESSIVE FINES WAS USED IN CONCRETE PLACEMENTS OF VARIOUS PLANT STRUCTURES DURING A SIX-MONTH PERIOD. HOWEVER, THE INTEGRITY OF THE STRUCTURE HAS NOT BEEN ADVERSELY AFFECTED SINCE CONCRETE STRENGTH AT 28 AND 90 DAYS HAS EXCEEDED REQUIRED DESIGN STRENGTH. QUALITY CONTROL HAS BEEN STRENGTHENED TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONCRETE • CONTAINMENT • MATERIAL • FAILURE, ADMINISTRATIVE CONTROL • QUALITY ASSURANCE • CONSTRUCTION • SUSQUEHANNA 2 (DNR) • SUSQUEHANNA 1 (DNR)

119340

DEFECT FOUND IN RPV BOTTOM HEAD SIDE PLATE AT SUSQUEHANNA 2

PENNSYLVANIA POWER & LIGHT CO., ALLENTOWN, PA
3 PGS, LTR N/A/PT-70-33 TO NRC OFFICE OF I & E, REGION 1, MAY. 5, 1970, Docket 50-380, TYPE--BWR, NRC--G.E., AE--DECNTEL

CAUSE - REMOVAL OF TEMPORARY ATTACHMENT. A DEFECT IN THE RPV BOTTOM HEAD SIDE PLATE IS BELIEVED TO HAVE BEEN CREATED ABOUT 4 MONTHS AGO WHEN A TEMPORARY ATTACHMENT BETWEEN THE VESSEL AND THE SUPPLEMENT SKEIN WAS BURNED OFF ACCORDING TO PROCEDURE. THE AREA HAS BEEN EXCAVATED TO A DEPTH OF 15/16-INCH. IT IS ANTICIPATED THAT THE AREA WILL BE EXCAVATED TO SOUND METAL, CONTAINMENT BLEND, EXAMINED BY NONDESTRUCTIVE EXAMINATION, ACID ETCHED TO DETERMINE THAT THE HEAT AFFECTED ZONE HAS BEEN REMOVED, AND THEN FINAL INSPECTION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

MAINTENANCE AND REPAIR • PLAN • SURFACE • FAILURE, INSTALLATION ERROR • MAIN COOLING SYSTEM • CONSTRUCTION • SUSQUEHANNA 2 (DNR) • PRESSURE VESSELS

119449

LPCI LUMP OVERPRESSURIZED AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR N/A/PT-75-24 TO NRC OFFICE OF I & E, REGION 1, JAN. 8, 1970, Docket 50-271, TYPE--BWR, NRC--G.E., AE--EBASCC

CAUSE - VALVE SEAT LEAKAGE. DURING TESTING WITH THE REACTOR AT 99% POWER, ONE LPCI INJECTION VALVE FAILED TO OPEN ON SIGNAL. TO DETERMINE IF FAILURE RESULTED FROM EXCESS PRESSURE DIFFERENTIAL ACROSS THE VALVE SEAT, THE VALVE WAS MANUALLY CRACKED OPEN AND THEN CYCLED. FOLLOWING THIS, A STEAM WATER MIXTURE WAS OBSERVED DISCHARGING FROM 3 AMR RELIEF VALVES AND THE RHM HEAT EXCHANGER TUBE SHEET TO SMELL PLANT AREA. A CHECK VALVE AND ANOTHER INJECTION VALVE WAS SEAT LEAKAGE WHICH CAUSED THE EXCESS DELTA P ACROSS THE FAILED VALVE. WHEN THE FAILED VALVE WAS OPENED, SEAT LEAKAGE OVERPRESSURIZED THE LPCI SYSTEM DUE TO FLOW FROM THE REACTOR VESSEL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FAILURE, OPERATION ERROR • CONTAINMENT INTEGRITY • TEST, SYSTEM OPERABILITY • SEAL • VERMONT YANKEE (DNR) • LEAK • OVERPRESSURE TRANSIENT • VALVE, CHECK • VALVES • HEAT EXCHANGERS • LPCI

119788

RADIATION MONITORS FOUND TO BE READING LOW AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR N/A/PT-70-01 TO NRC OFFICE OF I & E, REGION 1, JAN. 30, 1970, Docket 50-271, TYPE--BWR, NRC--G.E., AE--EBASCC

CAUSE - PURGE VALVE MALFUNCTION. DURING PLANT STARTUP WITH THE REACTOR AT 57% POWER, BOTH CHANNELS OF THE AREA RADIATION MONITORS WERE DISCOVERED TO BE READING ABNORMALLY LOW. AN ASCO MODEL 4000-1-03 2-WAY SOLENOID OPERATED PURGE VALVE FAILED TO RELEASE FROM THE PURGE POSITION DUE TO DIRT BUILDUP IN THE ACTUATING MECHANISM. THE PURGE VALVE WAS REMOVED AND A BYPASS LINE INSTALLED. PROPOSED ACTION IS TO REPLACE THE SOLENOID PURGE VALVE WITH A MANUAL VALVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CAUSE • FAILURE, DESIGN ERROR • OFF GAS • VERMONT YANKEE (DNR) • CONDENSER • SOLENOID • VALVES • RADIATION MONITORS

119987

PLANT SHUTDOWN FOR EVALUATION OF PRESSURE SUPPRESSION CHAMBER AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR N/A/PT-70-2 TO NRC OFFICE OF I & E, REGION 1, FEB. 13, 1970, Docket 50-271, TYPE--BWR, NRC--G.E., AE--EBASCC

CAUSE - POSSIBLE DESIGN DEFICIENCY. A PLANT SHUTDOWN WAS INITIATED VOLUNTARILY ON 1/20/70 TO EVALUATE RECENT INSTRUMENTATION AND TEST DATA OF THE SAFETY CONTAINMENT VESSEL. THE PRIMARY CONCERN IS THE ABILITY OF THE PRESSURE SUPPRESSION CHAMBER TO FUNCTION AS INTENDED IN THE EVENT OF ONE OF THE HYPOTHETICAL DESIGN BASIS ACCIDENTS. THIS IS PART OF AN INDUSTRY RESEARCH PROGRAM

110007 "CONTINUED"

INTENDED TO EVALUATE THE PERFORMANCE OF THE PRESENT TUNING DESIGNS OF THE TYPE FOUND HERE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT, PRESSURE SUPPRESSOR + ACCIDENT, LOSS OF COOLANT + FAILURE, DESIGN ERROR + VERMONT YANKEE (DNR) + SYSTEM OPERABILITY IN ACCIDENT + SYSTEM CAPABILITY + REACTOR SHUTDOWN + TUNING

111701

LPCI SYSTEM NOT TESTED PRIOR TO STARTUP AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR W/NO-70-05/17 TO NRC OFFICE OF I & E, REGION 1, MARCH 1, 1970, DUCRET 50-271, TYPE--DNR, RFG--G.E., AE--EBASCO

CAUSE - PROCEDURES NOT FOLLOWED. WHILE OPERATING AT 97% POWER, IT WAS DISCOVERED THAT A PORTION OF A PROCEDURE ASSOCIATED WITH SECURING FROM SHUTDOWN COOLING PUMP WAS NOT PERFORMED. TESTING, WHICH WAS STARTED IMMEDIATELY, INDICATED THAT 1 OF 2 LPCI SYSTEM VALVES WOULD NOT OPERATE UNTIL IT WAS MANUALLY CRACKED OFF ITS SEAT. BOTH VALVES WERE CYCLED. IMPERFECTNESS IS ATTRIBUTED TO CONTRACTION OF THE BLOW TYPE GATE VALVE INTERNALS AS TEMPERATURE IS REDUCED FROM OPERATING TO AMBIENT CONDITIONS. THE BLOW TYPE VALVES WILL BE DESIGNATED AS THE NORMALLY CLOSED VALVES TO PREVENT REOCCURRENCE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + PROCEDURES AND MANUALS + TESTING + THERMAL MECHANICAL EFFECT + MISCONFIGURATION + VERMONT YANKEE (DNR) + VALVES + LPCI

112100

CONTAINMENT AIR SAMPLING SYSTEM FAILS AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

2 PGS, LTR W/NO-70-04/31 TO NRC OFFICE OF I & E, REGION 1, MARCH 12, 1970, DUCRET 50-271, TYPE--DNR, RFG--G.E., AE--EBASCO

CAUSE - MOTOR BEARING FAILURE. DURING A ROUTINE STARTUP WITH THE REACTOR AT 2% POWER, A FLOW FAULT ALARM WAS RECEIVED ON THE SAMPLE PUMP ASSOCIATED WITH THE CONTAINMENT AIR SAMPLING SYSTEM. THE GE TRICLAD MOTOR, MODEL 2KCI45A1202, FAILED TO OPERATE THE SAMPLING SYSTEM PUMP BECAUSE OF A FAILED BEARING. THE DEFECTIVE MOTOR WAS REPLACED AND THE SYSTEM RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT + MONITOR, AIR + VERMONT YANKEE (DNR) + CONTAINMENT LEAK MONITOR + BEARING + FAILURE, INHERENT + MOTORS

112313

SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR W/NO-70-00/31 TO NRC OFFICE OF I & E, REGION 1, MARCH 24, 1970, DUCRET 50-271, TYPE--DNR, RFG--G.E., AE--EBASCO

CAUSE - INSTRUMENT DRIFT. DURING A TEST WHILE OPERATING AT 99% POWER, 1 OF THE 4 LOW-LOW WATER LEVEL SWITCHES ASSOCIATED WITH THE DIFFERENTIAL PRESSURE INDICATING SENSOR ACTUATED AT A VALUE LESS THAN -50 INCHES OF WATER. THE LOWER LIMIT IS -99.5 INCHES. THE APPARENT CAUSE WAS INSTRUMENT DRIFT. THE YARNWAY CORP., MODEL 4410-C, REMOTE LIQUID INDICATION SWITCH WAS IMMEDIATELY ADJUSTED TO -41 INCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

REACTOR PROTECTION SYSTEM + INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + VERMONT YANKEE (DNR) + SET POINT + PURITY + SENSORS, LEVEL

112314

CONTAINMENT AIR SAMPLING SYSTEM IMPERFECT AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR W/NO-70-90-01 TO NRC OFFICE OF I & E, REGION 1, MARCH 24, 1970, DUCRET 50-271, TYPE--DNR, RFG--G.E., AE--EBASCO

CAUSE - VALVE CLOSED FOR UNKNOWN REASON. DURING 100% POWER OPERATION, THE CONTROL ROOM OPERATOR OBSERVED A FLOW FAULT ALARM, FULL CLOSE INDICATION ON THE DISCHARGE VALVE, AND LOSS OF POWER INDICATION ON THE CONTAINMENT AIR SAMPLING SYSTEM. THE SYSTEM SAMPLE PUMP MOTOR HAD TRIPPED ON OVERLOAD. THE ATOMATIL VALVE, MODEL 150-00 VPI MOD, CLOSED FOR UNDETERMINED CAUSE. THE DISCHARGE VALVE WAS OPENED, AND THE PUMP MOTOR WAS DETERMINED TO BE OPERABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

112314 PLANTINLEU
 MAINTEN. AIR • SAMPLING • VERMONT YANKEE (DNR) • CONTAINMENT ATMOSPHERE • CONTAINMENT LEAK MONITOR • FLOW • VALVES

114172
 LEVEL SWITCH FAILS TO ACTUATE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NU-70-04/3L TO NRC OFFICE OF I & E, REGION 1, MAY 3, 1970, DUCRET 50-271, TYPE--DNR, NRC--G.E.,
 AE--EBASCO

CAUSE - BINDING DUE TO DISLOCATED WIRE. DURING TESTING WITH THE REACTOR AT 934 POWER, THE LEVEL SWITCH ASSOCIATED WITH THE LOW CS/MPCL SUCTION VALVE SWITCHING CIRCUIT FAILED TO ACTUATE AT THE 14 3/8-INCH LIMIT. THE ROBERT SHAW CONTROLS CO. LEVEL SWITCH MODEL FLOAT 83035-A2, MERCURY UPDT, HAD A DISLOCATED SWITCH WIRE WHICH PREVENTED THE MERCURY BOTTLE FROM ROTATING. THE WIRE WAS PLACED IN ITS PROPER POSITION AND TIED IN PLACE. CAUSE OF WIRE MOVEMENT IS UNKNOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (DNR) • OBSTRUCTION • PLATES AND CONNECTORS • SENSORS, LEVEL • MPCL

113753
 LPCI DECLARED IMPERABLE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NU-70-06/3L TO NRC OFFICE OF I & E, REGION 1, MAY 7, 1970, DUCRET 50-271, TYPE--DNR, NRC--G.E.,
 AE--EBASCO

CAUSE - VALVE BONNET RELIEF VALVE FAILURE. DURING TESTING OF LPCI INJECTION VALVES WHILE OPERATING AT 100% POWER, A VALVE BONNET RELIEF VALVE LIFTED AND DID NOT RESEAT UNTIL AFTER THE VALVE WAS CLOSED. THE SYSTEM WAS DECLARED IMPERABLE SINCE THE VALVE OPERABILITY COULD NOT BE GUARANTEED DUE TO PAST PROBLEMS WITH VALVE BODY SPRINGING. THE REACTOR WAS SHUT DOWN THE NEXT DAY. THE RELIEF VALVE WAS FOUND TO LIFT AT 1050 PSI. IT WAS RESET TO 1150 PSI.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • PRESSURE RELIEF • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (DNR) • SET POINT • DRIFT • VALVES • LPCI

114195
 NRC VALVES FAIL TO OPEN TO REQUIRED POSITION AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NU-70-17/1T TO NRC OFFICE OF I & E, REGION 1, MAY 21, 1970, DUCRET 50-271, TYPE--DNR, NRC--G.E.,
 AE--EBASCO

CAUSE - INCREASED VALVE STEM FRICTION. DURING TESTING WITH THE REACTOR AT 90% POWER, 2 NRC VALVES WOULD NOT COMPLETELY OBTAIN THEIR REQUIRED OPEN POSITION FROM THE CLOSED POSITION. BOTH WERE 1/2 INCH SHORT OF THE THROTTLED SET POINT CAUSING LPCI SYSTEM FLOW RATES TO BE BELOW THE REQUIRED 80% OF MINIMUM. DURING A RECENT SHUTDOWN, THE PACKING WAS TIGHTENED ON ONE VALVE AND REPLACED ON THE OTHER INCREASING VALVE STEM FRICTION. THE PACKING WAS ADJUSTED AND THE STEM LUBRICATED ON BOTH VALVES. ONE VALVE REQUIRED ADJUSTMENT OF THE LIMIT SWITCH. AT THE NEXT REFUELING OUTAGE, GRIPICES WILL BE INSTALLED TO CONTROL THE FLOW SO VALVES CAN BE OPENED WIDE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL • TEST, SYSTEM OPERABILITY • FAILURE, MAINTENANCE ERROR • FLOW BLOCKAGE • VERMONT YANKEE (DNR) • FRICTION • VALVES • LPCI

114033
 EVALUATION OF CRACKING IN AUSTENITIC STAINLESS STEEL PIPING AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 4 PGS, LTR W/NU-70-17 SUPPLEMENT TO NRC OFFICE OF I & E, REGION 1, JUNE 1, 1970, DUCRET 50-271, TYPE--DNR, NRC--G.E.,
 AE--EBASCO

CAUSE - DURING A STARTUP IN AUGUST 1970, PRIMARY WATER WAS OBSERVED TO BE DRIPPING FROM PIPE LEAKING AS REPORTED EARLIER. A 1-INCH SCH 80 304 STAINLESS STEEL PSE INSTRUMENT LINE WHICH ONCE WAS PART OF THE LPCI LOOP SELECT LOGIC WAS CRACKED IN THE HEAT AFFECTED ZONE OF A WELD. AT THE TIME OF FAILURE THE LINE WAS USED ENDED. EXAMINATION CONCLUDED THAT FAILURE WAS INTERGRANULAR STRESS CORRUSSION CRACKING WITH EVIDENCE OF FATIGUE AND BENDING STRESSES. THIS TYPE OF FAILURE IS NOT EXPECTED TO RESULT IN PIPE RUPTURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, PIPE • STRESS • MELT • STEEL, STAINLESS • FAILURE, FATIGUE • EXAMINATION • STRESS CORRUSSION • VERMONT YANKEE (DNR) • VIBRATION • HEAT TREATMENT • MAIN COOLING SYSTEM • PLEA • METALLURGY

114032
DIESEL GENERATION TRIPS ON HIGH CRANKCASE PRESSURE AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR N/RO-70-10/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 2, 1970, DUCRET 50-271, TYPE--BWR, NPG--UOE,
AE--EBASCO

CAUSE - UNKNOWN. PRIOR TO AN IMPENDING ELECTRICAL STORM, OPERATORS ATTEMPTED TO START DIESEL GENERATION. WITHIN 1 MINUTE, THE UNIT TRIPPED ON HIGH CRANKCASE PRESSURE. NO VISIBLE EVIDENCE WAS FOUND FOR FAILURE. THE UNIT WAS THEN RESTARTED WITH SATISFACTORY RESULTS. NO CORRECTIVE ACTION WAS TAKEN. PRELIMINARY INVESTIGATION INDICATES THAT THE CRANKCASE AIR EJECTOR IS DRAWING TOO LOW A VACUUM FROM THE ENGINE CRANKCASE. THE PROBABLE CAUSE IS CLOGGING OF THE EJECTOR SUPPLY GRAFFICK OR EJECTOR DUCT IN THE CRANKCASE DRAINAGE AND SUPPLY SYSTEM. THE REACTION WAS AT 100% POWER.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

EMERGENCY POWER, ELECTRIC + FAILURE, EQUIPMENT + PRESSURE, INTERNAL + VERMONT YANKEE (BWR) + ENGINES, INTERNAL COMBUSTION + GENERATOR, DIESEL

114029
WITH STACK MONITORING SYSTEMS SECURED AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR N/RO-70-15/17 TO NRC OFFICE OF I & E, REGION 1, JUNE 7, 1970, DUCRET 50-271, TYPE--BWR, NPG--UOE,
AE--EBASCO

CAUSE - PERSONNEL ERROR. WHILE PERFORMING SURVEILLANCE ON THE STACK MANUAL CARTRIDGE AND THE STACK PARTICULATE FILTER WITH THE UNIT AT 93% POWER, A TECHNICIAN INADVERTENTLY SECURED BOTH STACK MONITORING SYSTEMS CONCURRENTLY. THEY WERE RETURNED TO SERVICE FOLLOWING CHANGEOUT OF THE SAMPLE MEDIUM. THE TOTAL TIME THEY WERE INOPERABLE WAS 10 MINUTES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + MONITORING, STACK + TEST, FILTER + TEST, SYSTEM OPERABILITY + MONITORING SYSTEM, RADIATION + VERMONT YANKEE (BWR)

114031
MPCI PUMP GLAND SEAL CONDENSER FAILS AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR N/RO-70-12/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 7, 1970, DUCRET 50-271, TYPE--BWR, NPG--UOE,
AE--EBASCO

CAUSE - OVERPRESSURIZED DURING START. WHILE PERFORMING THE MPCI SYSTEM PUMP OPERABILITY TEST WITH THE REACTOR AT 90% POWER, THE HEAD GASKET ON THE GLAND SEAL CONDENSER FAILED. THE CONDENSER IS REQUIRED FOR PROPER SYSTEM OPERATION. THE GLAND SEAL CONDENSER, SIZE 12 INCH X 6 FEET, TYPE EUPTS-SWIM-LUM, BECAME OVERPRESSURIZED DURING THE PUMP START. MANUAL VALVES UPSTREAM OF THE CONDENSER AND LOWE LIL CLOSERS WERE FOUND TO BE 3 TO 4 TURNS OPEN. THE POSITIONS WERE PREVIOUSLY ESTABLISHED AT 1 TURN. THE VALVES WERE LOCKED IN THEIR PROPER THROTTLED POSITION.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATION ERROR + PROCEDURES AND MANUALS + TEST, SYSTEM OPERABILITY + PRESSURE, INTERNAL + VERMONT YANKEE (BWR) + CONDENSER + MPCI

114030
MPCI LEVEL SWITCH FAILS TO ACTUATE AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR N/RO-70-13/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 14, 1970, DUCRET 50-271, TYPE--BWR, NPG--UOE,
AE--EBASCO

CAUSE - BINDING OF PIVOT PLATE. DURING MPCI/CONDENSATE STORAGE TANK LEVEL SWITCH TESTING WITH THE UNIT AT 93% POWER, A SWITCH WOULD NOT ACTUATE AT ITS REQUIRED SET POINT OF 14 3/8 INCHES ABOVE TANK BOTTOM. THE PIVOT PLATE TO WHICH A ROBERT SHAW CONTROLS CO. LEVEL SWITCH, MODEL PLJAT 83035-42, MERCURY OUTPUT, IS ATTACHED WOULD NOT MOVE FAR ENOUGH TO ALLOW THE SWITCH TO OPERATE. NOISE WITHIN THE SWITCH HOUSING CONTRIBUTED TO THE IMMUNITY OF THE PIVOT PLATE. THE PIVOT PLATE ADJUSTMENT SCREW WAS REPOSITIONED AND THE PIVOT POINT LUBRICATED. THE NOISE WILL BE DEALT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

WATER + CONDENSATION + CORROSION + FAILURE, INSTRUMENT + INSTRUMENT, SWITCH + STORAGE CONTAINER + TEST, SYSTEM OPERABILITY + VERMONT YANKEE (BWR) + FAILURE, INSTALLATION ERROR + SENSORS, LEVEL + MPCI

115054
SUPPRESSION CHAMBER LEVEL SWITCH FAILS TO ACTUATE AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

115054 CONTINUED
 3 Pgs, LTR N/RU-70-10/31 TO NRC OFFICE OF I & E, REGION 1, JUNE 10, 1970, DUCRET 50-271, TYPE--DNR, NRU--G.E.,
 AE--EASCU

CASE - SCALE INSIDE SWITCH. DURING TESTING OF THE SUPPRESSION CHAMBER WATER LEVEL SWITCH WHILE OPERATING AT 90% POWER, ONE SWITCH FAILED TO ACTUATE AT THE TRIP SETTING OF 2 INCHES. AN ACCUMULATION OF SCALE AND CORROSION INSIDE THE SWITCH CHAMBER PREVENTED OPERATION OF THE ROBERT SPAN CONTROLS CO. MODEL 03035-A2, LEVEL SWITCH. AFTER TAPPING AND REPEATED FLUSHINGS, THE FLGAT WAS MADE OPERABLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

CORROSION + FAILURE, INSTRUMENT + CRUC + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + VERMONT YANKEE (DNR) + FAILURE, IMMINENT + SENSORS, LEVEL + TURNS

115497
 SUPPRESSION CHAMBER WATER LEVEL SWITCH FAILS TO OPERATE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 Pgs, LTR N/RU-70-10/31 TO NRC OFFICE OF I & E, REGION 1, JULY 1, 1970, DUCRET 50-271, TYPE--DNR, NRU--G.E.,
 AE--EASCU

CASE - SCALE INSIDE SWITCH CHAMBER. DURING A TEST WITH THE REACTOR AT 90% POWER, A HIGH SUPPRESSION CHAMBER WATER LEVEL SWITCH FAILED TO ACTUATE AT ITS TRIP LEVEL SETTING. THE ROBERT SPAN CONTROLS CO. MODEL 03035-A2, LEVEL SWITCH FAILED BECAUSE OF AN ACCUMULATION OF SCALE AND CORROSION INSIDE THE SWITCH CHAMBER. AFTER REPEATED FLUSHINGS, THE FLGAT WAS MADE OPERABLE AND THE SWITCH OPERATED SEVERAL TIMES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT CALIBRATION + FAILURE, INSTRUMENT + CRUC + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + VERMONT YANKEE (DNR) + FAILURE, IMMINENT + SENSORS, LEVEL + TURNS

115760
 CONTROL ROD WITHDRAWAL PERMIT IMPERABLE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 Pgs, LTR N/RU-70-10/31 TO NRC OFFICE OF I & E, REGION 1, JULY 13, 1970, DUCRET 50-271, TYPE--DNR, NRU--G.E.,
 AE--EASCU

CASE - STUCK POSITION SWITCH. WHILE PERFORMING SHM RESPONSE CHECKS WITH THE UNIT IN REFUEL MODE, THE CONTROL ROD WITHDRAWAL PERMIT CIRCUIT WAS FOUND TO BE IMPERABLE. AN INVESTIGATION HAS SHOWN THAT THE POSITION INDICATING SWITCH ON A ROD, AT THE FULL-IN POSITION, WAS STUCK IN THE CLOSED POSITION AND REMAINED STUCK FOLLOWING ROD WITHDRAWAL TO NOTCH POSITION 02. THE POSITION INDICATING PHOTODIODE WAS REPLACED AND SATISFACTORILY TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

INSTRUMENT, INTERLOCK + REACTOR CONTROL + FAILURE, INSTRUMENT + REFUELING + TEST, SYSTEM OPERABILITY + VERMONT YANKEE (DNR) + INSTRUMENT, POSITION + FAILURE, IMMINENT + CONTROL RODS + CONTROL ROD DRIVES

115721
 MPCI WARM SEAL CONDENSER HEAD GASKET FAILS AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 Pgs, LTR N/RU-70-17/31 TO NRC OFFICE OF I & E, REGION 1, JULY 15, 1970, DUCRET 50-271, TYPE--DNR, NRU--G.E.,
 AE--EASCU

CASE - PRESSURE TRANSIENT DURING START. WHILE THE REACTOR WAS OPERATING AT 80% POWER, AN OPERATION INADVERTENTLY UNLOADED THE REFERENCE LEG OF A LEVEL INSTRUMENT WHICH IS PART OF THE PRESSURE VESSEL WATER LEVEL CONTROL SYSTEM. AS A RESULT, THE FEEDWATER REGULATING VALVES RAMPED SHUT AND LEVEL INCREASED TO SCRAM SET POINT AND ECLS INITIATION SET POINT. UPON INITIATION OF MPCI SYSTEM, THE MPCI WARM SEAL CONDENSER HEAD GASKET FAILED. DESPITE THE FAILURE, MPCI SYSTEM CONTINUED TO OPERATE SATISFACTORILY UNTIL SECURED 90 MINUTES LATER. FAILURE RESULTED FROM OVERPRESSURIZATION DURING THE AUTO START BEFORE THE PRESSURE REGULATING VALVE COULD REACT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 (100 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

FAILURE, EQUIPMENT + SCRAM, REACTOR + FAILURE, DESIGN ERROR + SEAL + VERMONT YANKEE (DNR) + CONDENSER + PRESSURE TRANSIENT + REACTOR SHUTDOWN + MPCI

115870
 MAIN STEAM RELIEF VALVES FAIL TO OPERATE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 Pgs, LTR N/RU-70-20/31 TO NRC OFFICE OF I & E, REGION 1, JULY 20, 1970, DUCRET 50-271, TYPE--DNR, NRU--G.E.,
 AE--EASCU

CASE - EXCESSIVE HEATING OF DIAPHRAGMS. DURING THE REFUELING OUTAGE TESTING OF THE REACTOR

119070 *CONTINUED*

VESEL/MAIN STEAM RELIEF VALVES. THE AIR OPERATOR PLUNGERS ON 3 OF THE 4 RELIEF VALVES DID NOT MOVE WHEN AIR PRESSURE WAS APPLIED. THE SILICON RUMBA DIAPHRAGMS HAD FAILED DUE TO EXCESSIVE HEATING CAUSED BY IMPROPER INSULATION. A CONTRIBUTING FACTOR WAS THE EXTENDED OPERATING CYCLE. ALL DIAPHRAGMS WERE REPLACED. FUTURE OPERATING CYCLES SHOULD BE 1 YEAR IN DURATION. DIAPHRAGMS WILL BE CHANGED AFTER EACH CYCLE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • THERMAL MECHANICAL EFFECT • OVERPRESSURE RELIEF • REFUELING • TEST, SYSTEM OPERABILITY • THERMAL INSULATION • VERMONT YANKEE (NRA) • FAILURE, INSTALLATION ERROR • MAIN COOLING SYSTEM • VALVES

119250

SECONDARY CONTAINMENT TEST NOT PERFORMED ON TIME AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR NRD-70-19/31 TO NRC OFFICE OF I & E, REGION 1, JULY 29, 1970, JACKET 50-271, TYPE--DMA, NRU--GEC., AE--EDASCO

CASE - PERSONNEL OVERSIGHT. DURING A REVIEW OF TEST RECORDS, AN NRC INSPECTOR DISCOVERED THAT THE SECONDARY CONTAINMENT CAPABILITY TEST WAS NOT PERFORMED DURING THE REFUELING OUTAGE PRIOR TO REFUELING. THIS REQUIREMENT HAD BEEN OVERLOOKED. FUEL LOADING PROGRAMS HAD BEEN REVISED TO INCORPORATE THIS REQUIREMENT IN THE REFUELING PREREQUISITES. THE TEST WAS SUBSEQUENTLY PERFORMED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, OPERATOR ERROR • PROCEDURES AND MANUALS • TESTING • CONTAINMENT INTEGRITY • REFUELING • VERMONT YANKEE (NRA) • TEST INTERVAL

119250

SEAL LEAKAGE OF FOUR PRIMARY CONTAINMENT VALVES EXCEEDS LIMIT AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR NRD-70-24/31 TO NRC OFFICE OF I & E, REGION 1, JULY 30, 1970, JACKET 50-271, TYPE--DMA, NRU--GEC., AE--EDASCO

CASE - NOT STATED. DURING THE REFUELING OUTAGE, 4 PRIMARY CONTAINMENT ISOLATION VALVES WERE FOUND TO HAVE SEAL LEAKAGES IN EXCESS OF THAT PERMITTED BY TECH SPECS. IN EACH CASE, A SECOND VALVE PROVIDED THE PROPER ISOLATION CAPABILITY. REPAIRS HAVE BEEN COMPLETED WITH SUBSEQUENT RETESTS DEMONSTRATING LEAK RATES LESS THAN THE LIMIT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • CONTAINMENT ISOLATION • TEST, LEAK RATE • REFUELING • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (NRA) • LEAK RATE • VALVES

119257

INADVERTENT RELEASE OF RADIOACTIVE LIQUID OCCURS AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
9 PGS, LTR NRD-70-22/17 TO NRC OFFICE OF I & E, REGION 1, AUG 5, 1970, TYPE--DMA, NRU--GEC., AE--EDASCO

CASE - TWO LEAKAGE PATHS FROM CST MOUNT. DURING A ROUTINE PUMPDOWN OF THE FUEL OIL STORAGE TANK SUMP, AN OPERATOR DISCOVERED WATER RUNNING THROUGH ELECTRICAL CONDUITS FROM THE CONDENSATE STORAGE TANK MOUNT. THE CST WAS OVERFLOWING WITH ITS LEVEL INDICATING 85%. INVESTIGATION REVEALED A SECOND LEAKAGE PATH FROM THE MOUNT TO THE RIVER. AN ESTIMATED 63000 GALLONS OF CST WATER CONTAINING 1.0 Curies OF TRITIUM WERE RELEASED OVER A 2 DAY PERIOD. THE LEVEL INSTRUMENT HAD DRIFTED LOW. A LOCAL LEVEL INDICATOR WILL BE INSTALLED. PROCEDURES FOR TRANSFERRING RADIOACTIVE LIQUIDS WILL BE MODIFIED. LEAKAGE PATHS FROM THE CST MOUNT WILL BE PLUGGED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

DRIVER • TRITIUM • WASTE HANDLING • CONDENSATION • FAILURE, INSTRUMENT • STORAGE CONTAINER • RADIOACTIVITY RELEASE • VERMONT YANKEE (NRA) • SYSTEM CAPACITY • URIFT • SENSORS, LEVEL

119520

ONE CONTROL ROD WITHDRAWAL PERMIT CIRCUIT FOUND INOPERABLE AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PGS, LTR NRD-70-23/17 TO NRC OFFICE OF I & E, REGION 1, AUG 9, 1970, JACKET 50-271, TYPE--DMA, NRU--GEC., AE--EDASCO

CASE - TWO POSITION SWITCH STUCK CLOSED. WHILE PERFORMING CONTROL ROD POSITION TESTING DURING THE REFUELING OUTAGE, THE CONTROL ROD BLOCK ASSOCIATED WITH THE ONE CONTROL ROD WITHDRAWAL PERMIT CIRCUIT WAS FOUND TO BE INOPERABLE. BOTH THE POSITION INDICATION PROBE AND THE PROBE BUFFER CARD HAD FAILED FOR CONTROL ROD 34-07. BOTH WERE REPLACED AND SATISFACTORILY RETESTED. INVESTIGATION SHOWED THAT THE POSITION INDICATING SWITCH AT THE FULL-IN POSITION WAS STUCK IN THE CLOSED POSITION AND REMAINED STUCK PULLING THE ROD WITHDRAWAL TO NOTCH POSITION 46. THIS PROVIDED A FALSE 'ALL RODS IN' SIGNAL.

110520 CONTINUED
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • REFUELING • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (HWR) • INSTRUMENT, POSITION • FAILURE, IMMERSED • PLANT AND DRIVES

110521
 SET POINT SHIFT IN TEMPERATURE SWITCHES AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-21/36 TO NRC OFFICE OF I & E, REGION 1, AUG. 9, 1970, DUCRET 50-271, TYPE--BWR, NRG--G.E., AE--EDASLU

CASE - INSTRUMENT UNIT. DURING THE REFUELING OUTAGE TESTING OF THE NPL HIGH STEAM LINE TUNNEL TEMPERATURE SWITCHES, 2 OF THE 4 SWITCHES WOULD NOT ACTUATE AT THE UPPER LIMIT OF 212 F. THE CASE WAS INSTRUMENT UNIT. THE FURNACE, MODEL 17023-0, SWITCHES WERE IMMEDIATELY RESET TO 190 F.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT ISOLATION • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • FIRST-ADJUT, SWITCH • REFUELING • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (HWR) • SET POINT • SHIFT • FAILURE, IMMERSED • SENSORS, TEMPERATURE

117100
 SHUCA SUPPRESSORS FLUID INOPERABLE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 4 PGS, LTR W/NO-70-20/36 TO NRC OFFICE OF I & E, REGION 1, AUG. 23, 1970, DUCRET 50-271, TYPE--BWR, NRG--G.E., AE--EDASLU

CASE - FLUID VISCOSITY TOO LOW. DURING REFUELING OUTAGE SHUCA SUPPRESSOR FUNCTIONAL TESTS, 2 1/2 INCH WAINWELL SUPPRESSORS FAILED TO LOCK UP IN TENSION AND COMPRESSION WITHIN THE CAPABILITY OF THE TEST MACHINE. THE COMPANY SAID THE SHUTTLE TYPE VALVE IS DESIGNED FOR A MORE VISCOUS FLUID THAN WAS BEING USED. THE SHUTTLE VALVE SPRINGS WERE REPLACED TO COMPENSATE FOR THE DIFFERENCE. THE SUPPRESSOR FAILED AGAIN. THEY WERE REPLACED WITH NEW ONES THAT HAVE POPPET TYPE VALVES. A TRIP UNIT WAS FOUND TO HAVE NO FLUID IN THE SIGHTGLASS. THE LONG TEE FITTING O-RINGS WERE FOUND TO BE DEGRADED. NEW O-RINGS WERE INSTALLED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • REFUELING • OSNUCA ABSORBER • FAILURE, DESIGN ERROR • SEAL • VERMONT YANKEE (HWR) • SUPPORT STRUCTURE • LUBRICATION • SURVEILLANCE PROGRAM • LEAK • PIPES AND PIPE FITTINGS

117005
 VOLTAGE LOST TO MOTOR CONTROL CENTER AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-25/36 TO NRC OFFICE OF I & E, REGION 1, SEPT. 13, 1970, DUCRET 50-271, TYPE--BWR, NRG--G.E., AE--EDASLU

CASE - MISC IN UNUSED CIRCUIT. DURING POWER ASCENSION WITH THE REACTOR AT 75% POWER, VOLTAGE TO MOTOR CONTROL CENTER 090 WAS LOST. THE OUTPUT BREAKER ON UNINTERRUPTIBLE POWER SUPPLY 0 HAD OPENED ON A SHORT TRIP SIGNAL. THE EXISTING POWER SYSTEM, 250 KVA OUTPUT BREAKER TRIPPED BECAUSE OF MISC ENTERING AN UNUSUAL STATIC SWITCH OPEN SENSING CIRCUIT. THIS CAUSED A TRIP INPUT TO THE STATIC SWITCH. THIS SYSTEM DOES NOT HAVE A STATIC SWITCH AND THEREFORE DOES NOT UTILIZE THIS INPUT. CORRECTIVE ACTION WAS TO REMOVE THIS INPUT FROM THE SYSTEM.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTROL SYSTEM • MISC • FAILURE, DESIGN ERROR • VERMONT YANKEE (HWR) • ELECTRIC POWER, UNINTERRUPTED • EMERGENCY COOLING SYSTEM • BREAKER

117905
 AMR SERVICE WATER SYSTEM PUMP INOPERABLE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-29/36 TO NRC OFFICE OF I & E, REGION 1, SEPT. 15, 1970, DUCRET 50-271, TYPE--BWR, NRG--G.E., AE--EDASLU

CASE - CHECK VALVE FAILURE. DURING SURVEILLANCE TESTING OF THE AMR SERVICE WATER SYSTEM WITH THE REACTOR AT 95% POWER, PUMP A WAS DECLARED INOPERABLE. THE PUMP DISCHARGE CHECK VALVE FAILED TO SHUT PROPERLY AND ALLOWED WATER DISCHARGED FROM PUMP C TO RECIRCULATE BACK TO THE SUCTION SIDE OF THE PUMPS. THE WALWORTH CO., MODEL NO. 5344 HE, CHECK VALVE FAILED TO SHUT PROPERLY BECAUSE OF EXCESSIVE PLAY BETWEEN THE DISC AND DISC ARM. A THIN STAINLESS STEEL WASHER (SHIM) WAS INSTALLED BETWEEN THE 2 PARTS TO REDUCE PLAY TO AN ACCEPTABLE LEVEL.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (HWR) • SHUTDOWN COOLING SYSTEM • VALVE, CHECK

117905 *CONTINUED*
 SERVICE WATER • FAILURE, IMMINENT • LEAK • PUMP

117906
 CONTAINMENT AIR SAMPLE VALVE FAILS TO CLOSE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR WFO-70-27/31 TO NRC OFFICE OF I & E, REGION 1, SEPT. 15, 1970, DUCAT 50-271, TYPE--BWR, NRC--
 W-E, AE--EDASCO

CAUSE - DIRT AMONG VALVE STEM. DURING SPECIAL TESTS WITH THE REACTOR AT 95% POWER, A CONTAINMENT AIR SAMPLE VALVE FAILED TO CLOSE WHEN THE SWITCH WAS PLACED IN THE CLOSED POSITION. IT HAD BEEN SUCCESSFULLY CYCLED THE PREVIOUS DAY. THE AUTOMATIC VALVE, MODEL 130400PIMW, FAILED DUE TO AN ACCUMULATION OF FILTH AND DIRT AMONG THE VALVE STEM AND THE POSITION MAGNET. ALSO, THE SOLENOID COIL WAS BURNED OPEN. THIS DID NOT CAUSE FAILURE SINCE THE SOLENOID IS ENERGIZED TO OPEN THE VALVE. THE VALVE WAS REPAIRED AND CYCLED SEVERAL TIMES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • SAMPLING • LEAK • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (BWR) • CONTAINMENT ATMOSPHERE • FAILURE, IMMINENT • SOLENOID • VALVES

118211
 DIESEL GENERATOR FUEL HEADER FITTING LEAKS AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR WFO-70-28/31 TO NRC OFFICE OF I & E, REGION 1, SEPT. 24, 1970, DUCAT 50-271, TYPE--BWR, NRC--
 W-E, AE--EDASCO

CAUSE - NORMAL ENGINE VIBRATION. DURING TESTING OF DIESEL GENERATOR # WITH THE REACTOR AT 95% POWER, SLIGHT LEAKAGE WAS OBSERVED AT A FUEL HEADER FITTING. APPARENTLY, NORMAL ENGINE VIBRATIONS CAUSED THE MECHANICAL CONNECTION TO BECOME LOOSE. THE CONNECTION WAS TIGHTENED. AN 8 HRA LOAD TEST WAS PERFORMED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

TEST, SYSTEM OPERABILITY • VERMONT YANKEE (BWR) • VIBRATION • LEAK • FUEL, FOSSIL • FAILURE, IMMINENT • ENGINES, INTERNAL COMBUSTION • GENERATOR, DIESEL • PIPES AND PIPE FITTINGS

118212
 DAYWELL ATMOSPHERIC TEMPERATURE RECORDER BECOMES INOPERABLE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR WFO-70-30/31 TO NRC OFFICE OF I & E, REGION 1, SEPT. 24, 1970, DUCAT 50-271, TYPE--BWR, NRC--
 W-E, AE--EDASCO

CAUSE - BROKEN CHART DRIVE MTD. DURING 95% POWER OPERATION, 1 OF THE 2 DAYWELL ATMOSPHERIC TEMPERATURE RECORDERS WAS FOUND TO BE INOPERABLE. THE GE MODEL 8914201 RECORDER FAILED DUE TO BROKEN MTD IN THE CHART DRIVE MECHANISM. THE DRIVE MECHANISM WAS REBUILT AND THE RECORDER RETURNED TO SERVICE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, COMPONENT • CONTAINMENT • VERMONT YANKEE (BWR) • CONTAINMENT ATMOSPHERE • FAILURE, IMMINENT • SENSORS, TEMPERATURE • RECORDERS

118213
 SET POINT DRIFT IN DAYWELL PRESSURE SWITCH AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR WFO-70-31/31 TO NRC OFFICE OF I & E, REGION 1, SEPT. 27, 1970, DUCAT 50-271, TYPE--BWR, NRC--
 W-E, AE--EDASCO

CAUSE - INSTRUMENT DRIFT. DURING TESTING OF THE DAYWELL HIGH PRESSURE SCRAM/ISOLATION PRESSURE SWITCHES WHILE OPERATING AT 90% POWER, ONE SWITCH WAS FOUND TO ACTUATE AT 2.02 PSIG, EXCEEDING THE 2.0 PSIG LIMIT. IT WAS IMMEDIATELY RESET TO 2.00 PSIG. THE STATIC-DRIVING PRESSURE SWITCH, MODEL 12M-AA4, FAILED DUE TO INSTRUMENT DRIFT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • REACTOR PROTECTION SYSTEM • INSTRUMENT CALIBRATION • FAILURE, INSTRUMENT • INSTRUMENT, SWITCH • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (BWR) • SET POINT • DRIFT • SENSORS, PRESSURE

118214
 DESIGN DEFICIENCY FOUND IN LPCI INJECTION VALVE LOGIC AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR WFO-70-32/31 TO NRC OFFICE OF I & E, REGION 1, SEPT. 27, 1970, DUCAT 50-271, TYPE--BWR, NRC--

110214 PLATTINUM
U.S. AC--EDASCU

CAUSE - DESIGN UNRELIABLE. DURING A PERIOD OF PLANT DESIGN DOCUMENTATION WHILE THE PLANT WAS SHUT DOWN, AN APPARENT DESIGN DEFICIENCY WAS FOUND IN THE CONTROL LOGIC FOR THE 2 VALVES DESIGNED AS THE LPCI INJECTION VALVES. A REDUNDANT AUTO-OPEN CONTACT HAD BEEN OMITTED. OPERATING DIFFICULTIES WERE EXPERIENCED PRIOR TO MARCH 1970 WITH THE LPCI INJECTION VALVES. AS A RESULT, 2 OTHER VALVES WERE DESIGNATED AS THE INJECTION VALVES. BUT REDUNDANT AUTO-OPENING LOGIC WAS NOT PROVIDED. THE REDUNDANT LOGIC HAS BEEN ADDED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTACT SYSTEM • PURIFICATION • FAILURE, DESIGN ERROR • PRELIMINARY • VERMONT YANKEE (BWR) • VALVES • LPCI

110200
LPCI INJECTION VALVE FAILS TO OPEN AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PAGES, LTR NRC-70-35717 TO NRC OFFICE OF I & E, REGION 1, OCT. 4, 1970, Docket 50-271, TYPE--BWR, NRC--G.E.,
AC--EDASCU

CAUSE - UNKNOWN AT THIS TIME. DUE TO THE UNRELIABILITY OF UNINTERRUPTIBLE POWER SYSTEM A, ALTERNATE TESTING WAS BEING PERFORMED. DURING THE OPERABILITY CHECK OF THE LPCI INJECTION VALVES WHILE OPERATING AT 100% POWER, A VALVE WAS CLOSED ELECTRICALLY AND FAILED TO REOPEN USING THE CONTACT ALARM SWITCH. IT WAS MANUALLY CHARGED OFF ITS SEAT AND ELECTRICALLY CLOSED 2 TIMES SUCCESSFULLY. THERE ARE NO FIRM CONCLUSIONS AS TO THE CAUSE OF FAILURE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (BWR) • VALVES • LPCI

110205
IOWINE REMOVAL EFFICIENCY OF CHARCOAL FILTERS BELOW LIMIT AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PAGES, LTR NRC-70-35717 TO NRC OFFICE OF I & E, REGION 1, OCT. 7, 1970, Docket 50-271, TYPE--BWR, NRC--G.E.,
AC--EDASCU

CAUSE - UNKNOWN AT THIS TIME. WHILE OPERATING AT 99% POWER, ANALYSIS OF 2 CARBON SAMPLES TAKEN FROM SHUT TRAIN A FILTER REVEALED AN EFFICIENCY RATING OF 90% AND 71%. TECH SPECS REQUIRED 95%. CHARCOAL FILTERS WERE REPLACED UTILIZING CARBON HAVING AN EFFICIENCY RATING OF 90-70. EVALUATION OF IOWINE RELEASES FROM THE PLANT STACK INDICATED NO SIGNIFICANT INCREASE IN RELEASE RATE DURING OPERATION OF THE SHUT IN A DEGRADED MODE. ANALYSIS OF THE CARBON TO DETERMINE THE CAUSE OF DEGRADATION HAS BEEN INCONCLUSIVE.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • FILTER EFFICIENCY • IOWINE • CHARCOAL ADSORBENT • TEST, FILTER • TEST, SYSTEM OPERABILITY • VERMONT YANKEE (BWR) • STANDBY WAS TREATMENT

119003
UNINTERRUPTIBLE POWER SUPPLY TRIPS AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PAGES, LTR NRC-70-34731 TO NRC OFFICE OF I & E, REGION 1, OCT. 20, 1970, Docket 50-271, TYPE--BWR, NRC--G.E.,
AC--EDASCU

CAUSE - BLOWN INVERTER LEG FUSE. DURING 97% POWER OPERATION, PERSONNEL REPORTED LOSS OF VOLTAGE TO MOTOR CONTROL CENTER 09A. UNINTERRUPTIBLE POWER SUPPLY A HAD TRIPPED BECAUSE OF A BLOWN INVERTER LEG FUSE. SEVERAL CIRCUIT DIAGNOSIS AND SCADA WERE FOUND TO BE INOPERABLE. THE CAUSE APPEARS TO BE IN THE GATE FIRING MODULES. INOPERABLE COMPONENTS WERE REPLACED AND THE UNIT OPERATIONALLY TESTED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

FAILURE, EQUIPMENT • INSTRUMENT, PROTECTIVE • VERMONT YANKEE (BWR) • ELECTRIC POWER, UNINTERRUPTED • ELECTRONIC FUNCTION UNIT • GENERATORS

119471
VOLTAGE TO MOTOR CONTROL CENTER LOST AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
3 PAGES, LTR NRC-70-34731 TO NRC OFFICE OF I & E, REGION 1, OCT. 20, 1970, Docket 50-271, TYPE--BWR, NRC--G.E.,
AC--EDASCU

CAUSE - BLOWN INVERTER LEG FUSE. DURING 97% POWER OPERATION, VOLTAGE TO MOTOR CONTROL CENTER 09A WAS LOST. UNINTERRUPTIBLE POWER SUPPLY A HAD TRIPPED BECAUSE OF A BLOWN INVERTER LEG FUSE. PRELIMINARY INVESTIGATION PLACED THE CAUSE IN THE GATE FIRING MODULES. INOPERABLE COMPONENTS WERE REPLACED. THE UNIT WAS TESTED.

119471 (CONTINUED)
 AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + INSTRUMENT, PROTECTIVE + VERMONT YANKEE (OWN) + ELECTRIC POWER, UNINTERRUPTED + FAILURE,
 IMMERENT + ELECTRONIC FUNCTIONAL UNITS + WEARABLES

119100
 FILTER CAPACITOR BANK FUSE IN UPS SYSTEM BLOWS AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-30/3L TO NRC OFFICE OF I & E, REGION 1, OCT. 20, 1970, DCKET 50-271, TYPE--OWN, NRC--WEC,
 AE--EDASCO

CASE - CAPACITOR SHORTED. WHILE OPERATING AT 99% POWER, A FILTER CAPACITOR BANK FUSE BLOWN IN UPS
 A SYSTEM. A WE CO. MODEL 80F12230 CAPACITOR SHORTED CAUSING THE FILTER CAPACITOR BANK FUSE TO
 BLOW. IT WAS DETERMINED THAT THE UNIT COULD OPERATE SAFELY WITH THIS ONE BANK OUT OF FIVE BUT
 OPERABLE. CORRECTIVE ACTION WAS TO RETURN THE UNIT TO SERVICE WITHOUT THE FILTER CAPACITOR BANK.
 THE BANK WILL BE REPAIRED AT THE NEXT AVAILABLE COLD SHUTDOWN.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

FAILURE, EQUIPMENT + ELECTRIC POWER + VERMONT YANKEE (OWN) + ELECTRIC POWER, UNINTERRUPTED + FAILURE,
 IMMERENT

119720
 CONTROL POWER BATTERY VOLTAGE LOW AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-37/3L TO NRC OFFICE OF I & E, REGION 1, NOV. 12, 1970, DCKET 50-271, TYPE--OWN, NRC--WEC,
 AE--EDASCO

CASE - VOLTAGE REGULATOR FAILURE. WHILE OPERATING AT 100% POWER, A UPS-10 TANK ALARM WAS
 RECEIVED. THE CONTROL POWER BATTERY VOLTAGE WAS LOW. A SPARE POWER SUPPLY WAS IMMEDIATELY WIRED
 IN TO MAINTAIN UNIT OPERABILITY. FAILURE OF THE TELE-DYNAMIC, BRUTE III, SERIES 4000020, CONTROL
 BATTERY CHARGING POWER SUPPLY CAUSED THE UPS LOGIC TO BE POWERED DIRECTLY BY THE CONTROL
 BATTERIES. THE VOLTAGE REGULATORY CIRCUIT WAS INOPERATIVE. THE POWER SUPPLY WAS REPLACED.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

VERMONT YANKEE (OWN) + ELECTRIC POWER, UNINTERRUPTED + ELECTRIC POWER + BATTERIES & CHARGERS + FAILURE,
 INSTRUMENT + INSTRUMENT, CONTROL

119700
 ENVIRONMENTAL RADIOLOGICAL SAMPLE NOT OBTAINED AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-39/3L TO NRC OFFICE OF I & E, REGION 1, NOV. 12, 1970, DCKET 50-271, TYPE--OWN, NRC--WEC,
 AE--EDASCO

CASE - POWER SWITCH LEFT OFF. DURING A ROUTINE WEEKLY CHANGE OF THE AIR PARTICULATE AND CHEMICAL
 CARTRIDGE SAMPLES ASSOCIATED WITH THE ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAM, NO SAMPLE
 WAS OBTAINED FOR THE PERIOD OCT. 4-12, 1970 AT STATION 100. THE POWER SWITCH TO THE SAMPLES WAS
 FOUND TO BE IN THE OFF POSITION UPON ARRIVAL AT THE STATION. FOLLOWING THE LAST CHANGE,
 PERSONNEL APPARENTLY FAILED TO TURN THE POWER SWITCH ON.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

VERMONT YANKEE (OWN) + SAMPLING + MONITOR, AIR + FAILURE, OPERATOR ERROR + MONITORING PROGRAM, ENVIRONMENTAL
 + ELECTRIC POWER

115730
 LEVEL SWITCHES FAIL TO ACTUATE AT VERMONT YANKEE
 VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
 3 PGS, LTR W/NO-70-30/3L TO NRC OFFICE OF I & E, REGION 1, NOV. 10, 1970, DCKET 50-271, TYPE--OWN, NRC--WEC,
 AE--EDASCO

CASE - CORROSION OF PIVOT PLATE. DURING TESTING WITH THE REACTOR AT 99% POWER, HPCI/CONDENSATE
 STORAGE TANK LEVEL SWITCHES 23-74 AND 23-75 WOULD NOT ACTUATE AT THE REQUIRED SET POINT. FAILURE
 OF THE ROBERT SHAW CONTROLS CO. LEVEL SWITCHES, MODEL 83035-A2 WAS CAUSED BY CORROSION BUILDUP ON
 THE OPERATING MECHANISM WHICH PREVENTED THE PIVOT PLATE FROM MOVING. THE OPERATING MECHANISM OF
 BOTH SWITCHES WAS REPLACED. CONCURRENTLY, TURBO WATER LEVEL SWITCH 23-91A FAILED TO ACTUATE.
 THE FLOAT WAS STUCK. FLUSHING THE FLOAT CHAMBER WITH DEMINERALIZED WATER FREED THE FLOAT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
 CHARGE \$2.00

VERMONT YANKEE (OWN) + INSTRUMENT, SWITCH + TEST, SYSTEM OPERABILITY + FAILURE, INSTRUMENT + FAILURE, DESIGN
 ERROR + CORROSION + PLANT + HPCI + EMERGENCY COOLING SYSTEM + TOWNS + INSTRUMENT CALIBRATION

229734
UNINTERRUPTIBLE POWER SUPPLY FOR MAIN VALVE TRIPS AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
J PWS, LTR W/NO-78-00/31 TO NRC OFFICE OF I & E, REGION 1, NOV. 10, 1978, Docket 50-271, TYPE--DBR, NPG--G.E.,
AC--EDASCO

CASE - NOT DETERMINED. WITH THE PLANT AT 99% POWER, PERSONNEL WERE PERFORMING ROUTINE AND NOV
OPERABILITY TESTING ON VALVE AND-27A WHEN UPS-1A TRIPPED. AFTER AN INCONCLUSIVE INVESTIGATION,
THE UNIT WAS RESET AND FURTHER ATTEMPTS WERE MADE TO OPEN THE VALVE. THE UNIT AGAIN TRIPPED.
THE VALVE WAS MANUALLY OPENED AND CLOSED. UPS-1A WAS AGAIN RESTARTED. THE VALVE WAS CYCLED
WITHOUT TRIPPING THE UNIT. PRELIMINARY INVESTIGATION PLACED THE CAUSE ON A LOGIC FAILURE OF THE
EXIDE POWER SYSTEM, 250 AYS UNINTERRUPTIBLE POWER SUPPLY.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.000

VERMONT YANKEE (DBR) * ELECTRIC POWER, UNINTERRUPTED * TEST, SYSTEM OPERABILITY * VALVES * SHUTDOWN COOLING
SYSTEM * ON SITE * FAILURE, EQUIPMENT

229740
JET POINT SHIFT IN DIFFERENTIAL PRESSURE SWITCH AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
J PWS, LTR W/NO-78-02/31 TO NRC OFFICE OF I & E, REGION 1, NOV. 10, 1978, Docket 50-271, TYPE--DBR, NPG--G.E.,
AC--EDASCO

CASE - INSTRUMENT SHIFT. DURING TESTING OF THE ALIC MAIN STEAM LINE DELTA P SWITCHES WITH THE
REACTION AT 99% POWER, DIFFERENTIAL PRESSURE SWITCH DPS 1A-03 ACTUATED AT -200 INCHES OF WATER.
THIS WAS DUE TO JET POINT SHIFT ON A ORION MODEL 200 DIFFERENTIAL PRESSURE SWITCH. IT WAS
IMMEDIATELY READJUSTED TO ACTUATE AT -103 INCHES. THE LIMIT IS +195 AND -195 INCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.000

VERMONT YANKEE (DBR) * INSTRUMENT, SWITCH * INSTRUMENT CALIBRATION * SENSORS, PRESSURE * FAILURE, INSTRUMENT
* JET POINT * SHIFT * ALIC * FAILURE, INHERENT

220230
PH OF REACTOR COOLANT WATER LCM AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
J PWS, LTR W/NO-78-01/31 TO NRC OFFICE OF I & E, REGION 1, NOV. 20, 1978, Docket 50-271, TYPE--DBR, NPG--G.E.,
AC--EDASCO

CASE - RESIN TRAP FAILURE/NUCLEONIC SAMPLE. FOLLOWING A SCHEDULED SHUTDOWN FOR CONTROL ROD
PATTERN EXCHANGE, THE PLANT WAS UNDERGOING NORMAL STARTUP WHEN A LOW PH CONDITION WAS DISCOVERED
IN THE REACTOR COOLANT WATER. A SHORT TIME LATER, THE REACTOR CLEANUP SYSTEM WAS ISOLATED DUE TO
LEAKAGE. VESSEL CHEMISTRY DEGRADED FURTHER. THE REACTOR WAS SHUT DOWN. CLEANUP GENERALIZER
TRAP A WAS FOUND WITH A TRAP WHICH ALLOWED RESINS TO ENTER THE VESSEL. ONE CUBIC FOOT OF RESIN
COULD HAVE ENTERED THE VESSEL. WHEN THE CLEANUP SYSTEM WAS ISOLATED, THE NORMAL SAMPLE POINT WAS
LCST. THE ALTERNATE POINT MAY NOT HAVE BEEN PROPERLY FLUSHED.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.000

VERMONT YANKEE (DBR) * COOLANT QUALITY * RESIN * RADIATION DAMAGE * COOLANT PURIFICATION SYSTEM * LEAK *
REACTOR SHUTDOWN * SAMPLING * FAILURE, EQUIPMENT * FILTER, TRAP * FAILURE, INHERENT

220540
VOLTAGE TO MOTOR CENTRAL CENTER LOST AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT
J PWS, LTR W/NO-78-00/17 TO NRC OFFICE OF I & E, REGION 1, DEC. 13, 1978, Docket 50-271, TYPE--DBR, NPG--G.E.,
AC--EDASCO

CASE - UPS TRIPPED DUE TO COMPONENT FAILURE. DURING 99% POWER OPERATION, VOLTAGE TO MOTOR
CENTRAL CENTER BUS WAS LOST CAUSING LPCI SUBSYSTEM B TO BE IMPERABLE. UPS-1A WAS TRIPPED.
DURING THE REQUIRED OPERABILITY CHECKS, UPS-1A TRIPPED WHILE VALVE AND-27A WAS BEING OPENED.
FAILURE OF UPS-1A IS ATTRIBUTED TO A GATE DRIVER BOARD FAILURE. THE BOARD WAS REPLACED. UPS-1B
FAILED DUE TO A FAILED VOLTAGE REGULATOR CIRCUIT BOARD (2A12A12). THIS BOARD WAS ALSO REPLACED.
FAILURE COMPONENTS WERE RETURNED TO EXIDE POWER SYSTEMS FOR FAILURE ANALYSIS.

AVAILABILITY - NRC PUBLIC DOCUMENT NUMBER, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM
CHARGE \$2.000

VERMONT YANKEE (DBR) * PERMISSIBLE SAFETY FEATURE * TEST, SYSTEM OPERABILITY * FAILURE, COMPONENT * ELECTRONIC
FUNCTION UNITS * FAILURE, INHERENT * ELECTRIC POWER * ELECTRIC POWER, UNINTERRUPTED

220678
CONTAINMENT AIR SAMPLING PUMP MOTOR FAILS AT VERMONT YANKEE
VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

120478 CONTINUED

3 PGS, LTR N70-75-45/31 TC NRC OFFICE OF I & E, REGION 1, DEC. 15, 1970, Docket 50-271, TYPE--DNR, NFO--WCC., AE--EASCO

CAUSE - STARTING COIL SWITCH FAILED TO RESET. WITH THE REACTOR AT 994 POWER, THE CONTAINMENT AIR SAMPLING PUMP MOTOR WAS FOUND IMPERMEABLE WHEN IT FAILED TO START AFTER IT AUTOMATICALLY TRIPPED DURING TESTING. THE PUMP WAS SECURED. ITS BYPASS VALVE WAS OPENED AND THE EXISTING DELTA P BETWEEN THE TOWNS AND DRYWELL PROVIDED AIR FLOW TO THE RADIATION MONITOR. THE 40 TRACELAB MOTOR, MODEL 28C145A4232, FAILED TO START BECAUSE THE STARTING COIL LIMIT SWITCH FAILED TO RESET WHEN THE MOTOR TRIPPED. THE SWITCH WAS REPLACED AND RETURNED TO SERVICE WITHIN 305 HOURS.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

VERMONT YANKEE (DNR) • MOTORS • MONITOR • CONTAINMENT ATMOSPHERE • RADIATION MONITOR • SAMPLING • PUMPS • MONITOR, AIR • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • INSTRUMENT, SWITCH • FAILURE, IMMERENT

120530

UNINTERRUPTIBLE POWER SUPPLY TRIPS AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR N70-75-45/31 TC NRC OFFICE OF I & E, REGION 1, DEC. 17, 1970, Docket 50-271, TYPE--DNR, NFO--WCC., AE--EASCO

CAUSE - VOLTAGE REGULATION SYSTEM LOGIC. DURING NRC MONITOR OPERABILITY TESTING ON VALVE AND-270 WITH THE REACTOR AT 994 POWER, UPS-12 TRIPPED. THE 240V POWER SYSTEM 250 KVA UNINTERRUPTIBLE POWER SUPPLY TRIPPED BECAUSE OF PROBLEMS WITH VOLTAGE REGULATION AND SYSTEM LOGIC. THE VOLTAGE REGULATION CIRCUIT BOARD (2A13A12) WAS REPLACED. THE 01E-000-0001C-PAIRED CIRCUIT BOARD (2A13A1) WAS ADJUSTED. THE VALVE WAS CYCLED TO PROVE UPS OPERABILITY.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

VERMONT YANKEE (DNR) • ELECTRIC POWER, UNINTERRUPTED • VALVES • SHUTDOWN LIMITING SYSTEM • TEST, SYSTEM OPERABILITY • FAILURE, EQUIPMENT • ELECTRONIC FUNCTION UNITS • FAILURE, IMMERENT

120539

MSIV LIMIT SWITCH MALFUNCTION AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR N70-75-45/31 TC NRC OFFICE OF I & E, REGION 1, DEC. 20, 1970, Docket 50-271, TYPE--DNR, NFO--WCC., AE--EASCO

CAUSE - RETURN SPRING TOO STIFF. DURING MSIV PARTIAL CLOSING TESTING WITH THE REACTOR AT 994 POWER, RPS RELAY 5A-RJF DEENERGIZED NORMALLY BUT THEN RESET WHILE THE OPERATION WAS STILL CLOSING MSIV-200C. THE MOST PROBABLE CAUSE IS FAILURE OF THE VALVE LIMIT SWITCH. A NEW TYPE OF SWITCH HAS BEEN INSTALLED. THE RETURN SPRING IN THESE NEW SWITCHES WAS TOO STIFF CAUSING THE SWITCHES TO RESET AUTOMATICALLY. NEWER SPRINGS WERE INSTALLED IN ALL SWITCHES EXCEPT THIS ONE. IT WILL BE REPAIRED AT THE NEXT AVAILABLE OPPORTUNITY. THESE ARE HANCO CONTROLS, MODEL EA 700-00700, LIMIT SWITCHES.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

VERMONT YANKEE (DNR) • RELAYS • POSITION • REACTOR PROTECTION SYSTEM • TEST, SYSTEM OPERABILITY • VALVES • CONTAINMENT ISOLATION • MAIN COOLING SYSTEM • FAILURE, MAINTENANCE ERROR • INSTRUMENT, SWITCH

120650

PRESSURE SWITCH FAILS TO ACTUATE AT VERMONT YANKEE

VERMONT YANKEE NUCLEAR POWER CORP., RUTLAND, VT

3 PGS, LTR N70-75-45/31 TC NRC OFFICE OF I & E, REGION 1, DEC. 29, 1970, Docket 50-271, TYPE--DNR, NFO--WCC., AE--EASCO

CAUSE - BALLER PROBABLY DISLODGED FROM CAM. WHILE PERFORMING REACTOR LOW PRESSURE-RELCS VALVE PERMISSIVE TESTS WITH THE REACTOR AT 994 POWER, SWITCH 5 OF P22-3520 DID NOT ACTUATE AT THE 500 PSIG LIMIT. WHEN PRESSURE WAS REAPPLIED TO THE SWITCH AND MAIN REVALVED, THE SWITCH ACTUATED AS REQUIRED. THE FAILURE COULD NOT BE REPEATED. THE BANTON MODEL 400A INDICATING SWITCH FAILED TO OPERATE APPARENTLY BECAUSE THE SWITCH ASSEMBLY BALLER BECAME DISLODGED FROM THE ACTUATING CAM. THE BALLER REORIENTED ITSELF PROPERLY WHEN PRESSURE WAS REDUCED TO ATMOSPHERIC.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, D. C. 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

VERMONT YANKEE (DNR) • INSTRUMENT, SWITCH • PRESSURE • TEST, SYSTEM OPERABILITY • FAILURE, INSTRUMENT • EMERGENCY COOLING SYSTEM • CONTACT SYSTEM

121024

APPARENT DESIGN DEFICIENCY FOUND IN THE CONTAINMENT AT MPPSS 2

WASHINGTON PUBLIC POWER SUPPLY SYSTEM, RICHLAND, WA

2 PGS, LTR N70-75-45/31 TC NRC OFFICE OF I & E, REGION 1, FEB. 24, 1970, Docket 50-271, TYPE--DNR, NFO--WCC., AE--

NCE

111024 "CONTINUUM"

CAUSE - RESONANCE PHENOMENON. A DESIGN EVALUATION OF THE MARK II CONTAINMENT IS BEING MADE. PRELIMINARY RESULTS INDICATE A RESONANCE PHENOMENON EXISTS DURING SAFETY RELIEF VALVE ACTUATION DUE TO A COUPLE BETWEEN THE SUPPRESSION POOL AND THE METAL SHELL. IT HAS BEEN CONCLUDED THAT THE COMPLETED CONTAINMENT SHOULD BE MODIFIED. A CONCEPT INVOLVES ADDING STIFFENING TO THE INTERIOR OF THE RETRACT.

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 M STREET, WASHINGTON, DC 20545 100 CENTS/PAGE -- MINIMUM CHARGE \$2.00

CONTAINMENT • CONTAINMENT DESIGN • HYDRAULIC EFFECT • MODIFICATION • PRESSURE RELIEF • FAILURE, DESIGN ERROR • CONSTRUCTION • MANUFACTURE • IDUAL • VALVES • TORUS

SUBJECT INDEX

A COLLECTION OF SUBJECTS IS USED TO LOCATE THE MAIN SUBJECT RELATED POINTS COVERED IN EACH ARTICLE. THE FOLLOWING INDEX IS AN ALPHABETICAL LISTING OF THE SUBJECTS WITH REFERENCES TO EACH ARTICLE WHICH HAS REFER TO IT.

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115003 P 70	115000 P 70	115000 P250	115000 P177	113000 P130	113000 P130	113000 P130	113000 P130
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STARTUP AT BRUNSWICK		

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FUEL OIL TRANSFER LINE SEVERED BY
STOP
STOP
O FILTER CAPACITOR
UNPERMITTED OPERATION LESS CONSERVATIVE THAN
SPN OF SETTLING
SPN OF SETTLING
SPN OF SETTLING
SPN OF SETTLING
SPN FOR SETTLING
SPN FOR SETTLING
PSETTLING
PSETTLING
PSETTLING
PSETTLING
BOTTOM 2 AND 30
BOTTOM - AND 30
PSUSPENDED SOLIDS IN SETTLING
DEFICIENCY FOUND IN REINFORCING STEEL FOR SSB COOLING TOWER
PSOFTCHAND
OSPECIFIC GRAVITY OF STATION
DREACTION DEPRESSURIZING SYSTEM
STATION
DREACTION DEPRESSURIZING SYSTEM
R280-VOLT
ONEUTRCA MONITORING
OSPECIFIC GRAVITY ON PILOT CELL OF RDS
ONEUTRCA MONITORING
DREACTION DEPRESSURIZING SYSTEM
POINTO
BRUNSWICK 20
MONTHLY
REACTOR POWER
BLEAK PLUMB IN CLEAN-UP LINE AT MUMBOLOIT
SECONDARY CONTAINMENT LOST AT MUMBOLOIT
SECONDARY CONTAINMENT LOST AT MUMBOLOIT
INDIVIDUAL RECEIVES OVEREXPOSURE AT MUMBOLOIT
SECONDARY CONTAINMENT LOST AT MUMBOLOIT
FLUX MONITOR TRIP SETTING OUT OF SPECS AT MUMBOLOIT
GLAS TREATMENT SYSTEM CALUSTIC PUMP MOTOR FAILS AT MUMBOLOIT
BREAKER ON GAS TREATMENT SYSTEM FAN MOTOR FAILS AT MUMBOLOIT
CONTROL ROD DRIVE EXERCISING NOT PERFORMED AT MUMBOLOIT
SEEN IN THERMAL SLEEVE OF FEEDWATER NOZZLE AT MUMBOLOIT
THE REFUELING BUILDING VENTILATION SYSTEM FAIL AT MUMBOLOIT
IN THERMAL SLEEVE TO FEEDWATER SPARGER AT MUMBOLOIT
ARM COOLING LOOP SUCTION HEAD/A FOUND TO
PORTABLE ISOLATION VALVE OPENED DUE - REQUIRED TO
RADWASTE SHIPPING, CASH FOUND TO
RWPC TURNING SPEED COULD NOT
SCAN FOLLOWERS IN TYPE CC- SWITCHES FOUND TO
HYDRAULIC SHAMBER RESERVOIR FOUND TO
CLEARAGE RATE OF TIP PURGE CHECK VALVE FOUND TO
CALIBRATION OF FLOW TRANSMITTER FOUND TO
CONTROL ROD ACCUMULATOR FOUND TO
RCPH FOUND TO
DBALT SERVICE WATER PUMP HOLD-DOWN BELTS FOUND TO
INSTUMENT TRIP POINT SETTINGS FOUND TO

BLOCK-INDE AT BRUNSDON 10
BALL VALVE FAILS TO CLOSE AT HILLSTONE 10
BALL VALVE IN OPEN IMPROPERABLE CONDITION AT FITZPATRICKO
BANK PULSE IN OPS SYSTEM OLJOS AT VERMONT YAMKEO
BASES FOR LICENSE AT HILLSTONE 10
BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
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BASIN EFFLUENT PH EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT PH EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT PH EXCEEDS LIMITS AT PEACH BOTTOM 2 AND 30
BASIN EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH
BASIN EFFLUENT SUSPENDED SOLIDS EXCEED LIMIT AT PEACH
BASIN EXCEED LIMIT AT PEACH BOTTOM 2 AND 30
BASINS AT GRAND GULF 1 AND 20
BATTERIES NOT TESTED ON SCHEDULE AT HILLSTONE 10
BATTERY ACID LOW AT BIG ROCK POINTO
BATTERY C ACIS SPECIFIC GRAVITY LOW AT BIG ROCK POINTO
BATTERY CHARGER FAILS AT BIG ROCK POINTO
BATTERY D ACIS SPECIFIC GRAVITY LOW AT BIG ROCK POINTO
BATTERY FOUND IN A DEGRADED COMPOSITION AT DRUSDON 30
BATTERY IMPROPERABLE AT BROWNS FERRY 20
BATTERY LOW AT BIG ROCK POINTO
BATTERY MADE IMPROPERABLE AT BROWNS FERRY 20
BATTERY PJ37 CELL FOUND LOW AT BIG ROCK POINTO
BATTERY PILOT CELL SPECIFIC GRAVITY FOUND LOW AT BIG ROCK
BATTERY PILOT CELL SPECIFIC GRAVITY LOW AT BIG ROCK POINTO
BATTERY TEST PERFORMED INSTEAD OF QUARTERLY TEST AT
BATTERY VOLTAGE LOW AT VERMONT YAMKEO
POAILY
PCRRACKS
PCCONTROLS ON
CCRRACKS DISCOVEREE
BE AIR-LOCKED AT QUAD CITIES 30
BE CLOSED AT BRUNSDON 20
BE CONTAMINATED AT HILLSTONE 10
BE CONTROLLED AT PEACH BOTTOM 40
BE DEFECTIVE AT BROWNS FERRY 1, 2, AND 30
BE EMPTY AT QUAD CITIES 20
BE EXCESSIVE AT DRUSDON 30
BE INCORRECT AT WATCH 10
BE IMPROPERABLE AT BROWNS FERRY 30
BE LESS THAN LIMIT AT ARMOLOO
BE LOOSE AT PILGRIM 10
BE NONCONSERVATIVE AT OYSTER CREEK

[illegible]

DRYWELL AIR LOCK INNER DOOR LEAKAGE UNACCEPTABLE AT PEACH	BOTTOM 20	116155	P221
FROM SURVEILLANCE NOT PERFORMED AT PEACH	BOTTOM 20	116054	P221
REACTOR PUMP DISCHARGE VALVE FAILS TO CLOSE AT PEACH	BOTTOM 20	116051	P221
MAIN STEAM RELIEF VALVE FAILS TO OPEN AT PEACH	BOTTOM 20	116016	P222
REACTOR VENT RADIATION MONITORS FAIL COMMUNICATE AT PEACH	BOTTOM 20	117008	P222
MAIN STEAM RELIEF VALVE FAILS OPEN AT PEACH	BOTTOM 20	116050	P223
NPCL TURBINE SPEED COULD NOT BE CONTROLLED AT PEACH	BOTTOM 20	116051	P223
STOP ROOM FAILS TO WITHDRAW COMPLETELY AT PEACH	BOTTOM 20	116019	P223
STEAM TUNNEL TEMPERATURE INCREASES AT PEACH	BOTTOM 20	116051	P223
HYDRAULIC SHOCK SUPPRESSOR RESERVOIR FOUND EMPTY AT PEACH	BOTTOM 20	117005	P224
DISPERSED DRYWELL RADIOACTIVE GAS SAMPLE OBTAINED AT PEACH	BOTTOM 20	117007	P225
ALPCL PUMP FLOWS LIMITED BY VALVING AT PEACH	BOTTOM 20	116019	P225
ALPCL SYSTEM BECOMES INOPERABLE AT PEACH	BOTTOM 20	116017	P225
RESET POINT DRIFT IN APRN AT PEACH	BOTTOM 20	116010	P225
RELEASE RATE EXCEEDS LIMIT AT PEACH	BOTTOM 20	116070	P226
DISPERSED DRYWELL GAS SAMPLE OBTAINED AT PEACH	BOTTOM 20	116010	P226
RESET POINT DRIFT IN NPCL PLOC SWITCH AT PEACH	BOTTOM 20	116010	P226
RESET POINT DRIFT OF ADS LOW LEVEL SWITCH AT PEACH	BOTTOM 20	116010	P227
NPCL TRIP THROTTLE VALVE FAILS TO RESET AT PEACH	BOTTOM 20	116008	P227
SCANS NOT PERFORMED PRIOR TO TWO LEAKS RELEASES AT PEACH	BOTTOM 20	116027	P228
HYDRAULIC SHOCKERS FOUND WITH EMPTY RESERVOIRS AT PEACH	BOTTOM 20	120237	P229
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FLOW TO MAIN STACK SAMPLING SYSTEM DISTURBED AT PEACH	BOTTOM 20	116025	P232
PRESSURE SWITCHES FOUND VALVED OUT OF SERVICE AT PEACH	BOTTOM 20	113731	P232
RADIOACTIVE GAS SAMPLE SYSTEM OUT OF SERVICE AT PEACH	BOTTOM 20	117000	P234
PURGE FLOWMETER VALVE FAILS TO OPEN COMPLETELY AT PEACH	BOTTOM 20	116019	P235
LEVEL SWITCH BOUNCES WHEN TRIP SIGNAL APPLIED AT PEACH	BOTTOM 20	113700	P235
RATE FOR IODINE AND PARTICULATES EXCEEDS LIMIT AT PEACH	BOTTOM 20	116015	P237
SET POINT FOR CORE SPRAY AND NPCL IMPROPER AT PEACH	BOTTOM 20	116015	P237
SPRAY PERMISSIVE LEVEL SWITCH FOUND INOPERATIVE AT PEACH	BOTTOM 20	116020	P238
HYDROGEN ANALYZERS VALVED OUT OF SERVICE AT PEACH	BOTTOM 20	116009	P238
RELEASE RATE FOR IODINE AND PARTICULATES HIGH AT PEACH	BOTTOM 20	116015	P238
MADE WITH GROSS ACTIVITY MONITOR INOPERABLE AT PEACH	BOTTOM 20	116015	P238
RADIATION MONITOR DISPLAYS ABNORMAL READING AT PEACH	BOTTOM 20	116015	P238
RODS FROM LEAKS REMOVED DURING REFUELING AT PEACH	BOTTOM 20	116002	P239
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DRYWELL RADIATION MONITOR FOUND INOPERABLE AT PEACH	BOTTOM 30	109000	P237
NPCL PUMP REACTOR TO DIESEL GENERATOR FOUND OPEN AT PEACH	BOTTOM 30	110101	P237
REACTOR PUMP HYDRAULIC SHOCKER INOPERABLE AT PEACH	BOTTOM 30	110101	P239
HYDRAULIC SHOCKERS FOUND INOPERABLE AT PEACH	BOTTOM 30	110101	P239
OTHER HYDRAULIC SHOCKERS FOUND INOPERABLE AT PEACH	BOTTOM 30	110101	P239
NPCL PUMP FAILS TO CLOSE AT PEACH	BOTTOM 30	110101	P239
RESET POINT DRIFT IN RADIATION MONITOR AT PEACH	BOTTOM 30	110101	P239
RESET POINT DRIFT IN PRESSURE SWITCH AT PEACH	BOTTOM 30	110101	P239
STORUS OXYGEN LEVEL EXCEEDS LIMIT AT PEACH	BOTTOM 30	112103	P239
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DRYWELL AIR LOCK DOOR LEAK RATE UNACCEPTABLE AT PEACH	BOTTOM 30	112000	P240
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NPCL TURBINE TRIPS ON HIGH STEAM FLOW AT PEACH	BOTTOM 30	113005	P240
CRACK FOUND IN NPCL PUMP PIPING INSTRUMENT LINE AT PEACH	BOTTOM 30	116001	P243
NPCL PUMP VALVE FAILS TO CLOSE AT PEACH	BOTTOM 30	116000	P243
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DOWN ROD BLOCK COULD NOT BE OBTAINED AT PEACH	BOTTOM 30	115003	P243
MAIN STEAM RELIEF VALVE FAILS OPEN AT PEACH	BOTTOM 30	116017	P243
SHOCK ABSORBER FOUND WITH EMPTY RESERVOIR AT PEACH	BOTTOM 30	116008	P243
HYDRAULIC SHOCK ABSORBER FOUND INOPERABLE AT PEACH	BOTTOM 30	116009	P243
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DRYWELL RADIATION MONITORING SYSTEM FLOW STOPS AT PEACH	BOTTOM 30	116028	P244
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RESET POINT DRIFT IN CONDENSER LOW VACUUM SWITCH AT PEACH	BOTTOM 30	116001	P245
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THREE REACTOR VESSEL STABILIZERS SLIGHTLY DEFORMED AT PEACH	BOTTOM 30	110101	P237
NPCL TURBINE EXHAUST DRAIN POT VALVE FAILS TO OPEN AT PEACH	BOTTOM 30	116026	P246
DRYWELL FLOW DRAIN ISOLATION VALVE FAILS TO CLOSE AT PEACH	BOTTOM 30	116008	P246
STEAM LINE HIGH TEMPERATURE SWITCH FAILS TO TRIP AT PEACH	BOTTOM 30	116025	P246
TO NITROGEN COMPRESSOR VALVE FAILS TO CLOSE AT PEACH	BOTTOM 30	116028	P246
SHOCK SUPPRESSORS FOUND WITH EMPTY RESERVOIRS AT PEACH	BOTTOM 30	116029	P246
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POSITIVE	BOTTOM 30	113111	P237
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25 SIGNIFICANT	BOTTOM 30	116026	P246

UNDESIGN 20

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ALARM BLT-ON-SEQUENCE COMPLETED DURING TESTING AT	SHOCKS	FEAR	20	OPERATION	11:00:07	0 37
BY ACCUMULATOR SYSTEM ON 3 HYDRAULIC CONTROL VALVE AT	SHOCKS	FEAR	20		11:00:01	0 37
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SPY STABILIZER PLATES INSTALLED INCORRECTLY AT	SHOCKS	FEAR	20		11:00:03	0 42
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EIGHT ALARMS RECEIVED FROM SHOCK DETECTORS AT	SHOCKS	FEAR	20		11:05:10	0 43
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SHOCK TUBE LINE FAILS TO OPERATE PROPERLY AT	SHOCKS	FEAR	20		11:05:17	0 44
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SHOCK SHUT OFF PUMP FAILS TO MAINTAIN PRESSURE AT	SHOCKS	FEAR	20		11:07:29	0 44
SHOCK PUMP FAILS TO START AT	SHOCKS	FEAR	20		11:07:00	0 44
SHOCK RECEIVED FROM SHOCK DETECTORS AT	SHOCKS	FEAR	20		11:02:03	0 45
SHOCK AND SAMPLING SYSTEM IMPERMEABLE TWICE AT	SHOCKS	FEAR	20		11:00:04	0 45
SHOCK THERMOCUPLE WIRING FOUND OPEN AT	SHOCKS	FEAR	20		11:00:07	0 45
SHOCK FAILS TO CONTROL SPEED AT	SHOCKS	FEAR	20		11:00:03	0 46
SHOCK STREAMLINE FLOW INSTRUMENTS UNSENSITIVE TO PLUM AT	SHOCKS	FEAR	20		11:00:00	0 46
SHOCK STEAM FLOW INDICATORS READ LOW AT	SHOCKS	FEAR	20		11:03:17	0 46
SHOCK ALARM RECEIVED FROM SHOCK DETECTOR AT	SHOCKS	FEAR	20		11:07:01	0 46
SHOCK CIRCULATION PUMP TRIPS AT	SHOCKS	FEAR	20		11:02:29	0 46
STARTING CIRCUIT OF DIESEL GENERATOR IMPERMEABLE AT	SHOCKS	FEAR	20		11:02:00	0 47
SHOCK BAYONET SENSOR FAILS TO RESPOND PROPERLY AT	SHOCKS	FEAR	20		11:05:04	0 47
POTENTIAL PUMP AND PUMP OPERATION BEYOND BAYONET CONVENTION AT	SHOCKS	FEAR	20		11:12:05	0 41
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SHOCK-137 CONCENTRATION IN BULK SAMPLE EXCEEDS LIMIT AT	SHOCKS	1 AND 20			11:05:17	0 46
SHOCK-137 CONCENTRATION IN BULK SAMPLE HIGH AT	SHOCKS	1 AND 20			11:00:32	0 46
SHOCK-137 CONCENTRATION IN BULK SAMPLE HIGH AT	SHOCKS	1 AND 20			11:00:02	0 46
SHOCK VALVE MOTOR OPERATOR TRIPS ON THERMAL OVERLOAD AT	SHOCKS	10			11:00:43	0 46
SHOCK STEAM SUPPLY VALVE FAILS TO OPEN AT	SHOCKS	10			11:00:04	0 46
SHOCK LEVEL EXCEEDS THE MAXIMUM LIMIT AT	SHOCKS	10			11:00:33	0 46
SHOCK STEAM VALVE FAILS TO OPEN AT	SHOCKS	10			11:00:02	0 47
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DIESEL GENERATOR FAILS TO START AT	SHOCKS	20			11:02:04	0 48
SHOCK ATMOSPHERIC RECORDER FAILS COMPLETE AT	SHOCKS	20			11:02:05	0 48
SHOCK ISOLATES FROM HIGH VENT TEMPERATURE DIFFERENTIAL AT	SHOCKS	20			11:02:03	0 48
SHOCK RECORDER FOUND TO BE READING CORRECTLY AT	SHOCKS	20			11:02:00	0 52
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SHOCK ISOLATED FROM HIGH TEMPERATURE DIFFERENTIAL AT	SHOCKS	20			11:02:04	0 56
SHOCK SYSTEM ISOLATED AT	SHOCKS	20			11:02:05	0 52
PERIODIC TESTS NOT PERFORMED AT	SHOCKS	20			11:02:04	0 51
REACTOR WATER CONDUCTIVITY EXCEEDS LIMIT AT	SHOCKS	20			11:02:00	0 51
REACTOR WATER CONDUCTIVITY EXCEEDS LIMIT AT	SHOCKS	20			11:02:01	0 51
SET POINT DRIFT IN PRESSURE INTERLOCK SWITCH AT	SHOCKS	20			11:02:02	0 51
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REACTOR WATER CONDUCTIVITY EXCEEDS LIMIT AT	SHOCKS	20			11:02:37	0 54
SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCHES AT	SHOCKS	20			11:00:43	0 54
SET POINT DRIFT IN HIGH PRESSURE SWITCHES AT	SHOCKS	20			11:00:44	0 54
SHOCK ISOLATED ON STEAM LEAK DETECTION AT	SHOCKS	20			11:00:07	0 53
SHOCK ISOLATED ON STEAM LEAK DETECTION AT	SHOCKS	20			11:00:00	0 51
SHOCK ISOLATED ON STEAM LEAK DETECTION AT	SHOCKS	20			11:00:09	0 52
SHOCK ISOLATED ON STEAM LEAK DETECTION AT	SHOCKS	20			11:00:10	0 53
SET POINT DRIFT IN PRESSURE SWITCHES AT	SHOCKS	20			11:00:01	0 54
SHOCK ISOLATED DUE TO STEAM LEAK AT	SHOCKS	20			11:05:00	0 54
SHOCK ISOLATED FOR MAINTENANCE ACTIVITY AT	SHOCKS	20			11:05:07	0 54
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TESTING OF THE MAIN STACK REGISTER NOT PERFORMED AT	SHOCKS	20			11:00:00	0 54
DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT	SHOCKS	20			11:00:00	0 54
CONTAINMENT RADIATION RECORDER FAILS TO RESPOND AT	SHOCKS	20			11:02:10	0 55
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SHOCK AND SHOCK TESTS NOT RUN ON TIME AT	SHOCKS	20			11:02:05	0 55
SHOCK HAS RADIATION MONITOR SAMPLE VALVE FOUND CLOSED AT	SHOCKS	20			11:02:00	0 55
SHOCK ISOLATES ON HIGH TEMPERATURE AT	SHOCKS	20			11:02:00	0 56
SET POINT DRIFT IN PRESSURE SWITCHES AT	SHOCKS	20			11:02:09	0 56
SET POINT DRIFT IN TEMPERATURE SWITCH AT	SHOCKS	20			11:04:07	0 56
EXPLOSION OCCURS IN STACK FILTER HOUSE AT	SHOCKS	20			11:02:59	0 56
SET POINT DRIFT IN PRESSURE SWITCH AT	SHOCKS	20			11:02:01	0 56
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SET POINT DRIFT IN SHOCK PRESSURE SWITCH AT	SHOCKS	20			11:00:03	0 57
SET POINT DRIFT IN HIGH PRESSURE SWITCHES AT	SHOCKS	20			11:00:04	0 57
SHOCK ISOLATES ON STEAM LEAK DETECTION AT	SHOCKS	20			11:00:07	0 57
SHOCK FLOW INDICATION ON RADIATION MONITOR AT	SHOCKS	20			11:00:05	0 58
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MURDER IMPOSING CIVIL PENALTIES AT	SHOCKS	20			11:01:70	0 57
SET POINT DRIFT IN PRESSURE SWITCHES AT	SHOCKS	20			11:01:04	0 58
SHOCK OXYGEN ANALYZER READS HIGH AT	SHOCKS	20			11:01:11	0 58
SET POINT DRIFT IN FOUR LEVEL SWITCHES AT	SHOCKS	20			11:01:07	0 59
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CONTAINMENT RADIATION MONITOR HAS LOW FLOW AT	BRUNSWICK 20	111400 P 00
DRYBELL PENETRATION ISOLATION VALVE FAILS AT	BRUNSWICK 20	111401 P 00
HPIC ISOLATES ON STEAM LEAK DETECTION AT	BRUNSWICK 20	111390 P 00
HPIC TURBINE TRIPS ON HIGH EXHAUST PRESSURE AT	BRUNSWICK 20	111405 P 01
#SOGT BLOWER NOISY AT	BRUNSWICK 20	111403 P 01
#SET POINT DRIFT IN TWO PRESSURE SWITCHES AT	BRUNSWICK 20	111400 P 01
#SET POINT DRIFT IN THREE DIFFERENTIAL PRESSURE SWITCHES AT	BRUNSWICK 20	111402 P 01
UNIDENTIFIED DRYBELL LEAKAGE EXCEEDS LIMIT AT	BRUNSWICK 20	111409 P 01
CONTAINMENT RADIATION MONITOR HAS LOW FLOW AT	BRUNSWICK 20	111849 P 02
HPIC ISOLATES ON STEAM LEAK DETECTION AT	BRUNSWICK 20	111873 P 02
RADIATION MONITOR FOUND WITH NO FLOW INDICATION AT	BRUNSWICK 20	111876 P 02
HPIC INVERTER TRIPS ON HIGH VOLTAGE AT	BRUNSWICK 20	111897 P 02
HPIC SERVICE WATER PUMP FAILS TO START AT	BRUNSWICK 20	111890 P 03
HPIC TORUS SECTION VALVE FOUND CLOSED AT	BRUNSWICK 20	111877 P 03
#STEAM LEAK DETECTION ISOLATES HPIC AT	BRUNSWICK 20	111870 P 03
PHOSPHORIC ACID RELEASE DURING FILTER HOUSE EXPLOSION AT	BRUNSWICK 20	112130 P 03
MOISTURE FOUND ON FIXED PAPER FILTER AT	BRUNSWICK 20	111914 P 03
DRYBELL MONITOR FOUND WITH NO FLOW AT	BRUNSWICK 20	112300 P 04
#SET POINT DRIFT IN DRYBELL PRESSURE SWITCH AT	BRUNSWICK 20	112309 P 04
PHU REQUIRED PRE-STARTUP TESTS NOT PERFORMED ON TIME AT	BRUNSWICK 20	112337 P 04
CONTAINMENT INTEGRITY VIOLATED AT	BRUNSWICK 20	112321 P 04
BTMO HYDRAULIC SHIMMERS FOUND INOPERABLE AT	BRUNSWICK 20	112323 P 05
#SET POINT DRIFT IN CONDENSATE VACUUM SWITCH AT	BRUNSWICK 20	112391 P 05
#SET POINT DRIFT IN MAIN STEAM LINE PRESSURE SWITCH AT	BRUNSWICK 20	112392 P 05
#SET POINT DRIFT IN PRESSURE SWITCHES AT	BRUNSWICK 20	112390 P 05
PRIMARY CONTAINMENT TEMPERATURE MONITOR FAILS AT	BRUNSWICK 20	113100 P 06
HPIC SERVICE WATER PUMP FAILS TO START AT	BRUNSWICK 20	113107 P 06
LEVEL INSTRUMENT VALVE FAILS TO INDICATE OPEN AT	BRUNSWICK 20	112676 P 06
PRIMARY CONTAINMENT ISOLATION VALVE FAILS TO CLOSE AT	BRUNSWICK 20	112600 P 07
PRIMARY CONTAINMENT PENETRATION VALVE FAILS TO OPEN AT	BRUNSWICK 20	112670 P 07
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CONTAINMENT PURGE VALVE FAILS TO CLOSE AT	BRUNSWICK 20	112730 P 07
HPIC STEAM VALVE FAILS TO OPEN AT	BRUNSWICK 20	112741 P 08
#SET POINT DRIFT IN CONDENSATE TANK LEVEL SWITCH AT	BRUNSWICK 20	112740 P 08
#SET POINT DRIFT IN LEVEL SWITCH AT	BRUNSWICK 20	112730 P 08
DIESEL GENERATOR CYCLES UNDER LOAD AT	BRUNSWICK 20	113106 P 08
FUEL BUNDLE FALLS OUT OF FUEL PREPARATION MACHINE AT	BRUNSWICK 20	113236 P 09
HPIC STEAMLINE HIGH TEMPERATURE TRIP FAILS TO ACTUATE AT	BRUNSWICK 20	112605 P 09
REACTOR HEAD SPRAY VALVE FAILS TO CLOSE AT	BRUNSWICK 20	112606 P 09
PRIMARY CONTAINMENT PENETRATION INDICATIONS FOUND AT	BRUNSWICK 20	113233 P 09
#SOGT TRAIN NOT TESTED ON SCHEDULE AT	BRUNSWICK 20	113234 P 09
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#SET POINT DRIFT IN DRYBELL PRESSURE SWITCHES AT	BRUNSWICK 20	115447 P 12
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#SOGT POWER SUPPLY CIRCUIT BREAKER TRIPS AT	BRUNSWICK 20	115445 P 12
#SET POINT DRIFT IN REACTOR WATER LEVEL SWITCHES AT	BRUNSWICK 20	115446 P 12
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	0DIESEL GENERATOR AUTOMATICALLY SHUTS DOWN AT OYSTER CREEK0	110902 P210
	0DIESEL GENERATOR BREAKER INTERLOCK FAILS TO FUNCTION AT	113066 P 20
	0DIESEL GENERATOR BURST AT COOPER0	110236 P 97
	0DIESEL GENERATOR CONTROL CIRCUIT DEFICIENCY AT BIG ROCK	115730 P 24
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	0DIESEL GENERATOR CYCLES UNDER LOAD AT BRUNSWICK 20	113106 P 60
	0DIESEL GENERATOR EXCEEDS LIMIT AT BIG ROCK POINT0	110700 P 20
	0DIESEL GENERATOR EXHAUST AT "FITZPATRICK0	119730 P140
	0DIESEL GENERATOR EXHAUST MANIFOLD AT PILGRIM 10	110315 P251
	0DIESEL GENERATOR EXHAUST MANIFOLD AT PILGRIM 10	120705 P102
	0DIESEL GENERATOR FAILS AT BRUNSWICK 20	120416 P 89
	0DIESEL GENERATOR FAILS TO ACCEPT FULL LOAD AT DRESOEN 30	109460 P122
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	0DIESEL GENERATOR FAILS TO DEVELOP SUFFICIENT VOLTAGE AT	111912 P210
	0DIESEL GENERATOR FAILS TO LOAD FROM CONTROL ROOM AT	111900 P120
	0DIESEL GENERATOR FAILS TO MEET STARTING CRITERIA AT BIG	119154 P 27
	0DIESEL GENERATOR FAILS TO OPERATE AT BRUNSWICK 20	115600 P 70
	0DIESEL GENERATOR FAILS TO START AT BIG ROCK POINT0	119751 P 29
	0DIESEL GENERATOR FAILS TO START AT BIG ROCK POINT0	120600 P 20
	0DIESEL GENERATOR FAILS TO START AT BROWNS FERRY 1 AND 20	110310 P 37
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	0DIESEL GENERATOR FAILS TO START AT DRESOEN 20	115310 P114
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0YSTER CREEK0		
DRESOEN 30		
ROCK POINT0		

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	# DIESEL GENERATOR FAILS TO START AT FITZPATRICK	112552 P149
	# DIESEL GENERATOR FAILS TO START AT MATCH 10	112307 P160
	# DIESEL GENERATOR FAILS TO START AT MATCH 10	114764 P169
	# DIESEL GENERATOR FAILS TO START AT MATCH 10	117767 P173
	# DIESEL GENERATOR FAILS TO START AT MATCH 10	118276 P171
	# DIESEL GENERATOR FAILS TO START AT MATCH 10	118280 P171
	# DIESEL GENERATOR FAILS TO START AT SYSTEM CREEK	115735 P212
	# DIESEL GENERATOR FAILS TO START AT QUAD CITIES 10	118940 P255
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	# DIESEL GENERATOR FAILS TO START WITHIN SPECIFIED TIME AT	110677 P 30
	# DIESEL GENERATOR FAILS TO START WITHIN TIME LIMIT AT BIG	117676 P 37
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	# DIESEL GENERATOR PUEL HEADER FITTING LEAKS AT VERMONT	110211 P275
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	# DIESEL GENERATOR HAS ERRATIC SPEED BEHAVIOR AT BROWNS	110752 P 35
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	# SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT MATCH 10	110360 P202
	# SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT NINE MILE POINT	110427 P205
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	# SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT VERMONT YANKEE	110740 P278
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 SET POINT DRIFT IN HPS OVERPRESSURE SWITCH AT ONESEVEN 20
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 ALICE TEST RETURN LINE LEAKS AT ONESEVEN 20
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 BECC PUMP FAULT PENETRATIONS LEAK EXCESSIVELY AT ONESEVEN 30
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 SET POINT DRIFT IN AC UNDERVOLTAGE RELAY AT BAINSWICK 20
 SET POINT DRIFT IN ACCUMULATION PRESSURE SWITCH AT BAINSWICK 20
 SET POINT DRIFT IN ADD TIME DELAY RELAY AT BAINSWICK 20
 SET POINT DRIFT IN ADD TIME AT ANNULAR DRIFT IN APAN AT FITZPATRICK


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#SET POINT ORIFT IN APRN AT FITZPATRICK# 117772 P143
#SET POINT ORIFT IN APRN AT FITZPATRICK# 118259 P144
#SET POINT ORIFT IN APRN AT PEACH BOTTOM 3# 118218 P225
#SET POINT ORIFT IN APRN AT PEACH BOTTOM 3# 115066 P242
#SET POINT ORIFT IN APRN CHANNEL AT ARNOLD# 114762 P 8
#SET POINT ORIFT IN APRN ROD BLOCK SETTING AT PEACH BOTTOM 3# 119474 P245
#SET POINT ORIFT IN APRN'S AT NINE MILE POINT 1# 115061 P206
#SET POINT ORIFT IN AREA TEMPERATURE SWITCHES AT QUAD CITIES 2# 120275 P266
#SET POINT ORIFT IN CONDENSATE TANK LEVEL SWITCH AT BRUNSWICK 2# 112748 P 88
#SET POINT ORIFT IN CONDENSER LOW VACUUM SWITCH AT PEACH BOTTOM 3# 119001 P245
#SET POINT ORIFT IN CONDENSER VACUUM SWITCH AT BRUNSWICK 2# 112391 P 85
#SET POINT ORIFT IN CONDENSER VACUUM SWITCH AT HILLSTONE 1# 114566 P185
#SET POINT ORIFT IN CONTAINMENT SPRAY PRESSURE SWITCH AT HILLSTONE 1# 120409 P195
#SET POINT ORIFT IN CONTAINMENT SPRAY/REACTOR SHROUD LEVEL SWITCH AT 115400 P 10
#SET POINT ORIFT IN CORE SPRAY DIFFERENTIAL PRESSURE SWITCH AT MATCH 1 115911 P167
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT ARNOLD# 111934 P 3
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT DRESDEN 2# 113977 P112
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT MATCH 1# 120414 P173
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT NINE MILE POINT# 110360 P202
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT NINE MILE POINT# 114427 P205
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT PEACH BOTTOM 2# 114173 P221
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT PILGRIM 1# 113996 P251
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT VERMONT YANKEE# 112313 P249
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCH AT VERMONT YANKEE# 119740 P276
#SET POINT ORIFT IN DIFFERENTIAL PRESSURE SWITCHES AT BRUNSWICK 2# 109643 P 52
#SET POINT ORIFT IN DRYWELL HIGH PRESSURE SWITCH AT DRESDEN 2# 111484 P107
#SET POINT ORIFT IN DRYWELL HIGH PRESSURE SWITCHES AT BRUNSWICK 2# 115442 P 74
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT ARNOLD# 120295 P 20
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT BRUNSWICK 2# 118963 P 57
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT BRUNSWICK 2# 112389 P 64
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT DRESDEN 2# 117174 P118
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT NINE MILE POINT# 111649 P203
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT OYSTER CREEK# 113202 P210
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT OYSTER CREEK# 113547 P211
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCH AT VERMONT YANKEE# 116213 P275
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCHES AT BRUNSWICK 2# 115130 P 71
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCHES AT BRUNSWICK 2# 115467 P 72
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCHES AT BRUNSWICK 2# 115080 P 75
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCHES AT FITZPATRICK# 113560 P133
#SET POINT ORIFT IN DRYWELL PRESSURE SWITCHES AT HILLSTONE 1# 120670 P195
#SET POINT ORIFT IN EGCS FILL SYSTEM PRESSURE SWITCH AT QUAD CITIES 2# 114423 P265
#SET POINT ORIFT IN EMERGENCY BUS UNDERVOLTAGE RELAY AT ARNOLD# 112670 P 5
#SET POINT ORIFT IN FLOW BEAS UNIT AT ARNOLD# 114178 P 6
#SET POINT ORIFT IN FLOW COMPARATOR AT ARNOLD# 114177 P 6
#SET POINT ORIFT IN FLOW INSTRUMENT AT ARNOLD# 114487 P 1
#SET POINT ORIFT IN FLOW SENSOR AT DRESDEN 2# 111657 P107
#SET POINT ORIFT IN FLOW LEVEL SWITCHES AT BRUNSWICK 2# 111407 P 59
#SET POINT ORIFT IN HIGH FLOW SWITCH AT ARNOLD# 120417 P 21
#SET POINT ORIFT IN HIGH REACTOR PRESSURE SWITCH AT DRESDEN 2# 115897 P116
#SET POINT ORIFT IN HIGH REACTOR PRESSURE SWITCH AT DRESDEN 2# 115893 P117
#SET POINT ORIFT IN HPCI DIFFERENTIAL PRESSURE SWITCHES AT BRUNSWICK 2 115679 P 75
#SET POINT ORIFT IN HPCI FLOW SWITCH AT PEACH BOTTOM 2# 119161 P226
#SET POINT ORIFT IN HPCI LOW PRESSURE SWITCHES AT BRUNSWICK 2# 115902 P 78
#SET POINT ORIFT IN HPCI TURBINE PRESSURE SWITCH AT BRUNSWICK 2# 116492 P 80
#SET POINT ORIFT IN HPCI TURBINE PRESSURE SWITCHES AT BRUNSWICK 2# 115678 P 74
#SET POINT ORIFT IN IN-CORE NEUTRON FLUX AMPLIFIER AT DRESDEN 1# 120529 P106
#SET POINT ORIFT IN INTERMEDIATE RANGE MONITOR AT HILLSTONE 1# 117679 P191
#SET POINT ORIFT IN LEVEL SWITCH AT ARNOLD# 110257 P 1
#SET POINT ORIFT IN LEVEL SWITCH AT BRUNSWICK 2# 112730 P 66
#SET POINT ORIFT IN LEVEL SWITCH AT COOPER# 117690 P 95
#SET POINT ORIFT IN LOAD SEQUENCING TIMER AT OYSTER CREEK# 119309 P214
#SET POINT ORIFT IN LOGIC TIMER AT PEACH BOTTOM 3# 115865 P241
#SET POINT ORIFT IN LPCI PRESSURE SWITCH AT DRESDEN 2# 116511 P250
#SET POINT ORIFT IN LPCI PRESSURE SWITCHES AT BRUNSWICK 2# 116271 P116
#SET POINT ORIFT IN MAIN STEAM LINE FLOW SWITCH AT ARNOLD# 116493 P 81
#SET POINT ORIFT IN MAIN STEAM LINE FLOW SWITCH AT PEACH BOTTOM 3# 120418 P 23
#SET POINT ORIFT IN MAIN STEAM LINE LOW PRESSURE SWITCH AT MONTICELLO# 119476 P246
#SET POINT ORIFT IN MAIN STEAM LINE PRESSURE SWITCH AT BRUNSWICK 2# 118524 P198
#SET POINT ORIFT IN MAIN STEAM LINE PRESSURE SWITCH AT BRUNSWICK 2# 112392 P 65
#SET POINT ORIFT IN MAIN STEAM LINE PRESSURE SWITCHES AT MATCH 1# 115916 P166
#SET POINT ORIFT IN NUCLEAR INSTRUMENT AT LA CROSSE# 114331 P191
#SET POINT ORIFT IN OFF GAS RADIATION MONITOR AT FITZPATRICK# 113501 P134
#SET POINT ORIFT IN POWER RANGE NEUTRON MONITOR AT DRESDEN 1# 115743 P104
#SET POINT ORIFT IN PRESSURE INTERLOCK SWITCH AT BRUNSWICK 2# 109242 P 51
#SET POINT ORIFT IN PRESSURE INTERLOCK SWITCH AT COOPER# 120700 P101
#SET POINT ORIFT IN PRESSURE SENSOR AT NINE MILE POINT# 109458 P202
#SET POINT ORIFT IN PRESSURE SWITCH AT BRUNSWICK 2# 110258 P 57
#SET POINT ORIFT IN PRESSURE SWITCH AT BRUNSWICK 2# 111410 P 59
#SET POINT ORIFT IN PRESSURE SWITCH AT COOPER# 112734 P 93
#SET POINT ORIFT IN PRESSURE SWITCH AT COOPER# 120708 P101
#SET POINT ORIFT IN PRESSURE SWITCH AT DRESDEN 3# 110323 P122
#SET POINT ORIFT IN PRESSURE SWITCH AT FITZPATRICK# 120464 P149
#SET POINT ORIFT IN PRESSURE SWITCH AT MATCH 1# 125547 P174
#SET POINT ORIFT IN PRESSURE SWITCH AT HILLSTONE 1# 109459 P193
#SET POINT ORIFT IN PRESSURE SWITCH AT HILLSTONE 1# 112308 P196
#SET POINT ORIFT IN PRESSURE SWITCH AT NINE MILE POINT 1# 118917 P207
#SET POINT ORIFT IN PRESSURE SWITCH AT OYSTER CREEK# 119654 P209

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#SET POINT DRIFT IN PRESSURE SWITCH AT OYSTER CREEK# 113074 P213
 #SET POINT DRIFT IN PRESSURE SWITCH AT PEACH BOTTOM 3# 113362 P239
 #SET POINT DRIFT IN PRESSURE SWITCH AT PILGRIM 1# 113050 P250
 #SET POINT DRIFT IN PRESSURE SWITCH AT QUAD CITIES 2# 111060 P264
 #SET POINT DRIFT IN PRESSURE SWITCHES AT ARNOLD# 119700 P 15
 #SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2# 109641 P 54
 #SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2# 110269 P 56
 #SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2# 111613 P 57
 #SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2# 111406 P 59
 #SET POINT DRIFT IN PRESSURE SWITCHES AT BRUNSWICK 2# 112300 P 65
 #SET POINT DRIFT IN PRESSURE SWITCHES AT MATCH 1# 119733 P 172
 #SET POINT DRIFT IN PRESSURE SWITCHES AT OYSTER CREEK# 112052 P211
 #SET POINT DRIFT IN PRESSURE SWITCHES AT PILGRIM# 110955 P247
 #SET POINT DRIFT IN PRESSURE TRANSMITTERS AT MATCH 1# 113692 P165
 #SET POINT DRIFT IN RADIATION MONITOR AT PEACH BOTTOM 1# 110346 P239
 #SET POINT DRIFT IN RADIOACTIVE BUILDING VENT RADIATION MONITORS AT 110962 P145
 #SET POINT DRIFT IN RCIC ELECTRONIC OVERSPEED AT MATCH 1# 111900 P150
 #SET POINT DRIFT IN REACTOR HIGH PRESSURE SCRAM SWITCH AT DRESDEN 2# 115730 P115
 #SET POINT DRIFT IN REACTOR HIGH PRESSURE SCRAM SWITCH AT DRESDEN 2# 115731 P115
 #SET POINT DRIFT IN REACTOR HIGH PRESSURE SWITCHES AT BRUNSWICK 2# 113443 P 74
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 #SET POINT DRIFT IN REACTOR LOW PRESSURE SWITCH AT HILLSTONE 1# 115725 P190
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DIESEL GENERATOR FAILS TO START	AT BOUNDS	FEEDWATER 1 AND 20	
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STABILIZER BEARING BLOCKS INSTALLED IMPROPERLY	AT BOUNDS	FEEDWATER 1 AND 20	
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SCABLE TRAY HEAT DETECTOR DAMAGED	AT BOUNDS	FEEDWATER 10	
BLEAD WIRE TO THERMOCOUPLE BREAKS	AT BOUNDS	FEEDWATER 10	
GRW SERVICE WATER TANK LEVEL SWITCH STICKS	AT BOUNDS	FEEDWATER 10	
REACTOR HEATUP RATE EXCEEDED	AT BOUNDS	FEEDWATER 10	
DIAC TRIPS AND DIAC FAILS TO OPERATE PROPERLY	AT BOUNDS	FEEDWATER 10	
SPALBE ALARM RECEIVED FROM SMOKE DETECTOR	AT BOUNDS	FEEDWATER 10	
SPALBE ALARM RECEIVED FROM SMOKE DETECTOR	AT BOUNDS	FEEDWATER 10	
GRW PUMP PRESSURE SWITCH FAILS TO OPERATE	AT BOUNDS	FEEDWATER 10	
DIESEL GENERATOR HAS ERRATIC SPEED BEHAVIOR	AT BOUNDS	FEEDWATER 10	
STORUS OXYGEN SENSOR FAILS TO RESPOND PROPERLY	AT BOUNDS	FEEDWATER 10	
PIR DETECTION SYSTEM SMOKE AND HEAT ALARMS FAIL	AT BOUNDS	FEEDWATER 10	
REINFORCER LATCHES IN FIRST ROD OF GROUP 5	AT BOUNDS	FEEDWATER 10	
SPRAY SPARGER VESSEL OF SWITCH POUND VALVED OUT	AT BOUNDS	FEEDWATER 10	
DEFICIENCY FOUND IN LPCI LOOP SELECTION LOGIC	AT BOUNDS	FEEDWATER 10	
ROOM ANNUNCIATOR FOR FIRE PROTECTION SYSTEM FAILS	AT BOUNDS	FEEDWATER 10	
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STRUTTER DESIGN DEFICIENCIES FOUND	AT BOUNDS	FEEDWATER 20	
DIAC REED RELAYS FAIL	AT BOUNDS	FEEDWATER 20	
WATER LEAKS PAST PCU ACCUMULATOR PISTONS	AT BOUNDS	FEEDWATER 20	
DIAC MONITORING BATTERY INOPERABLE	AT BOUNDS	FEEDWATER 20	
DIAC MONITORING BATTERY WIRE INOPERABLE	AT BOUNDS	FEEDWATER 20	
ALARM RECEIVED FROM CONTROL ROOM SMOKE DETECTOR	AT BOUNDS	FEEDWATER 20	
SMOKE DETECTOR SENSITIVITY INCREASES	AT BOUNDS	FEEDWATER 20	
CONTROL ROOM ANNUNCIATOR FAILS	AT BOUNDS	FEEDWATER 20	
DIAC TURBINE STEAM SUPPLY VALVE FAILS TO OPEN	AT BOUNDS	FEEDWATER 20	
TURBINE GOVERNOR SPEED CONTROL FAILS TO RESPOND	AT BOUNDS	FEEDWATER 20	
DIAC PRESSURE SWITCH FAILS TO GIVE HALF SCRAM	AT BOUNDS	FEEDWATER 20	
PAUSED OUT-OF-SEQUENCE CONTROL ROD DURING TESTING	AT BOUNDS	FEEDWATER 20	
CONTROL UNIT FOUND INCAPABLE OF BEING SCRAMMED	AT BOUNDS	FEEDWATER 20	
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BRIDGE GUIDE ASSEMBLY DROPPED DURING HANDLING	AT BOUNDS	FEEDWATER 30	
RESTRAINTS FOR SOFT SYSTEM DUCTS INADEQUATE	AT BOUNDS	FEEDWATER 30	
CONTROL ROD ACCUMULATORS FOUND TO BE INOPERABLE	AT BOUNDS	FEEDWATER 30	
EIGHT ALARMS RECEIVED FROM SMOKE DETECTORS	AT BOUNDS	FEEDWATER 30	
SUPRUSIOUS ALARMS RECEIVED FROM SMOKE DETECTORS	AT BOUNDS	FEEDWATER 30	
DIAC TURBINE FAILS TO OPERATE PROPERLY	AT BOUNDS	FEEDWATER 30	
DIAC SHAFI OIL PUMP FAILS TO MAINTAIN PRESSURE	AT BOUNDS	FEEDWATER 30	
GRW PUMP FAILS TO START	AT BOUNDS	FEEDWATER 30	
ALARMS RECEIVED FROM SMOKE DETECTORS	AT BOUNDS	FEEDWATER 30	
PORTWELL AIR SAMPLING SYSTEM INOPERABLE TWICE	AT BOUNDS	FEEDWATER 30	
PORTWELL THERMOCOUPLE WIRING FOUND OPEN	AT BOUNDS	FEEDWATER 30	
DIAC FAILS TO CONTROL SPEED	AT BOUNDS	FEEDWATER 30	
DIAC STEAM FLOW INDICATORS READ LOW	AT BOUNDS	FEEDWATER 30	
SPALBE ALARM RECEIVED FROM SMOKE DETECTOR	AT BOUNDS	FEEDWATER 30	
DIAC CIRCULATION PUMP TRIPS	AT BOUNDS	FEEDWATER 30	
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STORUS OXYGEN SENSOR FAILS TO RESPOND PROPERLY	AT BOUNDS	FEEDWATER 30	
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STEAM DISCHARGE LINE RUPTURE DISK RUPTURES	AT BOUNDS	FEEDWATER 30	
TO CORE SPRAY PUMP MOTOR BEARING COOLERS CLOGGED	AT BOUNDS	FEEDWATER 30	
FEEDWATER NOZZLE AT HUNDELOT BAY			
FEEDWATER PUMP			

110894	0177
112089	0268
112971	0287
112143	0295
112766	0178
111782	0255
114336	0220
116786	0136
110310	0136
114639	0136
114281	0136
112731	0135
113190	0131
113954	0131
116879	0132
116827	0132
117659	0132
114826	0132
110626	0136
110880	0133
110907	0136
110648	0136
110150	0136
110732	0135
120274	0135
110201	0133
110627	0136
110906	0136
110370	0131
117683	0133
110202	0133
120403	0135
117688	0136
113295	0140
110205	0140
117687	0140
111395	0140
110310	0137
733783	0137
110203	0138
115090	0138
110204	0138
110525	0138
110291	0139
110723	0139
120676	0140
110724	0139
120804	0140
117997	0138
115724	0137
115691	0137
110724	0139
114417	0139
115803	0142
115847	0142
116236	0143
116234	0143
116510	0143
117054	0144
117057	0144
110739	0146
110740	0145
110283	0145
110894	0145
110897	0145
110893	0145
110317	0146
110829	0146
120280	0147
120542	0147
116235	0146
110896	0146
116396	0141
116073	0143
112145	0141
116234	0144
117633	0143
110382	0143
120462	0146
114423	0265
111914	0143
119160	0277
110259	0146
721250	0150
110293	0104
110290	0127

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LEAK DETECTION AT BRUNSWICK 20 LEAK DETECTION AT BRUNSWICK 20 LEAK DETECTION ISOLATES HPCL AT BRUNSWICK 20 LEAK DETECTION THERMOCOUPLE FOUND DEFECTIVE AT FITZPATRICK LEAK DETECTOR SWITCH FAILS TO TRIP AT PEACH BOTTOM 20 LEAK EXCESSIVELY AT DRESDEN 30 LEAK EXCESSIVELY AT HATCH 10 LEAK FOUND IN CLEAN-UP LINE AT HUMBOLDT BAY LEAK FOUND IN CLEANUP SYSTEM PUMP PIPING AT NINE MILE POINT LEAK FOUND IN CORE SPRAY VENT LINE WELD AT DRESDEN 10 LEAK FOUND IN HCU SYSTEM U BEND AT PILGRIM 10 LEAK FOUND IN VESSEL INSTRUMENTATION PENETRATION AT QUAD LEAK RATE EXCEEDS LIMIT AT FITZPATRICK LEAK RATE OF CONTAINMENT BUILDING AIRLOCK EXCEEDS LIMIT AT LEAK RATE OF CONTAINMENT ISOLATION VALVE EXCEEDS LIMIT AT LEAK RATE OF CONTAINMENT ISOLATION VALVE EXCEEDS LIMIT AT LEAK RATE OF FEEDWATER CHECK VALVE EXCESSIVE AT ARMOLOP LEAK RATE OF FEEDWATER CHECK VALVES EXCEED LIMIT AT LEAK RATE OF FEEDWATER CHECK VALVES EXCESSIVE AT DRESDEN 30 LEAK RATE OF FEEDWATER CHECK VALVES EXCESSIVE AT DRESDEN 30 LEAK RATE OF HPCL VALVE EXCEEDS LIMIT AT DRESDEN 20 LEAK RATE OF ISOLATION VALVE EXCEEDS LIMIT AT DRESDEN 30 LEAK RATE OF LPCI CHECK VALVE EXCESSIVE AT DRESDEN 30 LEAK RATE OF NSIV'S EXCEEDS LIMIT AT ARMOLOP LEAK RATE OF TORUS SPRAY VALVE AND TORUS COOLING VALVE LEAK RATE OF VACUUM BREAKERS EXCEED LIMITS AT OYSTER CREEK LEAK RATE OF VENTILATION SUPPLY VALVE EXCESSIVE AT BIG LEAK RATE TEST NOT PERFORMED ON TIME AT HATCH 10 LEAK RATE UNACCEPTABLE AT PEACH BOTTOM 30 LEAKAGE AIR SAMPLING INOPERABLE AT PILGRIM 10 LEAKAGE AIR SAMPLING SYSTEM ERRATIC AT PILGRIM 10 LEAKAGE AIR SAMPLING SYSTEM FOUND INOPERABLE AT PILGRIM 10 LEAKAGE AT ARMOLOP LEAKAGE AT BRUNSWICK 20 LEAKAGE AT DRESDEN 10 LEAKAGE AT DRESDEN 20 LEAKAGE AT DRESDEN 20 LEAKAGE AT DRESDEN 20 LEAKAGE AT LA CROSSE LEAKAGE AT PEACH BOTTOM 20 LEAKAGE AT QUAD CITIES LEAKAGE CONTROL SYSTEM TRIPS AT ARMOLOP LEAKAGE CONTROL SYSTEM VALVE FAILS TO OPEN AT ARMOLOP LEAKAGE EXCEEDS LIMIT AT BIG ROCK POINT LEAKAGE EXCEEDS LIMIT AT BRUNSWICK 20 LEAKAGE EXCESSIVE AT BRUNSWICK 20 LEAKAGE EXCESSIVE AT BRUNSWICK 20 LEAKAGE EXCESSIVE AT PEACH BOTTOM 30 LEAKAGE FOUND IN CONTAINMENT ISOLATION VALVES AT QUAD LEAKAGE OF CCSH PUMP VAULT PENETRATIONS EXCESSIVE AT LEAKAGE OF CONTAINMENT VENTILATION VALVES EXCESSIVE AT BIG LEAKAGE OF FOUR PRIMARY CONTAINMENT VALVES EXCEEDS LIMIT LEAKAGE OF MAIN STEAM LINE DRAIN VALVE EXCESSIVE AT LEAKAGE RATE OF TIP PURGE CHECK VALVE FOUND TO BE LEAKAGE THROUGH CND RETURN CHECK VALVE EXCESSIVE AT LEAKAGE THROUGH REACTOR HEAD COOLING CHECK VALVE EXCESSIVE LEAKAGE UNACCEPTABLE AT PEACH BOTTOM 20 LEAKAGE UNABLES REMOVED DURING REFUELING AT PEACH BOTTOM 20 LEAKING FROM HPCL RUPTURE DISC AT FITZPATRICK LEAKS AT ARMOLOP LEAKS AT BRUNSWICK 20 LEAKS AT COOPERS LEAKS AT COOPERS	117050 P100 117051 P170 117052 P167 117053 P167 117054 P167 117055 P167 117056 P167 117057 P167 117058 P167 117059 P167 117060 P167 117061 P167 117062 P167 117063 P167 117064 P167 117065 P167 117066 P167 117067 P167 117068 P167 117069 P167 117070 P167 117071 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#STUFFING BOX OF DRYWELL VENTILATION SYSTEM VALVE	LEAKS AT DRESDEN 20	112700 P139
#MPCI TEST RETURN LINE	LEAKS AT DRESDEN 20	110429 P119
#MPCI TEST RETURN LINE	LEAKS AT DRESDEN 20	110794 P120
#CLEANUP NON-REGENERATIVE HEAT EXCHANGER	LEAKS AT DRESDEN 30	115074 P125
#MOISTURE SEPARATOR DRAIN AIR LINE	LEAKS AT DRESDEN 30	110750 P127
#UNION IN ISOLATION CONDENSER INSTRUMENT LINE	LEAKS AT DRESDEN 30	120637 P131
#WELD JOINT IN THE HEAD SPRAY SYSTEM	LEAKS AT HILLSTONE 10	120220 P151
#CONDENSATE RETURN LINE ELBOW	LEAKS AT MONTICELLO	112139 P157
#TURBINE STEAM DRAIN LINE	LEAKS AT MONTICELLO	110200 P200
#TURBINE BYPASS HEADER DRAIN	LEAKS AT MONTICELLO	120442 P201
#PRESSURE SWITCH SENSING LINE	LEAKS AT OYSTER CREEK	114207 P212
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#PORTWELL VENTILATION SYSTEM VALVE	LEAKS BY ACCUMULATOR PISTONS ON 3 HYDRAULIC CONTROL UNITS	115091 P 37
#STANDBY LIQUID CONTROL CHECK VALVE	LEAKS EXCESSIVELY AT DRESDEN 20	112701 P104
#DNR TORUS COOLING RETURN VALVE	LEAKS EXCESSIVELY AT DRESDEN 20	115202 P110
#DOOR ON DNR'S SERVICE WATER PUMP VAULT	LEAKS EXCESSIVELY AT PEACH BOTTOM 30	109447 P237
#STD PIN HOLE	LEAKS EXCESSIVELY AT QUAD CITIES 10	113291 P254
#SMOKE	LEAKS FROM DIESEL GENERATOR EXHAUST MANIFOLD AT COOPER	120451 P 98
#SODIUM PENTABORATE SOLUTION	LEAKS INTO REACTOR VESSEL AT DRESDEN 20	119315 P251
#CONDENSATE TRANSFER LINE	LEAKS OUTSIDE THE BUILDING AT FITZPATRICK	115064 P114
#WATER	LEAKS PAST MCW ACCUMULATOR PISTONS AT BROWNS FERRY 20	115058 P137
#FLOW INSTRUMENT EQUALIZING VALVE	LEAKS THROUGH AT ARNOLD	110203 P 34
#DNR CHECK VALVE	LEAKS THROUGH AT FITZPATRICK	110329 P 15
#CHIMNEY SAMPLE VALVE INADVERTENTLY	LEFT CLOSED AT DRESDEN 20	110735 P146
#RELAY BLOCK INADVERTENTLY	LEFT IN MPCI RELAY AT ARNOLD	114644 P111
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#CPH	LESS THAN LIMIT AFTER POWER INCREASE AT ARNOLD	120447 P154
#CPH FOUND TO BE	LESS THAN LIMIT AT ARNOLD	120199 P 14
#FLOW RATE IN STANDBY GAS TRAIN	LESS THAN LIMIT AT DRESDEN 20	110003 P 19
#CALCULATED VALVE OF MCRP	LESS THAN LIMIT AT DRESDEN 20	117070 P119
#REACTOR BUILDING VACUUM	LESS THAN LIMIT AT MATCH 10	114501 P164
#CAD SYSTEM FOUND WITH	LESS THAN REQUIRED NITROGEN AT ARNOLD	110330 P203
#REPORTED INPUT ERRORS TO ECCS ANALYSIS IS	LESS THAN IS AT BROWNS FERRY 1 AND 20	120495 P 21
#CESIUM-137 CONCENTRATION IN MILK SAMPLE EXCEEDS CONTROL	LEVEL AT BRUNSWICK 20	120731 P 35
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#IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT	LEVEL AT PEACH BOTTOM 2 AND 30	120239 P216
#SUPPRESSION CHAMBER WATER	LEVEL BELOW LIMIT AT QUAD CITIES 20	113299 P264
#NITROGEN STORAGE TANK	LEVEL DROPS BELOW LIMIT AT DRESDEN 20	115517 P114
#TORUS WATER	LEVEL DROPS SLIGHTLY BELOW LIMIT AT PEACH BOTTOM 30	115046 P242
#TORUS WATER	LEVEL EXCEEDS LIMIT AT BRUNSWICK 20	110223 P 80
#TORUS WATER	LEVEL EXCEEDS LIMIT AT BRUNSWICK 20	110270 P 44
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#TORUS	LEVEL EXCEEDS MAXIMUM ALLOWABLE LIMIT AT ARNOLD	117949 P 14
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20	LEVEL INSTRUMENT VALVE FAILS TO INDICATE OPEN AT BRUNSWICK	112676 P 66
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#SET POINT DRIFT IN CONTAINMENT SPRAY/REACTOR SHROUD	LEVEL SWITCH AT ARNOLD	115440 P 10
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#SET POINT DRIFT IN	LEVEL SWITCH AT BRUNSWICK 20	112734 P 64
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AND 20	ONAPLUG LIMIT EXCEEDED IN 4	LOCK DOOR LEAK RATE UNACCEPTABLE AT PEACH BOTTOM 30	110962 P 136
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	OSPT POINT DRIFT IN	LOGIC FUSE OPENS AT COOPER	110605 P 241
	ARECIRCULATION SYSTEM SAMPLE VALVE CLOSING TIME TOO	LOGIC TIMER AT PEACH BOTTOM 30	112682 P 67
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1. 2. 3. AND 40
3. AND 40

2, 3, AND 40	123990	P154
STATUS LEVEL EXCEEDS	0	MATERIAL IDENTIFICATION DEFICIENCIES FOUND AT HARTSVILLE
STATUS LEVEL EXCEEDS THE	0	MATERIAL IDENTIFICATION INDETERMINATE AT HARTSVILLE 1, 2,
PCALCULATED VALVE OF	0	MAXIMUM ALLOWABLE LIMIT AT ARNOLD
	0	MAXIMUM LIMIT AT BRUNSWICK 10
	0	NEAR LESS THAN LIMIT AT MATCH 10
	0	NEAR LIMIT EXCEEDED DURING PWR. PRECONDITIONING AT ARNOLD
	0	NEAR LIMIT VIOLATED TWICE AT ARNOLD
	0	NEAR OUT OF SPECIFICATIONS AT ARNOLD
	0	NEAR TO C/P RATIO EXCEEDS LIMIT AT FITZPATRICK
SPINEL ASSEMBLIES OPERATE WITH	0	NEAR VALVE LOWER THAN LIMIT AT FITZPATRICK
	0	NEAR VIOLATION OCCURS AT ARNOLD
	0	MECHANICAL VACUUM PUMP NOT TESTED ON SCHEDULE AT ARNOLD
ONIC TRIP BLOWTLE VALVE	0	MECHANISM FAILS TO REATCH AFTER TEST AT SHAD CITIES 20
RELEV. SWITCH	0	MECHANISM REPLACED WITHOUT PROPER APPROVAL AT MATCH 10
CONCRETE CYLINDER TESTS FAIL TO	0	MEET COMPRESSIVE STRENGTH AT LA SALLE 1 AND 20
ONVILCS RELAY DOWNING FAIL TO	0	MEET SEISMIC DESIGN CRITERIA AT ARNO.0
ONVILCS GENERATOR FAILS TO	0	MEET STARTING CRITERIA AT BIG ROCK PLINTO
ONVILCS CHANNELS FAIL TO	0	MEET TECH SPECS AT COOPER
ONVILCS FUEL OIL SAMPLES FAIL TO	0	MEET TECH SPECS AT LA CROSSE
ONVILCS INVENTING REQUIREMENTS NOT	0	MET AT HONOLULU
ONVILCS RECTOR PUMP	0	NO SET TRIPS AT BRUNSWICK 20
ONVILCS IMPINGED ON INTAKE SCREENS AT	0	NILE POINT 10
ONVILCS IMPINGED ON INTAKE SCREENS AT	0	NILE POINT 10
ONVILCS IMPINGED ON INTAKE SCREENS AT	0	NILE POINT 10
ONVILCS CONTRACTOR EMPLOYEES RECEIVE OVEREXPOSURES AT	0	NILE POINT 10
ONVILCS PRECIPITATION PUMP RELAY POUND SHOOTING AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN TWO APR'S AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN APR'S AT	0	NILE POINT 10
ONVILCS MILK SAMPLE NOT ANALYZED ON TIME AT	0	NILE POINT 10
ONVILCS CONDENSER TEMPERATURES NOT RECORDED HOURLY AT	0	NILE POINT 10
ONVILCS SPEEDWATER PUMP FAILS TO START AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN PRESSURE SWITCH AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN REACTOR WATER LEVEL SWITCH AT	0	NILE POINT 10
ONVILCS DIODINE-131 CONCENTRATION IN MILK SAMPLE HIGH AT	0	NILE POINT 10
ONVILCS CHEMICAL COMPOSITE SAND DISCARDED PRIOR TO ANALYSIS AT	0	NILE POINT 10
ONVILCS OF CONTAMINANT SPRAY PUMP DISABLES SISTER PUMP AT	0	NILE POINT 10
ONVILCS SURVEILLANCE OF VACUUM BREAKERS NOT PERFORMED AT	0	NILE POINT 10
ONVILCS PUMP FAILS TO RESPOND DURING STARTUP AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN PRESSURE SENSOR AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT	0	NILE POINT 10
ONVILCS SENSOR FOUND IN KRAFT VS EXPOSURE CURVE POINTS AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN BRYWELL PRESSURE SWITCH AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN REACTOR LEVEL INDICATOR AT	0	NILE POINT 10
ONVILCS GREYFUL PLATFORM MONITOR HAS LOW RESPONSE AT	0	NILE POINT 10
ONVILCS ONVILCS PUMP SUCTION PRESSURE SWITCH FAILS AT	0	NILE POINT 10
ONVILCS SMALL CRACK FOUND IN CLEANUP SYSTEM PIPING AT	0	NILE POINT 10
ONVILCS BEAK FOUND IN CLEANUP SYSTEM PUMP PIPING AT	0	NILE POINT 10
ONVILCS TRAVELING SCREENS NOT WASHED ON SCHEDULE AT	0	NILE POINT 10
ONVILCS WISH IMPINGED ON INTAKE SCREENS AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN TURBINE PRESSURE SWITCH AT	0	NILE POINT 10
ONVILCS SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT	0	NILE POINT 10
ONVILCS ORVR VALVE FAILS TO OPEN AT	0	NILE POINT 10
ONVILCS WISH IMPINGED ON INTAKE SCREENS AT	0	NILE POINT 10
ONVILCS STRONTIUM-90 CONCENTRATION IN	0	NILE EXCEEDS REPORT LIMIT AT HILLSTONE 1 AND 20
ONVILCS CESIUM-137 CONCENTRATION IN	0	NILE FARM STOPS PROVIDING MILK SAMPLES AT ARNOLD
ONVILCS CESIUM-137 CONCENTRATION IN	0	NILE SAMPLE EXCEEDS CONTROL LEVEL AT BRUNSWICK 20
ONVILCS DIODINE-131 CONCENTRATION IN A	0	NILE SAMPLE EXCEEDS LIMIT AT BRUNSWICK 1 AND 20
ONVILCS RADIOIODINE LEVEL IN	0	NILE SAMPLE EXCEEDS REPORT LEVEL AT PEACH BOTTOM 2 AND 30
ONVILCS CESIUM-137 CONCENTRATION IN	0	NILE SAMPLE EXCEEDS REPORT LIMIT AT ARNOLD
ONVILCS DIODINE-131 CONCENTRATION IN	0	NILE SAMPLE HIGH AT BRUNSWICK 1 AND 20
ONVILCS DIODINE-131 CONCENTRATION IN	0	NILE SAMPLE HIGH AT BRUNSWICK 1 AND 20
ONVILCS DIODINE-131 CONCENTRATION IN	0	NILE SAMPLE HIGH AT FITZPATRICK
ONVILCS DIODINE-131 CONCENTRATION IN	0	NILE SAMPLE HIGH AT NINE NILE POINT 10
ONVILCS DIODINE-131 CONCENTRATION IN	0	NILE SAMPLE NOT ANALYZED ON TIME AT NINE NILE POINT 10
ONVILCS FARM STOPS PROVIDING	0	NILE SAMPLES AT ARNOLD
ONVILCS DI-131 CONCENTRATION IN	0	NILE SAMPLES EXCEED LIMIT AT FITZPATRICK
ONVILCS DIODINE-131 ACTIVITY IN	0	NILE SAMPLES HIGH AT HILLSTONE 1 AND 20
ONVILCS DIODINE-131 ACTIVITY IN	0	NILE SAMPLES NOT ANALYZED ON TIME AT FITZPATRICK
ONVILCS WISH IMPINGED ON INTAKE SCREENS AT	0	HILLSTONE 1 AND 20
ONVILCS WISH IMPINGED ON INTAKE SCREENS AT	0	HILLSTONE 1 AND 20
ONVILCS DIODINE-131 ACTIVITY IN MILK SAMPLES HIGH AT	0	HILLSTONE 1 AND 20
ONVILCS WISH IMPINGED ON INTAKE SCREENS AT	0	HILLSTONE 1 AND 20
ONVILCS STRONTIUM-90 CONCENTRATION IN MILK EXCEEDS REPORT LIMIT AT	0	HILLSTONE 1 AND 20
ONVILCS SET POINT DRIFT IN PRESSURE SWITCH AT	0	HILLSTONE 10
ONVILCS USER-LIKE WATER STRAINER FOUND NOT OPERATING AT	0	HILLSTONE 10
ONVILCS WHOLE FOUND IN CLEANUP FILTER SLOUGE TANK AT	0	HILLSTONE 10
ONVILCS MAIN STREAMLINE RADIATION MONITOR READING LOW AT	0	HILLSTONE 10
ONVILCS VACUUM BREAKER FAILS TO CLOSE AT	0	HILLSTONE 10
ONVILCS WINTER SKATE IMPINGED ON INTAKE SCREENS AT	0	HILLSTONE 10
ONVILCS SINGLE TUBE IN ISOLATION CONDENSER FAILS AT	0	HILLSTONE 10
ONVILCS SET POINT DRIFT IN CONDENSER VACUUM SWITCH AT	0	HILLSTONE 10
ONVILCS SPEEDWATER REGULATION VALVE LOCKS IN AS IS POSITION AT	0	HILLSTONE 10
ONVILCS PWR TURBINE STARTING TIME EXCEEDS LIMIT AT	0	HILLSTONE 10
ONVILCS SET POINT DRIFT IN PRESSURE SWITCH AT	0	HILLSTONE 10
ONVILCS GRADWASH SHIPPING CASE FOUND TO BE CONTAMINATED AT	0	

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GEAS TURBINE FAILS TO ACHIEVE RATED SPEED AT	HILLSTONE 10	112310 P107
OFFISH IMPINGED ON INTAKE SCREENS AT	HILLSTONE 10	113200 P107
OVERBLE GAS RELEASE RATE EXCEEDS REPORTING LEVEL AT	HILLSTONE 10	113540 P107
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OFFISH IMPINGED ON INTAKE SCREEN AT	HILLSTONE 10	114202 P100
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VALVE CRAB IMPINGED ON SCREENS AT	HILLSTONE 10	116529 P101
GEAS TURBINE GENERATOR BECOMES INOPERABLE AT	HILLSTONE 10	117670 P101
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UPDATE REPORT ON ISOLATION CONDENSER TUBE FAILURE AT	HILLSTONE 10	120000 P102
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OFFISH IMPINGED ON INTAKE SCREENS AT	HILLSTONE 10	120473 P104
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RMCI VALVE FAILS TO PULL	OPEN AT HATCH 10	110175 P120
RMHR NINEHUN FLOW VALVE FAILS TO STAY	OPEN AT HATCH 10	110400 P120
RCORE SPRAY VALVE FAILS TO	OPEN AT LA CROSSE	110400 P120
RMHR TORUS COOLING INJECTION VALVE FAILS TO	OPEN AT DUNESIDE	110725 P200
RMHR VALVE FAILS TO	OPEN AT NINE HOLE POINT	110420 P200
STORMUS SPRAY VALVE FAILS TO	OPEN AT OYSTER CREEK	113270 P211
CONTAINMENT SPRAY SYSTEM VALVE FAILS TO	OPEN AT OYSTER CREEK	117004 P211
CONTAINMENT SPRAY VALVE FAILS TO	OPEN AT OYSTER CREEK	120306 P211
RCORE SPRAY VALVE FAILS TO	OPEN AT OYSTER CREEK	120673 P211
RMHR INJECTION VALVE FAILS TO	OPEN AT PEACH BOTTOM 20	115240 P215
RMHR STEAM RELIEF VALVE FAILS TO	OPEN AT PEACH BOTTOM 20	115710 P222
RMHR STEAM RELIEF VALVE FAILS	OPEN AT PEACH BOTTOM 20	116254 P223
RMCI TURBINE EXHAUST DRAIN PUT VALVE FAILS TO	OPEN AT PEACH BOTTOM 30	110301 P237
RMHR STEAM RELIEF VALVE FAILS	OPEN AT PEACH BOTTOM 30	110420 P241
RMCI ELECTROMATIC RELIEF VALVES FAIL TO	OPEN AT QUAD CITIES 10	110117 P243
ELECTROMATIC RELIEF VALVES FAIL TO	OPEN AT QUAD CITIES 20	120430 P261
RMCI INJECTION VALVE FAILS TO	OPEN AT VERMONT YANKEE	120443 P266
PORTWELL PURGE EXHAUST VALVE FAILS TO	OPEN COMPLETELY AT PEACH BOTTOM 20	110200 P276
RMCI VALVES REMAIN	OPEN DURING TEST AT BRUNSWICK 20	110216 P275
RMCI BALL VALVE IN	OPEN IMPROPER CONDITION AT FITZPATRICK	113270 P 7
RMCI INJECTION VALVE RATCHED OUT OF SERVICE IN	OPEN POSITION AT DUNESIDE 30	110401 P136
RMHR VALVES FAIL TO	OPEN TO REQUIRED POSITION AT VERMONT YANKEE	120430 P130
RMHR AIR-LOCK DOORS BETWEEN TURBINE AND REACTOR BUILDINGS	OPENED AT HATCH 10	110199 P270
PORTWELL ISOLATION VALVE	OPENED WHEN REQUIRED TO BE CLOSED AT BRUNSWICK 20	110902 P136
RMCI VALVE	OPENING PERMISSIVE SWITCH FOUND ISOLATED AT BRUNSWICK 20	110909 P 50
RMCI SAFETY RELIEF VALVE	OPENS AT COOPER	113773 P 93
RMCI RELIEF VALVE INADVERTENTLY	OPENS AT FITZPATRICK	110400 P142
RMCI UNIT AT QUAD CITIES 10	OPERABILITY TEST ON CONTAINMENT COOLING LOOP PERFORMED ON	120202 P142
RMCI VALVE NOT	OPERABLE FROM CONTROL ROOM AT BRUNSWICK 20	117003 P250
RMCI VALVE FAILS TO	OPERATE AT AMHOL	110226 P 79
RMCI SYSTEM VALVE FAILS TO	OPERATE AT BRUNSWICK FERRY 10	111005 P 2
RMCI PUMP PRESSURE SWITCH FAILS TO	OPERATE AT BRUNSWICK FERRY 10	113190 P 31
RMCI DIESEL GENERATOR FAILS TO	OPERATE AT BRUNSWICK 20	119150 P 75
CONTROL BUILDING AIR TREATMENT SYSTEM FAN FAILS TO	OPERATE AT BRUNSWICK 20	110600 P 30
RMHR RELAY FAILS TO	OPERATE AT COOPER	115676 P 96
RCORE SPRAY VALVE FAILS TO	OPERATE AT COOPER	112600 P 72
RCORE SPRAY LEVEL SWITCH FAILS TO	OPERATE AT HATCH 10	117032 P 96
RMHR LEVEL SWITCH FAILS TO	OPERATE AT HATCH 10	110914 P167
RMCI LINE LEVEL SWITCH FAILS TO	OPERATE AT HATCH 10	115015 P167
VACUUM BREAKER FAILED TO	OPERATE AT OYSTER CREEK	110400 P166
RMCI STEAM SUPPLY VALVE FAILS TO	OPERATE AT PEACH BOTTOM 20	110956 P209
RMCI MOTOR SPEED CHANGER FAILS TO	OPERATE AT QUAD CITIES 10	111700 P216
RMCI SUPPRESSION CHAMBER WATER LEVEL SWITCH FAILS TO	OPERATE AT VERMONT YANKEE	115092 P250
RMHR STEAM RELIEF VALVES FAIL TO	OPERATE AT VERMONT YANKEE	119497 P272
RMCI TRIPS AND RMCI FAILS TO	OPERATE PROPERLY AT BRUNSWICK FERRY 10	111470 P272
RMCI TURBINE FAILS TO	OPERATE PROPERLY AT BRUNSWICK FERRY 30	111470 P 33
RMCI ASSEMBLIES	OPERATE WITH RELAY VALVE LOWER THAN LIMIT AT FITZPATRICK	113490 P143
RMCI UNIT AT PEACH BOTTOM 2 AND 30	OPERATED ABOVE 100 POWER WITH ALL COOLING TOWERS	110906 P220
RMCI CONTAINMENT PRESSURE RECORDER	OPERATES INTERMITTENTLY AT BRUNSWICK 20	110401 P 74
RMCI DE-INERTED WHILE REACTOR GAS	OPERATING AT DUNESIDE 10	110790 P126
RMCI WATER STRAINER FOUND NOT	OPERATING AT HILLSTONE 10	110904 P160
POTENTIAL FOR RMCI PUMP	OPERATION BEYOND RUNOUT CONDITION AT BRUNSWICK FERRY 30	112145 P 61
RMCI LIMIT OF POWER FOR REQUIRED RMCI NINEHUN	OPERATION INCREASED AT DUNESIDE 2 AND 30	110952 P121
HILLSTONE 10	OPERATION LESS CONSERVATIVE THAN BASES FOR LICENSE AT	110607 P150
RMCI VALVE	OPERATION OF LEVER SWITCH TRIPS RECIRC PUMP AT COOPER	120202 P 90
RMCI VALVE	OPERATION FOUND LOOSE AT AMHOL	110601 P150
RMCI FOUND IN VALVE MOTOR	OPERATION DURING TEST AT AMHOL	112152 P 3
RMCI MOTOR	OPERATION ON RMCI VALVE BURNS UP AT FITZPATRICK	110906 P147
RMCI UNIT AT BRUNSWICK FERRY 20	OPERATOR PULLED OUT-OF-SEQUENCE CONTROL ROD DURING TESTING	117007 P 30
RMCI UNIT AT BRUNSWICK FERRY 20	ORDER IMPOSING CIVIL PENALTIES AT BRUNSWICK 20	111070 P 50
RMCI UNIT AT BRUNSWICK FERRY 20	ORDER IMPOSING CIVIL PENALTIES OF \$10000 AT FITZPATRICK	117000 P162
RMCI UNIT AT BRUNSWICK FERRY 20	OUT AT AMHOL	110412 P 7
RMCI UNIT AT BRUNSWICK FERRY 20	OUT AT BRUNSWICK FERRY 10	110906 P 36
RMCI UNIT AT BRUNSWICK FERRY 20	OUT AT BRUNSWICK 20	110400 P 80
RMCI UNIT AT QUAD CITIES 20	OUT AT QUAD CITIES 20	110159 P266
RMCI UNIT AT BRUNSWICK 20	OUT OF FLUID AT BRUNSWICK 20	115676 P 76
RMCI UNIT AT BRUNSWICK 20	OUT OF FUEL PREPARATION MACHINE AT BRUNSWICK 20	112326 P 40
RMCI UNIT AT BRUNSWICK 20	OUT OF LIMITS AT DUNESIDE 30	110207 P126
RMCI UNIT AT BRUNSWICK 20	OUT OF SERVICE AT DUNESIDE 20	112727 P100
RMCI UNIT AT BRUNSWICK 20	OUT OF SERVICE AT FITZPATRICK	113903 P136
RMCI UNIT AT BRUNSWICK 20	OUT OF SERVICE AT HATCH 10	112372 P160
RMCI UNIT AT BRUNSWICK 20	OUT OF SERVICE AT HATCH 10	120490 P175
RMCI UNIT AT BRUNSWICK 20	OUT OF SERVICE AT PEACH BOTTOM 20	115251 P210

20	BPCE INJECTION VALVE RACKED	OUT OF SERVICE IN OPEN POSITION AT DRESDEN 30	120430 P130
	DIESEL GENERATOR	OUT OF SERVICE TOO LONG DURING INSPECTION AT QUAD CITIES 10	110193 P250
	DIESEL GENERATOR	OUT OF SERVICE TOO LONG FOR MAINTENANCE AT QUAD CITIES 10	113199 P250
	BPCE	OUT OF SPECIFICATIONS AT ARMOLOO	110256 P 1
	REFLUX MONITOR TRIP SETTING	OUT OF SPECS AT HUMBOLDT BAY0	114150 P177
	OPERATOR PULLED	OUT-OF-SEQUENCE CONTROL ROD DURING TESTING AT BROWNS FERRY	117067 P 30
	DIESEL GENERATOR	OUTBOARD HSIY FAILS TO CLOSE COMPLETELY AT DRESDEN 30	118797 P126
	DIESEL GENERATOR	OUTPUT BREAKER FAILS TO CLOSE AT BRUNSWICK 20	120630 P 55
FITZPATRICK0		OUTPUT ERRATIC AT DRESDEN 2 & 30	119007 P121
		OUTSIDE PERSONNEL AIRLOCK DOOR LEAK RATE EXCEEDS LIMIT AT	120747 P150
	CONDENSATE TRANSFER LINE LEAKS	OUTSIDE THE BUILDING AT FITZPATRICK0	112050 P130
	INDIVIDUAL RECEIVES	OVEREXPOSURE AT HUMBOLDT BAY0	110000 P176
	PERSONNEL RECEIVES APPARENT	OVEREXPOSURE AT PILGRIM 10	110220 P249
	PERSONNEL RECEIVES	OVEREXPOSURE AT QUAD CITIES 1 AND 20	115050 P263
	FIVE CONTRACTOR EMPLOYEES RECEIVE	OVEREXPOSURES AT NINE MILE POINT 10	110106 P205
	SHUT-DOWN TANK	OVERFILLED A SECOND TIME AT DRESDEN 10	110936 P102
	SHUT-DOWN TANK APPARENTLY	OVERFILLED AT DRESDEN 10	100056 P102
	NEUTRALIZATION TANK	OVERFLOW DRAINING INTO RIVER AT PATCH 10	110970 P157
	DIESEL FIRE PUMP	OVERHEATS AT DRESDEN 10	110510 P105
	ARM FAILS TO	OVERLOAD THE SB AT ARMOLOO	110730 P 10
	BPCE VALVE MOTOR BREAKER TRIPS ON THERMAL	OVERLOAD AT BRUNSWICK 10	119003 P 40
	SCORE SPRAY VALVE TRIPS ON THERMAL	OVERLOAD AT DRESDEN 30	114376 P125
	BPCE VALVE	OVERLOAD OCCURS AT FITZPATRICK0	113040 P130
	OTHERS	OVERLOAD RELAY FOR HSIY TRIPS AT ARMOLOO	119533 P 10
	BOFF LOS SYSTEM	OVERPRESSURIZED AT DRESDEN 20	115732 P115
	BPCE LOOP	OVERPRESSURIZED AT VERMONT YANKEE0	100449 P200
	RESET POINT DRIFT IN ACIC ELECTRONIC	OVERSPEED AT PATCH 10	111000 P150
	ACIC TURBINE TRIPS ON	OVERSPEED AT PATCH 10	111000 P150
	ACIC TURBINE TRIPS CUE TO	OVERSPEED AT MONTICELLO0	117053 P109
	ACIC TURBINE TRIPS ON	OVERSPEED AT MONTICELLO0	120700 P201
	ALQW FLOW INDICATION FOUND ON	OXYGEN ANALYZER AT BRUNSWICK 20	115005 P 73
		OXYGEN ANALYZER FAILS AT ARMOLOO	115120 P 0
	ORTWELL	OXYGEN ANALYZER READS HIGH AT BRUNSWICK 20	114111 P 50
		OXYGEN ANALYZER READS HIGH AT BRUNSWICK 20	110006 P 06
		OXYGEN ANALYZER SPIKE UPWARD AT COOPER0	112650 P 01
		OXYGEN AND HYDROGEN SENSORS IMPROPERLY CALIBRATED AT	110205 P 01
	STORUS	OXYGEN CONCENTRATION EXCEEDS LIMIT AT ARMOLOO	111403 P 1
	PRIMARY CONTAINMENT	OXYGEN CONCENTRATION EXCEEDS LIMIT AT MONTICELLO0	113955 P197
	PRIMARY CONTAINMENT	OXYGEN CONCENTRATION EXCEEDS LIMIT AT QUAD CITIES 10	110195 P200
	ORTWELL	OXYGEN CONCENTRATION EXCEEDS 4% AT ARMOLOO	117051 P 13
		OXYGEN CONCENTRATION EXCEEDS 4% 24 HOURS AFTER STARTUP AT	120546 P176
		OXYGEN CONCENTRATION IN ORTWELL EXCEEDS LIMIT AT	115002 P130
		OXYGEN CONCENTRATION IN TORUS EXCEEDS LIMIT AT JYSTER CREEK	116533 P213
	ACONTAINMENT	OXYGEN HYDROGEN RECORDER/INDICATOR NOT PRINTING AT	117700 P 03
	STORUS	OXYGEN LEVEL EXCEEDS LIMIT AT PEACH BOTTOM 30	112103 P230
		OXYGEN MONITOR FOUND WITH NO FLOW AT BRUNSWICK 20	112300 P 04
	ISOLATION VALVE TO	OXYGEN RECORDER FAILS TO CLOSE COMPLETELY AT BRUNSWICK 20	117705 P 03
		OXYGEN RECORDER FOUND TO BE READING DOWNSCALE AT BRUNSWICK 20	109206 P 52
	ACONTAINMENT	OXYGEN RECORDER/INDICATOR PEGS HIGH AT BRUNSWICK 20	115077 P 76
	STORUS	OXYGEN SENSOR FAILS TO RESPOND PROPERLY AT BROWNS FERRY 10	120276 P 35
	STORUS	OXYGEN SENSOR FAILS TO RESPOND PROPERLY AT BROWNS FERRY 30	120502 P 47
	ACONTAINMENT	OXYGEN/HYDROGEN ANALYZER DRIFTS DOWNSCALE AT BRUNSWICK 20	119325 P 06
		OXYGEN/HYDROGEN INDICATORS READING LOW AT BRUNSWICK 20	109207 P 50
		OXYGEN/HYDROGEN RECORDER/INDICATOR NOT PRINTING PROPERLY	115008 P 77
		OXYGEN/HYDROGEN RECORDER/INDICATOR PRINTING ERRATICALLY AT	115007 P 77
AT BRUNSWICK 20		OYSTER CREEK0	109456 P200
BRUNSWICK 20		OYSTER CREEK0	109654 P200
	VACUUM BREAKER FAILED TO OPERATE AT	OYSTER CREEK0	110331 P200
	RESET POINT DRIFT IN PRESSURE SWITCH AT	OYSTER CREEK0	110330 P200
	LEAK RATE OF VACUUM BREAKERS EXCEED LIMITS AT	OYSTER CREEK0	110332 P210
	REACTOR BUILDING VACUUM LESS THAN LIMIT AT	OYSTER CREEK0	110002 P210
	MOO WORTH MINIMIZER INOPERABLE DURING A REACTOR STARTUP AT	OYSTER CREEK0	111012 P210
	DIESEL GENERATOR AUTOMATICALLY SHUTS DOWN AT	OYSTER CREEK0	112720 P210
	DIESEL GENERATOR FAILS TO DEVELOP SUFFICIENT VOLTAGE AT	OYSTER CREEK0	113202 P210
	REFLUX PEAKING FACTOR LIMIT EXCEEDED AT	OYSTER CREEK0	112652 P211
	RESET POINT DRIFT IN ORTWELL PRESSURE SWITCH AT	OYSTER CREEK0	113270 P211
	RESET POINT DRIFT IN PRESSURE SWITCHES AT	OYSTER CREEK0	113507 P211
	STORUS SPRAY VALVE FAILS TO OPEN AT	OYSTER CREEK0	117155 P211
	RESET POINT DRIFT IN ORTWELL PRESSURE SWITCH AT	OYSTER CREEK0	113070 P212
	SECONDARY CONTAINMENT INTEGRITY FULLY VIOLATED AT	OYSTER CREEK0	114207 P212
	SENSING LINES TO SBT FLOW SWITCH FOUND TO BE REVERSED AT	OYSTER CREEK0	114204 P212
	PRESSURE SWITCH SENSING LINE LEAKS AT	OYSTER CREEK0	115004 P212
	SCORE SPRAY PUMP SEAL LEAKS AT	OYSTER CREEK0	115735 P212
	NOTICE OF PROPOSED IMPOSITION OF CIVIL PENALTIES AT	OYSTER CREEK0	116533 P213
	DIESEL GENERATOR FAILS TO START AT	OYSTER CREEK0	115074 P213
	OXYGEN CONCENTRATION IN TORUS EXCEEDS LIMIT AT	OYSTER CREEK0	117170 P213
	RESET POINT DRIFT IN PRESSURE SWITCH AT	OYSTER CREEK0	117000 P214
	CONTAINMENT SPRAY SYSTEM VALVE FAILS TO OPEN AT	OYSTER CREEK0	119103 P214
	RESET POINT DRIFT IN LOAD SEQUENCING TIMER AT	OYSTER CREEK0	120105 P215
	STORUS TO ORTWELL VACUUM BREAKER FAILS TO CLOSE AT	OYSTER CREEK0	120472 P215
	CONTAINMENT SPRAY VALVE FAILS TO OPEN AT	OYSTER CREEK0	120671 P215
	CONTAINMENT SPRAY PUMP FOUND INOPERABLE AT	OYSTER CREEK0	119104 P214
	SCORE SPRAY VALVE FAILS TO OPEN AT	OYSTER CREEK0	114030 P214
	RADIOACTIVITY RELEASE OCCURS THROUGH RELIEF VALVE AT	OYSTER CREEK0	115530 P100
	TRIP POINT SETTINGS FOUND TO BE NONCONSERVATIVE IN	OYSTER CREEK0	111700 P100
	LEVELS OF ACTIVITY IN	OYSTERS EXCEED 10 FINE CONTROL AT HILLSTONE 10	
	LEVELS OF ACTIVITY IN	OYSTERS EXCEED 10 FINE CONTROL VALUES AT HILLSTONE 10	

DESCRIPTION	STATUS	DATE	TIME	LOCATION	REMARKS
PRIMARY CONTAINMENT PRESSURE RECORDER FAILS TO ADVANCE	OK	11/11/78	14:00	PEACH BOTTOM 2	
EXCESS MOISTURE FOUND ON FLOOR	OK	11/11/78	14:00	PEACH BOTTOM 2	
IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT LEVEL AT PEACH	OK	11/11/78	14:00	PEACH BOTTOM 2	
IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT LIMIT AT PEACH	OK	11/11/78	14:00	PEACH BOTTOM 2	
CONTINUOUS DRYWELL	OK	11/11/78	14:00	PEACH BOTTOM 2	
RELEASE OF RADIOACTIVE	OK	11/11/78	14:00	PEACH BOTTOM 2	
RELEASE RATE FOR IODINE AND PARTICULATES HIGH AT PEACH BOTTOM 2	OK	11/11/78	14:00	PEACH BOTTOM 2	
QUARTERLY AVERAGE RELEASE RATE FOR IODINE AND PARTICULATES HIGH AT PEACH BOTTOM 2	OK	11/11/78	14:00	PEACH BOTTOM 2	
PILOT	OK	11/11/78	14:00	PEACH BOTTOM 2	
WATER LEAKS	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO UNMONITORED LIQUID RELEASE	OK	11/11/78	14:00	PEACH BOTTOM 2	
SETTLING BASIN EFFLUENT SUSPENDED SOLIDS EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SEWAGE PLANT EFFLUENT SUSPENDED SOLIDS EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SEWAGE PLANT EFFLUENT SUSPENDED SOLIDS EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SETTLING BASIN EFFLUENT PH EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PLASER'S ACTIVITY RELEASE RATE EXCEEDS 90% OF ALLOWABLE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
EXCESSIVE USAGE OF CHEMICALS	OK	11/11/78	14:00	PEACH BOTTOM 2	
COOLING TOWER INOPERABLE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SETTLING BASIN EFFLUENT SUSPENDED SOLIDS EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
TWO COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
THREE COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SEWAGE PLANT EFFLUENT SUSPENDED SOLIDS EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
THREE COOLING TOWERS SIMULTANEOUSLY INOPERATIVE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SETTLING BASIN EFFLUENT PH EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SETTLING BASIN EFFLUENT PH EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH OF SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SETTLING BASIN EFFLUENT PH EXCEEDS LIMITS AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH FOR SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH FOR SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SUSPENDED SOLIDS IN SETTLING BASIN EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
PH OF SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SALIN USE EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT LEVEL AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
IODINE AND PARTICULATE RELEASE RATE EXCEEDS REPORT LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
SUSPENDED SOLIDS IN SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
131 CONCENTRATION IN A RISK SAMPLE EXCEEDS REPORT LEVEL AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
ABOVE 20% POWER WITH ALL COOLING TOWERS INOPERABLE AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
DRUM INJECTION VALVE MOTOR FAILS AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
DRUM INJECTION VALVE FAILS TO OPEN AT	OK	11/11/78	14:00	PEACH BOTTOM 2	
DRUM STEAM SUPPLY VALVE FAILS TO OPERATE					

STOP PUMP: FAILS TO WITHDRAW COMPLETELY AT	PEACH BOTTOM 20	110518 P223
STEAM TUNNEL TEMPERATURE INCREASES AT	PEACH BOTTOM 20	110783 P223
HYDRAULIC SHOCK SUPPRESSOR RESERVOIR FOUND EMPTY AT	PEACH BOTTOM 20	110745 P224
PORTWELL RADIOACTIVE GAS SAMPLE SYSTEM OUT OF SERVICE AT	PEACH BOTTOM 20	110746 P224
DISPROPER PORTWELL RADIOACTIVE GAS SAMPLE OBTAINED AT	PEACH BOTTOM 20	110747 P225
PORTWELL PURGE EXHAUST VALVE FAILS TO OPEN COMPLETELY AT	PEACH BOTTOM 20	110716 P225
ALPCI PUMP FLOWS LIMITED BY VALVING AT	PEACH BOTTOM 20	110219 P225
ACAD SYSTEM BECOMES INOPERABLE AT	PEACH BOTTOM 20	110217 P225
RESET POINT DRIFT IN APRN AT	PEACH BOTTOM 20	110218 P225
PERMISSIVE SET POINT FOR CORE SPRAY AND LPCI IMPROPER AT	PEACH BOTTOM 20	110745 P226
MAJORUS RELEASE RATE EXCEEDS LIMIT AT	PEACH BOTTOM 20	110975 P226
DISPROPER PORTWELL GAS SAMPLE OBTAINED AT	PEACH BOTTOM 20	110976 P226
RESET POINT DRIFT IN MPC1 FLOW SWITCH AT	PEACH BOTTOM 20	110161 P226
RESET POINT DRIFT OF ADS LOW LEVEL SWITCH AT	PEACH BOTTOM 20	110473 P227
ORIC TRIP THROTTLE VALVE FAILS TO RESET AT	PEACH BOTTOM 20	110988 P227
RELEASE RATE FOR IODINE AND PARTICULATES EXCEEDS LIMIT AT	PEACH BOTTOM 20	110015 P227
OTHER HYDRAULIC SHUNNERS FOUND WITH EMPTY RESERVOIRS AT	PEACH BOTTOM 20	120237 P228
TESTS MADE WITH GROSS ACTIVITY MONITOR INOPERABLE AT	PEACH BOTTOM 20	115717 P222
MAJOR RELEASE RATE FOR IODINE AND PARTICULATES HIGH AT	PEACH BOTTOM 20	116519 P223
3-WAY PERMISSIVE LEVEL SWITCH FOUND INOPERATIVE AT	PEACH BOTTOM 20	110220 P226
VENTILATION RADIATION MONITOR DISPLAYS ABNORMAL READING AT	PEACH BOTTOM 20	116784 P224
FUEL RODS FROM LEAKY BUNDLES REMOVED DURING RETRAPPING AT	PEACH BOTTOM 20	116002 P224
MAJOR TORUS COOLING RETURN VALVE LEAKS EXCESSIVELY AT	PEACH BOTTOM 30	100447 P237
PORTWELL RADIATION MONITOR FOUND INOPERABLE AT	PEACH BOTTOM 30	100446 P237
ORIC PUMP DRUMMER TO DIESEL GENERATION FOUND OPEN AT	PEACH BOTTOM 30	110341 P237
THREE REACTOR VESSEL STABILIZERS SLIGHTLY DEFORMED AT	PEACH BOTTOM 30	110343 P237
REACTOR PUMP HYDRAULIC SHUNNER INOPERABLE AT	PEACH BOTTOM 30	110340 P238
HYDRAULIC SHUNNERS FOUND INOPERABLE AT	PEACH BOTTOM 30	110341 P238
THREE HYDRAULIC SHUNNERS FOUND INOPERABLE AT	PEACH BOTTOM 30	110342 P238
ORIC FAILS TO CLOSE AT	PEACH BOTTOM 30	110344 P238
RESET POINT DRIFT IN RADIATION MONITOR AT	PEACH BOTTOM 30	110346 P239
RESET POINT DRIFT IN PRESSURE SWITCH AT	PEACH BOTTOM 30	110362 P239
TORUS OXYGEN LEVEL EXCEEDS LIMIT AT	PEACH BOTTOM 30	112143 P239
ORIC CIRCULATION PUMP DISCHARGE VALVE FAILS AT	PEACH BOTTOM 30	112291 P239
PORTWELL AIR LOCK DRAIN LEAK RATE UNACCEPTABLE AT	PEACH BOTTOM 30	112406 P240
ORIC CIRCULATION PUMP VALVE FAILS TO CLOSE AT	PEACH BOTTOM 30	113311 P240
ORIC TURBINE TRIPS ON HIGH STEAM FLOW AT	PEACH BOTTOM 30	113905 P240
CRACK FOUND IN REACTOR PUMP PIPING INSTRUMENT LINE AT	PEACH BOTTOM 30	114081 P240
MAIN STEAM LINE HIGH TEMPERATURE SWITCH FAILS TO TRIP AT	PEACH BOTTOM 30	114625 P240
ORIC PUMP VALVE FAILS TO CLOSE AT	PEACH BOTTOM 30	115048 P241
ORIC TURBINE EXHAUST DRAIN POT VALVE FAILS TO OPEN AT	PEACH BOTTOM 30	114626 P241
PORTION OF SURVEILLANCE TEST NOT COMPLETED AT	PEACH BOTTOM 30	115046 P241
RESET POINT DRIFT IN LOGIC TIMER AT	PEACH BOTTOM 30	115045 P241
RESET POINT DRIFT IN APRN AT	PEACH BOTTOM 30	115046 P242
CONTROL ROD FAILS TO FULLY INSERT AT	PEACH BOTTOM 30	115047 P242
TORUS WATER LEVEL DROPS SLIGHTLY BELOW LIMIT AT	PEACH BOTTOM 30	115046 P242
PORTWELL FLOOR RADIATION MONITOR FAILS AT	PEACH BOTTOM 30	115495 P242
APRN ROD BLOCK COULD NOT BE OBTAINED AT	PEACH BOTTOM 30	115063 P242
MAIN STEAM RELIEF VALVE FAILS OPEN AT	PEACH BOTTOM 30	116517 P243
SHOCK ABSORBER FOUND WITH EMPTY RESERVOIR AT	PEACH BOTTOM 30	116246 P243
HYDRAULIC SHOCK ABSORBER FOUND INOPERABLE AT	PEACH BOTTOM 30	116249 P243
HYDRAULIC SHOCK SUPPRESSORS FOUND WITH EMPTY RESERVOIRS AT	PEACH BOTTOM 30	116250 P243
ORIC CLOSURE TIME EXCEEDS LIMIT AT	PEACH BOTTOM 30	116251 P243
ORIC SPEED CONTROL CIRCUIT FOUND INOPERABLE AT	PEACH BOTTOM 30	116252 P244
ALPCI PUMP FLOWS LIMITED BY VALVING AT	PEACH BOTTOM 30	116224 P244
PORTWELL RADIATION MONITORING SYSTEM FLOWS STOPS AT	PEACH BOTTOM 30	116728 P244
TORUS ATMOSPHERE SAMPLING VALVE LEAKAGE EXCESSIVE AT	PEACH BOTTOM 30	116729 P244
PORTWELL TO NITROGEN COMPRESSOR VALVE FAILS TO CLOSE AT	PEACH BOTTOM 30	116730 P244
PERMISSIVE SET POINT FOR CORE SPRAY AND LPCI IMPROPER AT	PEACH BOTTOM 30	116731 P245
RESET POINT DRIFT IN CONDENSER LOW VACUUM SWITCH AT	PEACH BOTTOM 30	116001 P245
RESET POINT DRIFT IN APRN ROD BLOCK SETTING AT	PEACH BOTTOM 30	116474 P245
ORIC FLOW BIAS TO THE A LOGIC APRN STRING HIGH AT	PEACH BOTTOM 30	116475 P245
RESET POINT DRIFT IN MAIN STEAM LINE FLOW SWITCH AT	PEACH BOTTOM 30	116476 P246
PORTWELL FLOOR DRAIN ISOLATION VALVE FAILS TO CLOSE AT	PEACH BOTTOM 30	116768 P246
POTASSIUM PENTABORATE CONCENTRATION BELOW LIMIT AT	PEACH BOTTOM 30	120239 P246
WITHDRAW PERMISSIVE LIGHT BLINKING DURING FUEL MOVEMENT AT	PEACH BOTTOM 30	110363 P239
OF TORUS SPRAY VALVE AND TORUS COOLING VALVE EXCESSIVE AT	PEACH BOTTOM 30	100445 P237
ORIC	PEAKING FACTOR LIMIT EXCEEDED AT OYSTER CREEK	112720 P210
CONTAINMENT OXYGEN RECORDER/INDICATOR	PEGS HIGH AT BRUNSWICK 20	115677 P 76
ORDER IMPOSING CIVIL	PENALTIES AT BRUNSWICK 20	111478 P 59
NOTICE OF PROPOSED IMPOSITION OF CIVIL	PENALTIES AT OYSTER CREEK	115444 P212
ORDER IMPOSING CIVIL	PENALTIES OF \$10000 AT FITEPATRICK	117490 P142
INSTRUMENT INDICATING LINE	PENETRATED AT DRESDEN 20	115096 P117
SPINNOLE LEAK FOUND IN VESSEL INSTRUMENTATION	PENETRATION AT QUAD CITIES 10	110321 P254
PRIMARY CONTAINMENT	PENETRATION INDICATIONS FOUND AT BRUNSWICK 20	113233 P 69
PORTWELL	PENETRATION ISOLATION VALVE FAILS AT BRUNSWICK 20	111401 P 60
PRIMARY CONTAINMENT	PENETRATION VALVE FAILS TO OPEN AT BRUNSWICK 20	112679 P 67
CRACKING OCCURS IN CONTROL ROD DRIVE	PENETRATIONS AT SHOREHAM	120467 P267
LEAKAGE OF CCSO PUMP VAULT	PENETRATIONS EXCESSIVE AT DRESDEN 20	115545 P111
CCSO PUMP VAULT	PENETRATIONS HAVE DETECTABLE LEAKAGE AT DRESDEN 30	110509 P129
CCSO PUMP VAULT	PENETRATIONS LEAK EXCESSIVELY AT DRESDEN 30	114373 P124
EXPANSION JOINTS OF CONTAINMENT	PENETRATIONS NOT VISUALLY INSPECTED AT BIG ROCK POINT	119405 P 28
DEFECTS IN CONTROL ROD DRIVE	PENETRATIONS OF CONTAINMENT LINER AT SHOREHAM	116744 P267
5500IUH	PENTABORATE CONCENTRATION BELOW LIMIT AT PEACH BOTTOM 30	120239 P246
5500IUH	PENTABORATE CONCENTRATION IN SLCS FLUCTUATES AT PILGRIM 10	120448 P253
5500IUH	PENTABORATE CONCENTRATION LOW AT ARNO,OP	112234 P 4
5500IUH	PENTABORATE SOLUTION LEAKS INTO REACTOR VESSEL AT DRESDEN 2	115044 P114

PERFORMANCE AS REQUIRED AT PILGRIM	113140 P249
DAILY RADIATION MONITOR SENSOR CHECKS NOT	PERFORMED AT BRUNSWICK
ENGINE PUMP ACTUATION TESTS NOT	PERFORMED AT BIG ROCK POINT
ALUMINO POLYMER CIRCULATING TESTS NOT	PERFORMED AT BRUNSWICK 20
PERIODIC TESTS NOT	PERFORMED AT BRUNSWICK 20
TEST ON MAIN STACK MONITOR NOT	PERFORMED AT BRUNSWICK 20
TESTING OF THE MAIN STACK MONITOR NOT	PERFORMED AT FITZPATRICK
REQUIRED SURVEILLANCE NOT	PERFORMED AT FITZPATRICK
BALPHA ANALYSIS ON LIQUID WASTE COMPOSITE NOT	PERFORMED AT HUNDOLOTT BAY
DAILY CONTROL ROD DRIVE EXERCISING NOT	PERFORMED AT HILLSTONE 10
QUARTERLY OFF GAS RADIATION MONITOR TEST NOT	PERFORMED AT NEW RILE POINT 10
REQUIRED SURVEILLANCE OF VACUUM BREAKERS NOT	PERFORMED AT PEACH BOTTOM 20
PERMANENT SURVEILLANCE NOT	PERFORMED INSTEAD OF QUARTERLY TEST AT BRUNSWICK 20
QUARTERLY BATTERY TEST	PERFORMED ON HPCI LEVEL SWITCH PRIOR TO STARTUP AT HATCH 10
ANALYSIS NOT	PERFORMED ON REACTOR COOLANT ON TIME AT HATCH 10
PERIODIC TESTS NOT	PERFORMED ON TIME AT BRUNSWICK 20
PERIODIC PRE-STARTUP TESTS NOT	PERFORMED ON TIME AT BRUNSWICK 20
ALPCI AND CORE SPRAY TESTS NOT	PERFORMED ON TIME AT DRESDEN 20
ALPCI TESTING NOT	PERFORMED ON TIME AT FITZPATRICK
MAINLOCK LEAK RATE TEST NOT	PERFORMED ON TIME AT HATCH 10
SEVERAL LLRTS NOT	PERFORMED ON TIME AT HATCH 10
SECONDARY CONTAINMENT TEST NOT	PERFORMED ON TIME AT VERMONT YANKEE
OPERABILITY TEST ON CONTAINMENT COOLING LOOP	PERFORMED ON WONG UNIT AT QUAD CITIES 10
GAMMA SCANS NOT	PERFORMED PRIOR TO TWO LIQUID RELEASES AT PEACH BOTTOM 20
PERIODIC TESTS NOT PERFORMED AT BRUNSWICK 20	109244 P 51
PERIODIC TESTS NOT PERFORMED ON TIME AT BRUNSWICK 20	111812 P 60
PERIODS OF TIME AT BRUNSWICK 20	109642 P 52
PERMISSIVE LEVEL SWITCH FOUND INOPERATIVE AT PEACH BOTTOM 2	110220 P 226
PERMISSIVE LIGHT FLASHING DURING FUEL MOVEMENT AT PEACH	110363 P 239
PERMISSIVE SET POINT FOR CORE SPRAY AND LPCI IMPROPER AT	110745 P 226
PERMISSIVE SET POINT FOR CORE SPRAY AND LPCI IMPROPER AT	110731 P 245
PERMISSIVE SWITCH FOUND ISOLATED AT BRUNSWICK 20	110966 P 50
PERMIT CIRCUIT FOUND INOPERATIVE AT VERMONT YANKEE	110520 P 273
PERMIT INTERLOCK FAILS AT DRESDEN 20	111171 P 112
PERMITTED OPERATION LESS CONSERVATIVE THAN BASES FOR	120667 P 194
PERSONNEL AIRLOCK DOOR LEAK RATE EXCEEDS LIMIT AT	120747 P 150
PERSONNEL NOT EVACUATED PROPERLY DURING CONTROL ROD	110373 P 112
PERSONNEL DISCHARGED TO RIVER AT HATCH 10	110400 P 162
PERSONNEL DISCHARGED TO THE RIVER AT HATCH 10	114767 P 163
PERSONNEL EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30	110303 P 229
PERSONNEL EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30	117161 P 233
PERSONNEL EXCEEDS LIMIT AT PEACH BOTTOM 2 AND 30	117162 P 234
PERSONNEL EXCEEDS LIMITS AT PEACH BOTTOM 2 AND 30	110746 P 235
PERSONNEL FOR SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH	110747 P 235
PERSONNEL FOR SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH	110748 P 235
PERSONNEL OF REACTOR COOLANT WATER LOW AT VERMONT YANKEE	120236 P 270
PERSONNEL OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH	113309 P 231
PERSONNEL OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH	115067 P 233
PERSONNEL OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH	110906 P 233
PERSONNEL OF SETTLING BASIN EFFLUENT EXCEEDS LIMIT AT PEACH	110221 P 234
PERSONNEL OF SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM	110222 P 234
PERSONNEL OF SEWAGE PLANT EFFLUENT EXCEEDS LIMIT AT PEACH BOTTOM	110300 P 236
PERSONNEL OF WASTE DISCHARGE EXCEEDS ETS LIMITS AT HATCH 10	114763 P 164
PERSONNEL OF WASTE WATER EXCEEDS ETS LIMITS AT HATCH 10	114766 P 164
PERSONNEL AT QUAD CITIES 10	110000 P 250
PERSONNEL FOUND IN CONTAINMENT PURGE SYSTEM SPOOL	120609 P 240
PERSONNEL FOUND ON REACTOR VESSEL FEEDWATER NOZZLES AT	11331A P 240
PERSONNEL SYSTEM WELD HAS FLAW AT	114787 P 240
PERSONNEL INFORMATION ON RV JET PUMP BOLT KEEPER WELOS AT	114786 P 240
PERSONNEL CONTAINMENT INTEGRITY VIOLATED AT	110220 P 249
PERSONNEL RECEIVES APPARENT OVEREXPOSURE AT	115405 P 249
PERSONNEL LIQUID CONTROL SYSTEM FOUND INOPERATIVE AT	115702 P 249
PERSONNEL RADIATION MONITORING SYSTEM FOUND INOPERATIVE AT	115050 P 250
PERSONNEL SET POINT DRIFT IN PRESSURE SWITCH AT	110511 P 250
PERSONNEL SET POINT DRIFT IN LOW REACTOR PRESSURE SWITCH AT	116075 P 250
PERSONNEL SYSTEM COOLANT LEAKAGE AIR SAMPLING INOPERATIVE AT	117630 P 250
PERSONNEL STEAM SUPPLY VALVE DECLARED INOPERATIVE AT	110730 P 250
PERSONNEL REACTOR BUILDING VENT RADIATION MONITOR INOPERATIVE AT	110737 P 251
PERSONNEL LEAK FOUND IN RWCU SYSTEM U DENO AT	110902 P 251
PERSONNEL MAIN STACK RADIATION MONITOR FAILS AT	110990 P 251
PERSONNEL SET POINT DRIFT IN DIFFERENTIAL PRESSURE SWITCH AT	119315 P 251
PERSONNEL SMOKE LEAKS FROM DIESEL GENERATOR EXHAUST MANIFOLD AT	110478 P 252
PERSONNEL COOLANT LEAKAGE AIR SAMPLING SYSTEM FOUND INOPERATIVE AT	110479 P 252
PERSONNEL COOLANT LEAKAGE AIR SAMPLING SYSTEM ERRATIC AT	110499 P 252
PERSONNEL SALT SERVICE WATER PUMP FOUND TO BE VIBRATING AT	120448 P 253
PERSONNEL SODIUM PENTABORATE CONCENTRATION IN BLCs FLUCTUATES AT	120716 P 253
PERSONNEL REACTOR BUILDING VENT RADIOACTIVE RELEASE RATE HIGH AT	120715 P 253
PERSONNEL MAIN STACK RADIATION MONITOR MALFUNCTIONS AT	119728 P 253
PERSONNEL MAIN STACK PROCESS RADIATION MONITOR SYSTEM MALFUNCTIONS AT	120279 P 253
PERSONNEL BLACK SMOKE COMES FROM DIESEL GENERATOR EXHAUST MANIFOLD AT	117500 P 252
PERSONNEL SERVICE WATER PUMP HOLD-DOWN BOLTS FOUND TO BE LOOSE AT	110604 P 246
PERSONNEL SALT SERVICE WATER PUMP FAILS AT	110291 P 246
PERSONNEL SALT SERVICE WATER PUMP FAILS AT	110954 P 247
PERSONNEL DIESEL GENERATOR FAILS TO START IN 10 SECONDS AT	110901 P 247
PERSONNEL REACTOR BUILDING VENT RADIATION MONITOR FAILS AT	110955 P 247
PERSONNEL SET POINT DRIFT IN PRESSURE SWITCHES AT	115140 P 249
PERSONNEL INSTRUMENT SURVEILLANCE TESTS NOT PERFORMED AS REQUIRED AT	

	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	BRUNSWICK 20	110043	P	87		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	BRUNSWICK 20	112000	P	84		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	ORESDEN 20	117170	P	1110		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	NINE MILE POINT0	111000	P	003		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	OYSTER CREEK0	113202	P	010		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	OYSTER CREEK0	113047	P	011		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCH	AT	VERMONT TANK00	110213	P	070		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCHES	AT	BRUNSWICK 20	110430	P	71		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCHES	AT	BRUNSWICK 20	110467	P	71		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCHES	AT	BRUNSWICK 20	110000	P	70		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCHES	AT	FITZPATRICK0	113000	P	1133		
	05ET	POINT	DRIFT	IN	DRYVELL	PRESSURE	SWITCHES	AT	HILLSTONE 10	120070	P	1000		
	05ET	POINT	DRIFT	IN	ECCS FILL	SYSTEM	PRESSURE	SWITCH	AT	QUAD	110423	P	006	
	05ET	POINT	DRIFT	IN	EMERGENCY	BUS	UNDERVOLTAGE	RELAY	AT	ARNHOLD0	110070	P	5	
	05ET	POINT	DRIFT	IN	FLOW	OR	DRIFT	AT	ARNHOLD0	110170	P	6		
	05ET	POINT	DRIFT	IN	FLOW	COMPARATOR	AT	ARNHOLD0	110177	P	6			
	05ET	POINT	DRIFT	IN	FLOW	INSTRUMENT	AT	ARNHOLD0	110177	P	6			
	05ET	POINT	DRIFT	IN	FLOW	SENSOR	AT	ORESDEN 20	111007	P	1			
	05ET	POINT	DRIFT	IN	FLOW	LEVEL	SWITCHES	AT	BRUNSWICK 20	111007	P	1		
	05ET	POINT	DRIFT	IN	HIGH	FLOW	SWITCH	AT	ARNHOLD0	111007	P	20		
	05ET	POINT	DRIFT	IN	HIGH	REACTOR	PRESSURE	SWITCH	AT	ORESDEN 20	120017	P	21	
	05ET	POINT	DRIFT	IN	HIGH	REACTOR	PRESSURE	SWITCH	AT	ORESDEN 20	110003	P	117	
	05ET	POINT	DRIFT	IN	HPCI	DIFFERENTIAL	PRESSURE	SWITCHES	AT		110670	P	75	
	05ET	POINT	DRIFT	IN	HPCI	FLOW	SWITCH	AT	PEACH BOTTOM 30	110101	P	000		
	05ET	POINT	DRIFT	IN	HPCI	LOW	PRESSURE	SWITCHES	AT	BRUNSWICK 20	113002	P	70	
	05ET	POINT	DRIFT	IN	HPCI	TURBINE	PRESSURE	SWITCH	AT	BRUNSWICK 20	110400	P	00	
	05ET	POINT	DRIFT	IN	HPCI	TURBINE	PRESSURE	SWITCHES	AT	BRUNSWICK 20	110670	P	70	
	05ET	POINT	DRIFT	IN	IN-CORE	NEUTRON	FLUX	AMPLIFIER	AT	ORESDEN 10	120000	P	100	
	05ET	POINT	DRIFT	IN	INTERMEDIATE	RANGE	MONITOR	AT	HILLSTONE 10	117070	P	101		
	05ET	POINT	DRIFT	IN	LEVEL	SWITCH	AT	ARNHOLD0	110207	P	1			
	05ET	POINT	DRIFT	IN	LEVEL	SWITCH	AT	BRUNSWICK 20	112730	P	00			
	05ET	POINT	DRIFT	IN	LEVEL	SWITCH	AT	COOPER0	117000	P	00			
	05ET	POINT	DRIFT	IN	LOW	SENDERLINE	TIME	AT	OYSTER CREEK0	110000	P	014		
	05ET	POINT	DRIFT	IN	LOCK	TRIP	AT	PEACH BOTTOM 30	110045	P	041			
	05ET	POINT	DRIFT	IN	LOW	REACTOR	PRESSURE	SWITCH	AT	PILGRIM 10	110011	P	000	
	05ET	POINT	DRIFT	IN	LPCI	PRESSURE	SWITCH	AT	ORESDEN 20	110271	P	110		
	05ET	POINT	DRIFT	IN	LPCI	PRESSURE	SWITCHES	AT	ARNHOLD0	110403	P	01		
	05ET	POINT	DRIFT	IN	MAIN	STEAM	LINE	FLOW	SWITCH	AT	ARNHOLD0	120010	P	20
	05ET	POINT	DRIFT	IN	MAIN	STEAM	LINE	FLOW	SWITCH	AT	PEACH BOTTOM	110470	P	004
	05ET	POINT	DRIFT	IN	MAIN	STEAM	LINE	LOW	PRESSURE	SWITCH	AT	110034	P	100
	05ET	POINT	DRIFT	IN	MAIN	STEAM	LINE	PRESSURE	SWITCH	AT	112302	P	00	
	05ET	POINT	DRIFT	IN	MAIN	STEAM	LINE	PRESSURE	SWITCHES	AT	HATCH 1	110010	P	100
	05ET	POINT	DRIFT	IN	NUCLEAR	INSTRUMENT	AT	LA CROSSE0	110331	P	101			
	05ET	POINT	DRIFT	IN	OFF	GAS	RADIATION	MONITOR	AT	FITZPATRICK0	113001	P	100	
	05ET	POINT	DRIFT	IN	POWER	RANGE	MONITOR	MONITOR	AT	ORESDEN 10	115743	P	104	
	05ET	POINT	DRIFT	IN	PRESSURE	INTERLOCK	SWITCH	AT	BRUNSWICK 20	100042	P	01		
	05ET	POINT	DRIFT	IN	PRESSURE	INTERLOCK	SWITCH	AT	COOPER0	120700	P	101		
	05ET	POINT	DRIFT	IN	PRESSURE	SENSOR	AT	NINE MILE POINT0	100400	P	002			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	BRUNSWICK 20	110100	P	07			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	BRUNSWICK 20	112734	P	03			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	COOPER0	120700	P	101			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	ORESDEN 30	110323	P	122			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	FITZPATRICK0	120404	P	007			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	HATCH 10	120407	P	174			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	HILLSTONE 10	100400	P	103			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	HILLSTONE 10	112300	P	100			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	NINE MILE POINT 10	110017	P	007			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	OYSTER CREEK0	100004	P	000			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	OYSTER CREEK0	110074	P	013			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	PEACH BOTTOM 30	110302	P	220			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	PILGRIM 10	110000	P	000			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCH	AT	QUAD CITIES 20	111000	P	004			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	ARNHOLD0	110000	P	10			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	BRUNSWICK 20	100041	P	04			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	BRUNSWICK 20	110200	P	04			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	BRUNSWICK 20	111013	P	07			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	BRUNSWICK 20	111400	P	00			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	BRUNSWICK 20	112300	P	00			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	HATCH 10	110733	P	172			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	OYSTER CREEK0	112002	P	011			
	05ET	POINT	DRIFT	IN	PRESSURE	SWITCHES	AT	PILGRIM 10	110000	P	007			
	05ET	POINT	DRIFT	IN	PRESSURE	TRANSMITTERS	AT	HATCH 10	110002	P	100			
	05ET	POINT	DRIFT	IN	RADIATION	MONITOR	AT	PEACH BOTTOM 30	110300	P	220			
	05ET	POINT	DRIFT	IN	WASTE	BUILDING	VENT	RADIATION	MONITORS	110002	P	100		
	05ET	POINT	DRIFT	IN	REACTOR	HIGH	PRESSURE	SCRAM	SWITCH	AT	110000	P	100	
	05ET	POINT	DRIFT	IN	REACTOR	HIGH	PRESSURE	SCRAM	SWITCH	AT	110730	P	115	
	05ET	POINT	DRIFT	IN	REACTOR	HIGH	PRESSURE	SCRAM	SWITCH	AT	110731	P	115	
	05ET	POINT	DRIFT	IN	REACTOR	LEVEL	INDICATOR	AT	NINE MILE POINT0	110443	P	74		
	05ET	POINT	DRIFT	IN	REACTOR	LOW	PRESSURE	SWITCH	AT	HILLSTONE 10	110720	P	202	
	05ET	POINT	DRIFT	IN	REACTOR	LOW	PRESSURE	SWITCH	AT	HILLSTONE 10	110720	P	100	
	05ET	POINT	DRIFT	IN	REACTOR	LOW	WATER	LEVEL	SWITCH	AT	BRUNSWICK 20	110320	P	07
	05ET	POINT	DRIFT	IN	REACTOR	LOW	WATER	LEVEL	SWITCHES	AT	111013	P	07	
	05ET	POINT	DRIFT	IN	REACTOR	PRESSURE	SWITCH	AT	ARNHOLD0	110401	P	01		
	05ET	POINT	DRIFT	IN	REACTOR	WATER	LEVEL	INSTRUMENT	AT	ORESDEN 20	110100	P	110	
	05ET	POINT	DRIFT	IN	REACTOR	WATER	LEVEL	SWITCH	AT	HATCH 10	120000	P	175	
	05ET	POINT	DRIFT	IN	REACTOR	WATER	LEVEL	SWITCH	AT	NINE MILE	110720	P	200	

CITIES 20

BRUNSWICK 20

20

30
CONTINUED
BRUNSWICK 20
0

AT FITZPATRICK0

ORESDEN 20

ORESDEN 20

20

20

BRUNSWICK 20

POINT 10

	05ET POINT DRIFT IN REACTOR WATER LEVEL SWITCH AT QUAD CITIES 10	114425 P257
	05ET POINT DRIFT IN REACTOR WATER LEVEL SWITCHES AT BRUNSWICK 20	115400 P 72
	05ET POINT DRIFT IN REACTOR WATER LEVEL SWITCHES AT HATCH 10	110323 P172
	05ET POINT DRIFT IN RELIEF VALVE PRESSURE SWITCH AT OYSTER CREEK	117179 P213
	05ET POINT DRIFT IN RWR PRESSURE SWITCHES AT BRUNSWICK 20	100044 P 53
	05ET POINT DRIFT IN RWR PRESSURE SWITCHES AT BRUNSWICK 20	110044 P 57
	05ET POINT DRIFT IN RWS PRESSURE SWITCH AT DRESDEN 20	115733 P116
	05ET POINT DRIFT IN RWS LEVEL SWITCH AT HATCH 10	120540 P174
	05ET POINT DRIFT IN S&C RELIEF VALVE AT DRESDEN 20	113067 P111
	05ET POINT DRIFT IN S&C RELIEF VALVE AT DRESDEN 20	113749 P111
	05ET POINT DRIFT IN SOURCE RANGE MONITOR AT ARNOLD	117770 P 13
	05ET POINT DRIFT IN SWITCH AT COOPER	110233 P 95
	05ET POINT DRIFT IN TEMPERATURE SWITCH AT BRUNSWICK 20	110207 P 50
	05ET POINT DRIFT IN TEMPERATURE SWITCHES AT ARNOLD	111615 P 2
	05ET POINT DRIFT IN TEMPERATURE SWITCHES AT BALLSTONE 10	120272 P193
	05ET POINT DRIFT IN TEMPERATURE SWITCHES AT VERMONT VALLEY	114521 P274
	05ET POINT DRIFT IN THREE DIFFERENTIAL PRESSURE SWITCHES AT	111402 P 61
	05ET POINT DRIFT IN THREE RELIEF VALVES AT LA CROSSE	113007 P179
	05ET POINT DRIFT IN TIME DELAY RELAYS AT COOPER	120710 P101
	05ET POINT DRIFT IN TURBINE PRESSURE SWITCH AT NINE MILE POINT	114426 P205
	05ET POINT DRIFT IN TWO APPH'S AT NINE MILE POINT 10	115000 P264
	05ET POINT DRIFT IN TWO PRESSURE SWITCHES AT BRUNSWICK 20	111400 P 61
	05ET POINT DRIFT IN UNDERVOLTAGE RELAY AT ARNOLD	112000 P 4
	05ET POINT DRIFT IN VACUUM BREAKER PRESSURE SWITCH AT QUAD	117601 P259
	05ET POINT DRIFT IN VARIOUS SWITCHES AT BRUNSWICK 20	100243 P 51
	05ET POINT DRIFT OF A&S LOW LEVEL SWITCH AT PEACH BOTTOM 20	110473 P227
	05ET POINT EXCEEDED AT COOPER	110300 P 95
	05ET POINT FOR CORE SPRAY AND L&C IMPROPER AT PEACH BOTTOM 20	110745 P226
	05ET POINT FOR CORE SPRAY AND L&C IMPROPER AT PEACH BOTTOM 30	110731 P245
	05ET POINT LOW AT LA CROSSE	120621 P162
	05ET POINT OF CORE SPRAY SPARGER DELTA P SWITCH NOT	117607 P 82
	05ET POINT OF MAIN STEAM RELIEF VALVE EXCEEDS LIMIT AT HATCH 10	100959 P154
	05ET POINT SETTINGS FOUND TO BE NONCONSERVATIVE AT OYSTER CREEK	110430 P214
	05ET POINT 10	110400 P 26
	05ET POINT 10	113544 P204
	05ET POINT 10	113545 P204
	05ET POINT 10	113546 P204
	05ET POINT 10	115009 P204
	05ET POINT 10	115000 P204
	05ET POINT 10	115001 P204
	05ET POINT 10	116002 P207
	05ET POINT 10	117137 P207
	05ET POINT 10	117071 P207
	05ET POINT 10	110617 P207
	05ET POINT 10	110720 P208
	05ET POINT 10	120226 P208
	05ET POINT 10	110190 P205
	05ET POINT 10	110514 P208
	05ET POINT 10	110105 P208
	05ET POINT 10	110106 P208
	05ET POINT 10	111650 P 22
	05ET POINT 10	112729 P 23
	05ET POINT 10	110442 P 24
	05ET POINT 10	115453 P 24
	05ET POINT 10	115730 P 24
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	05ET POINT 10	110401 P 26
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	05ET POINT 10	120670 P 31
	05ET POINT 10	120670 P 31
	05ET POINT 10	100457 P202
	05ET POINT 10	100458 P202
	05ET POINT 10	111446 P202
	05ET POINT 10	111670 P203
	05ET POINT 10	111671 P203
	05ET POINT 10	111672 P203
	05ET POINT 10	113003 P203
	05ET POINT 10	113005 P204
	05ET POINT 10	113004 P204
	05ET POINT 10	113006 P205
	05ET POINT 10	114426 P205
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0SET POINT DRIFT IN REACTOR HIGH	PRESSURE	SCRAM SWITCH AT OWSEN 20	115731 P 115
0SET POINT DRIFT IN	PRESSURE	SENSOR AT NINE HILL POINT	100450 P 202
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0SET POINT DRIFT IN DIFFERENTIAL	PRESSURE	SWITCH AT ARNOLD	111934 P 3
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT ARNOLD	120295 P 20
0SET POINT DRIFT IN ACCUMULATOR	PRESSURE	SWITCH AT BIG ROCK POINT	115453 P 24
0SET POINT DRIFT IN	PRESSURE	SWITCH AT BRUNSWICK 20	110250 P 57
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT BRUNSWICK 20	110963 P 57
0SET POINT DRIFT IN	PRESSURE	SWITCH AT BRUNSWICK 20	111410 P 50
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT BRUNSWICK 20	112309 P 64
0SET POINT DRIFT IN MAIN STEAM LINE	PRESSURE	SWITCH AT BRUNSWICK 20	112392 P 65
0SET POINT DRIFT IN LPCI TURBINE	PRESSURE	SWITCH AT BRUNSWICK 20	110492 P 80
0SET POINT DRIFT IN REACTOR	PRESSURE	SWITCH AT BRUNSWICK 20	110491 P 81
0SET POINT DRIFT IN	PRESSURE	SWITCH AT COOPER	112734 P 93
0SET POINT DRIFT AND LPCI DIFFERENTIAL	PRESSURE	SWITCH AT COOPER	110507 P 95
0SET POINT DRIFT IN	PRESSURE	SWITCH AT COOPER	120706 P 101
0SET POINT DRIFT IN DRYWELL HIGH	PRESSURE	SWITCH AT OWSEN 20	111004 P 107
0SET POINT DRIFT IN DIFFERENTIAL	PRESSURE	SWITCH AT OWSEN 20	113977 P 112
0SET POINT DRIFT IN OPS	PRESSURE	SWITCH AT OWSEN 20	115733 P 116
0SET POINT DRIFT IN LPCI	PRESSURE	SWITCH AT OWSEN 20	110271 P 116
0SET POINT DRIFT IN HIGH REACTOR	PRESSURE	SWITCH AT OWSEN 20	115007 P 116
0SET POINT DRIFT IN HIGH REACTOR	PRESSURE	SWITCH AT OWSEN 20	115093 P 117
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT OWSEN 20	111170 P 118
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0SET POINT DRIFT IN DIFFERENTIAL	PRESSURE	SWITCH AT MATCH 10	120414 P 173
0SET POINT DRIFT IN	PRESSURE	SWITCH AT MATCH 10	120547 P 174
0SET POINT DRIFT IN	PRESSURE	SWITCH AT HILLSTONE 10	100450 P 183
0SET POINT DRIFT IN	PRESSURE	SWITCH AT HILLSTONE 10	112300 P 186
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0SET POINT DRIFT IN	PRESSURE	SWITCH AT MONTICELLO	110017 P 207
0SET POINT DRIFT IN DIFFERENTIAL	PRESSURE	SWITCH AT NINE HILL POINT 10	110360 P 202
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT NINE HILL POINT	111009 P 203
0SET POINT DRIFT IN TURBINE	PRESSURE	SWITCH AT NINE HILL POINT	114426 P 205
0SET POINT DRIFT IN DIFFERENTIAL	PRESSURE	SWITCH AT NINE HILL POINT	114427 P 205
0SET POINT DRIFT IN	PRESSURE	SWITCH AT OYSTER CREEK	100054 P 207
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT OYSTER CREEK	113202 P 210
0SET POINT DRIFT IN DRYWELL	PRESSURE	SWITCH AT OYSTER CREEK	113547 P 211
0SET POINT DRIFT IN	PRESSURE	SWITCH AT OYSTER CREEK	115074 P 213
0SET POINT DRIFT IN RELIEF VALVE	PRESSURE	SWITCH AT OYSTER CREEK	117170 P 213
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0SET POINT DRIFT IN	PRESSURE	SWITCH AT PEACH BOTTOM 30	110342 P 230
0SET POINT DRIFT IN	PRESSURE	SWITCH AT PILGRIM 10	115550 P 250
0SET POINT DRIFT IN LOW REACTOR	PRESSURE	SWITCH AT PILGRIM 10	110511 P 250
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0SET POINT DRIFT IN DIFFERENTIAL	PRESSURE	SWITCH AT VERMONT YAMKEE	112313 P 269
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0SET POINT DRIFT IN	PRESSURE	SWITCH FAILS TO GIVE HELP SCRAM AT BROWN FERRY 20	120000 P 40
0SET POINT DRIFT IN	PRESSURE	SWITCH FAILS TO OPERATE AT BROWN FERRY 10	110707 P 15
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0SET POINT DRIFT IN	PRESSURE	SWITCH FAILS TO TRIP AT OWSEN 30	110252 P 31
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0SET POINT DRIFT IN	PRESSURE	SWITCH FOUND VALVED OUT AT QUAD CITIES 20	110995 P 97
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0SET POINT DRIFT IN	PRESSURE	SWITCH TRIPS DUE TO LOW PRESSURE AT COOPER	115306 P 160
0SET POINT DRIFT IN	PRESSURE	SWITCHES AT ARNOLD	120543 P 100
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0SET POINT DRIFT IN	PRESSURE	SWITCHES AT BRUNSWICK 20	110209 P 50
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0SET POINT DRIFT IN	PRESSURE	SWITCHES AT BRUNSWICK 20	111406 P 59
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FITZPATRICK

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#RECIRCULATION	PUMP DISCHARGE VALVE FAILS AT PEACH BOTTOM 30	112201 P239
#REACTOR	PUMP DISCHARGE VALVE FAILS TO CLOSE AT PEACH BOTTOM 20	115051 P221
#PLANT SERVICE WATER	PUMP FAILS AT HATCH 10	110971 P157
#SALT SERVICE WATER	PUMP FAILS AT PILGRIM	109004 P246
#SALT SERVICE WATER	PUMP FAILS AT PILGRIM	110291 P246
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#ORIC SHARP OIL	PUMP FAILS TO MAINTAIN PRESSURE AT BROWNS FERRY 30	110739 P 44
#ORIC GLAND SEAL CONDENSATE	PUMP FAILS TO RUN AT ARNOLD	120601 P 21
#ORHR	PUMP FAILS TO START AT BROWNS FERRY 30	110743 P 45
#ORHR SERVICE WATER	PUMP FAILS TO START AT BRUNSWICK 20	111048 P 63
#ORHR SERVICE WATER	PUMP FAILS TO START AT BRUNSWICK 20	113107 P 66
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#HIGH PRESSURE CORE SPRAY	PUMP FAILS TO START AT LA CROSSE	113112 P170
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#ORHR	PUMP INADVERTENTLY TRIPPED AT HATCH 10	113517 P101
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	#	RADIATION MONITOR	SAMPLE VALVE FOUND CLOSED AT BRUNSWICK 20	115985	P 77
	#	RADIATION MONITOR	SAMPLE VALVE FOUND CLOSED AT BRUNSWICK 20	115986	P 78
	#DAILY	RADIATION MONITOR	SENSOR CHECKS NOT PERFORMED AT ARNOLD	119485	P 18
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	#DRYWELL	RADIATION MONITORING SYSTEM	FLOW STOPS AT PEACH BOTTOM 30	118726	P244
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	#VERMONT VENT	RADIATION MONITORS FAIL DOWNSCALE AT PEACH BOTTOM 20		115866	P222
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115680	25
115681	25
116699	25
116535	25
116681	26
116766	27
116776	27
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116154	27
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116644	28
119516	28
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ALLOWED POISON CIRCUIT TEST NOT PERFORMED AT BIG
 BROS BATTERY PILOT CELL SPECIFIC GRAVITY LOW AT BIG
 DIESEL GENERATOR BREAKER INTERLOCK FAILS TO FUNCTION AT BIG
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 GENERATOR FAILS TO START WITHIN SPECIFIED TIME AT BIG
 DEPRESSURIZING SYSTEM BATTERY PILOT CELL F AND LOW AT BIG
 DEPRESSURIZING SYSTEM CHANNEL REMOVED FROM SERVICE AT BIG
 INSTRUMENTS HAVE INADEQUATE DESIGN PRESSURE RATING AT BIG
 IF CONFINEMENT PENETRATIONS NOT VISUALLY INSPECTED AT BIG
 SUBJECT SYSTEM TO VIOLATION OF DESIGN CRITERIA AT BIG
 SYSTEM BATTERY C ACID SPECIFIC GRAVITY LOW AT BIG
 SYSTEM BATTERY D ACID SPECIFIC GRAVITY LOW AT BIG
 CROSSE
 CONTROL
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 ACCUMULATORS FOUND TO BE INOPERABLE AT BROWNS FERRY 30
 BLOCK COULD NOT BE OBTAINED AT PEACH BOTTOM 30
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 WORTH MINERIZER MALFUNCTION AT QUAD CITIES 10
 WORTH MINERIZER NONCONSERVATIVE AT QUAD CITIES 1 AND 20
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 AT BRUNSWICK 20
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 RPS CHANNEL FAILS TO TRIP DURING TEST AT QUAD CITIES 20
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