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FROM:

4.

UNITED STATES NUCLEAR REGULATORY COMMISSION REGION I 472 ALLENDALE ROAD KING OF PRUSSIA, PENNSYLVANIA 19406

MEMORANDUM FOR: Distribution JUL 1 9 1989

Lowell E. Tripp, Chief Reactor Projects Section No. 1A Division of Reactor Projects

SUBJECT: BRIEFING PAPER FOR JULY 20, 1989 CALVERT CLIFFS ENFORCEMENT CONFERENCE (EA 89-141)

Enclosed is a subject paper summarizing events which will be the subject of the Enforcement Conference scheduled for 1:00 p.m., July 20, 1989, at Region I.

Lowell E. Tripp, Chief Reactor Projects Section No. 1A

Enclosure: As stated

Distribution w/enclosure: W. Russell, RI T. Martin, RI J. Gutierrez, RI D. Holody, RI W. Kane, RI S. Collins, RI J. Wiggins, RI D. Limroth, RI H. Lathrop, RI H. Eichenholz, SRI - Calvert Cliffs V. Pritchett, RI = Calvert Cliffs J. Lieberman, OE F. Miraglia, NRR R. Capra, NRR S. McNeil, NRR

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ENCLOSURE

Briefing Paper for Calvert Cliffs Nuclear Power Plant

Enforcement Conference - July 20, 1989

1.0 INTRODUCTION

During the NRR/RSIB conducted Special Team Inspection, 14 unresolved items were reported. A regional inspection team followed up on five of these items regarded as having the most potential to result in enforcement issues, four of which were identified as apparent violations. Another item related to control of overtime was also inspected resulting in a fifth apparent violation.

It is believed that a commonality of root cause was identified in this inspection; specifically, procedures for the control of activities important to safety are either weak, absent, or not followed. This common weakness was noted to pervade several areas (criteria), (e.g., Document Control (Criterion VI); Control of Special Processes (Criterion IX); Inspection (Criterion X); Control of Measuring and Test Equipment (Criterion XII); and Corrective Actions (Criterion XVI), and could in a broader sense be categorized as a failure to satisfy the requirements of Criterion II, Quality Assurance Program, which requires that the program

-- be documented by written policies, procedures or instructions,

-- be carried out in accordance with those policies, procedures or instructions,

-- provide control over activities affecting the quality of (safety related) structures, systems and components.

2.0 CONCERNS AND APPARENT VIOLATIONS

2.1 Measuring and Test Equipment (M&TE)

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a. Findings

Responsibility for the M&TE program has been delegated to the supervisor of each group using M&TE, resulting in a fragmented and non-uniform approach to a calibration program.

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One instrument had repeatedly failed calibration checks and was not entered into the Nonconformance Report (NCR) system as required until brought to licensee attention by the NRC inspector. Further review of records indicated five cases of repetitive failure and the instrument had not been removed from service. This indicated a lack of trending of failures.

Some pressure gauges used for calibration of installed gauges used in the conduct of STPs, were not controlled within the M&TE program. Gauges were comparison tested against a more accurate standard and then issued for use. Following use, the gauge would be returned to the cage/shelf until again required without post-use calibration checking.

Other instruments were stored in a cage located in the water treatment plant area which satisfied neither cleanliness, environmental, or controlled condition requirements, nor segregation of calibrated from uncalibrated instruments.

> Mechanical Maintenance M&TE calibration data sheets were routinely reviewed two to six weeks after calibration was performed without a means to highlight out of tolerance equipment to assist in expedited review of known deficiencies.

> Good practice which would dictate calibration checks following use to assure that an instrument had not gone out of tolerance during use, were not employed.

- b. Enforcement Issues/Potential Violation
 - -- Failure to control test pressure gauges within M&TE program,
 - -- Failure to prepare timely NCRs,
 - -- Improper control, segregation and storage of Performance Engineering M&TE.

are specific examples of failure to properly implement the M&TE program as required by CCI 120D and QAP 17 and constitutes an apparent violation of quality assurance program requirements (10 CFR 50, Appendix B Criteria) and requirements of standards to which the licensee is committed (ANSI N18.7-1976). No direct impact on nuclear safety was determined from these apparent violations.

c. Causal Factors

Inadequate and/or inconsistent administrative controls to implement an effective program for the control of M&TE to satisfy regulatory requirements or good engineering practices.

d. Corrective Actions

NCRs were prepared as required for out-of-calibration instruments; the instrument which had repeatedly failed calibration was removed from service; test gauges which were not controlled under the M&TE program were reportedly being brought within the program; gauges in question were calibration checked and found to be satisfactory; all STPs for which questionable gauges were used were identified for further review should a gauge have failed calibration checks.

2.2. Technical Manuals

a. Findings

Copies of unapproved technical manuals had been distributed to the onsite operating organization with the only control being a statement in an instruction (CCI 122) to the effect that users are to use only controlled copies of technical manuals. (Controlled copies are identified by a cover sheet bearing a control stamp).

Onsite operating organization personnel had "personal copies" of technical information received from training courses, and in one case, a technical writer was on a vendor distribution list for technical literature; however, no instances were identified where these data were used in safety-related work. Rather, it was discussed as a questionable practice where better receipt control might be appropriate. The individuals had forwarded copies of this technical information to the Document Control Center per CCI 122.

> An issue had been raised during the STI regarding lack of guidance relative to engineering review of technical manuals. A memorandum had been issued June 9, 1989, providing that guidance and the content of that memorandum was being incorporated into a pending revision to CC1 122.

b. Enforcement Issues/Potential Violation

Issuing unapproved documents to onsite operating organization personnel is an apparent violation of 10 CFR 50, Appendix B, Criterion VI, which requires that measures shall assure that documents are reviewed for adequacy and approved for release by authorized personnel.

c. Causal Factors

Inadequate administrative control coupled with a perceived lack of understanding on the part of plant personnel regarding the reason for document control.

d. Corrective Actions

- -- Copies of unreviewed technical manuals were recalled from the field and a licensee representative agreed to cease the practice.
- -- Licensee had done an apparently thorough job of identifying about 300 technical manuals requiring engineering review.
- -- Detailed guidance had been issued relative to engineering review requirements.

2.3 Control of Welding Process Activities

a. Findings

There was no evidence of pervasive problems with control of weld filler material at the site.

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Company-wide welding oriented administrative procedures were in use without having had POSRC review and plant management approval.

CCI 222, "Control of Welding Activities" had been cancelled February 28, 1989, leaving the plant without an approved governing procedure on the subject. A "shop/lab memo" had been issued in the interim (February 14, 1989) to cover the deficiency; this memo had not been reviewed/approved by the POSRC, but is reportedly in accordance with another CCI (119) (per licensee response of June 21, 1989 to STI report).

b. Enforcement Issues/Potential Violation

Apparent failure to maintain adequately reviewed and approved procedures for the conduct of special processes as required by 10 CFR 50, Appendix B, Criterion IX.

c. Causal Factors

Indeterminate.

d. Corrective Actions

Shop/lab memo to be changed to POSRC approved procedure.

2.4 Control of Quality Control (QC) Inspection Activities

a. Findings

No descriptions of the methodology or process to be followed by QC in implementation of inspection and overview responsibilities. QC inspectors were provided little or no direction regarding what was to be inspected, criteria, etc., and relied almost entirely on the inspector's judgement relative to what was to be inspected, what was satisfactory, and what inspection results were to be documented.

Review of work in progress and completed worked revealed a broad spectrum of results ranging from very general work directions to the crafts with a non-explanatory signature on the package by a QC representative to signature on hold/witness points with specifics of inspection requirements to short written remarks by QC inspectors regarding work done and inspected.

b. Enforcement Issues/Apparent Violation

Lack of adequate work detail in maintenance orders and/or lack of direction with respect to inspection and acceptance criteria are an apparent violation of 10 CFR 50, Appendix B, Criterion V, which requires that activities affecting safety be prescribed by documented instructions, ... and be accomplished in accordance with these instructions.

c. Causal Factors

Indeterminate. The QC function does not appear to have received adequate management attention/priority in the past. Its location within the overall organization had been relocated; QC lacked continuity and direction.

d. Corrective Actions

Reorganization within QA Department and assignment of an individual with a good track record to manage QC activities.

Independent contractor hired to assist in developing and implementing improvements.

QC administrative procedures under accelerated developement.

Three quality Engineers had been hired.

Apparent high-level management (Vice President-Nuclear Energy) attention has been focused on issues.

2.5 Control of Overtime

a. Findings

During the STI, 20 instances in which the licensee employees had exceeded the guidelines of CCI-140E, "Shift Staffing and Overtime Controls" were identified. A further review of records covering the period March-May 1989, was conducted indicating another seven instances in which employees exceeded the 72-hours within a 7-day period without before-the-fact management approval. It was noted that employees were getting one day off/ 7-day period and that the hours by which the 72-hour limit was exceeded were low; i.e., about 4-12 hours.

b. Enforcement Issues/Apparent Violation

The failure to review and approve exceeding overtime limits before-the-fact is an apparent violation of failing to follow CCI-140.

c. Causal Factors

Inattention on part of supervisors or lack of planning.

d. Corrective Action

None indicated.

1. Sec. 6.

3.0 PERTINENT ENFORCEMENT HISTORY

- 3.1 May 25, 1989 (Confirmatory Action Letter 89-08) issued confirming licensee commitment to maintain units shut down as follows:
 - Unit 2: Determine and resolve apparent material defects associated with pressurizer penetrations.
 - -- Unit 1: Provide basis for determination that Unit 2 pressurizer penetration problem is not applicable to Unit 1 or, if applicable, that issue has been resolved.
 - -- Both: Determine and correct cause(s) of the problems manifested as weaknesses in:
 - -- Control of system status
 - -- Control of work activities
 - -- Procedure use and control of procedure changes.

Also, participate in a management meeting to present results of nearterm corrective action taken to provide assurance that problems will not recur. Regional Administrator concurrence required for restart of first unit.

3.2 April 17-19, 1989 (Inspection Report 89-11) identified two instances of noncompliance resulting in one Level III (\$75,000 Civil Penalty) related to failure to maintain containment integrity during core alterations and failure to perform required safety evaluations to ensure that temporary modifications did not involve an unreviewed safety question.

- 3.3 February 21 April 3, 1989 (Inspection Report 89-04) identified three Level IV and one Level V violations related to procedure violations, inadequate procedures, and failure of POSRC to review facility operations to detect pertinent safety hazards.
- 3.4 January 10 February 20, 1989 (Inspection Report 89-08) identified one Level IV violation related to inadequate control of procedure changes, which resulted in repeated reactor startups without having performed TS required surveillance of the manual trip channel functional test.
- 3.5 January 1-12, 1989 (Inspection Report 89-01) identified two related Level IV violations associated with shipment of contaminated material.
- 3.6 October 31 November 1, 1988 (Inspection Report 88-29) identified two Level IV violations, one related to the solid radwaste system and one related to transportation. The violation related to radwaste involved not only a procedural noncompliance but, perhaps more significantly, had been earlier identified by a licensee NCR and had not been corrected.
- 3.7 October 24 November 4, 1988 (Inspection Report 88-28) identified one Level V violation related to Appendix B, Criterion III, design review by same individual as the one performing the design. Weak procedural discretion was identified as the cause.
- 3.8 August 9 September 12, 1988 (Inspection Report 88-19) identified one Level IV violation stemming from failure to comply with procedures which resulted in defeating the interlock of both containment airlock doors.

> 3.9 June 27 - July 13, 1988 (Inspection Report 88-17) identified two violations associated with an inoperable EDG and an improper adjustment to reactor protective instrumentation. This resulted in escalated enforcement and a civil penalty of \$75,000 for each event.

Attachments:

1. Applicable Excerpts from 10 CFR 50, Appendix B

2. Inspection Report No. 50-317/89-15 and 50-318/89-16

testing of the structures, systems, and components of the facility. Every applicant for an operating license is required to include. in its final safety analysis report, information pertaining to the managerial and administrative controls to be used to assure safe operation. Nuclear power plants and fuel reprocessing plants include structures. systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. This appendix establishes quality assurance requirements for the design, construction, and operation of those structures, systems, and components. The pertinent requirements of this appendix apply to all activities affecting the safety-related functions of those structures, systems, and components; these activities include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying.

As used in this appendix, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

I. ORGANIZATION

The applicant' shall be responsible for the establishment and execution of the quality assurance program. The applicant may delegate to others, such as contractors. agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but shall retain responsibility therefor. The authority and duties of persons and organizations performing activities affecting the safety-related functions of structures, systems, and components shall be clearly established and delineated in writing. These activities include both the performing functions of attaining quality objectives and the quality assurance functions. The quality assurance

functions are those of (a) assuring that an appropriate quality assurance program is established and effectively executed and (b) verifying, such as by checking, auditing, and inspection, that activities affecting the safety-related functions have been correctly performed. The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. Such persons and organizations performing quality assurance functions shall report to a management level such that this required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided. Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms provided that the persons and organizations assigned the quality assurance functions have this required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this appendix are being performed shall have direct access to such levels of management as may be necessary to perform this function.

II. QUALITY ASSURANCE PROGRAM

The applicant shall establish at the earliest practicable time, consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this appendix. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout plant life in accordance with those policies, procedures, or instructions. The applicant shall identify the structures, systems, and components to be covered by the quality assurance program and the major organizations participating in the program, together with the designated functions of these organizations. The quality assurance program shall provide control over activities affecting the quality of the identified structures, systems, and components, to an extent consistent with their importance to safety. Activities affecting quality shall be accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity. such as adequate cleanness; and assurance that all prerequisites for the given activity

ATTACHMENT

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that appl the desig specified those str to which translate cedures. shall inc propriate and inclu deviation trolled. 1 for the s of applic ment, and safety-re! systems : Measur identifica IRCES B.D. pating de shall inc dures ar tions for tribution ing design The de for verif: design, : idesign re simplifie performa The veri morforme than the tesien, b ninetion. verify th ature in 1 T processes tions tes' Boost adv atrol mea the i thermal. compatit

[&]quot;While the term "applicant" is used in these criteria, the requirements are, of course, applicable after such a person has received a license to construct and operate a nuclear powerplant or a fuel reprocessing plant. These criteria will also be used for guidance in evaluating the adequacy of quality assurance programs in use by holders of construction permits and operating licenses.

Edition)

that an am is es-(b) And th ing the correctly nizatione functions d organiity probovide so. ion of so tions per ons shall that the onal free pendent posed f . ch as the I active a or loca d, the iting the ke varios nd organite ince fut and oc ual(s) ring (the 200 16 1 14 3 neces 11:15 1.40 IRAME : t the witter ctivic 1 COC ed W lant la iction Droces all id 1.15 pon rant ALS r we 70 anb shi ecti coi . COL HOD e 10 3 PP

Nuclear Regulatory Commission

have been satisfied. The program shall take into account the need for special controls. processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test. The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained. The applicant shall regularly review the status and adequacy of the quality assurance program. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing.

III. DESIGN CONTROL

Measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in § 50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components.

Measures shall be established for the identification and control of design interfaces and for coordination among participating design organizations. These measures shall include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program. The verifying or checking process shall be performed by individuals or groups other than those who performed the original design, but who may be from the same orgamination. Where a test program is used to rverify the adequacy of a specific design feastare in lieu of other verifying or checking processes, it shall include suitable qualificais tions testing of a prototype unit under the most adverse design conditions. Design conthree measures shall be applied to items such the following: reactor physics, stress, Sthermal, hydraulic, and accident analyses; immontibility of materials; accessibility for

inservice inspection, maintenance, and repair; and delineation of acceptance criteria for inspections and tests.

Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.

IV. PROCUREMENT DOCUMENT CONTROL

Measures shall be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the applicant or by its contractors or subcontractors. To the extent necessary, procurement documents shall require contractors or subcontractors to provide a quality assurance program consistent with the pertinent provisions of this appendix.

V. INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

VI. DOCUMENT CONTROL

Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless the applicant designates another responsible organization.

VII. CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as

CALVERT CLIFFS SALP MANAGEMENT MEETING

APRIL 23, 1990

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

REPORTS NOS. 50-317/88-99 AND 50-318/88-99

CALVERT CLIFFS NUCLEAR POWER PLANT ASSESSMENT PERIOD: DECEMBER 1, 1988 - DECEMBER 31, 1989

D/10

90041800383200

OPERATIONS

EARLY PART OF ASSESSMENT PERIOD

- PRODUCTION OVER QUALITY PHILOSOPHY
- MANAGERIAL AND ADMINISTRATIVE CONTROL FROBLEMS
- WEAK PROCEDURE ADHERENCE PHILOSOPHY/QUALITY OF PROCEDURES
- SOME WEAK INTERDEPARTMENTAL COMMUNICATIONS
- PROFESSIONAL KNOWLEDGEABLE OPERATORS; GOOD CONTROL OF SIGNIFICANT EVOLUTIONS; GOOD RESPONSE TO PLANT CHALLENGES

LATTER PART OF ASSESSMENT PERIOD

- COMMITMENT TO IMPROVE
- SATISFACTORY CONTROL OF OPERATIONS
- EFFECTIVE SHIFT BRIEFINGS
- + IMPROVED PROCEDURAL ADHERENCE

CONCLUSION: CATEGORY 3

TREND: IMPROVING

RADIOLOGICAL CONTROLS

- CONTINUED EFFECTIVE PROGRAM
- + GOOD ALARA; LOW CUMULATIVE EXPOSURE
- WATER CHEMISTRY IMPROVEMENTS
- +/- OVERALL EFFECTIVE TRAINING
- . CONTINUED UNTIMELY RESOLUTION OF IDENTIFIED ISSUES
- PROCEDURAL ADHERENCE/CONTROL PROBLEMS
- REPEAT RAD WASTE SHIPPING INADEQUACIES

CONCLUSION: CATEGORY 2

RECOMMENDATION: LICENSEE: CORRECT PROBLEM RESOLUTION PROCESS

MAINTENANCE/SURVEILLANCE

EARLY IN ASSESSMENT PERIOD

- + CHANGED ORGANIZATION TO CORRECT DEFICIENCIES/PERSONNEL ADDITIONS
- SOME GOOD MAINTENANCE PERFORMANCE
 - BATTERY CONNECTION PROBLEM
- CONTINUING EQUIPMENT PROBLEMS ADVERSELY AFFECTED PERFORMANCE
 - AFW PROBLEMS
 - * EDG PROBLEMS
- WEAK CONTROL OF MAINTENANCE ACTIVITIES
 - QC SUPPORT
 - POOR WORK INSTRUCTIONS
 - RELIED HEAVILY ON CRAFT JUDGEMENT
- SURVEILLANCE PROGRAM FRAGMENTED
- MISSED AND INCORRECTLY PERFORMED SURVEILLANCES

MAINTENANCE/SURVEILLANCE (CONTINUED)

LATTER PART OF ASSESSMENT PERIOD

- IMPROVED MAINTENANCE PROCEDURES
- IMPROVED LEVEL OF PERFORMANCE
 - SOME INEFFICIENCIES IN IMPLEMENTATION
- IMPROVED CONTROL AND ACCOUNTABILITY FOR SURVEILLANCE PROGRAM

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CONCLUSION: CATEGORY 3

TREND: IMPROVING

EMERGENCY PREPAREDNESS

- + EFFECTIVE CORRECTION OF DEFICIENCIES
- EFFECTIVE STAFF; GOOD OFF SITE COORDINATION
- +/- PROCEDURES GOOD
- +/- GOOD ANNUAL EXERCISE PERFURMANCE EXCEPTION NOTIFICATION TIMELINESS OF STATE AND LOCAL OFFICIALS
- +/- TRAINING GOOD; 3 PERSONS FOR EACH KEY POSITION; EXCEPTION OVERDUE PERIODIC REFRESHER
- SHIFT STAFF DOSE ASSESSMENT DEFICIENCY

CONCLUSION: CATEGORY 2

SECURITY

- CONTINUED EFFECTIVE PROGRAM
- KNOWLEDGEABLE, PROFESSIONAL STAFF
- STRONG CORPORATE SUPPORT
- SOUND WELL DEVELOPED TRAINING PROGRAM
- + RESPONSIVE TO IDENTIFIED PROBLEMS
- + SOUND PROCEDURES

CONCLUSIONS: CATEGORY 1

ENGINEERING/TECHNICAL SUPPORT

- COMMITMENT TO IMPROVE AND CORRECT PREVIOUS PROBLEMS; PIP INITIATIVES
- INCREASED STAFFING
- SYSTEM ENGINEER PROGRAM
- */- MOVED STAFF TO IMPROVE COMMUNICATIONS; SOME PROBLEMS REMAIN
- +/- CONDUCTED HIGH QUALITY SSFI
 - * ANNUAL SSFI NOTEWORTHY INITIATIVE
 - DID NOT BROADLY APPLY FINDINGS
- SOME POOR TECHNICAL SUPPORT
 - STARTUP WITH UNISOLABLE SG LEAK
 - EDG FUEL OIL ANALYSIS
 - AFW FAILURES
 - ° LTOP CONCERNS

CONCLUSION: CATEGORY 2

RECOMMENDATION: NRC: REVIEW UNIT 2 PZR PROGRAM PRIOR TO RESTART

SAFETY ASSESSMENT/QUALITY VERIFICATION

- SAFETY EMPHASIS LATER IN PERIOD
- SELF-ASSESSMENT OF PERFORMANCE
- REVIEW COMMITTEES EXHIBITED GOOD SAFETY ETHIC
- +/- QA AUDITS IDENTIFY DEFICIENCIES
 - * FOLLOWUP OF DEFICIENCIES NOT EFFECTIVE
- +/- LICENSING DEPARTMENT PERFORMANCE MIXED
- -/+ QC PROGRAM DEFICIENCIES
 - EXPERIENCE OF INSPECTORS
 - * WEAK PROGRAM PROCEDURE CONTROL
 - * RESTRUCTURE TO STRENGTHEN
 - IMPROVEMENT LATE IN PERIOD
- PRODUCTION VS QUALITY EMPHASIS EARLY
- WEAK INTERDEPARTMENTAL COMMUNICATIONS
- -- WEAKNESS IN CORRECTIVE ACTION; AND COMMITMENT MANAGEMENT SYSTEMS
- WEAK SAFETY EVALUATION PROCESS

SAFETY ASSESSMENT/QUALITY VERIFICATION (CONTINUED)

CONCLUSION: CATEGORY 3

RECOMMENDATION: LICENSEE: REEVALUATE SCOPE OF PIP

NRC: CONDUCT IPAT

SUMMARY

EARLY PERFORMANCE DECLINE

- PROCEDURE ADHERENCE/ADEQUACY
- PRODUCTION VS QUALITY PHILOSOPHY

PERFORMANCE IMPROVEMENTS LATE IN PERIOD

- OPERATIONS DEPARTMENT IMPROVEMENT
- SUBSTANTIAL CHANGE IN PHILOSOPHY/AGGRESSIVE EFFORT TO IMPROVE
- * MANAGEMENT/PROGRAMMATIC CHANGES TO IMPROVE
- IMPROVED PROCEDURE ADHERENCE/QUILITY

SOME WEAKNESSES STILL EXIST

- CORRECTIVE ACTION AND COMMITMENT MANAGEMENT PROGRAMS
- RESOLUTION OF IDENTIFIED PROBLEMS

CONTINUED SENIOR MANAGEMENT ATTENTION NECESSARY



$\mathcal{A} \mathcal{A} \mathcal{K}$ MEMORANDUM

DATE: August 16, 1990

please file with IR

TO:Mr. H. W. KerchFROM:Mr. M. D. MilbradtSUBJECT:Extension of Commitment

Per our telephone conversation on Wednesday, August 15, 1990, I would like to inform you of our desire to extend the date for a Commitment we made in our response to NRC Inspection Report 50-7 317/90-01 and 50-318/90-01?

The second item in Violation A of the report describes examples of poor radiographic work practices as a result of failing to follow procedures. In our response, dated May 15, 1990, we committed to incorporating more detailed and specific directions for radiography into our radiographic procedures by August 31, 1990.

As I stated in our conversation on August 15, we would like to extend the August 31, 1990 date by 4 weeks to September 28, 1990. Due to the extension of the Calvert Cliff's Unit 1 and 2 outages, personnel who would normally be available to work on the procedure changes have been involved with outage related work. Additionally, we have grouped the radiographic procedure changes with other procedure changes and prioritized based on need. With very little radiography being performed at Calvert Cliffs, other procedures of greater importance are being changed first.

As stated in our May 15 response, a memo containing new directions for complete and accurate film reviews has already been issued to all certified radiographers at Calvert Cliffs. The new radiographic procedure changes will provide additional guidance to the radiographers.

If you have any questions regarding this matter please contact me (301) 260-4352.

2. Al

Compliance

cc: L. S. Larragoite G. L. Detter L. Nicholson S. R. Buxbaum B. Watkins

D/11

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CALVERT CLIFFS 182

SYNFOSIS OF INSPECTION REPORTS

| REPORT NUMBERS | | TYPE INSPECTION | TOTAL HOURS | DESCRIPTION |
|-------------------|-------------------|--------------------|----------------|--|
| 87-23 09/01/87 | 87-25 11/20/87 | RESIDENT | 396 | ROUTINE RESIDENT INSPECTION INCLUDING ASCO SOLENDID VALVE AND DIESEL GENERATOR PROBLEMS, FORSC AND INSERVICE TESTING |
| 87-24 11/10/87 | 11/10/87 | SPECIALIST | В | MANAGEMENT MEETING TO DISCUSS EQUIPMENT DEGRADATIONS RESULTING IN INOPERABILITY OF NOS. 11 AND 12 AUXILIARY FEEDWATER FUMPS |
| 87-21 11/16/87 | 87-23 11/18/87 | SPECIALIST | 16 | EMERGENCY FREPAREDNESS INSPECTION AND OBSERVATION OF FULL PARTICIPATION ANNUAL EMERGENCY FREPAREDNESS EXERCISE |
| 87-25 11/30/87 | 87-26 12/04/87 | SPECIALIST | 40 | REVIEW OF WATER CHEMISTRY CONTROL PROGRAM DURING ROUTINE SAFETY INSPECTION |
| 87-27 11/21/87 | 87-28 12/31/87 | RESIDENT | 208 | ROUTINE RESIDENT INSPECTION |
| 87-26 11/30/87 | 87-27 12/04/87 | SPECIALIST | 32 | REVIEW OF IMPLEMENTATION OF RADIATION SAFETY PROGRAM |
| -02 0 | 88-02 02/12/88 | RESIDENT | 294 | ROUTINE RESIDENT INCLUDING LICENSEE RESPONSE TO FIRE IN U2 ANNUNCIATOR CABINETS AND REACTOR TRIP U2 AND SAFETY INJECTION TANK #21 |
| 87-28 12/15/87 | 87-29 12/18/87 | SPECIALIST | 25 | PHYSICAL SECURITY INSPECTION |
| 88-01 01/19/88 | 88-01 01/29/88 | SPECIALIST | 619 | INTEGRATED PERFORMANCE ASSESSMENT (IPA) INSPECTION |
| 88-03 02/29/88 | 88-03 03/04/88 | SPECIALIST | 33 | ROUTINE INSPECTION OF NONRADIOLOGICAL CHEMISTRY PROGRAM |
| 88-04 02/11/88 | 88-05 02/12/88 | SPECIALIST | 8 | SPECIAL INSPECTION OF CONDITIONS SURROUNDING CLASSIFICATION, REPORTING AND RESPONSE TO ALERT DECLARED ON FEBRUARY 1, 1988 |
| 88-06 03/14/88 | 88-07 03/18/88 | SPECIALIST | 32 | INSPECTION OF FIRE PROTECTION/PREVENTION PROGRAM |
| 88-05 02/13/88 | 88-06 03/31/88 | RESIDENT | 157 | ROUTINE RESIDENT |
| -07 c 1/88 | 88-08 05/16/88 | RESIDENT | 173 | ROUTINE RESIDENT |
| 88-08 | 88-09 | SPECIALIST | 36 | INSERVICE TESTING OF FUMPS AND VALVES |

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age No. 2 5/08/89

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CALVERT CLIFFS 1&2

SYNPOSIS OF INSPECTION REPORTS

| REPORT | NUMBERS | TYPE INSPECTION | TOTAL HOURS | DESCRIPTION |
|------------------|-------------------|--------------------|----------------|--|
| 88-10 5/09/86 | 88-11 05/13/88 | SPECIALIST | 32 | INPSECTION OF RADIOLOGICAL CONTROLS PROGRAM DURING THE UNIT 1 DUTAGE |
| 88-13 5/26/88 | 88-13 05/27/88 | SPECIALIST | 16 | UNIT 1 CONTAINMENT INTEGRATED LEAK RATE TEST AND REVIEW OF PREVIOUSLY IDENTIFIED ITEM FOR UNIT 2 |
| 88-12 3/17/88 | 88-12 06/30/88 | RESIDENT | 226 | ROUTINE RESIDENT INSPECTION |
| 88-17 5/27/88 | 88-17 07/13/88 | RESIDENT | 20 | SPECIAL INSPECTION REGARDING 6/4/88 EVENT OF INOPERABILITY OF DG DUE TO OPERATOR ERROR AND 7/4/08 EVENT OF IMPROPER ADJUSTMENT OF DELTA T |
| 88-14 5/13/88 | 06/24/88 | SPECIALIST | 80 | UNANNOUNCED INSPECTION OF ISI AND STEAM GENERATOR ACTIVITIES TO ASCERTAIN ASME CODE COMPLIANCE |
| 88-09 | 88-10 05/13/88 | SFECIALIST | 43 | UNANNOUNCED INSPECTION OF DESIGN CHANGES AND MODIFICATION PROGRAM, MAINTENANCE PROGRAM, QUALIT, ASSURANCE AND QUALITY CONTROL INTERFACE |
| 88-15 7705788 | 88-15 07/08/88 | SPECIALIST | 40 | IMFLEMENTATION OF DESIGN CHANGES AND MODIFICATIONS PROGRAM BY DES WITH SPECIAL INSPECTION EMPHASIS ON FIELD CHANGE REQUESTS |
| 88-11 5/16/88 | 07/01/88 | SPECIALIST | 73, | STARTUP TESTING FOLLOWING REFUELING OF UNIT 1, CYCLE 10, AND POST MODIFICATION TESTING PROCEDURES |
| 88-16 7/01/88 | 88-16 08/08/88 | RESIDENT | 319 | ROUTINE RESIDENT INSPECTION |
| 88-19 3/09/88 | 88-19 09/12/88 | RESIDENT | 505 | ROUTINE RESIDENT INSPECTION INCLUDING RI TI 87-04 |
| 88-22 7/13/88 | 88-22 10/17/88 | RESIDENT | 328 | ROUTINE RESIDENT INSPECTION |
| 88-21 3/31/88 | 88-21 09/01/88 | SPECIALIST | 20 | INSPECTION OF LICENSED OPERATOR TRAINING PROGRAM |
| 88-20 7/88 | 88-20 08/19/88 | SPECIALIST | 56 | UNANNOUNCED REACTIVE INSPECTION OF EVENTS ASSOCIATED WITH A HIGHER THAN ANTICIPATED WORK EXPOSURE ON JUNE 21, 1988 |
| 88-24 | 88-24 | SPECIALIST | 30 | EMERGENCY PREPAREDNESS PROGRAM |

CALVERT CLIFFS 1&2

SYNPOSIS OF INSPECTION REPORTS

| PORT ECTI | NUMBERS ON DATES | TYPE INSPECTION | TOTAL HOURS | DESCRIPTION |
|-----------------|---------------------------------|--|----------------|---|
| | out the and set one and and and | the and the add and the last and and the | | MAN ANY ANY ANY ANY ANY ANY ANY ANY ANY A |
| 18-23 11/88 | 88-23 10/18/68 | SPECIALIST | 32 | REVIEW OF FUNCTIONS AND ORGANIZATION OF OFF SITE SAFETY REVIEW COMMITTEE AND PLANT OPERATIONS SAFETY REVIEW COMMITTEE |
|)8-25 21/88 | 88-25 11/25/88 | SPECIALIST | 24 | 1&C INSPECTION OF MAINTENANCE AREAS |
| 18-27 18/88 | 88-27 11/30/88 | RESIDENT | 322 | ROUTINE RESIDENT INSPECTION |
| 18-29 31/88 | 88-29 11/04/88 | SPECIALIST | 120 | UNANNOUNCED INSPECTION OF NON-RADIOLOGICAL CHEMISTRY PROGRAM |
| 18-30 05/88 | 88-30 12/07/88 | SPECIALIST | 99 | EMERGENCY PREPAREDNESS INSPECTION |
| 18-28 24/88 | 88-28 11/04/89 | SPECIALIST | 121 | INSPECTION OF CORPORATE ENGINEERING SUPPORT FOR CALVERT CLIFFS |
| 18-31 05/88 | 88-31 12/09/88 | SPECIALIST | 48 | INSPECTION OF RESTRUCTURED MAINTENANCE DRGANIZATION |
| J-32 01788 | 88-32 01/09/89 | RESIDENT | 202 | ROUTINE RESIDENT INSPECTION |
| 9-01 09/89 | 89-01 01/13/89 | SPECIALIST | 82 | INSPECTION OF SOLID RADIOACTIVE WASTE SYSTEMS |
| 19-02 109/89 | 89-02 01/13/89 | SPECIALIST | 74 | INSPECTION OF RADIATION SAFETY PROGRAM |
| 19-03 10/89 | 89-03 02/20/89 | RESIDENT | 389 | ROUTINE RESIDENT INSPECTION |
| 19-03 27/89 | 89-05 03/03/89 | SPECIALIST | 76 | ENGINEERING-EQ UNANNOUNCED INSPECTION OF EQ PROGRAM AND CLOSEOUT OF PREVIOUS OPEN ITEMS |
| 19-04 | 89-04 04/03/89 | RESIDENT | 524 | ROUTINE RESIDENT INSPECTION |

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CALVERT CLIFFS 1&2

SYNPOSIS OF VIOLATIONS

| ECTION REPORTS | REQUIREMENT VIOLATED | SEVERITY | FUNCTIONAL AREA | DESCRIPTION |
|--------------------------------|-------------------------|----------|--------------------|--|
| | | | | |
| 38-22 | 10 CFR2, APP. C | 5 | OPERATIONS | LICENSEE IDENTIFIED VIOLATION - FAILURE TO FOLLOW OP-24 OVERFLOW OF SPENT FUEL FOOL |
| 39-01 709/89 01/13/89 | 10 CFR 30.41(C) | 4 | RAD-CHEM | FAILURE TO PROPERLY LABEL RADIOACTIVE WASTE SHIPMENT |
| 39-01 '09/89 01/13/89 | 10 CFR 30.41(C) | 4 | RAD-CHEM | FAILURE TO VERIFY ACCEPTABILITY OF TRANSFEREE'S LICENSE |
| 39-03 '10/89 02/20/89 | T.S. 4.3.1.1 | 4 | OPERATIONS | FAILURE TO CONDUCT FUNCTIONAL TEST OF MANUAL REACTOR TRIP CHANNELS PRIOR TO THREE REACTOR STARTUPS ON 8/25/88, 11/15/88, 1/11/89 |
| 35-01 19/88 01/29/88 | T.S.6.8.3.6 | 4 | SURVEILLANCE | TEMPORARY CHANGES TO PROCEDURES WERE NOT PROPERLY REVIEWED |
| 38-28 88-28 124/88 11/04/89 | 10 CFR 50, APP.B | 5 | OTHER | NCR PROGRAM - LACK OF REPORTABILITY REVIEW |
| 38-04 11/88 02/12/88 | T.S.6.8.1.E | 4 | EMERG PREP. | DURING ALERT CONDITIONS PORTIONS OF ERPIP 3.0 WERE NOT IMPLEMENTED IN THAT EMERGENCY PERSONNEL WERE NOT NOTIFIED OR RECALLED AS NECESSARY |
| 88-08 01/88 05/16/88 | TS 4.4.13.1 | " S | OPERATIONS | LICENSEE IDENTIFIED VIOLATION - U2 FRESSURIZER VENT VALVES NOT TESTED FOLLOWING MAINTENANCE OUTAGE |
| 18-07 01/88 05/16/88 | CCI 101J | 5 | OPERATIONS | THREE TEMPORARY CHANGES THAT DID NOT ALTER INTENT MADE TO STP M529-1,REV.4 W/O REQUISITE AFPROVAL |
| 18-07 01/88 05/16/88 | TS 6,9.1.4 | 5 | OPERATIONS | LICENSEE'S FAILURE TO SUMIT ANNUAL REPORT OF ALL FAILURES AND CHALLENGES TO U1 AND U2 ERESSURTTER POPU'S OF |

Page No. 2 05/08/89

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CALVERT CLIFFS 1&2

SYNFOSIS OF VIOLATIONS

|) = 1 | CTION REPORTS | S REQUIREMENT VIOLATED | SEVERITY LEVEL | FUNCTIONAL AREA | DESCRIPTION |
|------------------|----------------------|---------------------------|-------------------|--------------------|--|
| | | | | | |
| 88-0 04/01/ | 7 88 05/16/88 | 10 CFR 2, APP. C | 5 | OPERATIONS | LICENSEE IDENTIFIED VIOLATION - INATTENTION TO DETAIL BY MAINTENANCE PERSONNEL OF GREASE FILLING ON #22 LPSI MOTOR/PUMP COUPLING |
| 88-10 05/09/8 | 0 58 05/13/88 | T.S. 6.11 | 5 | RAD-CHEM | RESPIRATOR WEARER WAS ADMINISTERED THE STANNIC CHLORIDE SMOKE TEST WITHOUT FIRST RECEIVING VERBAL CAUTIONS FROM ADMINISTERING INDIVIDUAL |
| 88-12 05/17/6 | 2 38 06/30/88 | SURV. 4.1.1.2.8 | 5 | SURVEILLANCE | LICENSEE IDENTIFIED VIOLATION CONCERNING MISSED SURVEILLANCE REQUIREMENT FOR SHUTDOWN MARGIN |
|)c _7/8 | 88-17 88 07/13/88 | TS 3.8.1.1 | 4 | OPERATIONS | FAILURE TO MEET TS WITH RESPECT TO THE MINIMUM NUMBER OF AC POWER SOURCES DEMONSTRATED TO BE OPERABLE |
| 96/27/8 | 88-17 8 07/13/88 | 01 30 | 4 | OPERATIONS | FAILURE TO PERFORM A CALORIMETRIC CALCULATION PER DI 30 BEFORE MAKING ADJUSTMENTS TO NUCLEAR INSTRUMENTATION AND DELTA T POWER |
| 88-19 8/09/8 | 8 09/12/88 | T.S.6.8.1 | 4 | OPERATIONS | FAILURE OF MECHANICAL MAINTENANCE FERSONNEL TO FOLLOW PROCEDURE HE 21 IN BOTH DEFEATING AND RESTORING TWO DOOR INTERLOCKS |
| 88-20 8/17/8 | 8 08/19/88 | 10 CFR 20.201 | 4 | RAD-CHEM | FAILURE TO DO ADEQUATE PRE-WORK SURVEY IN VALVE ALLEY |
| 87-23 176 | 7 11/20/87 | 10 CFR50, APP. B | 4 | MAINTENANCE | THE ROOT CAUSE FAILURE OF THE #12 EMERGENCY DIESEL GENERATOR ON HIGH COOLING WATER TEMPERATURE WAS NOT PROMPTLY IDENTIFIED AND CURRECTED |

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CALVERT CLIFFS 1&2

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SYNFOSIS OF VIOLATIONS

|] | ECTI ECT | ON REPORTS | REQUIREMENT VIOLATED | SEVERITY | FUNCTIONAL AREA | DESCRIPTION |
|------------|---------------|-------------------|-------------------------|----------|--------------------|---|
| 88 107: | 8-28 24/88 | 11/04/88 | 10 CFR 50 | 5 | OTHER | NCR PROGRAM - LACK OF REPORTABILITY REVIEW |
| B8 1073 | 9-29 31/88 | 11/04/88 | T.S.6.8 | 4 | RAD-CHEM | FAILURE TO FOLLOW SCALING FACTOR VERIFICATION REQUIREMENTS |
| 68 10/3 | 9-29 31/88 | 11/04/88 | 49 CFR 172.204 | 4 | RAD-CHEM | IMPROPER WASTE CLASSIFICATION |
| 02/2 | 21/89 | 89-04 04/03/89 | TS 6.8.1.E AND F | 5 | OPERATIONS | FAILURE OF CONTROL ROOM PERSONNEL TO IMPLEMENT REQUIREMENTS OF PROCEDURES DUIRNG FIRE IN CONTROL ROOM PANEL |
| 89 02/2 | 7-04 21/89 | 04/03/89 | TS 6.8.1.A | 4 | OPERATIONS | RO'S FAILURE TO FOLLOW STP 0-7-1 CONSTITUTES A VIOLATION OF TS WHICH REQUIRES IMPLEMENTATION OF PROCEDURES FOR CONDUCT OF TS SURVEILLANCE |
| 89 02/2 | 2-04 21/89 | 04703789 | TS 6.5.1.6.G | 4 | OPERATIONS | FAILURE OF THE POSEC TO REVIEW AN EVENT ON SAFETY RELATED COMPONENT INDICATES FAILURE TO IMPLEMENT FUNDAMENTAL RESPONSIBILITY IN TS |
| 02/2 | 21789 | 89-04 04/03/89 | TS 4.7.8.1.C | 4 | OPERATIONS | FAILURE TO PERFORM REQUIRED SURVEILLANCE TESTING, INCLUDING SAFETY RELATED SNUBBERS AS PER TS SURVEILLANCE REQUIREMENTS |

To: B.S. Montgomery, Licersing 1/27/89 FROM: V.L. PRIVETT, RI

CALVERT CLIFFS INFORMATION REQUESTED PIE-INSPECTION VISIT 7EBRUARY 7-8, 1989

- Corporate and site organization charts, plus description of 1. responsibilities and interfaces.
- Summary of plant operations, including significant occurrences since 2. January 1, 1988.
- Resumes of management personnel, from the Vice President Nuclear through 3. the level of supervision immediately below the Operations/Engineering/QA Managers level.
- Engineering Department staffing, including experience levels of personnel. 4.
- Administrative procedures, and other plant procedures involving: 5.
 - Deficiency reports and LERs, a .
 - In-plant and off-site review committees, b.
 - Control of changes, c.
 - 50.59 reviews. d.
 - Corrective actions. e.
 - Self assessments, f.
 - Internal reviews including QA audits,
 - 9. h. Modifications and maintenance, and
 - Surveillances. 1.
- Discuss the following areas: 6.
 - Results of internal reviews and assessments relating to 8. interdepartmental interfaces.
 - The Duke Power assessment of the Engineering Department. b.
 - Training programs for operators, engineering personnel, auditors and C. inspectors, and crafts.

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Site requirements for unrestricted access by the NRC inspection d. team, including contract personnel.

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Page No. 1 09/07/89 CALVERT CLIFFS

| HODULE | REASON FOR REQUEST | REMARKS | RESPONSIBLE SECTION |
|--------|------------------------------|---|------------------------|
| | | | |
| 64704 | KNOWN/SUSPECTED PROBLEM AREA | ASSES EFFECTIVENESS OF LICENSEE INITIATIVES | PSS |
| 83750 | CORE REQ PLANNED | SUIP SPECIFIED SCHEDULED PREVIOUS QUARTER. RESCHEDULED FOR 1ST QUARTER | FRS |
| 84750 | CORE REQ PLANNED | SUIP SPECIFIED SCHEDULE FOR PREVIOUS QUARTER. RESCHEDULED FOR IST QUARTER | ERS |
| 37700 | CORE REQ OVERDUE | INSPECTION OVERDUE. U-2 FACILITATES INSPECTION | STS |
| 37828 | CORE REQ PLANNED | INSPECTION REQUIRED DUE TO SIGNIFICANT CHANGES IN LICENSEE'S ENGINEERING ORGANIZATION | STS |
| 61725 | ENOWN/SUSPECTED PROBLEM AREA | LICENSEE'S CORRECTIVE ACTION IS QUESTIONABLE. ORGANIZATION INEFFECTIVE. REQUIRE ASSESSMENT OF EFFECTIVENESS | OPS |
| 81700 | CORE REQ PLANNED | SUIP SCHEDULE FOR 1/90. | PPS |
| 00000 | KNOWN/SUSPECTED PROBLEM AREA | MAINTENANCE TEAM INSPECTION. TI 2515/97 | OPS |

Page No. 1 FOURTH QUARTER F1888 05/19/88

CALVERT CLIFFS UNIT 1

| | MODULE | REASON FOR REQUEST | REMARKS |
|---|--------|------------------------------------|---|
| | ****** | | *********** |
| | 41400 | PROGRAM RED INSPECTION DVERDUE | Non-license staff training concentrate on maintenance personnel training |
| | 41701 | PROGRAM REQ INSPECTION DUE | License operating training |
| | 37702 | IMPLEMENTS SALP RECOMMENDATION | Problems getting design changes out to field, result in inadequate plan & implement of mods. Design Engineering overloaded high personnel turnover |
| 1 | | | |
| 1 | 82701 | FROGRAM RED INSPECTION DUE | Operational Status of EF Program |
| | 62702 | SUSPECTED PROBLEM AREA | Two significant errors & other SISAS indicate weakness (high I&C turnover, INPO) Dliviera did 62700 |
| - | 62704 | SUSPECTED PROBLEM AREA | Instrument maintenance (see note above) |
| | 38701 | KNDWN PROBLEM AREA | Procurement Program-Qlist Dedication (upgrading of parts to SR) problems with spare parts Q list upgrade |
| | 72701 | PROGRAM REQ INSPECTION DUE | Modification Testing |
| | 11 | SIGNNIFICANT FOLLOWUP DF OPEN ITEM | TI2515/79 - Inspection of EDP's |
| | T1 | SIGNNIFICANT FOLLOWUP OF OPEN ITEM | T12500/20 - Implementation of ATWS Rule |

Page No. 1 08/22/88

FIRST QUARTER F1989

CALVERT CLIFFS UNIT 1

| IDENTIFIED REQUIRING |
|-------------------------|
| IDENTIFIED REQUIRING |
| |
| PMENT CONTROL |
| |
| CTORS - ANNUAL EXERCISE |
| |
| REEVALUATED DUE TO |
| REEVALUATED DUE TO |
| |
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| |
| ICATION FUNCTIONS |
| |

Page No. 11/29/88

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SECOND QUARTER F1989

JAN. MARCH 89

CALVERT CLIFFS UNIT 1

| MODULE | REASON FOR REQUEST | REMARKS |
|--------|--------------------------------|---|
| 41400 | PROGRAM RED INSPECTION OVERDUE | Non-licensed staff training - concentrate on maintenance |
| 62702 | SUSPECTED PROBLEM AREA | Two significant errors and other ESF actuations indicate weakness |
| 62704 | SUSPECTED PROBLEM AREA | Inst. Maintenance. see 62702 remarks |
| 38701 | KNOWN PROBLEM AREA | Procurement Program-Q list dedication (upgrading of parts to safet, related)problems with spare parts/Qlist upgrade |
| 64704 | PROGRAM RED INSPECTION DUE | Fire Protection-known problem area |
| 37700 | PROGRAM REQ INSPECTION DUE | Known problem area |
| 37828 | PROBRAM REQ INSPECTION DUE | Known problem area |
| τı | | TI 2515/79 Insp. of EDP's |
| TI | | TI 2500/20 Implementation of ATWS |

SPECIAL INSPECTION PLAN

CALVERT CLIFFS NPP

| MODULE | REASON FOR REQUEST | REMARKS |
|---------|---------------------------------------|--|
| 42700 | Suspected Problem Area | Evaluate procedures for correctiveness, applicability and implementation |
| 42400B | Suspected Problem Area | Evaluate procedures for correctiveness, applicability and implementation |
| 40500 | Program Requirement Inspection Due | Known Problem Area |
| Special | Team Inspection | |

Operational Safety Team Inspection (OSTI)

June 2, 1989

TO: DISTRIBUTION

FROM: M. D. Milbradt

SUBJECT: NRC EOP Inspection - Exit Meeting Notes

The NRC EOP inspection exit meeting was held on Thursday, May 25. A pre-exit meeting was held a day earlier to discuss NRC concerns. The inspectors expressed two concerns they termed "restart" items and noted several items within our EOPs they felt we could improve upon. The inspection was divided into five tasks and a summary of their major concerns identified in each task are summarized below:

Generic Issue

Potential "Restart" issue: EOPs are considered guidelines by us and not procedures

NRC position: If we are using them as procedures we should have them called procedures and not guidelines. We should have a specific policy on how the EOPs are to be implemented.

BG&Es response: We will give the operators more specific guidance and we will follow the EOPs verbatim. At the exit meeting we committed to sending them a plan and schedule on how we will correct this item. They are associating the term "restart" with approval of our plan.

Task 1 Basic EOP/GTG (CEN-152) Comparison

NRC position: 1. CEN-152 has the Loss of Forced Circulation condition in an EOP. At one point we had it in EOP-2 but now we go directly into AOP-3E from EOP-0. Their concern is that the AOP won't get the same scrutiny and control as an EOP.

BG&Es response: We agree with the comment although the curren: $\angle OP-2$ does have the appropriate steps within it to handle natural circulation. We will clarify which steps should be performed.

<u>Task 2</u> Independent technical adequacy review of the Emergency Operating Procedures

NRC positions: 1) Potential "<u>Restart</u>" issue - The flow chart in EOP-0 doesn't allow operators to fully ask specific questions needed to diagnose which EOP to go into. It is left up to the judgement of the operator as to which procedure to use. We should expand the diagnostic chart to allow for the identification of events based on symptom analysis.

5/14

BG&Es response: We are currently revising the flow chart to give more guidance to the operators. Our commitment to the NRC at the exit meeting was the same as our response under the generic issue.

2) EOP-8 does not address vital auxiliaries in the text. BG&Es response: We will add additional guidance in EOP-8 for vital auxiliaries.

Task 3 . Review of the EOPs by Control Room and Plant walkdowns.

NRC positions:

!) Labeling

- a. Titles of equipment in the EOPs and on the panels do not always match. Ex. SI pump recirc lockout vs. SI pump miniflow.
- b. Component identification is not consistent. Ex. the EOP will have the valve number while the panel will have the handswitch number.
- c. Identification numbers are missing on some name tags.
- d. Identification tags are missing on some equipment in the field and in the control room.
- e. The NRC also found cases where paper was used as labeling and dynamo tape used as scales.

BG&E's response: Bruce Mrowca explained our DCRDR program and how labeling was identified as a problem already. We submitted a schedule last year to the NRC detailing how we would change our labeling. We will provide the NRC team with an update of our progress so far.

 Our NEOGs in general are hard to use because the information is complex; they are not very user friendly to ROs and SROs.

BG&Es response: We are revising the NEOGs to make them user friendly. Indexing, changing number sequence, and writing them in accordance with our site specific writers guide are all being done. The Nuclear Engineering revisions should be finished by August 1. Operations will have to look at how to change the EOPs to reflect the number sequence of the NEOGs.

- 3) When referencing or branching out to another procedure from the EOPs we don't always give adequate instructions on where to go. This can be broken down into 3 problems:
- a. No reference at all
- b. Put into an OI without stating which section to use
- c. Sometimes we are sent to the wrong procedure

BG&Es response: We agreed to look into this issue.

Task 4 Simulator observations

NRC positions:

- 1) Natural circulation transition into AOP without using an EOP.
- The simulator callback rates (pag :, telephone) are not consistent with what might be experienced in the plant.
- A simulator malfunction was treated as a simulator problem and not a real imposed casualty.
- 4) There was no evidence that we train in minimum staffing modes.
- 5) The lighting arrangement in the simulator is not the same in the control room.
- 6) The noise levels in the simulator are high and varying.
- The physical location of operator aids are not the same in the simulator as in the control room.
- 8) The binding methods are different between the simulator EOPs and the control room EOPs. We should pick the best method such that they are easy to use and do not obstruct the viewer from seeing the text.

Overall, they think the crews performed well.

BG&Es response: We were to respond to #4 and #8.

- #4. We agree we should have periodic training at minimum staffing levels and those levels are outlined in our admin procedures not the tech. spec. manning levels.
- #8. We agree that the EOPs should be bound in the best manner and will look into that.

Task 5 Ongoing evaluation of the EOPs and Human factors

NRC positions: Overall the writers guide is inadequate in that it does not ensure consistency within the procedures. Specifics are:

- 1. The logic sequences are not always clear(and, or, etc.). especially in EOP-8.
- There is no guidance on how to write transition steps or how to structure attachments.
- 3. We have allowed EOP-8 to be written in a different format than the other EOPs.
- 4. Consistency standards are not in place. Ex. No set standards for type styles, no clear definition of substeps, list of terminology has several words that mean the same like ensure vs. verify vs. confirm.

- Procedures referenced from EOPs like the AOPs should have the same level of controls and verification and quality as the EOPs.
- Appears to be inadequate verification of Rev.1 being consistent with the basis procedure.
- 7. We have an inadequate system for controlled copies.
- We do not have a controlled system for job performance operator aids (graphs, nameplates).
- We need to strengthen our verification and validation program for the EOPs and their branching procedures.
- We need more involvement from different organizations such that when changes are made to EOPs everyone is on board.
- 11. Our QA involvement has been limited (i.e., audit participation only).

BG&Es response: We responded to #3, #5, #9, #11

- #3. We said we would look into making EOP-8 better.
- #5. We will consider this issue.
- #9. We have a new verification and validation system in effect and will continue to monitor its effectiveness.
- #11. We have an independent review group that looks at the changes to EOPs, POSRC. But, we may need to strengthen their role in reviewing them.

OVERALL

- * They did not find anything that would have shut us down.
- * They did not find anything that would have forced the team to stay on site.
- * The procedures do work
- * The operators do know how to use them.
- The EOPs appear to be technically correct (if problems do occur while using them the operators are good enough to overcome them.)

Positive things:

- 1. Awareness of key items in the EOPs
- 2. We have a procedural group that deals directly with EOP changes
- 3. ' The placekeeper in the EOPs
- 4. Simulator sessions are handled well
- 5. Training appears to be effective
- 6. Fire taps- cross connects between water supplies is good.

#1

The written report from the NRC should be issued in approximately 30 days. If you have any questions regarding this inspection please call me at ext. 4352.

alla of 1722

Engineer -Licensing

MDM/mlv

- DISTRIBUTION: G. C. Creel L. B. Russell C. H. Cruse R. E. Denton R. L. Wenderlich P. E. Katz W. J. Lippold K. J. Nietmann R. P. Heibel J. T. Carroll
- J. F. Lohr M. D. Patterson B. S. Montgomery J. R. Hill J. E. Gilbert H. Eichenholz V. L. Pritchett J. A. Mihalcik G. C. Wolf L. S. Larragoite

STI #15 UPDATE IN MJ

REVIEW OF ADDITIONAL CONCEEN NO. 2 - ADP-9 REVISION

In their June 21, 1989 response to the NRC, BG&E committed to address certain unresolved items and additional concerns prior to the restart of either Calvert Cliffs Unit. Additional Concern No. 2 focused on the weaknesses identified with Abnormal Operating Procedure (ADP) - 9, Alternate Safe Shutdown Procedure. A special licensee project team inspection of this procedure determined that in the event of a control room fire the measures contained in ADP - 9 to achieve cold shutdown within 72 hours, as required by 10CFR50, Appendix R, could not be performed. The two major weaknesses identified with ADP-9 were insufficient shift manning levels and design features in the plant which would not permit required local operations. The licensee committed to revise ADP-9 to account for design modifications made to the plant and to correct procedural inadequacies. ADP-9A. Control Room Evacuation And Safe Shutdown Due To A Severe Control Room Fire, was written to satisfy that commitment. A desk review of AOP-9A identified the following concerns:

1. ADP-9A is specific to Unit-1. It is not clear how this procedure interfaces with Unit-2 in the event of a control room fire since Units 1 and 2 have a common control room.

2. AOP-9A requires responses from seven different individuals: a RO,CRO,SS,STA,OSO,TBO and a ABO. Assuming a similar procedure exists for Unit-2, would this require an additional seven individuals? Would there be any responses which would be common to both Units? Would off shift manning be sufficient to support both Units?

3. On pages 11 and 21, paragraph 1. requires the RO to remove the CLOSE fuses prior to tripping the RCP breakers and refers the RO to the diagram shown below. It is recommended that the portion of the diagram that shows where the ruses are located be relabled to read "CLOSE FUSES" instead of "CLOSE CIR".

4. On page 22, step 1., it is recommended that the step be expanded to either clearly spell out each valve number required to be repositioned DR to indicate the total number of valves required to be repositioned to position 2.

5. On page 39 step 2 should be expanded to indicate to what level (2300 ppm?) the RCS should be borated.

6. To help clarify the AOPs it is recommended that the licensee develop a Writers Guide, similar to that used for writing EOPs, to provide consistency and a clear understanding of what is required. For example, on page 61 of AOP-9A, step 1 would be clearer if an "OR" was placed between each of the three substeps and step 3 would be clearer if an "AND" was placed between the two substeps.



c. Square mesh steel wire cloth tack welded to the inside of the strainer box. The project wire mesh specification is: Meshes per linear inch: 2-3/4. Wire diameter: 0.120". Width opening: 0.244". Percentage of open area: 45%.

This design constitutes a strong construction and will withstand severe shock and loading. With the wideness of the projected flow areas, it is very unlikely that the strainer will clog. Due to the extremely low flow velocity through the strainer box," the resulting pressure drop of the box construction will be negligible.

The system design is based on the spray water being heated to the temperature of the steam-air mixture within the containment. The nozzles will spray droplets with a mean diameter of approximately 700 microns with the spray system operating at design conditions and the containment at design pressure. In order that the spray droplets attain thermal equilibrium during the fall, adequate distance is provided between the spray nozzles and the highest obstruction in the containment.

Any of the following combinations of equipment will provide sufficient heat removal capability to maintain the post-incident containment temperature and pressure below their design value:

Allen

Materials

degree an aluminum Here is a page from Ch. 6 of the FSAR. The Site obside and I thought you might like to see that the FSAR says the flow through the Strainer box 15 "entremely low."

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CONTAINMENT SUMP STRAINER SCREEN "FLOW THEOUGH SCREEN"



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The system design is based on the spray water being heated to the temperature of the steam-air mixture within the containment. The nozzles will spray droplets with a mean diameter of approximately 700 microns with the spray system operating at design conditions and the containment at design pressure. In order that the spray droplets attain thermal equilibrium during the fall, adequate distance is provided between the spray nozzles and the highest obstruction in the containment.

Any of the following combinations of equipment will provide sufficient heat removal capability to maintain the post-incident containment temperature and pressure below their design value:

- Two containment spray pumps will provide 100 percent cooling capacity.
- b. One containment spray pump in conjunction with two containment air cooling units will provide more than 100 percent cooling capacity.
- c. Three containment air cooling units will provide 100 percent cooling capacity.

Materials exposed to the containment spray solution that corrode to any appreciable degree are aluminum and zinc. Section 14.21.2.4 provides a detailed review of all aluminum and zinc equipment which may be exposed to the spray solutions.

Containment Sump Strainer Screen "Flow Theough Screen"