



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
811 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

JUL 29 1992

Docket No. 50-298
License No. DPR-46

Nebraska Public Power District
ATTN: Guy R. Horn, Nuclear Power
Group Manager
P.O. Box 499
Columbus, Nebraska 68602-0499

Gentlemen:

This refers to the management meeting conducted on July 7, 1992, at the Region IV office in Arlington, Texas, concerning activities authorized by NRC License DPR-46 for the Cooper Nuclear Station. This meeting addressed the District's initiatives in response to the recent NRC Systematic Assessment of Licensee Performance (SALP) (NRC Inspection Report 50-298/92-99). The meeting was attended by those on the attached Attendance List.

The subjects discussed at this meeting are described in the enclosed Meeting Summary.

We noted that your SALP Action Plan indicated that you were not in complete agreement with some of the assessments discussed in the SALP Report. We have reviewed your assessments and SALP Action Plan and have concluded that the major issues are still valid and that the need for corrective actions still remain. Consequently, we do not plan to revise the existing SALP Report.

It is our opinion that this meeting was beneficial and has provided a better understanding of your efforts and initiatives. In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the NRC's Public Document Room.

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

A. Bill Beach, Director
Division of Reactor Projects

9208050043 920729
PDR ADOCK 05000298
G PDR

Enclosure:
Meeting Summary w/attachments

cc w/attachments: (see attached)

JE45

Nebraska Public Power District
ATTN: G. D. Watson, General Counsel
P.O. Box 499
Columbus, Nebraska 68602-0499

Copper Nuclear Station
ATTN: John M. Mezham, Division
Manager, Nuclear Operations
P.O. Box 98
Brownville, Nebraska 68321

Nebraska Department of Environmental
Control
ATTN: Randolph Wood, Director
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Nemaha County Board of Commissioners
ATTN: Larry Bohlken, Chairman
Nemaha County Courthouse
1824 N Street
Auburn, Nebraska 68305

Nebraska Department of Health
ATTN: Harold Borchert, Director
Division of Radiological Health
301 Centennial Mall, South
P.O. Box 95067
Lincoln, Nebraska 68509-5007

Kansas Radiation Control Program Director

JUL 29 1992

bcc distrib. by RIV:

J. L. Milhoan	Resident Inspector
DRP	Section Chief (DRP/C)
Lisa Shea, RM/ALF, MS: MNBB 4503	MIS System
DRSS-FIPS	RSTS Operator
Project Engineer (DRP/C)	RIV File
DRS	Chief, Technical Support Section
Senior Resident Inspector - River Bend	
Senior Resident Inspector - Fort Calhoun	

bcc Co DMB (1545)

RIV/BA:DRP	C:DRP	D:DRP		
EE Collins	PH Harrell	AB Beach		
7/27/92	7/27/92	7/29/92		

JUL 29 1992

bcc distrib. by RIV:

J. L. Milhoan	Resident Inspector
DRP	Section Chief (DRP/C)
Lisa Shea, RM/ALF, MS: MNBB 4503	MIS System
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Project Engineer (DRP/C)	RIV File
DRS	Chief, Technical Support Section
Senior Resident Inspector - River Bend	
Senior Resident Inspector - Fort Calhoun	

bcc to DMB (1E45)

RIV/DRP:DRP	C:DRP	D:DRP		
EE Collins	RH Harrell	A. Beach		
7/29/92	7/29/92	7/29/92		

MEETING SUMMARY

Licensee: Nebraska Public Power District (NPPD)
Facility: Cooper Nuclear Station
License No.: DPR-46
Docket No.: 50-298
Subject: Management Meeting

On July 7, 1992, representatives of Nebraska Public Power District met with Region IV personnel in Arlington, Texas, to discuss the District's initiatives in response to the recent Systematic Assessment of Licensee Performance (SALP) in NRC Inspection Report 50-298/92-99. The meeting was held at the request of Region IV. The attendance list, licensee presentation, and SALP Action Plan are attached to this summary.

The licensee presented a summary of initiatives addressing licensed operator training, radiological controls, procurement, and operability program/deficiency program improvements. Also, the licensee distributed the SALP Action Plan. A copy of the licensee's presentation and the District's SALP Action Plan are enclosed in Attachments 2 and 3.

Attachments:

1. Attendance List
2. Licensee Presentation
3. SALP Action Plan

ATTACHMENT 1

ATTENDANCE LIST

NPPD

H. Parris, Vice-President, Production
G. Horn, Nuclear Power group Manager
D. Whitman, Division Manager, Nuclear Support
R. Gardner, Acting Division Manager, Nuclear Operations
C. Estes, Acting Senior Manager Operations
E. Mace, Senior Manager Staff Support

NRC

J. Milhoan, Regional Administrator
J. Montgomery, Deputy Regional Administrator
M. Virgilio, Assistant Director for Region IV and V Reactors, Division of
Reactor Projects III, IV, V
A. Beach, Director, Division of Reactor Projects (DRP)
S. Collins, Director, Division of Reactor Safety (DRS)
J. Callan, Director, Division of Radiation Safety and Safeguards
J. Pellet, Chief, Operator Licensing Section, DRS
I. Barnes, Chief, Materials and Quality Section, DRS
R. Kopriva, Senior Resident Inspector, Cooper Nuclear Station

ATTACHMENT 2

NEBRASKA PUBLIC POWER DISTRICT

NUCLEAR REGULATORY COMMISSION REGION IV

MANAGEMENT MEETING

JULY 7, 1992



AGENDA

- | | |
|---|---------------|
| ■ INTRODUCTION | H. G. PARRIS |
| ■ OVERVIEW | G. R. HORN |
| ■ LICENSED OPERATOR TRAINING | D. A. WHITMAN |
| ■ RADIOLOGICAL CONTROLS | R. L. GARDNER |
| ■ NUCLEAR PROCUREMENT PROGRAM | C. M. ESTES |
| ■ OPERABILITY PROGRAM/DEFICIENCY PROGRAM IMPROVEMENTS | E. M. MACE |
| ■ CONCLUDING REMARKS | G. R. HORN |



NEBRASKA PUBLIC POWER DISTRICT

NUCLEAR REGULATORY COMMISSION REGION IV

MANAGEMENT MEETING

LICENSED OPERATOR TRAINING

JULY 7, 1992



INTRODUCTION

- *SALP REPORT BACKGROUND*
- *TRAINING ACCOMPLISHMENTS DURING SALP PERIOD*
- *SUBSEQUENT ACTIONS TAKEN OR PLANNED*
- *RESULTS ACHIEVED*



SALP REPORT BACKGROUND

- *LICENSED OPERATOR TRAINING PROGRAM CONCERNS*
 - *COMMAND AND CONTROL DEFICIENCIES*
 - *OPERATORS' ABILITY TO PERFORM DURING SIMULATED EMERGENCY EVENTS*
 - *MANAGEMENT EFFECTIVENESS*



TRAINING ACCOMPLISHMENTS DURING PAST SALP PERIOD

- *ACHIEVED ACCREDITATION OF ALL OPERATIONS TRAINING PROGRAMS BY THE NATIONAL NUCLEAR ACCREDITING BOARD*
- *CNS CONTROL ROOM SIMULATOR WAS CERTIFIED IN ACCORDANCE WITH ANS 3.5 REQUIREMENTS*
- *ACHIEVED FULL STAFFING OF OPERATIONS INSTRUCTOR POSITIONS WITH NPPD PERSONNEL (14 OF 14)*
- *ESTABLISHED PROGRAM TO ROTATE FOUR LICENSED OPERATORS TO TRAINING AS INSTRUCTORS*



TRAINING ACCOMPLISHMENTS
DURING PAST SALP PERIOD (cont.)

- **COMPLETED MAJOR SIMULATOR UPGRADE**
- **IMPLEMENTED AUTOMATED DATA RETRIEVAL SYSTEM FOR OPERATIONS TASK ANALYSIS**
- **DROPPED EXCESS SRO/RO LICENSES TO ALLOCATE TRAINING RESOURCES MORE EFFECTIVELY**
- **COMPLETED COMPENSATION ANALYSIS OF OPERATIONS INSTRUCTOR POSITIONS**



TRAINING ACCOMPLISHMENTS
DURING PAST SALP PERIOD (cont.)

- ***ESTABLISHED SRO CERTIFICATION PROGRAM***

- ***ESTABLISHED SRO CERTIFICATION BONUS***

- ***ESTABLISHED LEAD OPERATIONS INSTRUCTOR POSITIONS***

- ***FINALIZED COMPREHENSIVE QA ASSESSMENT OF PREVIOUS TRAINING CONCERNS***



TRAINING ACCOMPLISHMENTS
DURING PAST SALP PERIOD (cont.)

- **COMPLETED REQUALIFICATION PROGRAM CRITIQUE BY LICENSED OPERATORS**
- **REDEFINED NUMBER OF SIMULATOR SCENARIOS TO REDUCE OPERATOR STRESS**
- **ESTABLISHED MILESTONE PROGRESS REVIEW TO ASSURE CANDIDATES' PREPARATION FOR LICENSE EXAMS**



SUBSEQUENT ACTIONS TAKEN OR IN PROGRESS

- *ENHANCED EMERGENCY PREPAREDNESS TRAINING FOR OPERATORS*
- *ESTABLISHED INSTRUCTIONAL STANDARDS AND EVALUATION METHODS FOR OPERATOR COMMAND AND CONTROL*
- *COMPLETED INPO TEAM TRAINING FOR OPERATIONS CREWS ON THE DYNAMICS OF HUMAN INTERACTION ON CREW PERFORMANCE*
- *INITIATED COMPREHENSIVE PROGRAM TO RESOLVE ALL SIMULATOR DEFICIENCIES*
- *PROCUREMENT PROCESS FOR SIMULATOR AUDIO/VISUAL SYSTEM HAS BEGUN*



SUBSEQUENT ACTIONS TAKEN OR IN PROGRESS

(cont.)

- OPERATIONS TRAINING FOR QA AUDITORS
- COMPREHENSIVE OVERVIEW AND EVALUATION OF TRAINING EFFECTIVENESS BY PLANT MANAGEMENT AND SUPERVISION
- ENHANCED INSTRUCTOR TRAINING TECHNIQUES
- ENHANCED INSTRUCTOR STANDARDS, EVALUATION AND PROFESSIONALISM



RESULTS ACHIEVED

- *IMPROVED INTERFACE BETWEEN OPERATIONS AND TRAINING*
- *IMPROVED OPERATOR PERFORMANCE DURING SIMULATED EMERGENCY EVENTS*
- *IMPROVED COMMAND AND CONTROL DEMONSTRATED*
- *LICENSE EXAM SUCCESS*
- *REGION IV TRAINING INSPECTION RESULTS*



CONCLUSIONS

- *NUMEROUS COMPREHENSIVE ACTIONS AND ENHANCEMENTS*
- *RECENT INDICATIONS SHOW SIGNIFICANT PERFORMANCE IMPROVEMENT*
- *TRAINING PROGRAM INITIATIVES AND IMPROVEMENTS CONTINUE TO BE MADE*
- *EXPECT CONTINUED PERFORMANCE IMPROVEMENT*



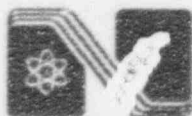
RADIOLOGICAL CONTROLS SALP CATEGORY 2

- *THIS RATING REPRESENTS A DECLINE FROM THE PREVIOUS RATING OF 1*
- *PERFORMANCE OF THE RADIOLOGICAL PROTECTION STAFF WAS EXCELLENT DURING ROUTINE DAY-TO-DAY ACTIVITIES*
- *THE DECREASE IN PERFORMANCE RATING WAS BASED ON CONCERNS IDENTIFIED WITH IMPLEMENTATION OF RADIOLOGICAL CONTROL PROGRAMS DURING THE REFUELING OUTAGE*



RADIOLOGICAL CONTROLS

- *RADIOLOGICAL PROTECTION PROGRAM WEAKNESSES*
- *SPECIAL WORK PERMIT PROGRAM WEAKNESSES*
- *LIMITED ALARA GROUP INVOLVEMENT*
- *MARGINAL PERSONNEL RESOURCES*



RADIOLOGICAL PROTECTION PROGRAM WEAKNESSES

- *POOR COMMUNICATIONS, COORDINATION AND CONTROLS*
 - *CNS RADIATION PROTECTION PROGRAM SELF ASSESSMENT*
 - *MANAGEMENT OVERSIGHT*
 - *RADIOLOGICAL DEPARTMENT TEAM APPROACH*
 - *RADIOLOGICAL COORDINATORS WORK DIRECTLY FOR RADIOLOGICAL DEPARTMENT*
 - *FEEDBACK*



RADIOLOGICAL PROTECTION PROGRAM WEAKNESSES

- *HOT SPOT POSTING*
 - *REVISED PROCEDURAL POSTING CRITERIA AND EMPHASIS*
 - *HEALTH PHYSICS TRAINING PROGRAM REVIEW*
 - *CNS RADIATION PROTECTION PROGRAM SELF ASSESSMENT*



RADIOLOGICAL PROTECTION PROGRAM WEAKNESSES

- *REAL TIME TRACKING OF EXPOSURES*
 - *SWP ASSESSMENT*
 - *SWP PROCEDURE REVISIONS*
 - *CNS RADIOLOGICAL PROTECTION PROGRAM SELF ASSESSMENT*
 - *RADIOLOGICAL SUPPORT SYSTEM*



SPECIAL WORK PERMIT PROGRAM WEAKNESS

- *FAILURE TO PROPERLY LOCATE DOSIMETRY/FAILURE TO SPECIFY MULTIPLE DOSIMETRY*
 - *SWP ASSESSMENT*
 - *SWP PROCEDURE REVISIONS*
 - *PERSONNEL DOSIMETER PROGRAM PROCEDURE REVISIONS*
 - *HEALTH PHYSICS TRAINING PROGRAM UPGRADE*
 - *CNS RADIOLOGICAL PROTECTION PROGRAM SELF ASSESSMENT*



LIMITED ALARA GROUP INVOLVEMENT

- *CNS RADIOLOGICAL PROTECTION PROGRAM SELF ASSESSMENT*
- *THRESHOLD VERSUS PEAK STAFF REQUIREMENTS*
 - *INCREASED WORK EVALUATION INVOLVEMENT*
 - *INCREASED MOCKUP TRAINING INVOLVEMENT*
 - *INCREASED FIELD OBSERVATION OF WORK*
- *POST OUTAGE CRITIQUE*



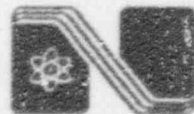
MARGINAL PERSONNEL RESOURCES

- *RADIOLOGICAL PROTECTION PROGRAM SELF ASSESSMENT*
- *THRESHOLD VERSUS PEAK STAFF REQUIREMENTS*
- *POST OUTAGE CRITIQUE*



RADIOLOGICAL SUMMARY

- *RADIATION PROTECTION PROGRAM SELF ASSESSMENT*
- *RADIOLOGICAL DEPARTMENT OUTAGE STAFFING*
- *RADIOLOGICAL DEPARTMENT TEAM APPROACH*
- *CONTINUED MANAGEMENT ATTENTION*



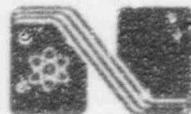
**NUMARC
COMPREHENSIVE PROCUREMENT
INITIATIVE
(CPI)**

- *BACKGROUND*
- *DEVELOPMENT OF A PROCUREMENT PROJECT PLAN (PPP)*
- *RECEIPT OF INSPECTION REPORT 92-201*
- *CURRENT STATUS OF THE PPP*
- *SUMMARY*



BACKGROUND

- *ACTION PLAN*
- *INSPECTION NOTIFICATION*
- *MAINTAIN CPI & INSPECTION SEPARATE*
- *INSPECTION*
- *PROCUREMENT PROGRAM ENHANCEMENT*



NUMARC COMPREHENSIVE
PROCUREMENT INITIATIVE
(CPI)

Responsibilities/Deadlines/Special Considerations

Action Plan

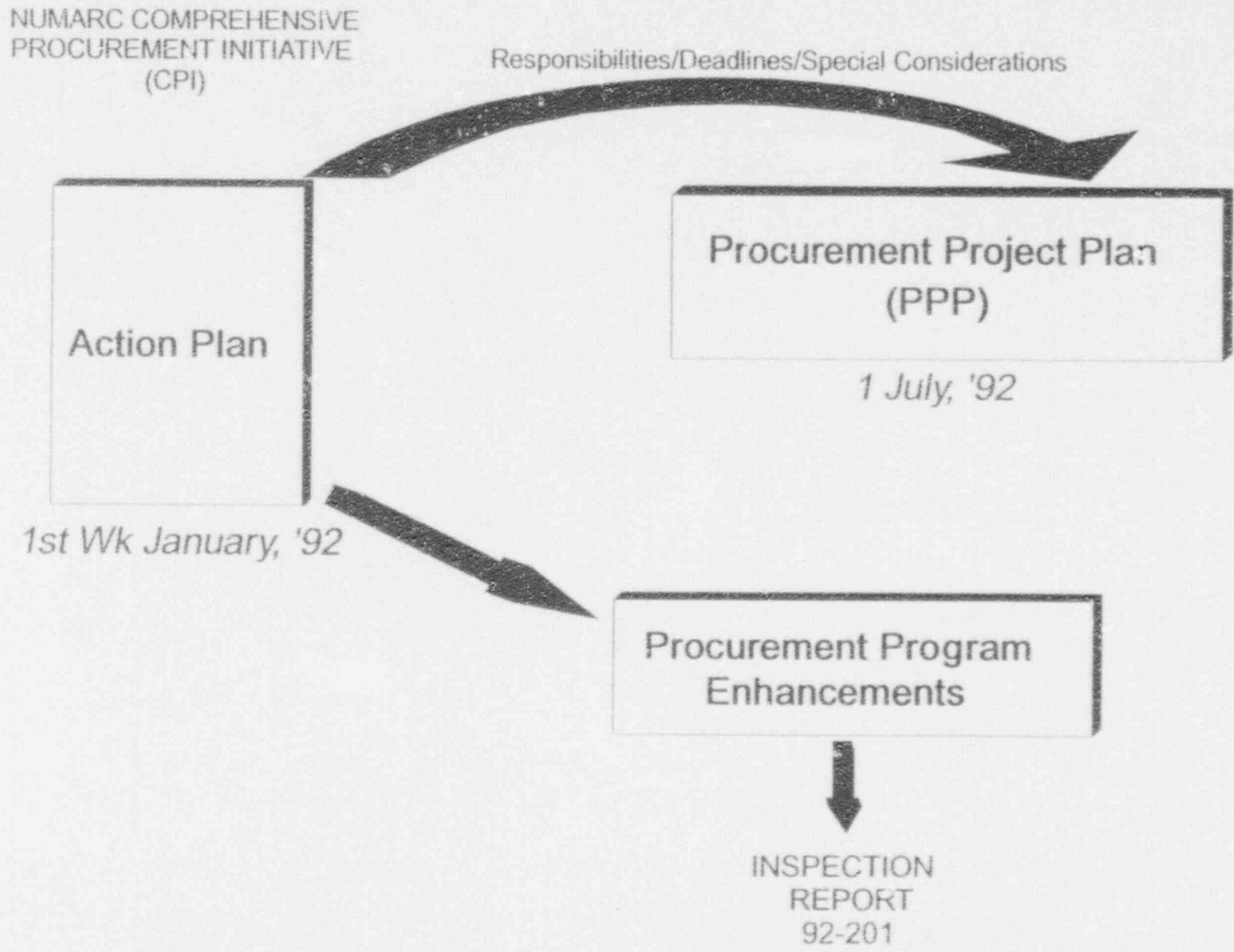
Procurement Project Plan
(PPP)

1 July, '92

1st Wk January, '92

Procurement Program
Enhancements

INSPECTION
REPORT
92-201



PROCUREMENT PROGRAM ENHANCEMENTS

- *ESTABLISH PROCEDURAL REQUIREMENT TO PROVIDE FORMAL DOCUMENTATION OF CRITICAL CHARACTERISTICS AS APPLIED TO ECG PROCUREMENT*
- *FORMALIZE THE ENGINEERING PROGRAMS DEPARTMENT INDEPENDENT REVIEW OF DEDICATION PACKAGES AND ECG TECHNICAL EVALUATIONS*
- *IMPROVE TESTING AND INSPECTION CAPABILITIES*
- *REVIEW AND REVISE PROCUREMENT PROCEDURES (E.G. 3.22, 3.24, 1.13, QAI-16) AS APPROPRIATE*
- *ENHANCE QUALITY ASSURANCE SUPPLIER AUDITS*



PROCUREMENT PROGRAM ENHANCEMENTS (CONT'D)

- ***IMPLEMENT TESTING OF LUBRICANTS ALONG WITH A DEDICATION PACKAGE OR DECIDE TO PURCHASE UNDER A 10CFR50, APPENDIX B PROGRAM***
- ***PLACE A "HOLD" ON ALL ITEMS IN WAREHOUSE PURCHASED AS ECG SINCE JANUARY 1, 1990***
- ***COMPLETE FOCUSED COMMERCIAL SURVEYS OF ECG SUPPLIERS BY JANUARY 1, 1993, USING NUPIC COMMERCIAL SURVEY CHECKLIST***



DEVELOPMENT OF A PROCUREMENT PROJECT PLAN (PPP)

- *ESSENTIAL COMMERCIAL GRADE (QUALITY COMMERCIAL GRADE)*
- *PROCEDURES CHANGES/ENHANCEMENTS*
- *PERFORMED LUBRICATION STUDY*
- *UPGRADED TRAINING LESSON PLAN*
- *EXPANDED TRENDING RECEIPT INSPECTION/TESTING FAILURES*
- *EXPANDED TESTING AND RECEIPT INSPECTION CAPABILITIES*
- *COMPLETED A VALIDATION OF EXISTING DEDICATION PACKAGES*



INSPECTION REPORT 92-201 RECEIPT

- *PERFORMED DETAILED REVIEW*
- *ALL CONCERNS WERE ADDRESSED PRIOR TO RECEIPT OF REPORT*
- *A MAJORITY OF THE ACTIONS WERE FULLY IMPLEMENTED PRIOR TO RECEIPT OF REPORT*
- *TWO DEFICIENCIES WERE IDENTIFIED:*
 - *GENERIC WEAKNESS IN PROCUREMENT PROGRAM*
 - *FAILURE TO ADEQUATELY DETERMINE SUITABILITY OF APPLICATION OF CGIs*



SUITABILITY OF APPLICATION OF CGI'S

- *ALL INSPECTION FINDINGS ADEQUATELY RESOLVED*
- *ALL DEDICATION PACKAGES REVIEWED AND ALL COMMERCIAL SUPPLIERS RE-EVALUATED WITH NO QUALITY CONCERNS*
- *PLANT OPERATING HISTORY VERY GOOD*
- *PROGRAMMATIC SYSTEMS ARE IN PLACE TO IDENTIFY AND/OR PRECLUDE FAILURES*
- *PAST ENGINEERING INVOLVEMENT IN PROCUREMENT*
- *HIGH DEGREE OF AWARENESS OF CRAFT IN UTILIZING CORRECT PARTS*
- *STRONG WAREHOUSE CONTROL OF TAGGING AND TRACEABILITY*



CURRENT STATUS OF PROCUREMENT PROJECT PLAN

- *EIGHT CONCERNS WERE NOT DISCUSSED DURING INSPECTION*
- *THREE OF THESE ARE STILL BEING ADDRESSED*
- *PROCUREMENT PROJECT PLAN IS ESSENTIALLY COMPLETE*
- *ON GOING ACTIVITIES:*
 - *LUBRICATION*
 - *TESTING*
 - *TRAINING*



SUMMARY

- *SIGNIFICANT PROGRESS SINCE JANUARY 1, 1992*
- *IDENTIFIED NO CONCERNS WITH MATERIALS/COMPONENTS INSTALLED IN PLANT*
- *MEET THE JULY 1, 1992 NUMARC COMPREHENSIVE PROCUREMENT INITIATIVE COMMITMENT*



***NPPD/NRC REGION IV
MANAGEMENT MEETING***

- OPERABILITY PROGRAM IMPROVEMENTS

- DEFICIENCY REPORTING PROGRAM

JULY 7, 1992

E. M. MACE

***SENIOR MANAGER STAFF SUPPORT
COOPER NUCLEAR STATION***



DISCUSSION TOPICS

- *OPERABILITY PROGRAM*
 - *HISTORY OF EVENTS*
 - *SUMMARY OF CONCERNS*
 - *SUMMARY OF ACTIONS TAKEN*
 - *FLOW CHART EXAMPLE*

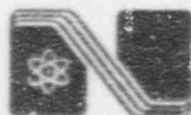
- *DEFICIENCY REPORTING PROGRAM*

- *SUMMARY*



OPERABILITY PROGRAM - HISTORY OF EVENTS

- *DECEMBER 19, 1991
BATTERY SURVEILLANCE TEST DISCREPANCY*
- *FEBRUARY 21, 1992
NPPD/NRC REGION IV MANAGEMENT MEETING*
- *MARCH 11, 1992
INSPECTION REPORT 92-04 ISSUED*
- *MARCH 24, 1992
NPPD/NRC REGION IV ENFORCEMENT CONFERENCE*
- *MAY 21, 1992
NOTICE OF VIOLATION ISSUED*
- *JUNE 19, 1992
VIOLATION RESPONSE TRANSMITTED*



OPERABILITY PROGRAM - SUMMARY OF CONCERNS

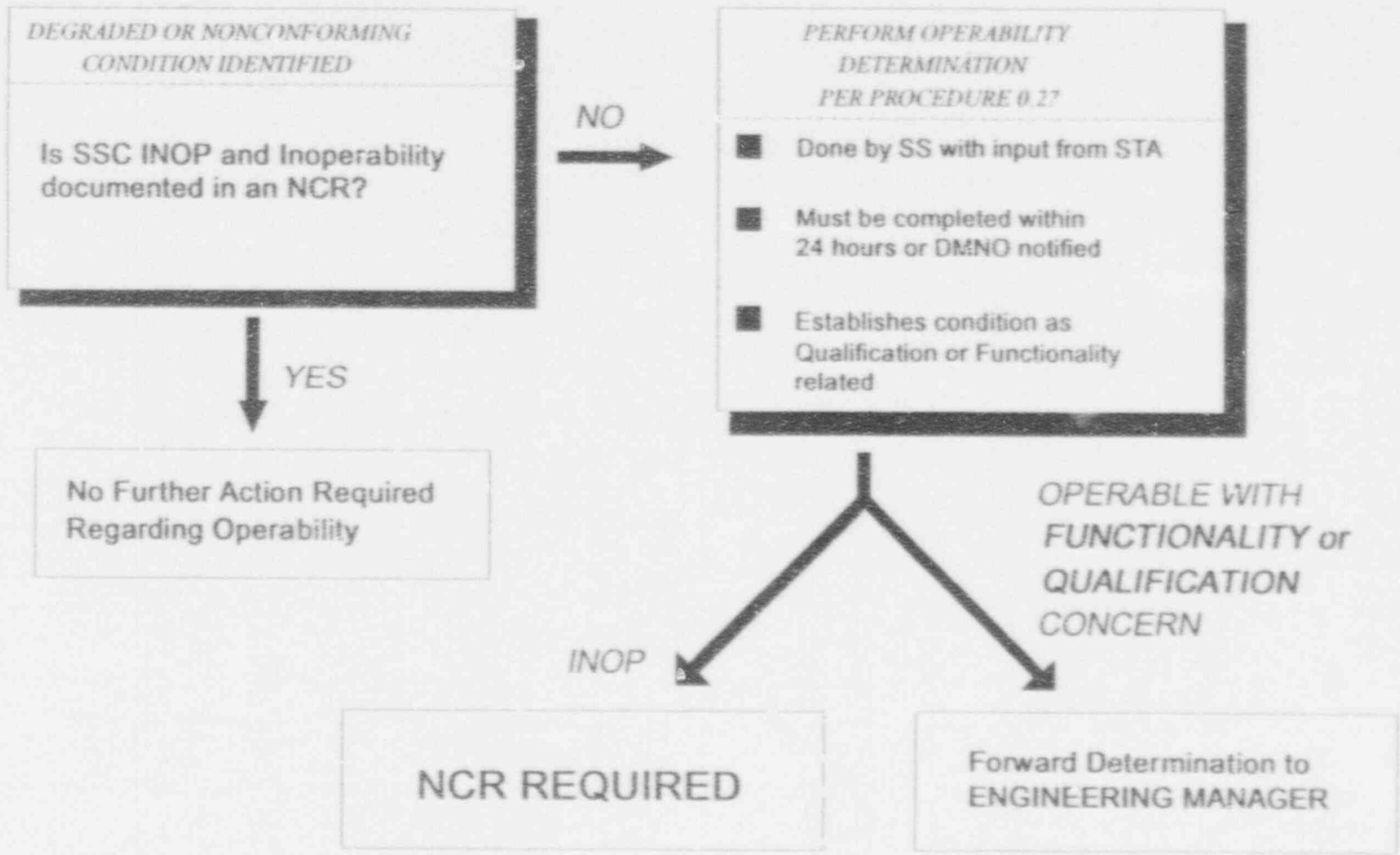
- *LACK OF SPECIFIC GUIDANCE TO MAKE INITIAL OPERABILITY DETERMINATIONS*
- *BASIS FOR THE OPERABILITY DECISION NOT ALWAYS ADEQUATELY DOCUMENTED*
- *INADEQUATE SEPARATION OF OPERABILITY DETERMINATIONS FROM CORRECTIVE ACTIONS*
- *FAILURE TO SORC REVIEW AN OPERABILITY DETERMINATION*



OPERABILITY PROGRAM - ACTIONS TAKEN

- *IMPROVED GUIDANCE TO MINIMIZE RELIANCE ON INDIVIDUAL JUDGEMENT*
- *DOCUMENTED ENTIRE PROCESS*
- *CLARIFIED AND SEPARATED OPERABILITY DETERMINATIONS AND CORRECTIVE ACTIONS*
- *ESTABLISHED SPECIFIC APPROVAL AND TIMELINESS REQUIREMENTS*
- *INCORPORATED GUIDANCE OF GENERIC LETTER 91-18*





OPERABILITY DETERMINATION

FUNCTIONALITY CONCERN

QUALIFICATION CONCERN

ENGINEERING MANAGER
PRESENTS TO SORC

- Within 1 working day unless condition resolved, then within 5 working days
- SORC determines if additional evaluation required

YES

ENGINEERING MANAGER INITIATES
OPERABILITY EVALUATION
PER PROCEDURE 0.27.1

- Engineering Evaluation
- SORC approved within 48 hours unless condition resolved, then within 5 working days; or extended by SORC

NO

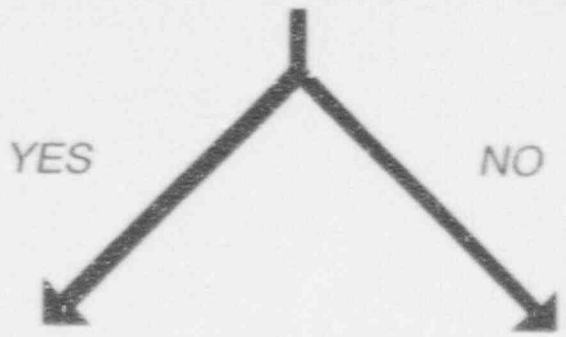
File / Additional
Corrective Action

OPERABLE
OR
INOPERABLE

Cannot support continued operation

INOPERABLE
Can support continued operation

Does T.S. LCO apply?



YES

NO

JCO

BCO

NRC
Approval

File

DEFICIENCY REPORTING PROGRAM

- *RELATIVELY HIGH THRESHOLD FOR NONCONFORMING ITEMS DOCUMENTED BY THE EXISTING CORRECTIVE ACTIONS PROGRAM*
 - *LESS SIGNIFICANT CONDITIONS ADVERSE TO QUALITY: PROGRAMMATIC, PROCEDURAL, AND OPERATIONAL TRANSIENT*
 - *ALLOW FOR:*
 - *TRACKING*
 - *TRENDING*
 - *INDEPENDENT ASSESSMENT*
 - *IMPLEMENTED:*
 - *USING GENERIC LETTER 91-18 GUIDANCE*
 - *USING INPUT FROM CURRENT INDUSTRY PROGRAMS*
 - *BY SEPTEMBER 30, 1992*



SUMMARY

- *OPERABILITY PROGRAM*
 - *CLARIFIED AND SEPARATED OPERABILITY AND CORRECTIVE ACTIONS*
 - *DOCUMENTATION TRAIL REDEFINED*
 - *PROVIDED ADDITIONAL GUIDANCE TO MINIMIZE RELIANCE ON INDIVIDUAL JUDGEMENT*
 - *ESTABLISHED TIMELINESS REQUIREMENTS*
 - *TRAINED LICENSED OPERATORS & SITE/CORPORATE ENGINEERING*
- *DEFICIENCY REPORTING PROGRAM*
 - *ESTABLISHING A LOWER THRESHOLD CORRECTIVE ACTIONS PROGRAM*



ATTACHMENT 3

**1992 SALP ACTION PLAN
FOR
COOPER NUCLEAR STATION**

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1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

EXECUTIVE SUMMARY

The SALP Report (50-298/92-99) for Cooper Nuclear Station (CNS) provided the NRC's evaluation of CNS performance for the period July 16, 1990, through January 18, 1992. Although we were certainly pleased to achieve improved ratings from Performance Category 2 to Performance Category 1 in the Maintenance/Surveillance and Security functional areas, we were very disappointed in the decline from Performance Category 1 to 2 in the Operations and Radiological Controls functional areas. The strengths and weaknesses identified by the SALP report in these areas as well as those identified in the Emergency Preparedness, Engineering/Technical Support and Safety Assessment/Quality Verification functional areas have been particularly helpful to NPPD in directing management attention and resources in our continuing efforts to improve on excellence.

This 1992 SALP Action Plan addresses the specific NRC concerns identified in the SALP Report. The Action Plan is intended to accomplish the following:

- provide a complete compilation of NPPD actions taken or in progress on NRC concerns identified in the SALP report;
- provide a discussion of program enhancements relating to SALP identified concerns;
- provide a status report of actions taken or in progress regarding NRC concerns;
- provide direction and focus for all Nuclear Power Group personnel.

Although particular management emphasis has been directed in the Operations, Operations Training and Radiological Controls areas, all concerns are specifically addressed in the Plan. We believe this SALP Action Plan will serve as a guide for managing the numerous activities underway or planned associated with the recent SALP report. Further, the Action Plan will serve as a catalyst for additional program enhancements in the future.

At NPPD, management is guided by three key precepts that have made CNS successful in the past and will continue to make us successful in the future:

- nuclear safety is of paramount importance -- all other issues are of secondary consideration;
- continually rising standards of performance are necessary to achieve and maintain excellent performance;
- developing and sustaining a self critical, questioning attitude among all employees is to be strongly encouraged at all organizational levels.

The District is firmly committed to achieving and sustaining higher levels of excellence in nuclear operations. This commitment translates to the goals of (1) reestablishing Performance Category 1 ratings in both the Operations and Radiological Controls areas, (2) maintaining existing Category 1 ratings and (3) improving from Category 2 to 1 in at least one other functional area in the current SALP period. We believe this SALP Action Plan, when combined with the other Nuclear Power Group initiatives, will assist us in achieving the performance necessary to attain these goals.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

OPERATIONS EXECUTIVE SUMMARY

To ensure that complex emergency operating procedures (EOPs) can be performed as written, Procedure 0.4 (preparation, review and approval of procedures) was revised to include plant walkdowns during validation and verification. During the fall/winter of 1991/1992, all Emergency and Abnormal procedures were walked down resulting in the conclusion that all can be performed as written. During the same period, CNS EOPs and EOP Support Procedures were verified to be technically accurate and able to be used effectively. In June of 1992, CNS EOPs underwent simulator validation resulting in the conclusion that they are usable by operators under dynamic accident conditions. Procedure 0.4 criteria is applied to all procedure changes by the responsible Supervisor. Management, during their review of procedure revisions, will ensure that plant walkdown criteria is applied and walkdown acceptance criteria is met prior to procedure approval for implementation.

To ensure adequate safety evaluations of emergency procedures by multi-disciplined groups, the EOP Support Procedure Verification Instruction has been revised, and implemented, to include Radiological and Engineering Department personnel.

To ensure adequate control of independent valve verification, Procedure 2.0.1, Conduct of Operations, was revised to include a policy statement regarding independent verification, resulting in no known missed verifications since approval.

To alleviate any further operator weaknesses for failure to issue temporary procedure changes and use of procedures for operating evolutions, the Operations Supervisor has held discussions with each crew stressing procedural compliance, and the Division Manager of Nuclear Operations has issued a letter to all CNS personnel concerning the accuracy and adequacy of station procedures. Management continues to monitor procedure usage and compliance by evaluating Inspection Reports, NCRs, LERs, QA findings, etc.

To prevent any further instances of missed surveillance testing, the computer-based surveillance scheduling system has been modified so that surveillances are now included in the weekly schedule until they have been performed. The Surveillance Coordinator was also counselled on the need for accurate scheduling of surveillance tests. Additionally, CNS is planning to replace the present software with a more flexible, human factored network based system.

To prevent instances of failure to follow procedures and inattention to detail while performing surveillance procedures, LERs have been routed, Industry Events Training has been conducted, and the Division Manager of Nuclear Operations has issued correspondence addressing the issues of complacency and maintaining a questioning attitude. Management continues to monitor the effectiveness of the actions taken by evaluating Inspection Reports, NCRs, LERs, QA findings, etc. In addition, a self-checking program will be implemented in for all groups within the station that conduct hands-on work.

Management has spent significant effort and time in the Licensed Operator Training Program to ensure that weaknesses in the areas of operating crew command, control, and communications, operating procedures and failure to convey management expectations for operator training performance have been addressed. In support of this heightened attention, CNS Management and Supervision has: visited other operating Nuclear plants to benefit from industry experience, expanded guidance on operating philosophy, participated more in training evaluations and subsequent critiques, and revised procedures to provide more specific guidance in this area. Additionally, a new policy on crew command and control, and a revision to the current Operations Communication instruction, will be issued.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-1-a

Assigned To: E. M. Mace
Senior Manager of
Staff Support

Description:

Appropriate management conservatism was not always evident:

- a. Temporary elevator cable caused a scram.

Root Cause:

The root cause of this event was failure to establish and implement sufficient work control measures for the Reactor Building roof refurbishment activity. In retrospect, it became clear that while extensive efforts were made to assure that installation of the temporary elevator was safe and that initial job preparations were thorough, we did not establish sufficient work control measures and/or limiting "criteria" to assure that job execution would not affect safe operation of the facility.

Action Taken:

Corrective actions taken included verification of proper transmission system protective relay operations, transmission line inspections, and inspections and testing of the Normal, Startup and Main power transformers. The temporary construction elevator was relocated to the north side of the reactor building. Additionally, extensive work control measures and inspection requirements were established for completion of the roof refurbishment effort.

Action Planned:

Because of the experience gained from this incident, the potential risks associated with project work to be performed at CNS are now evaluated more thoroughly. New stringent job control measures have been implemented to assure that such an event will not be repeated. We have also instituted daily Construction Management job walkdowns for all projects and routinely discuss project progress reports at the daily NPG senior management teleconference.

Schedule:

Although the controls necessary to safely complete the roof refurbishment were implemented, management continues to evaluate and upgrade the controls for infrequent/unusual work.

Adequacy of Results Achieved:

We believe that the additional infrequent/unusual work controls established and implemented as a result of this event have resulted not only in achieving safe, reliable plant operation, but also in developing a more questioning attitude throughout the entire NPG. This attitude has carried over into more routine activities, as well as plant operations. 1991 ended without a single unplanned scram event at CNS; we see this as direct evidence of the effectiveness of our corrective measures and the more conservative management approach to infrequent/unusual work.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-1-b Assigned To: E. M. Mace
Senior Manager of
Staff Support

Description:

Appropriate management conservatism was not always evident:

- b. NOUE not declared when both diesel generators (D/Gs) were declared inoperable.

Root Cause:

Two root causes have been established for this event. First, we misinterpreted the intent of the PAL requirement regarding the term "loss", which was interpreted to mean in the physical sense and not in the strictest term of "inoperable", as defined in the CNS Tech Specs. Accordingly, although the D/Gs were considered inoperable by Tech Specs due to D/G HVAC seismic concerns, the D/Gs were not considered "lost" from an Emergency Planning standpoint. In retrospect, this decision was contrary to station management's normally consistent and conservative decision making process. Secondly, the affected Emergency Planning procedure for event classification was inadequate with regard to defining the term "loss". Accordingly, the lack of procedural guidance contributed to the inconsistent emergency planning decision.

Action Taken:

Following senior management review of the event, a letter fully describing the event and the corrective action to be taken was routed to CNS Managers and NPG Division Managers. Although the decision resulting from this event was not typical NPG management practice, we chose to issue the letter to management (in addition to the procedure change) to bring to light and further reinforce the need for consistent and conservative decisions in every aspect of plant operation. Additionally, the Emergency Planning classification procedure (EPIP 5.7.1) has been revised to clarify that the term "loss", noted throughout the EALs, is synonymous with "inoperable".

Action Planned:

Station management will continue to monitor, question and self-critique decisions related to Emergency Planning classifications. Although not anticipated, if additional problems are noted, a more in-depth root cause analysis and likewise, a more extensive corrective action plan will be instituted.

Schedule:

With the approval of EPIP 5.7.1 on June 11, 1992, all short term corrective action has been completed.

Adequacy of Results Achieved:

We are convinced that the probability for recurrence of this type of event is minimal due to the corrective measures taken and the conservative management attitude that is typical within the NPG. However, we also recognize the potential consequences of an event mis-classification and consider this specific issue as a learning experience that will focus increased management attention on inoperable plant equipment and the relationship to Emergency Plan classification.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-4

Assigned To: J. W. Dutton
Training Manager

Description:

The performance of operating crews during simulated, nonroutine emergency conditions was weak. Operating crews exhibited difficulty in decision-making and in overseeing the response to simulated, nonroutine emergency events.

Root Cause:

The root cause of this item was insufficient training on Emergency Plan actions while controlling the plant during off-normal conditions.

At the time of the inspection during which this item was noted, Operators had traditionally been trained on EALs, PARs and Notification with "table top" exercises. Emergency Plan training had not yet been incorporated into simulator training. The complications involved in controlling the plant while simultaneously performing Emergency Plan actions had not been recognized, since Emergency Plan training for licensed operators in the simulator was limited to EAL classification, announcement, and notification of the Division Manager of Nuclear Operations (DMNO). At that time the Shift Supervisor/Emergency Director responsibilities were considered to be turned over to the DMNO.

Action Taken:

All shift crews were provided with extended emergency scenario training in the simulator, over a one week period. The Requalification program was also modified to require practice in a minimum of six extended emergency scenarios during each two-year cycle. All crews have received an additional scenario (as of June 1, 1992).

Action Planned:

Integrated emergency plan and plant management scenarios will be continued as a normal element of the Requalification program training. The installation of an audio system to further support the operating crew critique process in the simulator is planned for 1992.

Schedule:

Ongoing.

Adequacy of Results Achieved:

Increased proficiency of the crews during Emergency scenarios has been noted since the new scenarios have been implemented. The effectiveness of this training program upgrade will continue to be monitored and feedback provided to each operating crew.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-6

Assigned To: R. Brungardt
Operations Manager

Description:

The method used for validation and verification of complex emergency operating procedures did not require a plant walkdown to ensure that the procedures could be performed as written.

Root Cause:

The station did not have a procedure in place which required the performance of plant walkdowns for the purpose of verifying technical accuracy and usability of complex emergency procedures. Specifically, Procedure 0.4, Preparation, Review, and Approval of Procedures was deficient by failing to establish criteria and provide guidance for the performance of plant walkdowns.

Action Taken:

Plant walkdown verifications of all Emergency and Abnormal Procedures was performed during Fall/Winter 1991/1992.

The results of this review concluded that all existing Emergency and Abnormal Procedures could be performed as written. Also, CNS EOP and EOP Support Procedure Verifications were performed the first quarter of 1992, and it was determined that these procedures were technically accurate and able to be used effectively. Lastly, in June 1992, the EOPs underwent EOP simulator validation and it was concluded that the EOPs are usable by the operator under dynamic accident conditions.

In addition, CNS Management directed the review and revision of Procedure 0.4. The revision establishes responsibility for performing plant walkdowns, applicability criteria, and provides an acceptance criteria checklist with sign-offs for the performance of plant walkdowns. The walkdown criteria is applied to all procedures by the responsible Department Supervisor. The Walkdown Checklist provides acceptance criteria in question format for written correctness, technical accuracy, and personnel usability. This action will ensure that future revisions to all procedures can be performed as written.

The above actions ensure that current procedures and future revisions to these procedures are adequately reviewed for technical accuracy and operator usability.

Action Planned:

CNS Management will monitor the effectiveness of the actions taken above and ensure that the provisions of Procedure 0.4 are being properly implemented. As a part of their review of proposed procedure revisions, they will ensure that plant walkdown criteria is applied when appropriate, and walkdown acceptance criteria is met prior to their approval for implementation.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-6 (Continued)

Schedule:

The Management review of plant walkdowns is an integral part of the review and approval process of proposed procedure revisions, and as such is an ongoing responsibility with no defined schedule.

Adequacy of Results Achieved:

The enhancements to Procedure 0.4 and the Management review to confirm proper implementation of those provisions have ensured that proposed procedure revisions receive plant walkdowns as appropriate in order to provide for their technical accuracy, written correctness, and usability. The expected results will be improved personnel performance of complex procedures, and a reduction in performance miscues attributed to procedural deficiencies.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-7

Assigned To: R. Brungardt
Operations Manager

Description:

Safety evaluations for emergency procedures are being performed by the Operations Department in lieu of a multi-disciplined review.

Root Cause:

Procedural deficiencies. Procedure 0.22, Emergency Operating Procedure Maintenance Program, did not specify that a Radiological Department representative was to be a member of the EOP Maintenance Team. The CNS EOP Support Procedure Verification Instruction, specified by Procedure 0.22, did not provide requirements and instructions for Engineering and Radiological safety reviews of EOP Support Procedures.

Action Taken:

Procedure 0.22, Emergency Operating Procedure Maintenance Program (Rev. 4), was revised to add a Radiological Department representative to the EOP Maintenance Team. In addition, the CNS EOP Support Procedure Verification Instruction was revised to contain requirements and guidance for performance of safety reviews by both Engineering and Radiological Department personnel. The Engineering review addresses the use of EOP Plant Temporary Modifications and prioritization of various options within the procedures in terms of Engineering concerns. The Radiological review addresses procedural actions with regard to ALARA, shielding, and exposure concerns in light of potentially degraded plant conditions.

Action Planned:

A verification of EOP Support Procedures was recently completed using the guidance contained in the EOP Support Procedure Verification Instruction. The results of this Verification, and the need for any future revision of the EOP Support Procedures or the EOP Support Procedure Verification Instruction, will be discussed and documented at the next quarterly meeting of the EOP Maintenance Team. These actions are a direct result of the Action Taken items above. The implementation of multi-disciplined review is complete.

Schedule:

The requirement for additional revisions to the EOP Support Procedures or the EOP Support Procedure Verification Instruction will be determined at the next EOP Maintenance Team meeting. If additional revisions are deemed necessary, the completion date for this upgrade will be established by the team. Future multi-disciplined safety evaluations of emergency procedures will be performed as required by Procedure 0.22, EOP Maintenance Program.

Adequacy of Results Achieved:

The multi-disciplined safety review of emergency procedures, which is now required by the EOP Support Procedure Verification Instruction, has identified the potential need for additional changes to several EOP Support Procedures. These proposed changes will be discussed at the next quarterly meeting of the EOP Maintenance Team. The broad perspective of a multi-disciplined safety evaluation will continue to provide improved procedural guidance.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-8

Assigned To: R. Brungardt
Operations Manager

Description:

Independent valve verification is not adequately addressed by controlling procedures.

Root Cause:

Procedural deficiency; adequate guidance was not provided in Operations Department Policy Procedures to assure that Independent Verification would always be performed when required.

Action Taken:

An extensive review was performed of Procedure 2.0.1, Conduct Of Operations, Procedure 0.9, Clearance Orders and Caution Tags Orders, and Procedure 12.5, CNS Q. C. Functions. As a result of this review, it was determined that no policy guidance regarding independent verification existed in any of these procedures. Therefore, a Policy Statement was generated and added to Procedure 2.0.1.

Action Planned:

None; the above action taken provides adequate definition and direction for Independent Verification.

Schedule:

None.

Adequacy of Results Achieved:

The above actions appear to be adequate to clear up any misunderstandings or lack of guidance as to when and how Independent Verification is to be performed. There have not been any questions or missed verifications since taking the steps discussed above. CNS management will continue to monitor the effectiveness of this action.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: A-9

Assigned To: R. Brungardt
Operations Manager

Description:

Operators demonstrated some weaknesses in the use of procedures when, on four occasions, the operators failed to issue a temporary procedure change when a procedure error was identified. In lieu of having a procedure available, the operators relied on memory to perform an evolution.

Root Cause:

The root cause for the weaknesses in procedure usage is the failure to initiate temporary or permanent procedure changes when known procedural deficiencies existed. A contributing cause for one of the events was the failure to issue a change to a procedure affected by a design change.

Action Taken:

Actions taken to address the subject weaknesses include the initiation of temporary and permanent procedure changes for the identified items, Operations Supervisor discussions with each crew stressing procedural compliance and the issuance of a letter from the Division Manager of Nuclear Operations to all CNS personnel concerning the maintenance of the accuracy and adequacy of station procedures. In addition, Engineering reviewed all outstanding design changes to ensure that required procedure changes have been implemented. The review also verified that existing Engineering Procedures adequately identify, track and implement procedure changes required by design changes.

Action Planned:

Management will continue to monitor procedure usage and compliance and ensure expectations are conveyed through administrative procedures, correspondence and discussions with plant personnel. A quarterly evaluation of events resulting from inattention to detail is performed by CNS Managers on a rotating basis. This evaluation entails a review and analysis of Inspection Reports, NCRs, LERs, QA findings, etc., generated during the previous six months which identify personnel error as a causal factor.

Schedule:

Management will continue to monitor procedure usage and compliance. Evaluations of events resulting from inattention to detail are conducted quarterly.

Adequacy of Results Achieved:

A review of LERs since the latest of the four occasions referenced shows no subsequent instances of failure to issue a temporary procedure change when a procedure error was identified.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

RADIOLOGICAL EXECUTIVE SUMMARY

Currently, a management directed radiation protection self evaluation is underway. The scope of this self evaluation will include not only station management's areas of concern, but also all concerns addressed in the current SALP report, such as radiological protection program implementation during routine, day-to-day activities and peak work loads.

We are particularly concerned with the violations that occurred during the 1991 refueling outage that were related to the proper placement of dosimetry on some of our radiation workers. Accordingly, the NRC can be assured that Health Physics and ALARA staffing levels will be evaluated against peak outage work loads. In addition, the ongoing self evaluation is placing special emphasis in the areas of ALARA and special work permit procedural requirements as compared to the current industry standard for excellence. We are confident that staffing to peak outage work load conditions and the upgrade in ALARA and Health Physic procedural requirements will eliminate these situations.

We pride ourselves in our well-established reputation for good communications, coordination and work control in the Radiological Department and were concerned that a contributing cause to the refueling outage event was a weakness in these qualities. Accordingly, we have directed the adoption of a contract technician team concept, whereby a CNS technician will coordinate and overview an assigned group of contract technicians. This will improve communications to station supervision and management and will allow us to promptly deal with any potential problem areas.

In summary, we recognize that the functional area of Radiological Controls requires focused management to improve implementation of the radiological protection programs at Cooper Nuclear Station. We believe that the completed actions and future plans discussed in these contents reflect our commitment to continuous improvement in this area.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-1

Assigned To: J. V. Sayer
Radiological Manager

Description:

ALARA personnel did not spend sufficient time in the radiological controlled area to evaluate proposed work or to observe work in progress, and ALARA staff involvement in mockup training for maintenance jobs involving significant radiological control problems was limited.

Root Cause:

The size of the ALARA staff was marginal for refueling activities.

Action Taken:

A CNS ANSI qualified Health Physics Technician was assigned to augment the ALARA staff during the remainder of the 1991 CNS Refueling Outage.

A review of ALARA staffing is included in the CNS Radiation Protection Program self assessment currently being conducted.

Action Planned:

Future scheduled outage work scopes will be reviewed in detail to determine sufficient ALARA staffing requirements. 1990 and 1991 CNS Refueling Outage ALARA staffing and the results of the self assessment ALARA recommendations will be utilized as a basis for this determination. Staff augmentation will be used to obtain additional ALARA staffing commensurate with the outage work scope and self assessment recommendations.

Schedule:

ALARA staff augmentation will occur approximately two to eight weeks prior to the scheduled outage start date.

Adequacy of Results Achieved:

ALARA staff numbers will be periodically re-evaluated during the outage to determine staffing adequacy. The CNS post-outage critique process will be used to formally evaluate outage ALARA staffing adequacy.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-2

Assigned To: J. V. Sayer
Radiological Manager

Description:

Radiological personnel failed to locate monitoring dosimetry properly on radiation workers.

Root Cause:

The root cause of this concern is the failure to provide adequate in-situ evaluation of radiological controls and requirements. The initial dosimetry placement requirement for the job that precipitated this concern was based on observing the insulator craft personnel's positioning and proximity during the full scale mock-up, and the pre-job dose-rate gradients determined in the field. The insulator craft were subsequently replaced by pipefitter and sheetmetal workers who claimed to have positioned themselves such that an unmonitored part of the body could have received the major portion of the job-related exposure. The Contract Health Physics Technicians assigned to this job failed to recognize and/or correct the dosimeter placement error, and did not convey the workers' claims to Health Physics Supervision.

Action Taken:

Temporary Procedure Changes to Procedure 9.1.1.4, Special Work Permit, have been made to ensure that task specific multiple dosimetry and dosimetry placement requirements are adequately addressed and allow for special radiological considerations and updates. This ensures that the radiation protection technicians have the ability to review the radiation protection requirements, in place, and make modification and revisions as required. Procedure Change Notices for Procedures 9.1.1.3, Personnel Dosimeter Program, and 9.1.1.4, Special Work Permit, that address these concerns are currently undergoing Station Technical Review.

Action Planned:

Procedures 9.1.1.3 and 9.1.1.4 are scheduled for SORC approval prior to July 1, 1992. Following approval, training will be provided to Radiological Department and other key station personnel in these revised procedures. These changes will be incorporated into Health Physics Technical Training following SORC approval.

Schedule:

Full implementation of revised Procedure 9.1.1.4 is scheduled with SORC approval. The aforementioned training will be accomplished by August 1, 1992.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-2 (Continued)

Adequacy of Results Achieved:

Temporary procedure changes leading to the changes to Procedures 9.1.1.3 and 9.1.1.4 have been highly effective in providing task specific dosimeter placement requirements and have been highly effective in providing in-situ review and modification to in-progress radiation protection requirements. The full effectiveness of these procedural changes will be monitored during the 1993 refueling outage and, if necessary, additional procedural changes or guidance implemented.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-3

Assigned To: J. V. Sayer
Radiological Manager

Description:

Radiological personnel failed to specify multiple dosimetry on Special Work Permits during the outage.

Root Cause:

Inadequate procedure is the root cause of this concern, in that Procedure 9.1.1.4, Special Work Permit (SWP), did not require the update of the SWP form as the radiological conditions and monitoring requirements change. Additionally, SWP requirements were written in generic terms that did not provide adequate guidance in the use and placement of personnel dosimeters.

Action Taken:

Temporary Procedure Changes to Procedure 9.1.1.4 have been made to ensure that changing radiological conditions and monitoring requirements can be made to the SWP form in a timely manner, and that task specific multiple dosimetry and dosimetry placement requirements are adequately addressed. A Procedure Change Notice for Procedure 9.1.1.4 is currently undergoing Station Technical Review.

Action Planned:

Procedure 9.1.1.4 is expected to be SORC approved prior to July 1, 1992. Following approval, training will be provided to Radiological Department and other key station personnel in the use of the revised procedure and SWP form. These changes will be incorporated into General Orientation Training at the time of procedure approval.

Schedule:

Full implementation of revised Procedure 9.1.1.4 is scheduled with SORC approval. The aforementioned training will be accomplished by August 1, 1992.

Adequacy of Results Achieved:

Temporary procedure changes to Procedure 9.1.1.4 have eliminated this concern in that dosimeter assignment and placement have been made task specific, and in sufficient detail, to ensure that dosimetry requirements are addressed by radiation protection personnel during the preparation and implementation of the SWP. As stated above, permanent revision to this procedure is currently in the approval process.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-4

Assigned To: J. V. Seyer
Radiological Manager

Description:

Concerns were identified with the radiological programs and/or implementation activities when the Radiological Protection staff was stressed during the outage.

Root Cause:

Decreased communications and lack of sensitivity by contract Health Physics Technicians involvement in job coverage.

Action Taken:

The Division Manager of Nuclear Operations directed the Senior Manager of Operations and the Radiological Manager to conduct an evaluation of the CNS radiation protection program to determine whether significant communications, radiological controls, and radiological work coordination weaknesses exist in the program. This self evaluation is currently in progress and upgrades to the radiological program are being made.

Action Planned:

In future outages, teams of Contract Health Physics Technicians will be assigned to and will be directed by CNS Health Physics Technicians to cover long duration jobs or projects requiring significant radiological work control and coordination. Also, Radiological Coordinators between the craft contractor and the CNS Radiological Department will be assigned to work directly for the CNS Radiological Department. In the past these coordinators were directed by the craft contractor.

The team concept will ensure better continuity, responsibility, and accountability between Health Physics Technicians and Health Physics Supervisors.

Schedule:

The team concept is planned for the 1993 Refueling Outage.

Adequacy of Results Achieved:

The team concept practice worked well at CNS for the Reactor Recirculation Pump Upgrade and the Reactor Recirculation Pipe Replacement Projects and expectations are similar for the other outage projects. However, the effectiveness of these corrective actions will be monitored during the 1993 outage and, if necessary, further upgrades implemented.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B --a

Assigned To: J. V. Sayer
Radiological Manager

Description:

Radiological personnel failed to provide adequate posting of Hot Spots during the outage.

Root Cause:

Procedure deficiency and personnel error are the root causes of this concern, in that Hot Spot posting criteria was not adequately proceduralized and, although the criteria for Hot Spot posting is provided during initial training, technicians failed to ensure several areas were posted during the 1991 Refuel/Repair Outage.

Action Taken:

Following a survey of Hot Spot Posting and Tracking Programs within the Region IV Power Reactor Facilities, Hot Spot posting criteria has been improved and relocated to Procedure 9.1.2.2, Area Posting - Radiological. This procedure change ensures that technicians remain familiar with the Hot Spot Posting criteria, and emphasizes the importance as an informative radiological posting. Identification of Hot Spots is also being provided on applicable SWPs. Procedure 9.1.2.2 was SORC approved on May 7, 1992. Additionally, CNS continues to be aggressive in elimination of Hot Spots to maintain radiation exposures and general area dose-rates ALARA.

Action Planned:

Review Contract Health Physics Technician and CNS Health Physics Technician Training Programs to ensure appropriate emphasis is given to Hot Spot posting.

Schedule:

The aforementioned Training Program reviews will be completed prior to August 1992.

Adequacy of Results Achieved:

CNS is currently posting Hot Spots in accordance with station procedure. The effectiveness of the actions taken will be evaluated periodically by detailed review of radiological survey data forms and Health Physics Log Book entries.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-4-b

Assigned To: J. V. Sayer
Radiological Manager

Description:

Radiological personnel failed to provide adequate Real Time tracking of exposures during the outage.

Root Cause:

Craft personnel failed to record their radiation exposures on the correct Special Work Permit (SWP) due to SWP procedural deficiencies. As a result, several instances of inaccurate real time exposure tracking were noted during the outage.

Action Taken:

1. A detailed review of the recently revised SWP procedure is included in the CNS Radiation Protection Program self assessment currently being conducted.
2. Automated real time exposure tracking has been incorporated into the Radiological Support System upgrade.

Action Planned:

1. SWP recommendations resulting from the CNS Radiation Protection Program self assessment will be used as a basis for further revisions to the SWP procedure.
2. Development, testing and implementation of automated real time tracking of exposures will be in accordance with the Radiological System Design Document specifications and schedules.

Schedule:

The CNS Radiation Protection Program Self Assessment report is scheduled for issuance by August 1992. SWP recommendations from the report will be incorporated into the SWP procedure by October 31, 1992.

The Radiological Support System automated real time exposure tracking is scheduled for testing implementation by January 1993. Formal implementation will be made following a testing duration of sufficient length to verify accuracy and adequacy of the system.

Adequacy of Results Achieved:

Automated real time exposure tracking has been incorporated into the Radiological Support System Design Document. Development and site testing of automated real time exposure tracking will be completed prior to the 1993 CNS Refueling Outage in order to validate the adequacy of the tracking system.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-4-d

Assigned To: J. V. Sayer
Radiological Manager

Description:

Drywell contract radiological protection technicians and CNS radiological personnel did not adequately coordinate work activities during the outage.

Root Cause:

The lack of direct CNS Health Physics Technician involvement in some outage jobs requiring significant radiological work controls and coordination, and the apparent lack of sensitivity by some Contract Health Physics Technicians to workers' concerns and apprehensions during the 1991 Refuel/Repair Outage have been determined as the root cause of this concern.

Action Taken:

Sensitivity to workers' concerns and apprehensions was emphasized to all Contract and CNS Health Physics technicians following the 1991 Refuel/Repair Outage incident that raised this concern.

Action Planned:

CNS will assign CNS Health Physics personnel to coordinate radiological coverage for all projects where communication and radiological controls are critical, thus providing direct overview by the CNS staff. Teams of Contract Health Physics Technicians directed by CNS Technicians will be assembled to cover long duration jobs requiring significant radiological work controls and coordination. This teamwork concept will be utilized as opposed to the practice of assigning Health Physics Technicians on a day-to-day basis. CNS will also continue to emphasize the need to maintain sensitivity and the need to respond to worker concerns to Contract Health Physics Technicians.

Schedule:

Currently in practice.

Adequacy of Results Achieved:

During the current, ongoing Fuel Pool Cleanup Project, technician teams have been assigned to cover this project on a continuous basis. The crew is changed by 1 CNS technician each week. This allows for consistent job coverage and communications, yet allows relief from repetition. The Plant Health Physics Technicians that have been assigned direct overview and evaluation for this project to date report that this concept has been successful. This change in philosophy cannot be fully evaluated until the 1993 Refuel/Repair Outage.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-5

Assigned To: J. V. Sayer
Radiological Manager

Description:

Ineffective management oversight during high activity periods such as an outage.

Root Cause:

Through lack of communication by contract Health Physics Technicians and failure to assess current radiological conditions on Special Work Permits (SWPs), management was not appraised of the noted radiological problems.

Action Taken:

The Division Manager of Nuclear Operations, subsequent to the identification of these concerns, directed the Senior Manager of Operations and the Radiological Manager to conduct an evaluation of the CNS radiation protection program to determine whether significant communications, radiological controls, and radiological work coordination weaknesses exist in the program.

The four SWPs noted in Inspection Report Items 91-10-15, 91-10-29, 91-10-44, and 91-10-77 were immediately corrected. All remaining active SWPs were reviewed to ensure that dosimetry requirements were being accurately identified. No additional SWPs required revision.

Action Planned:

Teams of Contract Health Physics Technicians will be assigned to and will be directed by CNS Health Physics Technicians to cover long duration jobs or projects requiring significant radiological work control and coordination. Also, Radiological Coordinators between the craft contractor and the CNS Radiological Department will be assigned to work directly for the CNS Radiological Department. In the past these coordinators were directed by the craft contractor.

The team concept and Radiological Coordinators will improve communications to management to keep them better appraised of any radiological concerns. A significant restructuring of the SWP program is being conducted to provide specific job coverage requirements, personnel monitoring requirements, and protective equipment and clothing requirements. These upgrades should significantly enhance controls over radiological work activities conducted at CNS.

Schedule:

The team concept is planned for the 1993 Refueling Outage.

Restructuring the SWP program will be completed by July 1, 1992.

Training of Health Physics technicians to the new program will be completed by August 1, 1992.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-5 (Continued)

Adequacy of Results Achieved:

The team concept will ensure better continuity, responsibility, and accountability between Health Physics Technicians and Health Physics Supervisors. The team concept practice worked well at CNS for the Reactor Recirculation Pump Upgrade and the Reactor Recirculation Pipe Replacement Projects. This methodology will assure that communication of any radiological concerns is brought to management's attention in an expeditious manner and will provide for improved management oversight abilities.

A SWP program is presently being restructured to achieve the following objectives:

- Facilitate a means to effectively correct human factor weaknesses, by providing a timely means for updating changes to radiological conditions, dosimetry requirements, job coverage requirements, and personnel entry requirements posted on the SWP.
- Provide a means of identifying task specific radiological control requirements for multiple tasks occurring within the same job.
- Incorporate a section on the SWP to document special considerations.
- Eliminate the use of generic terms such as "as required" by providing a means for specific delineation of job coverage, personnel monitoring, and protective equipment and clothing requirements.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: 3-6

Assigned To: J. V. Sayer
Radiological Manager

Description:

Radiological Protection personnel resources are marginally adequate for outage control.

Root Cause:

Staffing in the Radiological Department during outages has historically been based on full work scope threshold requirements versus peak requirements. This has been highly successful in maintaining a motivated radiological production staff. Personnel shortages, although infrequent, have occurred during the peak outage schedule.

Action Taken:

A review of the 1991 outage reveals that Radiological Department staffing, the highest to-date at CNS, was adequate during the majority of the schedule. However, during peak schedule and stress periods a slight temporary shortage of radiation protection personnel may have existed.

Action Planned:

The 1993 outage work scope review for radiological staffing requirements will be upgraded. This review will take into account peak, as well as threshold, staffing requirements. Additionally, Radiological Department staffing throughout future outages will be monitored for changing conditions to maintain maximum productivity and to minimize stress on radiation protection personnel.

Schedule:

The Radiological Department Outage Staffing Plan will be developed by December 1992

Adequacy of Results Achieved:

The adequacy and effectiveness of Radiological Department outage staffing will be evaluated during the 1993 Refuel/Repair Outage.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: B-7

Assigned to: J. W. Eutton
Training Manager

Description:

A second instance was identified in the failure to conduct semi-annual training of chemistry technicians on CNS Post Accident Sampling Systems.

Root Cause:

The root cause was failure to document the lapsed requalification training and the circumstances surrounding the lapsed training. An individual no longer requiring Post Accident Sampling System Training was allowed to let his training lapse without the appropriate supporting documentation to justify this inaction.

Action Taken:

A revision to CNS procedure 0.17, Selection & Training of Station Personnel, was approved on November 29, 1990. This revision requires specific documentation of all job specific requalification training deletions for personnel and the circumstances surrounding the lapsed training. This documentation will be approved by the cognizant station Department Manager and forwarded to the Training Manager.

Action Planned:

No further action is planned.

Schedule:

Action has been implemented.

Adequacy of Results Achieved:

No further problems of the nature described have been experienced.

The effectiveness of this program upgrade will continue to be monitored.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: C-1

Assigned to: M. E. Unruh
Maintenance Manager

Description:

Adequate controls to address cleanliness and housekeeping requirements for safety related maintenance activities were not established.

Root Cause:

21 - Procedural deficiency: Nonexistent

Action Taken:

Maintenance Work Practice (MWP) No. 5.1.3, Foreign Material Exclusion and System Cleanliness, was developed in December 1990. This MWP provides guidance to craft personnel for actions to be taken whenever a system/component is open to the environment during plant maintenance activities.

Action Planned:

MWP 5.1.3 is currently being revised to further include guidance for cleanliness/foreign material exclusion when working on plant electrical components. Additionally, procedures from several other plants are being reviewed in order to identify applicable guidance and good practices that should be incorporated into existing maintenance practices at CNS. MWP 5.1.3 will be revised as necessary to include this additional guidance.

Schedule:

MWP 5.1.3 will be revised to include additional guidance determined to be required from the review of various cleanliness procedures obtained from other nuclear facilities by October 31, 1992.

Adequacy of Results Achieved:

The adequacy of maintenance practices in this area will be monitored through field observation of routine maintenance activities during operation, and of outage related maintenance activities during the 1993 refueling outage. Further guidance will be provided to the craft as found necessary through additional revisions to MWP 5.1.3, Foreign Material Exclusion and System Cleanliness.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: C-2

Assigned To: J. R. Flaherty
Engineering Manager

Description:

A minor weakness in the labeling of containment building penetrations was identified.

Root Cause:

During an NRC review of containment building penetration labeling it was found that, with certain exceptions, penetrations were not labeled at the location where the piping meets the containment wall. However, in these cases, the associated piping components are labeled. As discussed later, this methodology was found to be the preferred and most effective method of labeling. The root cause of this minor weakness appears to be inadequate communication, in that the advantages of the existing method were not adequately provided to the NRC inspector.

Action Taken:

Several methods of containment penetration labeling were evaluated. Because of the various configurations and associated accessibility limitations, labeling the penetrations where the piping meets the wall was determined to be unfeasible, and potentially confusing. The existing method of labeling associated piping components was determined to be the most effective of the available options. This method is particularly suitable to leak rate testing where it is important to verify that the correct valves are being tested. Furthermore, recent as-building efforts provide a high level of confidence in the existing labeling.

Action Planned:

An engineering evaluation will be conducted to verify that the existing labeling has historically provided an accurate means of containment penetration identification.

Schedule:

The engineering evaluation will be complete by August 1, 1992.

Adequacy of Results Achieved:

The evaluations conducted to-date have verified that the existing methods are preferred and contribute to a high level of confidence that leak rate testing is properly conducted. However, any upgrades to the existing identification system as a result of the engineering evaluation will be implemented.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: C-3

Assigned To: M. E. Unruh
Maintenance Manager

Description:

Several minor instances of inattention to detail (failure to follow procedure or seek clarification).

Root Cause:

Root cause for these occurrences is attributed to procedural deficiencies and personnel error.

Action Taken:

Several actions have been taken to minimize and preclude recurrence of these instances of inattention to detail. Examples are discussed with Maintenance Department personnel during tail-gate training sessions, through routing of NCR, LER and QA Audit Finding responses, and through Industry Events Training. Maintenance Department personnel are also encouraged to utilize the procedure feedback system as a means to correct Maintenance Procedures that require revision or clarification. In addition, Station Management conducts a quarterly review of events that are a result of inattention to detail or failure to follow procedures. This review is conducted by evaluating Inspection Reports, NCRs, LERs and QA findings which identify personnel error as a root cause.

Action Planned:

Quarterly evaluation of events resulting from inattention to detail will continue to be conducted. Also, a self-checking program will be initiated for all station personnel that conduct hands-on work.

Schedule:

The self checking program will be implemented by December 1992.

Adequacy of Results Achieved:

The quarterly evaluations of events resulting from inattention to detail to date have identified the fact that the number of events resulting from inattention has declined steadily since 1988 (37 in 1988, 25 in 1989, 23 in 1990, and 15 in 1991). However, these evaluations have determined that the lack of adequate self-checking is a major contributor to events of this nature. Therefore, the previously mentioned self-checking program will be developed and implemented by December 1992. The effectiveness of this upgrade will continue to be monitored by the quarterly evaluations and if necessary, further upgrades implemented.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: C-4

Assigned To: J. R. Flaherty
Engineering Manager

Description:

Controls for Leak Rate Testing and In-service Testing/Measuring Test Equipment (M&TE) were weak.

Root Cause:

With regard to leak rate testing M&TE, it was determined that although engineering personnel were using appropriate practices for control of M&TE, the procedures being used for control of this equipment required enhancement to better reflect these practices. With regard to In-service Testing (IST) M&TE, two of approximately 85 IST instruments were found to have not been formally included in the M&TE Calibration Program. However, these instruments were being calibrated properly. Furthermore, the responsible engineering personnel were not fully aware of the importance of including these rigorous practices in the appropriate procedures. Two root causes were therefore assigned: (1) procedure less than adequate, and (2) training less than adequate.

Action Taken:

An engineering review determined that the existing practices, if formalized, exceed the requirements of 10CFR50 Appendix J, ASME and the applicable CNS QA documents. Additionally, the responsible personnel were reminded of the need to ensure that procedures accurately demonstrate and control safety related practices.

Action Planned:

Procedures controlling leak rate testing will be enhanced to include more extensive controls for leak rate testing M&TE.

The two noted IST instruments will be formally incorporated into the M&TE Calibration Program.

Engineering personnel, even those not associated with IST or leak rate testing, will be refamiliarized with CNS calibration program requirements.

Schedule:

Procedures controlling leak rate testing equipment will be revised by October 1992. The two IST instruments will be incorporated into the formal calibration program by July 1992. Engineering personnel will be refamiliarized with calibration program requirements by July 1992.

Adequacy of Results Achieved:

The results of the engineering review confirmed that existing practices for control of leak rate testing and IST instrumentation provided adequate assurance that no safety concerns existed.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: C-5

Assigned To: R. Brungardt
Operations Manager

Description:

Two examples of missed surveillance testing.

Root Cause:

The root cause of the missed surveillances were a deficiency in the computer-based surveillance scheduling system and personnel error. The scheduling system did not continue to list a missed surveillance beyond the week in which it was scheduled. Additionally, a personnel error by the Surveillance Coordinator resulted in the surveillance test packages not being provided to the performing organization at the time the tests were scheduled.

Action Taken:

The computer-based surveillance scheduling system was modified so that surveillances are now included in the weekly schedule until they have been performed. In addition, the Surveillance Coordinator was counselled on the need for accurate scheduling of surveillance tests.

Action Planned:

No further action is planned.

Schedule:

No further action is planned.

Adequacy of Results Achieved:

No surveillance tests have been missed since July 1990. The effectiveness of this program upgrade will continue to be monitored.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: C-6

Assigned To: R. Brungardt
Operations Manager

Description:

Some examples of failure to follow procedures and inattention to detail (while performing surveillance testing, minor events occurred that were reportable).

Root Cause:

The root causes for the events that occurred are procedural deficiency and personnel error. Procedural ambiguity and failure of personnel to seek further clarification contributed to the events.

Action Taken:

Actions have been taken to ensure that events such as those described above are adequately addressed. Correct procedure performance has been emphasized through personnel counselling, routing of LERs, Industry Events Training and correspondence from the Division Manager of Nuclear Operations addressing the issues of complacency and maintaining a questioning attitude. Identified procedural deficiencies have been corrected by procedure revisions. The need to seek clarification has been addressed in an Instrumentation and Control Guideline for Procedure Performance and Review. This guideline also addresses self-checking, completion of steps before continuing, receipt of unexpected vs. expected response, and the need to initiate procedure revisions where further clarification is required. In addition, a quarterly evaluation of events resulting from inattention to detail or failure to follow procedure is performed by CNS Managers on a routine basis. This evaluation entails a review and analysis of Inspection Reports, NCRs, LERs, QA findings, etc., generated during the previous three months which identify personnel error as a causal factor.

Action Planned:

Quarterly evaluations of events resulting from inattention to detail will continue to be conducted. In addition, a self-checking program will be implemented for all groups within the station that conduct hands-on work.

Schedule:

Evaluations of events resulting from inattention to detail are conducted quarterly. A self-checking program for personnel that conduct hands-on work will be implemented by December 1992.

Adequacy of Results Achieved:

The most recent quarterly evaluation of events resulting from inattention to detail noted that the total number of events has continued its downward trend for the past four years. Events associated with a failure to follow procedure are also included in this evaluation. The total number of events in 1991 decreased by approximately 29% from 1990 and 60% from 1988.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

EMERGENCY PREPAREDNESS EXECUTIVE SUMMARY

The last SALP report characterized this functional area stating that NPPD's "emergency preparedness program continued to maintain a good level of operational readiness for responding to emergencies." Problems encountered during the SALP period were primarily the result of a particularly challenging 1991 emergency exercise scenario that stressed the ability of the emergency response organization (ERO) and the apparent weaknesses of operating crews in performing emergency classification, notification, dose assessment and protective action recommendations during Simulator walk-throughs. The weaknesses observed in the operating crews were the result of inadequate training for licensed operators in these areas.

The weaknesses identified during the last SALP period are being aggressively addressed. Control Room and TSC command and control functions were reviewed during a comprehensive self assessment and improvements have been and continue to be made in enhancing this function during regularly scheduled emergency drills. Effective TSC and CSC operations are also being addressed during these drills. The effectiveness of exercise control and exercise evaluation functions is expected to improve substantially with the implementation of new, comprehensive procedures for these activities. The abilities of our operating crews to perform emergency classification, notification, dose assessment and protective action recommendation functions have been upgraded through enhanced training in these areas, which have been formally included in the licensed operator requalification training program.

Additionally, since the close of the previous SALP period, the CNS Emergency Plan has been implemented for three actual Notification of Unusual Events due to plant operating considerations. These emergency declarations were effectively managed and the Emergency Plan was effectively implemented with appropriate classifications and notifications performed.

Finally, in a continuing effort to enhance the overall performance of this functional area, the Nuclear Power Group Manager has established an Emergency Preparedness Task Force to review the effectiveness of the NPPD ERO, command and control functions, EP training, call-in procedures, previous findings and program deficiencies, exercises and drills. The Task Force will complete its review and report its findings and recommendations in July 1992.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-1 Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

Weaknesses were identified that indicate minor programmatic concerns with regard to emergency preparedness.

Root Cause:

The 1991 emergency exercise was extremely challenging for the emergency response organization. As a result of the challenging nature of the exercise, new insights were discovered relative to the emergency preparedness program and potential program improvements.

Action Taken:

The specific weaknesses identified that indicated minor programmatic concerns have been addressed in responses to Inspection Reports 91-12 and 92-01. In addition an emergency preparedness task force has been formed to evaluate the overall effectiveness of our existing Emergency Plan, Implementation Procedures, and Emergency Response Organization and to recommend appropriate program improvements.

Action Planned:

The task force's recommendations will be evaluated for implementation in a further effort to increase the effectiveness and efficiency of the emergency preparedness program.

Schedule:

The task force is scheduled to publish its recommendations by July 1992.

Adequacy of Results Achieved:

Adequacy of the program improvements will be evaluated during the 1992 emergency exercise.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-2

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

Command and control were identified as being weak in the control room and in the technical support center after the emergency director had left the facility to go to the emergency operations facility.

Root Cause:

Command and control expectations were not clearly communicated to the control room and TSC organizations.

Action Taken:

Guidelines to clearly define the roles of Control Room personnel during emergency conditions were developed and promulgated. These guidelines address responsibilities for supervision, information focus and dissemination as well as overall operator conduct in the Control Room. EPIP 5.7.7 "Activation of TSC", and related procedures were reviewed and revised to address the specific examples of degradation in TSC performance stated in the weakness. In addition to the measures described above in response to this weakness, the District is conducting an in depth self assessment of Control Room and TSC response organizations, their command and control arrangements and the effective utilization of these organizations.

Action Planned:

The Emergency Preparedness training drills discussed in the response to exercise weakness 298/9112-01 will continue to be monitored to assure the effectiveness of both Control Room and TSC organizations.

The results of the command and control self assessment are being evaluated and factored into the Emergency Plan and EIPs to improve the overall performance of these facilities and the personnel assigned to them.

Schedule:

The drills will be completed by August 11, 1992. All applicable command and control recommendations resulting from the self assessment will be fully implemented prior to the 1992 Exercise except for the comprehensive Emergency Preparedness Job Task Analysis and related training program revisions, which will be completed by December 31, 1993.

Adequacy of Results Achieved:

Adequacy of program enhancements will be determined during the 1992 emergency exercise and additional improvements implemented as found necessary.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-3

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

A weakness was identified with technical assessments of accident conditions by the Technical Support Center during the 1991 exercise.

Root Cause:

The root causes for the weaknesses in technical assessments are:

- 1) A procedure for estimating core damage using methods other than post accident sampling results did not exist.
- 2) There was less than adequate communication between the TSC disciplines.
- 3) Procedures for repair/survey team reporting of plant radiological conditions to the TSC were less than adequate.
- 4) Human factors inhibited maintenance and communication of accurate system status.

Action Taken:

A method has been developed and proceduralized to estimate core damage using in-containment radiation monitors.

EPIP 5.7.7 "Activation of TSC" was revised to prompt the TSC Director to form a multi-discipline team, as required, to aid in assuring effective communication and technical assessment.

To provide more timely data relative to radiological conditions the HP technicians will report, by portable radio, to the TSC Chemistry Health Physics Coordinator significant radiation readings found during radiological surveys in the field.

To help focus assessment, and reduce errors in communicating system status, separate status boards for mechanical and electrical malfunctions have been established in the TSC.

Action Planned:

Enhanced TSC drills to emphasize technical assessment and the program enhancements have been scheduled for TSC staff members. These drills will include problems in core damage assessment, release path analysis, and timely communication of radiation survey results.

Schedule:

The TSC drills will be completed by August 11, 1992.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-3 (Continued)

Adequacy of Results Achieved:

Adequacy of results will be verified during the scheduled drills and the 1992 emergency exercise.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-4

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

A weakness was identified regarding poor coordination, control, and radiological practices of in-plant repair and survey teams deployed from the Operations Support Center.

Root Cause:

There was less than adequate procedural guidance for team dispatch, control, and safety.

Action Taken:

EPIP 5.7.15 "Rescue and Reentry", has been revised to implement a new mechanism for team tracking and control in order to enhance the coordination and control of in-plant repair and survey teams. The procedure revision also included assignment of responsibility for team safety and for required notification to the repair/survey teams of significant changes in plant conditions.

Action Planned:

The improvements contained in the above procedure change will be demonstrated during scheduled TSC drills.

Schedule:

The TSC drills will be completed by August 11, 1992.

Adequacy of Results Achieved:

Adequacy of results will be verified during the scheduled drills and the 1992 emergency exercise.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-5

Assigned To: J. V. Sayer
Radiological Manager

Description:

A weakness in the emergency operations facility was identified in the assessment of offsite radiological consequences of the release due to a failure to recognize that the release was unfiltered.

Root Cause:

Lack of attention to detail due to rapidly developing scenario events and conflicting plant system information.

Action Taken:

1. EPIP 5.7.17, Dose Assessment, and EPIP 5.7.7, Activation of TSC, have been revised to ensure that EOF decision makers correctly assess the status of the radiological release pathway through the Standby Gas Treatment System.
2. An Emergency Preparedness Task Force has been organized to perform a self assessment, and among its assigned areas to evaluate are:
 - a. The effectiveness of the ERO organization based upon today's standards (INPO/NRC).
 - b. Command and control of the ERO.
 - c. Training effectiveness and efficiency.
 - d. Previous NRC, INPO, and exercise findings.

Action Planned:

1. The revisions to EPIP 5.7.17 and 5.7.7 will be evaluated and critiqued during EP drills conducted in 1992.
2. The Emergency Preparedness Task Force final report is scheduled for issuance in July 1992. Any dose assessment recommendations resulting from this report will be used as a basis for further revisions to EPIP 5.7.17 and 5.7.7.

Schedule:

1. EPIP 5.7.17 and 5.7.7 were revised February 27, 1992. EP drills and exercises are periodically scheduled from May through September 1992.
2. The Emergency Preparedness Task Force final report recommendations will be prioritized and scheduled following the report's issuance in July 1992.

Adequacy of Results Achieved:

1. In-house critiques of the revisions made to EPIP 5.7.17 and 5.7.7 are being conducted during EP drills held in 1992 to determine effectiveness. Critique observations will be used as a basis for any further necessary revisions to EPIP 5.7.17 and 5.7.7.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-5 (Continued)

2. The Emergency Preparedness Task Force will continue to review the adequacy of the revisions made to EPIP 5.7.17 and 5.7.7 during drills and the 1992 emergency exercise to determine if further revisions are warranted.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-6

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

Several problems were noted with the preparation for the 1991 emergency exercise.

Root Cause:

There was less than adequate procedural guidance for exercise preparation and control.

Action Taken:

To strengthen the controller/exercise preparation, a specific procedure for controlling emergency preparedness exercises and drills was developed. This procedure addresses the functions of exercise control, the controller organization, and ensures that an adequate number of controllers will be available. It includes the limits on allowed simulation, controller scenario authority, appropriate responses to unanticipated scenario events, and a means to document controller actions when the scenario deviates from the planned scenario events. The procedure contains a section that includes the analysis of controller staffing, guidelines for simulation, and specifics on simulation.

Action Planned:

Training for exercise controllers on the improved procedure is scheduled to be completed prior to the 1992 exercise.

Schedule:

The procedure will be used throughout the course of 1992 exercise development and implementation cycle. Training for the controllers is scheduled for completion by September 15, 1992.

Adequacy of Results Achieved:

Adequacy of results will be verified during the 1992 emergency exercise.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-7

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

The 1991 Emergency Exercise self-critique process was weak in that it failed to identify several areas in need of corrective action.

Root Cause:

The root cause was determined to be less than adequate guidance in evaluating exercise performance.

Action Taken:

An exercise/drill evaluation procedure has been developed for evaluating exercise performance, based on the NRC Inspection Procedure 82-301, "Evaluation of Exercises for Power Reactors".

Action Planned:

An evaluator organization, separate from the controller organization, will be established with responsibilities for exercise evaluation only. It is expected that this arrangement will provide a more independent review of emergency response organization performance and enhance the objectivity and effectiveness of the post exercise critique.

Schedule:

The separate controller and evaluator organizations will be implemented prior to the 1992 evaluated exercise currently scheduled for September 22, 1992.

Adequacy of Results Achieved:

Adequacy of results will be verified during the 1992 emergency exercise.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-8

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

Walkthroughs with control room operators in January 1992 by NRC personnel identified weaknesses in the areas of emergency classification, notification messages, dose assessment and formulation of protective action recommendations.

Root Cause:

The root cause of the classification weakness was determined to be less than adequate training in EALs under dynamic conditions.

The root causes of the notification weaknesses were determined to be a procedure inadequacy and an incorrect task assignment.

The root causes of the dose assessment weaknesses were determined to be a procedure inadequacy; no procedural cues were available to guide operators with respect to core degraded or not degraded, and human miscue; and, the operator was aware that the core was degraded yet made an incorrect entry into the dose assessment program.

The root causes of the protective action weaknesses were determined to be a procedure inadequacy, the automatic Protective Action Recommendation for General Emergency was not specified as an immediate action, and human miscue, evacuating upwind sectors.

Action Taken:

Immediate corrective actions involved retraining the three operating crews observed by the NRC on the same scenario used during the inspection. The crews were also reevaluated, using the same format as NRC Inspection Module 82206, on a scenario similar to the one used in the original inspection. The immediate retraining and reevaluation of these crews were completed January 11-12, 1992, for the three operating crews that were evaluated during the inspection. Retraining and evaluation for the remaining three operating crews were completed prior to their resumption of shift duties. The completion date was January 17, 1992. Following completion of the above immediate corrective actions, enhanced dynamic simulator emergency response training for operating crews was implemented in the licensed operator requalification training program. All crews have currently received at least one cycle of this enhanced training.

EPIP 5.7.6 "Notification" was revised to streamline the notification form and to reassign responsibilities for completing the form. The responsibility to complete the form is now assigned to the Shift Communicator. The Emergency Director will be responsible for review and signature of the form.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: D-8 (Continued)

EPIP 5.7.17 "Dose Assessment" was revised to provide specific cues for the "Core degraded" entry into the dose assessment program.

EPIP 5.7.5 "General Emergency" was revised to make the automatic baseline General Emergency PAR an immediate operator action.

Action Planned:

The Nebraska Public Power District plans to continue the dynamic simulator emergency response training as part of the licensed operator requalification training program. The emergency plan training has been incorporated into simulator training at a minimum frequency of six cycles per two year requalification period.

Schedule:

The corrective actions described that pertain to procedure revisions are complete. The corrective actions pertaining to operator training are included on a continuing basis in the licensed operator requalification training program.

Adequacy of Results Achieved:

The adequacy of the results will be verified by the evaluation of the operating crew's performance in the simulator and future emergency exercise drills and exercises.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

ENGINEERING/TECHNICAL SUPPORT
EXECUTIVE SUMMARY

The last SALP report characterized this functional area stating, "overall, the performance in this functional area was good . . . Ongoing concerns were identified with the licensed operator training program. It did not appear that management had adequately addressed the concerns identified during previous assessment periods."

Aggressive NPPD actions were taken with regard to the licensed operator training concerns expressed. Aggressive action continues. These actions include steps to enhance the interface between licensed operators and training personnel, strengthened evaluation and self assessment of training by line management, enhancement of training materials, enhancement of instructional techniques and effectiveness, and upgrade of operator emergency training. Additionally, a high priority has been placed on actions to assure Simulator fidelity. These efforts from initial evaluation are having the desired effect. Licensed Operator performance as observed in emergency drills has improved and three license candidates were recently successful in their license examinations.

Beyond licensed operator training, significant steps have been taken to enhance the overall training of NPPD's nuclear staff. These steps include training NPPD corporate design engineers to the same tech staff program standards as site engineers, rotation of plant personnel to training as instructors, conduct of in depth training for Quality Assurance personnel and specialized training for NPPD craft supervisory personnel as well as numerous other initiatives, all of which are being undertaken at the direction and oversight of a committed and involved nuclear management team.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: F-1

Assigned To: R. Brungardt
Operations Manager

Description:

Licensed Operator Training continues to need management attention and priority.

Root Cause:

Insufficient procedural guidance, weakness in the standards for operating crew command, control, and communications, and failure to convey operating philosophies resulted in operator training performance below management expectations.

Action Taken:

A root cause analysis was conducted of the performance difficulties observed during operator license examinations. This analysis and subsequent training evaluations identified several areas that require management attention.

Abnormal and emergency operating procedures were walked down to ensure that procedures can be performed as written. Accordingly, procedures associated with the reactor recirculation system and the AC and DC distribution systems were revised to provide more specific guidance.

Visits to other operating nuclear plants have been conducted by Operations Management and Supervision for the purpose of learning from industry experience in the areas of communications and command and control.

Expanded guidance on operating philosophy has been provided through enhanced written policies. Operations Instructions on Control Room Conduct and Operator Conduct During Training were revised to better convey Operations Management's expectations.

Operations Management currently performs weekly evaluations of operating crews during requalification training and periodic evaluations during hot license training. Operations Management ensures that expected standards of crew performance are maintained by making the final pass/fail decision. Management involvement in the evaluation and subsequent critique conveys Operations ownership of operator performance.

In addition to the weekly and periodic simulator evaluations performed, the Operations Manager and Operations Supervisor also observe a training session in one of the accredited Operations Training Programs each month. This requirement was promulgated per a recently issued CNS Policy Directive for the purpose of improving training feedback and monitoring.

1992 CALP ACTION PLAN FOR
JOOPER NUCLEAR STATION

Item No: R-1 (Continued)

Action Taken: (Continued)

As an overview of the training function, Training Effectiveness Review Committees (TERCs) have been established. An Operations TERC, consisting of Operations and Training supervisory personnel, meets quarterly to assess training effectiveness of operations personnel. A Management TERC, consisting of the Division Manager of Nuclear Operations, CNS Managers, Senior Managers and the Training Manager meets semi-annually to assess training effectiveness on a plant wide basis.

Periodic Operations line management/Shift Supervisor breakfasts have also served as an excellent forum to convey management philosophy and concerns and to solicit feedback. Examples of recent topics include the STA's role during emergency conditions, the Shift Supervisor's responsibility for operators in training, simulator performance weaknesses, the operations communications instruction, and command and control.

Action Planned:

To further ensure that expected standards of performance are adequately conveyed, a new policy on control room command and control will be issued and the current operations communication instruction will be revised.

Operator training will continue to receive management attention through simulator evaluations, training observations, and Training Effectiveness Review Committees. Weakness identified will be pursued through resolution.

Schedule:

A new policy on crew command and control will be issued and a revision to the current operations communication instruction will be completed by September 1992. Other forms of Management attention to Licensed Operator Training, as described above, are an ongoing process.

Adequacy of Results Achieved:

As a result of the most recent NRC administered exams, three licenses were issued and two requalification reexamines passed. There were no examination failures and no generic weaknesses or findings were observed. Continued evaluation and feedback from the program enhancement described will be used to monitor effectiveness of the actions taken.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: F-2 Assigned To: R. E. Wilbur
Division Manager of Nuclear
Engineering & Construction

Description:

Weaknesses were noted in the Design Change Program relative to safety evaluations and a lack of documentation to verify the environmental qualification of replacement conduit seal assemblies.

Root Cause:

The Safety Evaluation for DC 90-275 did not contain sufficient detail to assure the NRC Inspector that this change was not an unreviewed safety question. During NRC Inspection 91-23, the NRC Inspector performed a review of DC 90-275 and its Safety Evaluation. The inspector was of the opinion that the addition of a relay in the Diesel Generator starting circuit caused an increase in the probability of a malfunction of equipment and, therefore, was an unreviewed safety question requiring prior NRC approval. This was documented as open item 91-23-02.

Action Taken:

At the time of the inspection, DC 90-275 had been implemented for one Diesel Generator. Pending further review by and discussions with the NRC, NPPD decided to write a DC Amendment to restore the modified starting circuit to its original condition and cancel modification of the other DG's starting circuit.

After Inspection Report 91-23 was issued, extensive discussions were held between NRC Region IV Staff, NRR Staff, and NPPD concerning the modification and its safety impact. Based on the guidance provided by NSAC 125 and additional details provided to the NRC about the modification, it was agreed by the NRC and NPPD that the modification would not cause an unreviewed safety question.

The safety evaluation for DC 9-275, at Senior Management's direction, has been reviewed and revised to include additional detail to further justify that the change does not present an unreviewed safety question.

Action Planned:

The revised safety evaluation is scheduled for SORC review in July, 1992.

DC 90-275A will be implemented during the 1993 Refueling Outage.

Schedule:

SORC review of DC 90-275A is scheduled to be completed in July 1992 and implementation of the DC is planned during the 1993 Refueling Outage.

Adequacy of Results Achieved:

Open Item 91-23-02 has been closed.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: F-3

Assigned To: R. E. Wilbur
Division Manager of Nuclear
Engineering & Construction

Description:

The NRC conducted an Electrical Distribution System Functional Inspection. The inspection report indicated that "program weaknesses involving inappropriate design inputs used in engineering calculations in both the electrical and mechanical areas were identified. Most of the design calculation problems were considered to be minor and did not affect the validity of the calculation."

Root Cause:

Lack of readily accessible design basis documentation for use by the design engineers. Due to the age of the plant, many of the original design calculations and their supporting information is not available.

Action Taken:

The discrepancies found by the EDSFI inspection team were addressed by the Licensee. Additional calculations and analyses were performed to show that the system's performance was acceptable. A detailed review of the EDSFI inspection report was made to identify all concerns by the NRC inspectors and any calculations that needed further attention. Identified items were listed on the Nuclear Power Group Action Item Tracking System; action has been assigned and each item is tracked to completion.

Action Planned:

In addition to the upgrade of specific calculations, the Design Criteria Document for the Electrical System is scheduled to be generated in 1992 by the Design Basis group.

Schedule:

Items still remaining open on the EDSFI inspection have specific completion dates assigned based upon priority. The longest lead time item is the purchase of the electrical system software program DAPPER which will be used to model the CNS electrical systems. This program is scheduled to be in place by December 1992. It will then be verified and validated for essential application by a consultant.

In addition, work on the Electrical System Design Criteria Document is scheduled to start in June 1992 and be completed by December 1992.

Adequacy of Results Achieved:

The EDSFI inspection has shown that the electrical design of CNS is adequate. The identified deficiencies in the calculations to substantiate this are being completed in a prioritized fashion. The generation of the Electrical System Design Criteria Document will further enhance the design engineers' ability to retrieve the required data in a timely fashion.

1992 SALP ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: F-4 Assigned To: R. E. Wilbur
Division Manager of Nuclear
Engineering & Construction

Description:

Omission of water hammer considerations in design calculations of the Service Water (SW) System was considered significant.

Root Cause:

A water hammer analysis of Service Water Systems was apparently not completed at the time CNS was designed/constructed. Studies performed after CNS was licensed indicated a water hammer event could occur in a low energy system such as service water. Later editions of the CNS Piping Design Code (B31.1) specifically called out water hammer as part of the design analysis. A water hammer analysis of the Service Water System was apparently not a licensing requirement for CNS and, therefore, was not performed or recognized as being required by engineering.

Action Taken:

A thermal-hydraulic analysis of the SW System was completed and provided forcing functions suitable for a time-history ADLPIPE Analysis. The ADLPIPE Analysis was performed in-house and verified the SW System would remain operable after a worst-case water hammer event. In addition, Design Change Procedure 3.4.2 has been revised to ensure any future changes to the SW system do not adversely impact the water hammer analysis.

Action Planned:

No modifications to the service water system are required. Other essential cooling water systems were evaluated and are not considered susceptible to a water hammer event. These systems are closed loop systems that are kept full of water and do not drain due to a pump trip/loss of offsite power.

Schedule:

An NRC commitment to complete the analysis by May 1, 1992, has been met.

Adequacy of Results Achieved:

The CNS Service Water System Water Hammer Study has shown the system will remain operable after a worst case event (i.e., four pumps running at design flow, one RHR Hx in service, Low river level). All piping and supports are capable of withstanding the event. Therefore, the current SW System configuration is adequate and no modifications are anticipated at this time.

Changes made to the Design Input Guide (Procedure 3.4.2) are considered adequate to keep the analysis current and ensure future modifications do not adversely affect the results of the water hammer study.

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COOPER NUCLEAR STATION

Item No: F-5

Assigned To: R. Brungardt
Operations Manager

Description:

Problems associated with post maintenance testing of RWCU System were noted.

Root Cause:

Procedures less than adequate. While lining up to perform post-maintenance testing, insufficient throttling of the filter/demineralizer bypass valve allowed flow from both RWCU pumps to exceed the setpoint of the RWCU high flow isolation switch. The cause of the insufficient throttling of the bypass valve was the lack of procedural guidance under these system operating conditions.

Action Taken:

System Operating Procedure 2.2.66 "Reactor Water Cleanup" has been revised to require use of local rack mounted system flow indication when starting a second RWCU pump with RWCU filters not in service. Guidance is provided which specifies the maximum system flow allowable prior to starting a second pump. In addition, the procedure also specifies that if both filters are in service, one filter must be removed from service before a second RWCU pump may be started.

Action Planned:

The above actions provide assurance that no further RWCU high flow isolations will occur due to performance of similar post maintenance testing. However, the CNS Technical Staff will monitor and track any NCRs generated due to any other unidentified RWCU procedural deficiencies.

Schedule:

Normal station operations and corrective action programs will provide continuous monitoring of RWCU system performance and the implementation and tracking of any necessary corrective measures.

Adequacy of Results Achieved:

No unplanned RWCU system isolations have occurred as a result of high flow conditions since the approval of the revision to the System Operating Procedure on March 19, 1992.

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COOPER NUCLEAR STATION

Item No: F-6

Assigned To: J. R. Flaherty
Engineering Manager

Description:

One instance of failure to document resolution of a test discrepancy by a system engineer was identified.

Root Cause:

This weakness became evident when an observed reading of a non-acceptance criteria parameter was outside the range specified in a surveillance procedure. The system engineer, present during the test, evaluated the reading and determined that associated equipment was not adversely affected. He informed the operating crew accordingly. The engineer then confirmed his evaluation with the vendor. Although the engineer's actions demonstrated aggressive technical involvement in the surveillance testing program, the engineer neglected to document his resolution on the procedure.

A multi-departmental task force was conducted to determine the root cause and appropriate corrective actions. The evaluation determined that existing procedural guidance neither required nor assigned responsibility for documentation of resolutions to discrepancies that did not adversely affect equipment operability, even though these resolutions were routinely being performed. This resulted in inconsistent documentation of said resolutions.

Actions Taken:

The station procedure that overviews the CNS surveillance program was enhanced by revising sections specifying the responsibility for, and mechanism of, resolving discrepancies. Included in these responsibilities are those of the System Engineer and the Surveillance Coordinator. A form has been included which documents the identification and resolution of all discrepancies.

Furthermore, the importance of documenting resolutions to surveillance procedure discrepancies was reiterated to the responsible engineering personnel.

Action Planned:

Additional enhancements to surveillance procedures are continuing as part of an ongoing program to maximize the clarity and effectiveness of these procedures. Steps that require data collection are being revised to differentiate between criteria that demonstrates operability and data used for other purposes, such as performance trending.

Schedule:

Completion of the surveillance program procedure enhancement (approximately 180 procedures are scheduled for enhancement) is scheduled for December 1992.

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COOPER NUCLEAR STATION

Item No: F-6 (Continued)

Adequacy of Results Achieved:

Revision of the surveillance program overview procedure has greatly improved the consistency and timeliness with which resolutions to discrepancies are evaluated and documented. The effectiveness of this program enhancement will continue to be monitored.

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COOPER NUCLEAR STATION

Item No: F-7 Assigned to: J. W. Dutton
Training Manager

Description:

Interviews with operators gave some indication that operators' observations and feedback in the Training Department were not being considered.

Root Cause:

The comment appears to be developed from Inspection Report 50-298/91-16. This inspection involved an in-depth look at the Licensed Operator Requalification program and the Electrical Maintenance training program. The comment appears to have been generated from opinions expressed by operators (IR 91-16, page 10, second paragraph.) This information was provided in the inspection report as a symptomatic example of a perceived communication problem. This same inspection report indicated that some evidence which was in direct opposition to the operators comments had been found (IR 91-16, page 10, fourth paragraph.)

Action Taken:

Although the stated concern is misleading, several initiatives have been established to enhance communication between the operators and the Training Department:

A Friday "de-brief" between the Lead Licensed Instructor for the Requalification program and the Shift Supervisor of the Regual Crew has been established. The intent is to discuss training needs for the crew and individuals on the crew, and determine future training focus for the crew.

A major undertaking to gain insight into operator ideas on how to improve the Requalification program was also begun in January 1992. This effort included a survey of all licensed personnel followed by meetings with each crew. Numerous program enhancements and innovations were identified through this process. The results of this effort are under review by Training and Operations management. Substantial improvements in the Rsqualification program are expected to result.

In addition, a new CNS Directive has been written which requires increased monitoring of training activities by both Management and Supervision.

Action Planned:

Complete the effort to gain insight into operator ideas on how to improve the Requalification Program.

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Item No: F-7 (Continued)

Schedule:

Complete identification of ways to improve the program by September 1, 1992.

Adequacy of Results Achieved:

Communications between operations and training personnel have been strengthened by the measures taken. Additional improvement will be closely monitored in the future through Operations/Training Coordination meetings, Training Effectiveness Review Committee and Management Training Effectiveness Review Committee meetings and Supervision/Management attendance of the training programs.

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COOPER NUCLEAR STATION

Item No: F-8

Assigned to: J. W. Dutton
Training Manager

Description:

Many of the initiatives for improving the Operator Training Program are overdue. The first revision to the job task analysis was not initiated until after June 1991. This delay contributed to a prolonged period of poor learning objectives, inadequate lesson plans, and a poorly defined training cycle content.

Root Cause:

This comment appears to have originated from IR 91-16. However, the SALP report comments are somewhat misleading as to the status of the first revision to the job task analysis.

The Operator analysis actually began in January of 1990, with a job survey to determine the site specific task list. This project was initiated as an augmentation to the INPO analysis. The site-specific task list (Revision 0) was approved on 5/15/90. Analysis of these tasks was begun, and continues today as new tasks are identified. The analysis of the task inventory identified on 5/15/90 was completed on 4/15/91. The verification process to validate this analysis began in May of 1991, and is continuing. This validation process is very time consuming and would be better performed by NPPD personnel, and consequently is a slow process. The final result of the validation will be tasks linked to objectives in the training materials.

The overall goal of the JTA project was to verify that the training in this area is effective. Current training is being conducted based upon the requirements of the NRC, as interpreted by the K&A catalog and the NRC Examiners Standard. We believe, however, that we may be over-training in some topics and under training in others, but cannot demonstrate this until the project is completed and the analysis is evident. The current training cycle content is well defined and, as discussed previously, conforms to NRC and INPO standards.

Inspection Report 91-16 stated, in paragraph 1 of section 2.2.2 (page 6) that "Learning objectives were generally well constructed. Conditions and standards were generally implied in those cases where they were not stated." The report goes on to state that, as previously discussed, the objectives were not linked to tasks, with the exception of simulator exercises and JPMS. These training elements were linked to tasks; the linkage missing is in the classroom settings.

Although objectives exist for all lesson plans, objectives for the classroom lessons have not all been demonstrated to pertain to tasks from the site-specific task list. This effort is in progress and will be expedited.

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COOPER NUCLEAR STATION

Item No: F-8 (Continued)

Action Taken:

The job task analysis is in progress and will link tasks to objectives in the training materials. It is expected that this extensive effort will provide for a more efficient and effective operations training program.

Action Planned:

Complete the job task analysis validation.

Schedule:

JTA validation is scheduled for completion in March 1993.

Adequacy of Results Achieved:

The adequacy of results will be determined based on enhanced, continuing overview provided by plant and training management, instructors, and students through the training evaluation process, and continued overview by INPO and NRC inspections.

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Item No: F-9-a (Continued)

- Established Lead Licensed Operations Instructor positions to provide career progression, and increased supervisory overview of training activities.
- Established SRO certification program and accompanying bonus to provide better utilization of instructors.
- Dropped excess SRO/RO licenses to allocate training resources more effectively.
- Management support for high priority improvement of simulator fidelity and use of the simulator as a training tool.
- Enhanced post-critique methods resulting in a more effective tool to improve operator performance.
- Weekly meetings between each crew Shift Supervisor and the Training Department Lead Requal Instructor have been implemented to discuss the crew's performance, training feedback and future training needs.
- Established policy to increase line management observation/overview of the Training Programs and provide feedback to the TERC committees for evaluation and improvement of training.

Action Planned:

Plans are to continue with existing process of oversight and efforts to improve Licensed Operator Training and to upgrade the program appropriately. In addition, installation of an audio-visual system in the Simulator is planned to improve training feedback to operators.

Schedule:

Continuing.

Adequacy of Results Achieved:

The most recent operator licensing examination resulted in all applicants (1 SRO, 2 ROs) passing the exam. Future results will continue to be closely monitored through the increased monitoring of training activities by station management and supervisory personnel.

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Item No: F-10-a

Assigned To:

R. E. Wilbur
Division Manager of Nuclear
Engineering & Construction

Description:

An RWCU System actuation occurred during the implementation of a design change because the design engineer failed to consider the impact of lifting leads.

Root Cause:

1. Incorrect procedure information.
2. Inadequate design review.

Action Taken:

1. The design engineer immediately reviewed the design change for similar situations and addressed them where applicable. There were no subsequent occurrences of this problem as a result of this review.
2. Industry Events Training on this subject was provided to design and system engineers.
3. The DC Writers Guide has been updated to address working in sensitive areas.

Action Planned:

All planned actions have been completed as indicated in the above "Action Item" section. These actions will aid in precluding similar situations from occurring in the future.

Schedule:

Complete.

Adequacy of Results Achieved:

Results of the effectiveness of the actions taken will be monitored in future modifications.

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Item No: F-10-b

Assigned To: R. E. Wilbur
Division Manager of Nuclear
Engineering & Construction

Description:

Inadequate assessment of the implementation of a design change package and working in sensitive areas resulted in RWCU System actuation.

Root Cause:

1. Standards, policies and controls less than adequate.
2. Procedure not followed.

Action Taken:

1. The subject DC (87-015MF), along with other 1991 Outage DCs involving work in sensitive areas, had additional reviews performed by senior staff engineering to identify other potential sensitive areas. Where able, circuits were de-energized to further reduce the risk factor.
2. OSC #28 to DC 87-015MF was written to provide additional guidelines while performing electrical tasks around energized circuits.
3. All Craft personnel involved in the project were assembled and addressed regarding the importance of following procedures.
4. Prior to beginning work on the remaining work packages in the subject DC, Craft were required to walk the package down and review the package for points of confusion or discrepancies and notify their field coordinator if necessary.
5. The Design Change Writers Guide has been updated to address working in sensitive areas.
6. Industry Event Training on this subject was provided to design and system engineers.

Action Planned:

Attention to detail discussions stressing the importance of understanding the procedures, following procedures and cautions of working in sensitive areas will be conducted with craft personnel before starting modification jobs.

Schedule:

Complete.

Adequacy of Results Achieved:

The long term results of the effectiveness of these program enhancements will continue to be closely monitored.

1992 SALF ACTION PLAN FOR
COOPER NUCLEAR STATION

Item No: F-10-c

Assigned To: R. E. Wilbur
Division Manager of Nuclear
Engineering & Construction

Description:

Several incidents indicated inherent design problems in the RWCU System.

Root Cause:

A 3/4" subcooling line was installed to eliminate flashing in the pump suction piping, which damages the pumps and causes a Group III isolation due to apparent high flow at the excess flow element. A manual globe valve (RWCU-V-395) was installed for flow control and shutoff and a check valve (RWCU-CV-17CV) was installed to prevent backflow.

The root cause is failure to anticipate all system operating modes when designing the RWCU subcooling line per DC 89-256. The small differential pressure across the RWCU subcooling line check valve when the RWCU pumps are secured was not considered during the design process. This allowed hot water to backflow through the check valve which causes a RWCU high temperature isolation of the Primary Containment Group III valves due to the physical arrangement of the temperature element. The metal seat piston type lift check valve that was installed requires a much higher differential pressure (500 psi) to obtain a leak tight shutoff.

Action Taken:

A procedure change is in routing for approval and, when implemented, will require that the RWCU subcooling line isolation valve (RWCU-V-395) be closed except when RWCU pump(s) are in operation during reactor cooldown. Also, the design change process procedural requirements were revised to require a detailed statement of all anticipated modes of operation during the conceptual design phase. This information will be taken into account prior to purchasing materials to avoid this type of situation in the future.

Action Planned:

EWR 91-132 was generated to enhance the RWCU subcooling. The EWR proposes, in part, that an air-operated valve be installed to automatically isolate the RWCU subcooling line when the RWCU pumps are secured.

Schedule:

EWR 91-132 is currently scheduled for the 1994 Refueling Outage.

Adequacy of Results Achieved:

The design change process revision to verify all modes of plant operation during the design phase is in effect and will be used for generation of design changes scheduled for the 1993 Outage.

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SAFETY ASSESSMENT/QUALITY VERIFICATION
EXECUTIVE SUMMARY

The last SALP report characterized this functional area stating that "licensee management provided good assurance of quality. A significant issue involving a relatively high threshold for items to be documented by a nonconformance report was identified which indicated management has not always been proactive in identifying potential safety issues. Management assurance of quality in the area of licensed operator training, radiological controls and licensed operator performance on the simulator were identified as weaknesses."

NPPD has taken several steps to address the concerns expressed in this functional area, and improvement continues. A lower threshold deficiency reporting system is under development which will further ensure we capture items of potential safety significance. An aggressive Operations Training program has been initiated for Quality Assurance personnel and a plant radiological technician has been rotated to the CNS Quality Assurance Department. These measures are expected to strengthen the ability of Quality Assurance personnel to effectively audit the operations, operations training and radiological protection functions. In addition to these measures, a self assessment program has been established to review the effectiveness of functions in which management desires to place additional emphasis. Self assessments have been or are in the process of being conducted in the emergency preparedness, radiological protection and corporate safety review and audit functions. In order to further develop and enhance the performance in this area, NPPD participates regularly in technical exchange of QA auditors and plant personnel with other utilities.

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Item No: G-1 Assigned To: C. M. Estes
Acting Senior Manager
of Operations

Description:

Management oversight and involvement in the areas of radiological protection, licensed operator training, and the performance of operational crews on the simulator need further attention.

Root Cause:

Senior management expectations were not previously communicated adequately to line management and supervision.

Action Taken:

Senior management has taken several actions to enhance oversight, involvement, and communication to line management and supervision. In the area of radiological protection:

1. The Radiological Manager has successfully completed the Senior Licensed Operator certification program. This training has provided the Radiological Manager with a broadened perspective of plant operation which will enhance his ability to effectively communicate management's expectations to departmental personnel.
2. Trending reports and reports detailing out-of-limit conditions are being developed within the radiological and chemistry departments and provided to management on a weekly basis. Conditions requiring management feedback are discussed at the weekly manager's staff meeting.
3. Management and supervisory personnel are giving increased attention to the adherence to and implementation of established radiological work practices when performing plant tours.
4. Senior management has expanded their daily Control Room tours to include the health physics and chemistry offices. These tours encompass a review of the logs as well as an assessment of the physical conditions of the office and equipment.
5. Performance appraisals for station health physics personnel have been expanded to include radiological work practices.

In the areas of operator performance, operator training, and simulator training, the following actions have been taken:

1. Operations supervisory and management personnel attend a monthly "breakfast". This informal setting has proven effective in opening a two-way line of communication between operations personnel and senior management.
2. Operations personnel recently completed a Control Room Teamwork Development Training course developed by the National Academy For Nuclear Training. The training sessions included personnel from the operations management.
3. The Shift Supervisor has been included in the daily briefings with senior management.

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Item No: G-1 (Continued)

4. Individuals from senior or operations management are included as observers for evaluated simulator scenarios.
5. CNS Directive 54, Management Overview of Training and Evaluation Activities, has been implemented. This Directive requires management personnel to periodically sit in on and critique the training provided to their department. Although developed primarily for licensed operator training, this program has been implemented for all training programs.

Action Planned:

Periodic departmental evaluations and self assessments will be conducted to assess the effectiveness of management oversight and involvement in communicating management's expectations to line management and supervisory personnel. Specifically:

1. To assess plant operations, quarterly evaluations will be conducted per Procedure 2.0.8, Operations Department Performance Assessment Program.
2. To assess operator and simulator training, monthly evaluations will be conducted per CNS Directive 54, Management Overview of Training and Evaluation Activities.
3. To assess radiological protection, a self assessment is currently under way. This self assessment will include an evaluation of supervisory feedback.

Schedule:

Evaluations conducted per Procedure 2.0.8 and CNS Directive 54 are ongoing. The radiological self assessment is currently scheduled for completion during 1992.

Adequacy of Results Achieved:

As a result of actions taken to date, management oversight and involvement in the noted weak areas has been significantly increased. This increased oversight and involvement has opened channels of communication which has enabled senior management to effectively communicate expectations to line management and supervision. The programs and self assessments implemented will ensure that progress in this area is monitored on an ongoing basis.

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Item No: G-2

Assigned To: V. L. Wolstenholm
Division Manager of
Quality Assurance

Description:

In some cases, the assessment of processes by QA audits lacked scope and depth in that the audits did not routinely verify all of the programs/systems used to document and disposition identified problems were sufficiently comprehensive.

Root Cause:

Inadequate scope of Quality Assurance Plan 2300.

Action Taken:

Revision of QAP-2300 (Revision 1 approved June 8, 1992) to ensure comprehensive coverage of the functional area of Corrective Action.

Action Planned:

No additional action is planned. The action stated above was initiated immediately following completion of NRC Inspection Report 91-19 (Darwin Hunter) - action is complete.

Schedule:

Action was completed June 8, 1992.

Adequacy of Results Achieved:

In addition to the QA Plan revision, its associated audit checklist has been revised to increase the scope and depth of the audit. A subsequent audit is scheduled to begin this month (June 1992) utilizing the new Plan and Checklist.

As an additional comment, it is acknowledged that the pending revision to the Station's corrective action program (due September 1992) will necessitate consideration for an additional revision of the QA Plan and audit checklist, once implemented.

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Item No: G-3

Assigned To: D. A. Whitman
Division Manager of
Nuclear Support

Description:

Some weaknesses in self assessment in the area of Emergency Preparedness were identified.

Root Cause:

The root cause was determined to be less than adequate guidance in evaluating exercise performance.

Action Taken:

A procedure has been developed to improve the drill/exercise critique. This procedure was based on NRC Inspection Procedure 82-301, Evaluation of Exercises for Power Reactors. Dynamic simulator training on emergency preparedness scenarios, similar to those conducted during the 82-701 inspection walkthroughs, has been included in the operator training program.

Action Planned:

The enhanced drill/exercise critique process will be used throughout the course of the year. The emergency plan training will be incorporated into simulator training at a minimum frequency of six per two-year requalification period.

Schedule:

The initial round of dynamic simulator training will be completed by July 1, 1992.

Adequacy of Results Achieved:

The adequacy of the results will be determined by the evaluation of the operating crew's performance in the simulator and subsequent to the 1992 emergency exercise.

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COOPER NUCLEAR STATION

Item No: G-4

Assigned To: C. R. Moeller
Technical Staff Supervisor

Description:

Significant weakness in the licensee's corrective action process was identified in that a relatively high threshold exists for requiring items to be documented in a nonconformance report.

Root Cause:

Programmatic Deficiency. The Nonconformance Program was originally established to meet 10CFR50 Appendix B requirements and to document reportable events. As such, conditions or events of lesser significance were not, in all cases, adequately documented or evaluated. Since conditions or events of lesser significance could be precursors to more significant conditions or events, a programmatic weakness (or deficiency) is considered to exist.

Action Taken:

Corrective action program procedures from several other nuclear utilities have been obtained and are currently under review by the technical staff. The necessary programmatic upgrades are being identified.

Action Planned:

A lower threshold nonconformance reporting system is being developed. The program enhancement will be implemented through a revision to Procedure 0.5.1, Nonconformance And Corrective Action. Once implemented, program adherence will be monitored to ensure that all conditions or events requiring a nonconformance report are documented.

Schedule:

The revision to Procedure 0.5.1, Nonconformance And Corrective Action, will be implemented by September 1992. Monitoring program adherence will be an ongoing action.

Adequacy of Results Achieved:

The review of corrective action procedures from other utilities has been effective in identifying the programmatic weaknesses in the CNS program. These results are being utilized in the development of the CNS program revision. The effectiveness of this program upgrade will be determined through continuous monitoring by the technical staff and management.

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Item No: G-5-a

Assigned To: C. R. Moeller
Technical Staff Supervisor

Description:

The scope and timeliness of NCR root cause analyses caused a delay in corrective actions to assure safety.

Root Cause:

Administrative Controls Less Than Adequate. Although Procedure 0.5.1, Nonconformance And Corrective Action, provided a request form to revise nonconformance report due dates, this mechanism was not always utilized. Additionally, the due date extension process did not adequately address safety significance and the potential impact to safety.

Action Taken:

Procedure 0.5.1, Nonconformance And Corrective Action, has been revised to enforce timeliness requirements with respect to all nonconformance report corrective actions. In addition, this revision enhanced the process by requiring that safety significance be addressed prior to allowing a scheduled completion date to be reversed.

Action Planned:

Monitor compliance with the timeliness requirements of Procedure 0.5.1, Nonconformance And Corrective Action.

Schedule:

Revision to Procedure 0.5.1, Nonconformance And Corrective Action, was approved April 9, 1992. Monitoring of compliance to procedural requirements is ongoing.

Adequacy of Results Achieved:

Overdue nonconformance report actions have dropped from approximately 40% to zero and those actions requiring an extension to the scheduled completion date are being reviewed for safety significance. As a result of the actions taken, the stated concern appears to have been adequately addressed.

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Item No: G-5-b

Assigned To: C. R. Moeller
Technical Staff Supervisor

Description:

The NCR process does not require prompt evaluation of similar components that may have the same deficiency, but routinely allows a delay of an evaluation for the development of the root cause, which may take 30 days or more, since completion dates are routinely extended.

Root Cause:

Administrative Controls Less Than Adequate. Although Procedure 0.5.1, Nonconformance And Corrective Action, provided a request form to revise nonconformance report due dates, this mechanism was not always utilized. In addition, the process did not formally address safety significance and the potential impact to safety prior to granting due date extensions. As a result of recent management evaluation of the corrective action program, it was also determined that the quarterly review of open nonconformance reports was not frequent enough to insure safety concerns were identified in a timely fashion.

Action Taken:

Procedure 0.5.1, Nonconformance And Corrective Action, has been revised to:

1. Monitor and enforce timeliness requirements with respect to all nonconformance report corrective actions.
2. Enhance the process to revise predefined completion dates to require safety significance be formally addressed prior to an extension being granted.
3. Expand the scope of periodic reviews of open nonconformance reports from quarterly to monthly.

Action Planned:

Monitor compliance with the timeliness requirements of Procedure 0.5.1, Nonconformance And Corrective Action, and assess the effectiveness of the monthly review in identifying safety concerns.

Schedule:

Revision to Procedure 0.5.1, Nonconformance And Corrective Action, was approved April 9, 1992. Monitoring of compliance to procedure and adequacy of monthly review to identify safety concerns is ongoing.

Adequacy of Results Achieved:

Overdue nonconformance report actions have dropped from approximately 40% to zero, and those actions requiring an extension to the scheduled completion date are being reviewed for safety significance. To date, three monthly reviews have been conducted by SORC and all open nonconformance report actions were reviewed for safety concerns. As a result of the actions taken, the stated concern has been adequately addressed.

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Item No: G-5-c

Assigned To: C. R. Moeller
Technical Staff Supervisor

Description:

Corrective actions have not been fully effective with regard to addressing repetitive RWCU isolations.

Root Cause:

(See discussion under Action Taken.)

Action Taken:

In response to a concern noted in IR 91-27, an evaluation was done to determine if corrective actions had been effective in reducing the number of RWCU isolations. This evaluation was based on all RWCU isolations that occurred during the 1989 - 1991 time frame. The following is a summary of the findings:

1. Five events resulted from actual reactor low level signals following automatic or manual scrams. (Root Cause: Design) The low level reactor scram setpoint has been lowered from 12.5" to 4.5", which has been effective in reducing the number of isolations.
2. One event resulted from operational instability during reactor depressurization. (Root Cause: Design, Problem Not Anticipated) This condition was effectively remedied with the addition of the subcooling line.
3. Three events resulted from the incorrect application of a check valve in the subcooling line. (Root Cause: Design, Failure Of Design Review) This problem has been temporarily alleviated through procedural changes.
4. One event resulted from rapid depressurization when the system was taken out of service to replace a leaking valve. (Root Cause: Design, Problem Not Anticipated.) The system operating procedure has been revised to advise the Operators of the potential for an isolation, given this situation.
5. Eight events were associated with DC/ESC work. (Root Cause: Personnel, Lack Of Attention Or Concentration; Design, Problem Not Anticipated; and Design, Failure Of Design Review) Corrective actions have focused primarily on enhancements to the design change process, i.e., development and implementation.

Action Planned:

Based on the evaluation discussed above, a programmatic weakness was identified with respect to the development and implementation of design modifications. Corrective actions to address this weakness are detailed in LER 91-012. An Engineering Work Request (EWR) is under evaluation to modify the high temperature isolation. No additional actions are planned.

Schedule:

The actions identified in LER 91-012 were completed in May 1992. The EWRs are scheduled for completion in 1994.

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Item No: G-5-c (Continued)

Adequacy of Results Achieved:

The evaluation done as a result of IR 91-27 was effective in identifying programmatic concerns associated with repetitive RWCU isolations. These concerns have been addressed with actions either completed or being tracked for completion.