EMPLOYEE CONCERNS

SPECIAL PROGRAM

VOLUME 3
OPERATIONS CATEGORY

SUBCATEGORY REPORT 30800
MAINTENANCE

UPDATED

TVA

NUCLEAR POWER

TVA EMPLOYEE CONCERNS
SPECIAL PROGRAM

REPORT NUMBER: 30800

REPORT TYPE: Subcategory

REVISION NUMBER: 2

TITLE: Maintenance

REASON FOR REVISION:

1. Reformat to conform with Revision 4 of ECTG Program Manual and incorporation of SRP comments and inclusion of final corrective action plans.

2. Revised to incorporate comments from SRP and TAS.

PREPARATION

PREPARED BY: R. J. Sutt

SIGNATURE DATE

PREPARED BY: T. W. White J. W. White July 31, 1987

SIGNATURE DATE

(Note: Evaluator List in Attachment I) R1

REVIEWS

PEER: 8-3-87

SIGNATURE DATE

TAS: WSK James E Warthy III 9/4/87

SIGNATURE DATE

CONCURRENCES

CEG-H: S. Franco 8/20/87

SRP: Jimmie W Joyce 9-4-87

SIGNATURE DATE SIGNATURE* DATE

APPROVED BY: W R Brown 9/4/87

ECSP MANAGER DATE

NA

MANAGER OF NUCLEAR POWER CONCURRENCE (FINAL REPORT ONLY) DATE

*SRP Secretary's signature denotes SRP concurrences are in files.

4343T

Preface, Glossary, and List of Acronyms
for ECTG Subcategory Reports

HISTORY OF REVISION

REV NUMBER	PAGES REVISED	REASON FOR CURRENT REVISION
3	i	To clarify that one or more attachments will help the reader find where a particular concern is evaluated

Preface

This subcategory report is one of a series of reports prepared for the Employee Concerns Special Program (ECSP) of the Tennessee Valley Authority (TVA). The ECSP and the organization which carried out the program, the Employee Concerns Task Group (ECTG), were established by TVA's Manager of Nuclear Power to evaluate and report on those Office of Nuclear Power (ONP) employee concerns filed before February 1, 1986. Concerns filed after that date are handled by the ongoing ONP Employee Concerns Program (ECP).

The ECSP addressed over 5800 employee concerns. Each of the concerns was a formal, written description of a circumstance or circumstances that an employee thought was unsafe, unjust, inefficient, or inappropriate. The mission of the Employee Concerns Special Program was to thoroughly investigate all issues presented in the concerns and to report the results of those investigations in a form accessible to ONP employees, the NRC, and the general public. The results of these investigations are communicated by four levels of ECSP reports: element, subcategory, category, and final.

Element reports, the lowest reporting level, will be published only for those concerns directly affecting the restart of Sequoyah Nuclear Plant's reactor unit 2. An element consists of one or more closely related issues. An issue is a potential problem identified by ECTG during the evaluation process as having been raised in one or more concerns. For efficient handling, what appeared to be similar concerns were grouped into elements early in the program, but issue definitions emerged from the evaluation process itself. Consequently, some elements did include only one issue, but often the ECTG evaluation found more than one issue per element.

Subcategory reports summarize the evaluation of a number of elements. However, the subcategory report does more than collect element level evaluations. The subcategory level overview of element findings leads to an integration of information that cannot take place at the element level. This integration of information reveals the extent to which problems overlap more than one element and will therefore require corrective action for underlying causes not fully apparent at the element level.

To make the subcategory reports easier to understand, three items have been placed at the front of each report: a preface, a glossary of the terminology unique to ECSP reports, and a list of acronyms.

Additionally, at the end of each subcategory report will be a Subcategory Summary Table that includes the concern numbers; identifies other subcategories that share a concern; designates nuclear safety-related, safety significant, or non-safety related concerns; designates generic applicability; and briefly states each concern.

Either the Subcategory Summary Table or another attachment or a combination of the two will enable the reader to find the report section or sections in which the issue raised by the concern is evaluated.

The subcategories are themselves summarized in a series of eight category reports. Each category report reviews the major findings and collective significance of the subcategory reports in one of the following areas:

- management and personnel relations
- industrial safety
- construction
- material control
- operations
- quality assurance/quality control
- welding
- engineering

A separate report on employee concerns dealing with specific contentions of intimidation, harassment, and wrongdoing will be released by the TVA Office of the Inspector General.

Just as the subcategory reports integrate the information collected at the element level, the category reports integrate the information assembled in all the subcategory reports within the category, addressing particularly the underlying causes of those problems that run across more than one subcategory.

A final report will integrate and assess the information collected by all of the lower level reports prepared for the ECSP, including the Inspector General's report.

For more detail on the methods by which ECTG employee concerns were evaluated and reported, consult the Tennessee Valley Authority Employee Concerns Task Group Program Manual. The Manual spells out the program's objectives, scope, organization, and responsibilities. It also specifies the procedures that were followed in the investigation, reporting, and closeout of the issues raised by employee concerns.

ECSP GLOSSARY OF REPORT TERMS*

classification of evaluated issues the evaluation of an issue leads to one of the following determinations:

Class A: Issue cannot be verified as factual

Class B: Issue is factually accurate, but what is described is not a problem (i.e., not a condition requiring corrective action)

Class C: Issue is factual and identifies a problem, but corrective action for the problem was initiated before the evaluation of the issue was undertaken

Class D: Issue is factual and presents a problem for which corrective action has been, or is being, taken as a result of an evaluation

Class E: A problem, requiring corrective action, which was not identified by an employee concern, but was revealed during the ECTG evaluation of an issue raised by an employee concern.

collective significance an analysis which determines the importance and consequences of the findings in a particular ECSP report by putting those findings in the proper perspective.

concern (see "employee concern")

corrective action steps taken to fix specific deficiencies or discrepancies revealed by a negative finding and, when necessary, to correct causes in order to prevent recurrence.

criterion (plural: criteria) a basis for defining a performance, behavior, or quality which ONP imposes on itself (see also "requirement").

element or element report an optional level of ECSP report, below the subcategory level, that deals with one or more issues.

employee concern a formal, written description of a circumstance or circumstances that an employee thinks unsafe, unjust, inefficient or inappropriate; usually documented on a K-form or a form equivalent to the K-form.

evaluator(s) the individual(s) assigned the responsibility to assess a specific grouping of employee concerns.

findings includes both statements of fact and the judgments made about those facts during the evaluation process; negative findings require corrective action.

issue a potential problem, as interpreted by the ECTG during the evaluation process, raised in one or more concerns.

K-form (see "employee concern")

requirement a standard of performance, behavior, or quality on which an evaluation judgment or decision may be based.

root cause the underlying reason for a problem.

*Terms essential to the program but which require detailed definition have been defined in the ECTG Procedure Manual (e.g., generic, specific, nuclear safety-related, unreviewed safety-significant question).

Acronyms

AI	Administrative Instruction
AISC	American Institute of Steel Construction
ALARA	As Low As Reasonably Achievable
ANS	American Nuclear Society
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
BFN	Browns Ferry Nuclear Plant
BLN	Bellefonte Nuclear Plant
CAQ	Condition Adverse to Quality
CAR	Corrective Action Report
CATD	Corrective Action Tracking Document
CCTS	Corporate Commitment Tracking System
CEG-H	Category Evaluation Group Head
CFR	Code of Federal Regulations
CI	Concerned Individual
CMTR	Certified Material Test Report
COC	Certificate of Conformance/Compliance
DCR	Design Change Request
DNC	Division of Nuclear Construction (see also NU CON)

DNE.	Division of Nuclear Engineering
DNQA	Division of Nuclear Quality Assurance
DNT	Division of Nuclear Training
DOE	Department of Energy
DPO	Division Personnel Officer
DR	Discrepancy Report or Deviation Report
ECN	Engineering Change Notice
ECP	Employee Concerns Program
ECP-SR	Employee Concerns Program-Site Representative
ECSP	Employee Concerns Special Program
ECTG	Employee Concerns Task Group
EEOC	Equal Employment Opportunity Commission
EQ	Environmental Qualification
EMRT	Emergency Medical Response Team
EN DES	Engineering Design
ERT	Employee Response Team or Emergency Response Team
FCR	Field Change Request
FSAR	Final Safety Analysis Report
FY	Fiscal Year
GET	General Employee Training
HCI	Hazard Control Instruction
HVAC	Heating, Ventilating, Air Conditioning
II	Installation Instruction
INPO	Institute of Nuclear Power Operations
IRN	Inspection Rejection Notice

L/R	Labor Relations Staff
M&AI	Modifications and Additions Instruction
MI	Maintenance Instruction
MSPB	Merit Systems Protection Board
MT	Magnetic Particle Testing
NCR	Nonconforming Condition Report
NDE	Nondestructive Examination
NPP	Nuclear Performance Plan
NPS	Non-plant Specific or Nuclear Procedures System
NQAM	Nuclear Quality Assurance Manual
NRC	Nuclear Regulatory Commission
NSB	Nuclear Services Branch
NSRS	Nuclear Safety Review Staff
NU CON	Division of Nuclear Construction (obsolete abbreviation, see DNC)
NUMARC	Nuclear Utility Management and Resources Committee
OSHA	Occupational Safety and Health Administration (or Act)
ONP	Office of Nuclear Power
OWCP	Office of Workers Compensation Program
PHR	Personal History Record
PT	Liquid Penetrant Testing
QA	Quality Assurance
QAP	Quality Assurance Procedures
QC	Quality Control
QCI	Quality Control Instruction

QCP	Quality Control Procedure
QTC	Quality Technology Company
RIF	Reduction in Force
RT	Radiographic Testing
SQN	Sequoyah Nuclear Plant
SI	Surveillance Instruction
SOP	Standard Operating Procedure
SRP	Senior Review Panel
SWEC	Stone and Webster Engineering Corporation
TAS	Technical Assistance Staff
T&L	Trades and Labor
TVA	Tennessee Valley Authority
TVTLC	Tennessee Valley Trades and Labor Council
UT	Ultrasonic Testing
VT	Visual Testing
WBECSP	Watts Bar Employee Concern Special Program
WBN	Watts Bar Nuclear Plant
WR	Work Request or Work Rules
WP	Workplans

MAINTENANCE

Subcategory Report 30800

Executive Summary

I. SUMMARY OF ISSUES

The Maintenance Subcategory is comprised of 76 employee concerns that raised 59 issues associated with plant support personnel and how they perform their tasks. The issues are related to the adequacy of procedures, preventive and corrective maintenance, training, program deficiencies, use of underqualified personnel to perform plant work, and clam control.

Twenty-seven issues were found to be not factually accurate. Four issues were factually accurate but did not require corrective action. Seventeen issues were factually accurate but the problems were being addressed before the employee concerns program. Eight issues were factual and presented problems for which corrective action either has been or is being taken as a result of the employee concerns program. Three issues did not present a problem in themselves; however, as a result of the employee concerns evaluation, a problem was discovered for which corrective action was initiated.

II. SUMMARY OF FINDINGS

Several conditions were found to exist in violation of design, construction, or operating requirements. Each of these conditions, called specific deficiencies, were noted as requiring short-term corrective measures:

1. At Browns Ferry Nuclear Plant (BFN) a problem was discovered with safety rigging of the main steam relief valves (MSRV).

2. At Bellefonte Nuclear Plant (BLN) a problem was found regarding hardening of grease in Limitorque valve operators.

3. Deficiencies were noted in updating and proper incorporation of vendor manuals at Watts Bar Nuclear Plant (WBN) and Sequoyah Nuclear Plant (SQN).

4. SQN and BFN have problems with the use of Furmanite (leak repair) and with related preventive maintenance instructions

5. Door maintenance and repair is a chronic problem at SQN, BFN and WBN.

6. Crane side pulls were performed in violation of procedure at SQN, BLN and BFN.

7. An evaluation is required at BFN concerning the removal and reinstallation of pipe hangers.

8. The Nuclear Managers Review Group for Maintenance noted numerous problems relating to this subcategorys major topics.

III. SUMMARY OF COLLECTIVE SIGNIFICANCE

Evaluation of the findings revealed the following areas of deficiency that reflect on management effectiveness at SQN, BFN, and WBN:

a. Procedural inadequacies have been identified in TVA maintenance programs based on deficiencies found.

b. The overall maintenance program including preventive, predictive and corrective aspects had no specific direction or overall policy to identify the goals and objectives the program should satisfy.

c. The as-constructed configuration of plant equipment does not always reflect the vendor technical manuals controlled at the plants. The broad topic of configuration control is further discussed in subcategory 30700.

d. The overall training of maintenance personnel had not included sufficient training in specific areas of specialized equipment or processes and general training for adequately documenting all work performed under the maintenance requests (MR) program.

IV. SUMMARY OF ROOT CAUSES

A review and analysis of the subcategory findings taken collectively pointed to three significant subcategory level-root causes as follows:

- Failure of the operating organization to incorporate design requirements into maintenance program and activities

- Inadequate maintenance program definition and inconsistency in implementation, of the respective program between sites

- Lack of clearly defined responsibilities and performance objectives for the maintenance program and lack of organizational accountability to ensure that an effective maintenance program is in place

V. SUMMARY OF CORRECTIVE ACTION

1. At BFN, the removal and installation of main steam relief valves will be improved through the addition of handling and rigging equipment, the addition of support beams, hoists and hatches in the grating and procedures/instructions for completing the task.

2. Program requirements at BLN to ensure proper lubrication of Limitorque actuators are being established in the Preventive Maintenance data base.

3. Control of vendor manuals is being addressed by ONP Document Control and Records Management Branch preparation of directives and standards for the control of vendor manuals and drawings. Among other features will be provisions for a periodic update with vendors to ensure that vendor manuals and drawings are current.

4. The use of Furmanite is now controlled and identified for permanent repair during scheduled maintenance/outages at SQN and BFN.

5. Door maintenance and repair problems at SQN, BFN and WBN are being corrected by program revisions to several procedures and processes, establishment and performance of specialized training for a dedicated door crew and other maintenance personnel. In addition, doors have been purchased and installed in some locations and an appropriate inventory of spare parts and hardware is being implemented.

6. Special training has been conducted at SQN and BFN for crane operators, riggers, supervisors and others in safe crane operations and, especially, side pulls.

7. At BFN, a new procedure has been developed for implementation before restart to control the removal and replacement of hangers.

8. Corrective actions at the plant sites are on-going based on the activities of the Employee Concerns Task Group, assessments made by NMRG and the commitments made in the Nuclear Performance Plan for TVA.

1.0 CHARACTERIZATION OF ISSUES

1.1 Introduction

The Maintenance Subcategory is comprised of 76 employee concerns which raised 59 issues concerning adequacy of preventive and corrective maintenance procedures, plant training, and use of unqualified personnel.

1.2 Description of Issues

The issues have been combined into higher-order groups, called elements, to aid in identifying and evaluating related issues. In this section of the report, each element is presented with a brief overview of its issues.

1.2.1 Element 308.01 - Adequacy of Procedures

Issue 308.01-1 - Craft Not Allowed to Read Manuals to Perform Work

IN-85-129-003

CI stated that WBN supervisory person would not allow maintenance personnel to read manuals or instructions on how to perform work.

Issue 308.01-2 - Management Does Not Correct Identified Problems

IN-85-601-002

CI was concerned that WBN management does not correct problems identified when performing Maintenance Surveillance Instructions.

Issue 308.01-3 - Questionable Quality Review of Surveillance Instructions

IN-85-677-001

In this issue, the CI believed that the compliance review for the WBN surveillance instructions was not adequate.

Issue 308.01-4 - Procedures Need Clarification & More Defined Criteria

IN-85-825-002

At WBN, the CI stated that TVA work procedures need clarification and better defined criteria.

Issue 308.01-5 - Crafts Not Credited for Surveillance Instruction Walkdowns

IN-85-889-X06

The CI at WBN was concerned that the crafts have done surveillance instruction walkdowns for engineers and have not received credit for a job well done.

Issue 308.01-6 - Work Packages Do Not Contain Sufficient Information

IN-86-316-003 IN-86-316-005 IN-86-316-006
IN-86-316-007

Four concerns were made at WBN alleging that work packages do not contain sufficient information to perform required work and do not incorporate information identified from vendor manuals.

Issue 308.01-7 - Adequacy of Maintenance Instructions

MAS-85-004 MAS-86-001 SQP-86-009-004

This issue is made up of three concerns received at SQN questioning the adequacy of several Maintenance Instructions.

Issue 308.01-8 - Communications Between Craft & Foreman Inadequate

SQP-86-014-001

In this SQN issue, the CI alleged that foremen do not always supply crafts with necessary information to perform required work.

Issue 308.01-9 - M&AI-9 Does Not Specify Torque Requirements for Small Screws

TAK-85-002

The CI stated in this issue that SQN Modification and Addition Instruction (MA&I-9) does not specify torque requirements for small screws.

Issue 308.01-10 - MOV Limit Switch Lubrication Not Properly Inspected

TAK-85-004

At SQN, a CI was concerned that lubrication of geared limit switches on motor operated valves was not properly inspected.

Issue 308.01-11 - Vendor Manuals Not Available

WBN-242

At WBN, a CI was concerned that instrument calibration manuals were not readily available to perform required work.

Issue 308.01-12 - Craft Not Provided With Sufficient Procedures

XX-85-016-001

This issue contains one BFN-specific concern in which the CI stated that maintenance personnel are not provided appropriate procedures for performance of work.

Issue 308.01-13 - Procedure Inadequate for Removal of MSRV

XX-85-106-N02

This issue, specific to BFN, deals with the adequacy of procedures for removal of main steam relief valves from primary containment.

1.2.2 Element 308.02 - Preventive Maintenance

Issue 308.02-1 - PMs on Valves are Signed Off Without Being Performed

EX-85-053-011 EX-85-053-012

Two concerns stated that preventive maintenance work on valves at WBN was being signed off without work actually being performed.

Issue 308.02-2 - Supervisor Required Unnecessary Work to be Performed

IN-85-393-002

At WBN, a CI alleged that his supervisor required unnecessary maintenance to be performed.

Issue 308.02-3 - Work Performed Without MR in Possession

IN-86-103-003

Another WBN issue came from a CI who believed that the Maintenance Department was performing work without applicable maintenance requests (MRs) in their possession.

Issue 308.02-4 - Engineering Disregards Vendor Manuals for PM Program

IN-86-316-X09

This issue deals with preparation of instructions in maintenance at WBN specifically, the CI stated engineering disregards vendors manuals in developing preventive maintenance (PM) program.

Issue 308.02-5 - Hydrogen System PM is not Adequate

QCP10.35-8-19

A BLN CI believed that the PM program on hydrogen system valves is not adequate.

1.2.3 Element 308.03 - Corrective Maintenance

Issue 308.03-1 - Non CSSC Valve Installed in CSSC System

BFNIESC-86-01

In this issue, a BFN employee alleged that a non-CSSC valve had been installed in CSSC system.

Issue 308.03-2 - Butterfly Valves Leak and Spare Parts Not Available

BNPQCP10.35-17

A BLN employee alleged that butterfly valves leaked excessively and that spare parts were not available.

Issue 308.03-3 - Inadequate Door Maintenance

DHT-85-003

In this issue, a SQN CI alleged that inadequate maintenance had violated the operability of ABSCE, Fire, and Security doors.

Issue 308.03-4 - Need to Check Torque Wrench Calibration

GSB-85-001

This SQN issue related the CI's belief in the need to check torque wrench calibration.

Issue 308.03-5 - Maintenance Requests (MRs) Are Being Signed Off Complete Without Work Being Performed

In-85-025-005

In this issue, the CI at WBN alleged that Maintenance Requests (MR's) are being signed off complete without work being performed.

Issue 308.03-6 - Need to Secure Tubing in Accordance With Drawings

IN-85-108-X02

The WBN CI believed that a specific instrumentation tubing was not secured in accordance with the as-constructed drawing.

Issue 308.03-7 - Maintenance Request (MR) Safety Review Inadequate

IN-85-129-X05 IN-85-142-X10

The two CIs stated that the WBN Maintenance Request personnel safety review is inadequate.

Issue 308.03-8 - Maintenance Requests on Security Equipment Need to be Completed Promptly

IN-86-056-001

The CI believed that Maintenance Requests on security equipment is not being completed expediously.

Issue 308.03-9 - Sprinkler System Drainage Inadequate

IN-86-096-001

In this issue, the CI felt that plant operations could be enhanced by installation of a drain to remove water spilled during fire protection system tests.

Issue 308.03-10 - Maintenance Request Initiator Requests Work Update

IN-86-315-005

A WBN CI was concerned that the initiator of a Maintenance Request does not receive any notification that the work has been completed.

Issue 308.03-11 -Work Package Incomplete

IN-86-316-002

A WBN CI in this issue alleged that a work package he was involved with was incomplete.

Issue 308.03-12 - Supervisor Review of Work Package Required With Craft

SQP-86-014-002

A SQN CI alleged that the required supervisory review of work packages with craft was not being done.

Issue 308.03-13 - Questionable Hardware Repair Process

XX-85-071-003

In this issue, the CI questioned the SQN hardware repair process.

Issue 308.03-14 - Large Spill Was Misrepresented to NRC as Small Leak

XX-85-096-N07

At SQN, a large spill was misrepresented to NRC as a small leak, according to the CI.

Issue 308.03-15 - Thimble Guide Incident Recurrence

XX-85-096-005

This issue alleged that the April 1985 SQN thimble guide tube incident could recur.

Issue 308.03-16 - Repairs Not to ASME Requirements

2850162005

The CI in this issue alleged that repairs to piping and other systems are not in accordance with ASME requirements.

1.2.4 Element 308.04 - Program Deficiencies/Procedure Violations

Issue 308.04-1 - Foreman Using Verbal Hold Orders

EX-85-048-001

This issue concerns the CI's perception of a safety hazard caused by foremen using verbal hold orders at WBN.

Issue 308.04-2 - Potential Safety Hazard With Temporary Hose Drainage

I-86-233-SQN

The SQN employee related a potential safety hazard associated with temporary hose being used to replace piping.

Issue 308.04-3 - Inadequate Controls of Instrument Adjustments

IN-85-142-X11

Inadequate controls of instrument adjustments were the subject of this WBN concern.

Issue 308.04-4 - Check Valves Removed From Welding Gas Header

IN-85-338-001

A WBN employee alleged that check valves had been removed from a welding gas header in violation of procedure.

Issue 308.04-5 - TVA Rarely Consults Vendors for Repair

IN-85-463-005

A WBN CI reported that TVA rarely consults vendors, resulting in inadequate equipment repairs.

Issue 308.04-6 - Nuclear Power Responsible for Repairs/Modifications at Turnover

IN-85-553-001

In this issue, the CI felt that the WBN Division of Nuclear Power should be responsible for repairs/modifications at turnover.

Issue 308.04-7 - Fire Door Blocked Open Without Breach Permit

IN-85-895-002

The CI alleged that the elevation 713 airlock fire door at WBN had been blocked open without a breach permit for an extended period.

Issue 308.04-8 - Material Not Being Sufficiently Supplied to Craft

IN-85-905-001 IN-86-097-001

In this issue, two CIs were concerned that material was not being sufficiently and expeditiously supplied to craft.

Issue 308.04-9 - Configuration Control of Vendor Manuals

IN-86-073-002

In this issue, the CI feared that the lack of configuration control of vendor manuals at WBN could result in errors by maintenance personnel.

Issue 308.04-10 - Jackhammers Used During Ice Loading

IN-86-110-001

A WBN CI was concerned that jackhammers used during ice loading could have degraded the ice condenser's operability.

Issue 308.04-11 - Engineering Accepts Work Not Completed

IN-86-315-002

A concern from WBN alleged that engineering accepts work which was not completed.

Issue 308.04-12 - Workplan Signed Off Prematurely

JAN-86-001

An SQN concern stated that a workplan had been prematurely signed off.

Issue 308.04-13 - Motor Operator Grease Inspections Inadequate

JLH-86-001

An SQN CI alleged that grease inspections in motor operators were inadequate.

Issue 308.04-14 - MRs Are Signed Off Without Work Being Done

JLH-86-001

This issue covers a concern made at SQN that MR's are signed off without work being done.

Issue 308.04-15 - Non-QA Material Used in QA Applications

JLH-86-001

The CI alleged that non-QA material had been used in QA applications at SQN.

Issue 308.04-16 - Violation of Procedures

SQP-85-004-006

In this issue, the CI stated that craft personnel at SQN had been instructed to perform a job in violation of approved procedures.

Issue 308.04-17 - Hanger Removed and Not Replaced

XX-85-102-001

At BFN, a CI alleged that a hanger had been removed and not replaced.

Issue 308.04-18 - Out-of-Service Tags Being Violated

XX-85-122-023

In this issue, the CI reported that out of service tags were being violated at BLN.

1.2.5 Element 308.05 - Training Program Deficiencies

Issue 308.05-1 - Cranes Improperly Used

EAC-85-004 SQP-85-004-005

In this SQN issue, the CIs alleged that plant cranes are being improperly used.

Issue 308.05-2 - Plant Personnel Need More Training

IN-85-495-001 XX-85-016-001

This WBN issue involved a perceived need for more specific equipment training for craft personnel.

Issue 308.05-3 - Unqualified Personnel Operating MOVATS Equipment

IN-86-114-001

In this WBN issue the CI alleged that unqualified personnel are operating Motor Operated Valve Actuation Tests (MOVATS) equipment.

Issue 308.05-4 - Improper Lifting Rigging on RCPs

WBN-0217

This issue dealt with improper lifting rigging on Reactor Coolant Pumps (RCP's) at WBN.

1.2.6 Element 308.06 - Subjourneyman/Journeyman

Issue 308.06-1 - Unqualified Subjourneyman Performing Journeyman Work

EX-85-012-001	EX-85-054-002	IN-85-128-001
IN-85-130-001	IN-85-589-002	IN-85-729-001
IN-86-022-002	IN-86-210-002	PH-85-005-001

This issue contains nine concerns from WBN over unqualified subjourneymen performing journeymen work.

Issue 308.06-2 - Laborers Are Used to Perform Cement Mason Work

IN-85-693-003

This issue, raised at WBN, involves the use of laborers to perform cement mason work.

1.2.7 Element 308.07 - Clam Control

Issue 308.07-1 - Clams Clogging Heat Exchangers

IN-85-948-001 IN-85-948-002 IN-85-948-003

This issue involves three concerns made at WBN stating that TVA's clam control program is insufficient.

2.0 EVALUATION PROCESS

2.1 General Methodology

The evaluation of this subcategory was conducted according to the Evaluation Plan for the Employee Concerns Task Group and the Evaluation Plan for the Operations Group. The concern case files were reviewed. Source documents were researched and interviews conducted in order to identify the requirements and criteria which applied to the issues raised by the concerns. The issues were evaluated against the identified requirements and criteria to determine findings. A collective significance analysis was conducted; causes were indicated for negative findings; and corrective action for the negative findings was initiated or determined to have already been initiated.

2.2 Specific Methodology

During the element evaluations the evaluators reviewed applicable sections from the following baseline requirement documents: Title 10 Code of Federal Regulations, Part 50 (10 CFR50); TVA Nuclear Quality Assurance Manual (NQAM); applicable TVA General Construction Specifications; Final Safety Analysis Report (FSAR), plant Standard Practices; Technical Specifications, General Operating Instructions and plant Area Plans.

To ensure consistency and implementation of the requirements found in these documents, the evaluators reviewed applicable Administration Instructions (AI), Maintenance Instruction (MI) Surveillance Instructions (SI), Modification and Addition Instructions (M&AI), Preventative Maintenance Instructions (PMI), Engineering Change Notices (ECN), Section Instruction Letters (SIL), Material Section Letter (MSL), Maintenance Requests (MR) and various other maintenance instructions. Evaluators reviewed files which had been expurgated by the NRC, as well as applicable Licensee Event Reports (LER), vendor manuals, work packages and instructions, drawings, INPO reports and reports which had been previously evaluated by the Nuclear Safety Review Staff (NSRS).

Included in the baseline information was the Nuclear Manager's Review Group (NMRG) Report R-86-02-NPS. This report was the result of an overall evaluation and assessment of maintenance at each nuclear plant conducted by personnel experienced in conducting programmatic reviews. This report was thoroughly reviewed and compared to the findings and conclusions in this report.

The evaluators from each element review conducted informal interviews with cognizant personnel when required either to verify document-based findings or to provide nondocument-based evaluation input. Interviews were conducted at the various plant sites with personnel from Work Planning, Document Control, Maintenance, Electrical Maintenance personnel and Craft's General foremen. Evaluators also interviewed cognizant engineers in the Mechanical Maintenance, Instrument Maintenance Test, and Nuclear Engineering departments.

From their element evaluation findings, the evaluators identified specific deficiencies and analyzed them for perceived root causes at the element level as appropriate. A final determination was made on whether or not each specific deficiency was safety related. The evaluators initiated CATDs for the specific deficiencies that had been identified during the element evaluations. The evaluators documented their findings, specific deficiencies, and perceived root causes in accordance with the Operations Category Evaluation Plan.

3.0 FINDINGS

Generic applicability statements are included only for concerns which are classified as being potentially safety-related or safety-significant denoted on Attachment A.

On April 10, 1986 the Manager of Nuclear Power requested a comprehensive review of corrective and preventive maintenance be performed at Browns Ferry (BFN), Sequoyah (SQN), and Watts Bar (WBN) by the Nuclear Manager's Review Group (NMRG). This review was requested as a result of the current interest in maintenance practices within the nuclear industry as an area in need of improvements. The NMRG was staffed with 25 individuals with extensive experience in conducting programmatic reviews and/or in maintenance with expertise in the electrical, mechanical, or instrumentation disciplines. The maintenance evaluators were trained by an Institute of Nuclear Power Operations (INPO) evaluation team manager. The evaluation was performed using the INPO guidelines for corporate evaluation and the conduct of maintenance at nuclear power plants. These evaluations were performed at the sites encompassing several subject areas in maintenance as noted:

- Corporate Involvement in Maintenance
- Maintenance Organization
- Training and Qualifications
- Facilities, Equipment, and Tools
- Types of Maintenance
- Procedures
- Planning and Scheduling
- Control of Maintenance Activities
- Post Maintenance Testing
- Materials Suitability
- Maintenance History
- Quality Assurance

The NMRG results for each evaluation are incorporated into the maintenance categories established in the employee concerns as identified in section 1.0. The conclusions of the concerns are based on the findings discovered during each evaluation and the past findings and conclusions from the NMRG reports and Nuclear Safety Review Staff (NSRS) evaluations.

3.1 Element 308.01 - Adequacy of Procedures

Issue 308.01-1 - Craft Not Allowed To Read Manuals to Perform Work (WBN)

Concern IN-85-129-003 regarding craft personnel being prevented from spending a reasonable amount of time reading vendor manuals or work instructions required for that job assignment is not valid. Review of this concern by QTC could not identify any cases where Management prevented an instrument maintenance technician from spending a reasonable amount of time reading vendor manuals or work instructions. Supervisors require craft personnel to read and understand all information needed to perform the job properly. Craft personnel are to sign that they have accomplished this prior to starting work. In addition, Instrument Maintenance Instruction IMI-100 has been issued, which requires vendor manuals and instructions that are used to perform work during maintenance activities be documented on IMI-100 data sheets.

Conclusion

This issue was not verified as factual.

Issue 308.01-2 - Management Does Not Correct Identified Problems (WBN)

Concern IN-85-601-002 regarding the lack of management efforts to correct procedural problems in the maintenance area is not valid. All new and revised maintenance procedures that requires actual work or inspections of CSSC equipment are reviewed by the craft who initially use the procedure. They are required, upon completion of the work, to record all problems and discrepancies on a feedback sheet. The supervisor reviews this document and initiates corrections as required. Quality Assurance reviews this document and ensures changes are made. Feedback sheets from 10 surveillance instructions were randomly selected and reviewed. All comments were resolved by explanation or by incorporation into the next revision.

This process adequately evaluates problems identified in surveillance instructions and allows for incorporation into revised procedures if necessary. These reviews are reviewed by Plant Quality Assurance (PQA) and become part of permanent plant records.

The NMRG report recommended a strengthening of feedback methods to identify and correct procedural errors and omissions after citing a few examples at WBN where a procedure was too restrictive and a violation which occurred as a result of not enough information being provided. Similar cases were not observed during the ECTG evaluation in January of 1987.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and found to be not valid. No other site evaluations are necessary.

Issue 308.01-3 - Questionable Quality Review of Surveillance Instruction (WBN)

Concern IN-85-677-001 regarding a quality review of surveillance instructions being sacrificed to meet startup schedule was valid. Since this concern was written, all SIs have been re-reviewed, revised if necessary, and tested to ensure that they are technically correct and in compliance with all regulatory requirements. This program was completed in the spring of 1986 and is awaiting an inspection from the NRC to ensure the SI program has complied with commitments made by WBN in response to a severity Level IV

violation. Completion of this activity is being tracked via CATD 30801-WBN-01. The adequacy of surveillance instructions is further evaluated in Subcategory Report 30700.

Conclusion

This issue was factual but corrective action was initiated before the evaluation of this issue.

Generic Applicability

The WBN evaluation of this concern determined the incident to be isolated to WBN as a result of attempts to ready for fuel load. No other site evaluations are necessary.

Issue 308.01-4 - Procedures Need Clarification and More Defined Criteria (WBN)

Concern IN-85-825-002 regarding several procedures needing portions rewritten for clarity or needing more defined criteria is not valid. The NSRS report (I-85-339-WBN) evaluated the two specific procedures TI-27 and MAI-14 identified in the concern and could not substantiate the allegation. Revisions to these procedures have been made as a normal part of the on-going evaluation of plant procedures and controls. The review of procedures includes the completion of a detailed evaluation criteria that is performed by the preparer and reviewer. Also included is a Quality Assurance review and a trial run of the procedures by the craft with feedback comments. Also a mandatory review of each procedure is required every two years. If specific portions of the procedure require clarification or changes due to new or revised upper-tier requirements, this program provides a system in which craft, engineering, or management personnel can request these changes for incorporation. | R2

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN). It was determined that the issue was related to specific WBN procedures. Adequate corrective action had been implemented prior to the ECTG evaluation. No other site evaluations are necessary.

Issue 308.01-5 - Crafts Not Credited For Surveillance Instruction Walkdowns (WBN)

Concern IN-85-889-X06 regarding recognition being given to engineering personnel instead of craft personnel for doing excellent work is not valid. The evaluation found this to be a one time occurrence, not a repetative problem. Project management has stressed in all communications that these walkdowns were a team effort of engineering and craft personnel. The project manager praised both engineering and craft.

Conclusion

This issue was not verified as factual.

Issue 308.01-6 - Work Packages Do Not Contain Sufficient Information (WBN)

Four concerns, IN-86-316-003, IN-86-316-005, IN-86-316-006, and IN-86-316-007 are grouped together because they all pertain to the same problem of inadequate information in work packages. All four concerns were not substantiated. The work instructions were prepared by Maintenance personnel and were reviewed and approved by the appropriate management personnel.

Review and evaluation of several work packages by NSRS could not find any work package having inadequate information or any problems with quality of the instructions for performing the job correctly. Interviews conducted with maintenance engineers, work planning and craft personnel revealed no problem with work packages or instructions. In addition to this, AI-9.2 "Maintenance Requests and Equipment Maintenance History" requires that the foreman/general foreman review work packages to ensure adequacy and completeness before assigning them to the craft personnel for implementation.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and could not be substantiated. No other site evaluations are necessary.

Issue 308.01-7 - Adequacy of Maintenance Instructions (SQN)

Concern MAS-85-004 regarding procedure MI-10.48 being inadequate is valid. This concern was identified by the Discrepancy Report (DR) SQ-DR-86-01-003R on January 10, 1986. The DR was resolved by writing specific procedures MI-15.2.1, 15.4.1 and 15.6.1 which address the individual requirements of different motor manufacturers. The generic procedure, MI-10.48 was canceled when it was verified that the new procedures adequately addressed all motors.

Concern MAS-86-001 regarding inadequacy of MI 6.20 is not valid. MI 6.20 meets the requirements of the NQAM. Additionally, this procedure meets the guidelines presented in INPO Guideline 85-017 Conduct of Operations, chapter 13, "Control of Temporary Modifications." A data sheet is provided in the instruction for entering configuration changes during performance of work per the MR, and instructions on how and when to fill out the data sheets are provided. This data sheet is attached to the MR and becomes the historical documentation of temporary modifications performed while working to the MR.

Concern SQP-86-009-004 that maintenance instructions are unclear and do not provide adequate instructions was found valid based on the findings in the Nuclear Managers' Review Group (NMRG) Report R-86-02-NPS. As a result of this study and S. A. White's Directive (001-86-1001-800), SQN has developed a Maintenance Procedure Enhancement Program that will require all maintenance procedures to eventually meet the requirements of a writer's guide based on INPO Guideline 85-026 and NUREG CR-1369. Maintenance has committed to complete this program in two phases. The first phase is procedures that are considered high priority as determined by maintenance management. This phase is to be completed 8 months after startup. The lower priority procedures in phase two are scheduled for completion 21 months after startup. This schedule will be tracked on the Management Action Tracking System (MATS).

Conclusion

Concern MAS-85-004 was factual but corrective action was initiated before the evaluation of the issue.

Concern MAS-86-001 was not verified as factual.

Concern SQP-86-009-004 was factual but corrective action was initiated before the evaluation of this issue.

Generic Applicability

Concern MAS-85-004 was evaluated at the site of concern (SQN) and found to involve a specific SQN procedure. No other site evaluations are necessary.

Concern MAS-86-001 was evaluated at the site of concern (SQN) and found not to be valid. No other site evaluations are necessary.

The SQN evaluation of Concern SQP-86-009-004 identified a corporate level effort to upgrade maintenance procedures at all sites. Evaluation of the effort at SQN identified an adequate effort. No other site evaluations are necessary.

Issue 308.01-8 - Communications Between Craft and Foreman Inadequate (SQN)

Concern SQP-86-014-001 that foremen do not always support the craft personnel in providing them with everything they need to do the job, such as required drawings, was not validated. SQM-2 controls the Work Request (WR) process at Sequoyah. Sequoyah utilizes planners (formerly craft personnel) to plan out the work requested by the WR/MR, which includes making up the WR package. The responsible foreman ensures the WR package is complete and all necessary instructions are included.

The foreman and the responsible craftsmen sign the Instruction Review Sheet verifying the instructions included are adequate for performing the work. The inclusion of necessary drawings in the WR package is not addressed in SQM-2. The planner only includes the required drawings in the WR package when he marks them up to provide instructions for that package (i.e., showing craft where to cut pipe). Normally the planner will only provide the drawing number either in the work package or the work instructions. Craftsmen are responsible for acquiring the drawings necessary to perform the work.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (SQN) and found to be not valid. No other site evaluations are necessary.

Issue 308.01-9 - MAI-9 Does Not Specify Torque Requirements for Small Screws (SQN)

Concern TAK-85-002 regarding M&AI-9 not specifying torque value for screws less than #10 is factually accurate but does not describe a problem. Procedure M&AI-9 is in complete agreement with General Construction Specification G-38. Section 3.5.6 of G-38 states that screws size #10 and smaller used in cable splice and termination shall be tightened to the point at which the lock washer is flattened. Since the NQAM specifies that Maintenance Instructions shall comply with General Specification requirements, M&AI-9.15 adequate. Also, interviews with craft personnel did not indicate any problem with this section of M&AI-9.

Conclusion

This issue is factual but does not require corrective action.

Generic Applicability

The SQN evaluation found this concern to be a statement of fact. However, no adverse effects could be attributed to this practice. No other site evaluations are necessary.

Issue 308.01-10 - MOV Limit switch Lubrication Not Properly Inspected

Concern TAK-85-004 regarding inadequate lubrication or indication of grease hardening in the geared limit switches of Limitorque operators was found valid only at BLN.

On February 9, 1979, the NRC issued Information Notice 79-03 describing the difficulties experienced by Commonwealth Edision with a number of geared limit switch assemblies supplied by Limitorque. A number of intermittent gears were broken causing turning difficulties of the intermittent gear shafts. The gear failures were caused by inadequate lubrication. Inspection of the grease found it "had dried out and become more consistent than it was when it was new."

WBN

The concern that the lubrication of general limit switches on MOV's is not being properly inspected was not validated. WBN Mechanical Maintenance Section has in place a Preventive Maintenance (PM) program that inspects all Limitorque operators every 18 months. A WBN internal letter to E. R. Ennis, Plant Manager (T10 860501 874) dated May 1, 1986, identifies the frequency and the scope of the inspection. Initially, all motor-operated valves (MOVs) were inspected when turned over from Construction to Operations. This

inspection required the removal of the old grease from the geared limit switch and repacking with Mobil 28. Presently, the PM program provides a comprehensive inspection procedure for Limitorque internals. Included in the inspection are instructions to determine the condition of the lubricant in the geared limit switch intermittent gear box for signs of hardening or contamination and to repack if necessary.

SQN

The concern that the lubrication of geared limit switches on MOVs is not being properly inspected was not validated. Limitorque has experienced problems with the lubricant Beacon 325, originally furnished in the geared limit switches of MOVs operators in high temperature environments. Per recommendations of Limitorque, installations which were found to contain hardened, discolored lubricant have been repacked with Mobil 28.

The grease on unit 2 MOVs' geared limit switches has been inspected and changed to Mobil 28 in all safety-related operators. Unit 1 has only a few operators remaining to be inspected but will be accomplished prior to startup. The SQN preventive maintenance program requires an inspection of the lubricant in the geared limit switches for quantity, quality, and consistency at 18 month intervals as recommended by Limitorque.

BFN

The concern regarding improper inspection of lubrication of limit switches on MOV Limitorque operators was not substantiated. BFN inspects the Lubrication in the Limitorque MOV's geared limit switch in accordance with the Electrical Maintenance Instruction, EMI-16 every 18 months. This procedure inspects for grease hardening and requires replacing the Beacon 325 grease with Mobil 28. This changeout was recommended by Limitorque as a result of NRC information notice 79-03 which found damaged gears in MOV's limit switch caused by hardened grease.

Units 1 and 3 have replaced all MOVs geared limit switch grease with Mobil 28. Unit 2 is scheduled to be completed prior to startup.

BLN

The concern that the lubrication of geared limit switches on MOV is not being properly inspected is valid. This is a safety-related concern. Neither the DNC nor the ONP PM programs for valves with Limitorque operators contained any requirements to inspect the lubricant in the limit switch gears of the operators. Changes to the DNC PM program to meet this requirement have already been turned

in, and the ONP PM program will be changed to include this inspection. These changes will be verified via CATD 30801-BLN-01.

Conclusion

This issue was found to be factual at BLN only. Corrective action is being taken as a result of the evaluation.

Issue 308.01-11 - Vendor Manual Not Available (WBN)

Concern WBN-242, addressing vendor manuals at WBN not being readily available for craft to perform their job expeditiously, was factual. This concern was previously raised via several Corrective Action Reports (CAR) and Discrepancy Reports (DR) in 1985. Many corrections have been implemented as a result of these reports such as Instrument Maintenance now controls commonly used vendor manuals in their shop. The manufacturer and any applicable information is input into a computer and can be sorted in several ways for easier manual retrieval.

Conclusion

This issue was factual but corrective action was initiated before the evaluation of this issue.

Issue 308.01-12 - Craft Not Provided With Sufficient Procedures (BFN)

Concern XX-85-016-001 that craft personnel are not provided with specific technical instructions for performance of work is a valid concern. NSRS Report I-85-379-BFN cited that procedure MAI-4 did not fully implement the upper-tier procedure, General Construction Specification G-32. This was identified in Corrective Action Report BF-CAR-84-706 and was corrected in December of 1985. Further evaluation found that procedure MAI-34 did not fully implement the requirements of G-2 and G-51. This was identified in BF-CAR-86-032 in March of 1986. The response to this CAR was that all MAIs are being revised to incorporate General Specifications. A procedural upgrade program identified in the BFN Nuclear Performance Plan is addressing this issue and has been or is revising procedures to incorporate requirements from General Construction Specifications. A review of five randomly selected MAIs found that all had recently been revised and fully incorporated G-Specs where required.

Conclusion

This issue was factual but corrective action was initiated before the evaluation was commenced.

Generic Applicability

This concern was shared with element 308.05, "Maintenance Training." Both evaluations found the issue to be unique to BFN. No other site evaluations are necessary.

Issue 308.01-13 - Procedure Inadequate For Removal of MSRV (BFN)

The NRC concern, XX-85-106-N02, that questioned the control and adequacy for handling maintenance of the Main Steam Relief Valves (MSRV) was found to be valid. Removal of the MSRVs is very difficult and potentially hazardous because of their location in the drywell. Each MSRV weighing approximately 1000 pounds must be pulled out of its permanent location, moved around the drywell, down a flight of stairs and out the equipment hatch. The removal and replacement of the MSRVs are performed in accordance with MMI-13, Main Steam Relief Valve. This procedure has a precaution for rigging valves in and out of drywell but does not have any guidelines for a safe removal. A task force requested by the BFN site director reviewed this problem and recommended the following action:

1. Develop a specific rigging procedure for the married-chain falls transfer of the valves.

2. Install a hatch in the grating in the vicinity of the equipment hatch in order to avoid the requirement for transport down and up the stairs.

3. Add additional jib cranes as required, identify dedicated rigging equipment, and provide specific instructions for operation of the equipment.

The results of the Task Force activities will be reviewed via CATD 30801-BFN-01.

Conclusion

The issue is factual and corrective action is being taken as a result of the evaluation.

Generic Applicability

This issue was evaluated at the site of concern (BFN) and found to address a specific design unique to that plant. No other site evaluations are necessary.

3.2 Element 308.02 - Preventive Maintenance (PM)

Issue 308.02-1 - PMs on Valves Are Signed Off Without Work Performed (WBN)

Concerns EX-85-053-011 and EX-85-053-012 specifically addressed falsification of signatures on preventive maintenance work packages to indicate that maintenance may not have been performed. The Office of Inspector General was assigned the task of evaluating the falsification and forgery issue. This evaluation examined the issue of preventive maintenance (PM) not being performed on valves; they were not validated.

The PM program is controlled in accordance with the requirements of AI-9.1, WBN Management Program. All PMs shall be identified and entered into a scheduling system within 30 days after tentative transfer of equipment from Construction. This schedule was reviewed for compliance to this program and for completeness of the list for turned over equipment. No discrepancies were identified.

The PM files were also evaluated for independent verification signoffs as required by AI-2.19, Independent Verification, for aligning equipment in off-normal configurations during PM work. In all cases reviewed, valves, breakers, etc., were realigned and independently verified before closeout of work package.

Interviews were conducted with cognizant personnel involved in the PM program including supervisors, engineers and craft. No one identified any PMs that were not complete and then signed off as complete.

The NMRG report did not identify any falsification problems during their investigation, however, deficiencies were identified with the PM program. One example identified that PM information that was included in the packages was based on configuration of the equipment at turnover. Any subsequent modifications to the equipment were not evaluated for impact on the program.

Management is currently restructuring the PM program over the next two years, identifying all equipment and PMs that have been omitted from the program. The program will also include a periodic review to ensure it remains current and effective. The PMs will be modified and their frequencies adjusted throughout the program, based on equipment performance.

The NMRG recommended assigning responsibility for this program development to a capable manager at each site to direct and coordinate this effort and to provide him with sufficient resources to support a timely upgrade of the PM effort.

The issue of falsification of preventive maintenance on valves could not be substantiated. Although weaknesses were identified by NMRG in the PM program, their recommendations and the ongoing upgrade activities are sufficient. No further corrective actions are required.

Conclusion

This issue was not verified as factual.

Generic Applicability

The WBN evaluation could not substantiate this concern. No other site evaluation are necessary.

Issue 308.02-2 - Supervisor Required Unnecessary Work To Be Performed (WBN)

Concern IN-85-393-002 regarding supervisors going against subordinates and that supervisors had wasteful and unnecessary maintenance done on plant equipment is not valid. The specific case identified in this concern was the use of flow meters in air ducts for duct flow calibration and testing methods used by a supervisor in the field. TVA supervisors are responsible for assuring that required activities are completed in the most beneficial manner for TVA. The supervisor has ultimate responsibility for resource utilization and work completion. Interviews with cognizant test engineers and craft personnel from the mechanical and instrument maintenance test sections revealed that there are no problems with the methods being used for measuring air flow in the ventilation systems. Responsible test engineers have been sent to special training or classes to ensure they have the special skills to measure air flow under the existing conditions. The methods used are in accordance with TVA General Construction Specifications.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and found to be not valid. No other site evaluations are necessary.

Issue 308.02-3 - Work Performed Without MR in Possession (WBN)

The practice questioned by concern IN-86-103-003, of work being performed without maintenance request(s) (MR) in their possession is not valid. Instances where it is acceptable to work without an MR are identified in AI-9.2.

Interviews were conducted with several craftsmen, foremen and quality assurance which provided examples where work was performed without MRs: special situations such as emergencies and troubleshooting.

AI-9.2, Maintenance Request and Equipment Maintenance History, allows work to be performed under certain situations without an MR. The evaluation of this concern did not find violations where normal corrective maintenance was performed without proper documentation, therefore this concern could not be substantiated.

Conclusion

This concern is factual but what it identifies is not a problem.

Generic Applicability

The WBN evaluation determined that there were cases where it is acceptable, by procedure, to perform work without an MR in possession. No adverse effects were noted due to this practice and adequate compensatory controls were in place when used. No other site evaluations are necessary.

Issue 308.02-4 - Engineers Disregard Vendor Manuals for PM Program

WBN

Concern IN-86-316-X09 regarding engineers disregarding vendor manuals in the PM program of equipment is not substantiated. The reviews and evaluations of PM requirements from vendor manual control documents were found to meet all requirements, and no discrepancies were found. Also, a review and evaluation of 15 PM instructions on CSSC equipment showed that requirements as stated in the source document vendor manuals were implemented into the PM instructions. In addition to this, interviews with cognizant engineers and craft personnel found that, to their knowledge, no engineer(s) disregarded the use of vendor manuals in the performance of maintenance activities. The scope of this concern only addressed PMs not being incorporated from vendor manuals. Other vendor manual concerns are addressed in Element 308.04 and Subcategory 30700.

The NMRG report identified several areas in PM that require management attention. Overall, it recommended several changes to ensure all recommended PMs were incorporated into the program. Their report, however; did not specifically address the issue of engineers ignoring vendor manuals.

SQN

The concern that the PM program is not adequate because engineer(s) have disregarded the use of vendor manuals for safety related equipment was not substantiated. The PMs reviewed showed no discrepancies in implementing the vendor manual control requirements of AI-23 and SQM57. Interviews with cognizant engineers and craft personnel found that to their knowledge no engineer(s) disregarded the use of vendor manuals in the performance of preventive maintenance activities. The Generic Concern Task Force (GCTF) report for the subject concern found that "problems with engineers not using vendor manuals was not validated based on interviews with maintenance and modification craftworkers." This evaluation is in agreement with GCTF report. However, problems with the Vendor Manual Program previously identified by plant Quality Assurance and the NRC in Generic Letter 83-28 are currently being resolved via CATD 30802-SQN-02 and CATD 30802-SQN-03.

The identified problems with the Vendor Manual Control Program prior to the revision of AI-23 had the potential to be safety related with respect to performance of preventive maintenance on CSSC equipment. However, the review and evaluation of 15 preventive maintenance instructions on CSSC equipment, found that the requirements from the vendor manuals have been incorporated into those preventive maintenance instructions.

Although the NMRG did not identify any falsification of the PM program, they did identify that several components important to safe and reliable operation were not included in the PM program. There was an absence of PMs identified for non-safety related equipment that was essential to plant reliability. CATD 30802-SQN-01 was issued.

BFN

The concern that the PM program is not adequate because engineer(s) have disregarded the use of vendor manuals for safety-related equipment was not substantiated. The Preventive Maintenance Program (PM) was reviewed; a complete PM Program review was underway to verify that all vendor revision information was correct as referenced by the Mechanical Maintenance procedures. A review of

vendor recommendations from the vendor manuals against the Mechanical Maintenance procedures was conducted by the evaluator and no discrepancies were found. Interviews with cognizant engineers and craft personnel found that to their knowledge no engineer(s) disregarded the use of vendor manuals in the performance of Preventive Maintenance activities. Mechanical Maintenance procedures and Standard Practice procedures meet the requirements for vendor manual control. The Mechanical Maintenance procedures are presently being revised to ensure all procedures are in compliance with the Vendor Manual Control Program.

The Vendor Manual Control Program was implemented in response to NRC Generic Letter 83-28 to ensure that plant procedures are kept updated with current vendor information. This program will ensure (1) all controlled vendor manuals are maintained at the same revision level as the master controlled vendor manual, (2) all controlled vendor manuals are under revision control, and (3) all new vendor manuals and revisions are evaluated by the cognizant section(s) before utilization.

BLN

The concern that the PM program is not adequate because engineer(s) disregarded the use of vendor manuals was not substantiated. A review of BLN procedures addressed the integrated TVA Vendor Manual Program as described in the previous evaluations at the other sites. A review of several randomly selected PM instructions against their referenced vendor manuals found that the requirements as stated in the vendor manuals have been incorporated into the PM instructions. Interviews with cognizant maintenance personnel could not identify any instance in which engineers disregarded vendor manuals when preparing the PM instructions.

Conclusion

This issue was not verified as factual.

Issue 308.02-5 - Hydrogen System PM Not Adequate (BLN)

Concern BNP QCP-035-8-19 related to the lack of PM necessary to prevent rust buildup on hydrogen system needle valves was not substantiated. An interview with a cognizant systems engineer from the PM group was conducted. The cognizant engineer stated that he had recently performed system walkdown PM inspection as required by BLN Standard Practice BLM 3.5, "Performance of Preventive

Maintenance Tasks" on the hydrogen system and had not found any rust or corrosion on any of the valves or piping in the hydrogen system. An interview with a cognizant construction QC inspector found that the exposed piping surface conditions were documented on BNP-QCP-6.10, revision 8, test number 6A for the hydrogen system and acceptance of the surface conditions were verified with no rust or corrosion identified. A walkdown and inspection of the hydrogen system was conducted by the evaluator and an Assistant Unit Operator. No rust or corrosion problems were found.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (BLN) and found to be not valid. No other site evaluations are necessary.

3.3 Element 308.03 - Adequacy of Corrective Maintenance Programs and Activities

Issue 308.03-01 - Non-CSSC Valve Installed in CSSC System (BFN)

Issue BFNIESC-86-01 that the CI believes a non-safety related valve was installed in a safety related system is not valid. The system in question was the fire protection system. The valve in question was a fire hydrant that protects the high voltage switch yard. A review of the CSSC list that identifies safety related equipment did not have hydrant 0-26-505 listed. Furthermore, the switchyard is not safety related and does not require a safety related system for fire protection.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (BFN) and found to be not valid. No other site evaluations are necessary.

Issue 308.03-2 - Butterfly Valves Leak and Spare Parts Not Available (BLN)

Concern BNPQCP10.35-17 that the butterfly valve failures in the Emergency Raw Cooling Water (ERCW) system will cause extensive plant shutdowns was validated. This problem had been previously identified

to the NRC during the construction phase after having 45 documented seat failures out of approximately 400 BIF butterfly valves at BLN. The failures have been diagnosed by BIF as deterioration of elastomer seats during storage and damage by foreign objects during system flushing. These failures should not occur during normal operations. All failures have been repaired and tested satisfactorily.

As a result of the longterm lay up condition that BLN is currently in, many of the valves will not be retained in the ideal storage conditions required by BIF. BLN's solution is to identify and test all Local Leak Rate Test (LLRT) valves during preoperational and in-service test programs and will replace the valve seats as necessary. All other BIF valves will be repaired in accordance with normal maintenance programs.

This problem has been reported to the NRC on several occasions and corrective action has been taken. This concern impacts plant safety and has been addressed to the NRC under 10 CFR part 21.

Problems identified with this evaluation resulted in the issuance of CATD 30803-BLN-01 and 30803-BLN-02.

Conclusion

This issue is factual and corrective action is being taken as a result of the evaluation.

Generic Applicability

The BLN evaluation of this concern identified the issue to have been addressed under 10 CFR 21 reports previously submitted to the NRC. No other site evaluations are necessary.

Issue 308.03-3 - Inadequate Door Maintenance

This issue was evaluated at SQN, BFN, and WBN as a result of the concern DHT-85-003 being raised on inadequate maintenance of fire doors, security doors, and ABSCE doors at SQN. Element Report 306.01 also addresses fire door problems.

SQN

This issue has been addressed in Licensee Event Report (LER-SQRO-50-327/84073) identifying several fire doors as being either nonfunctional or not meeting code specifications. This issue was validated. A review of LERs from early 1984 through July 1986

showed a total of 19 cases where door failure or door inoperability directly or indirectly resulted in a reportable occurrence. However, as of March 18, 1986, SQN has had no new occurrences since a dedicated door crew now performs all door maintenance. This concern was substantiated and impacts plant safety. However, the action being taken is effectively resolving the concern with the exceptions noted:

(1) The question pertaining to safety related designation of work activities on doors needs to be addressed.

(2) Open Maintenance Action Tracking System (MATS) items 1294, 1295, and 1298 should be completed and closed out.

(3) Training for the dedicated door crew is a one time only class. Periodic retraining and training of new personnel should be evaluated.

These actions are being tracked via CATD 30803-SQN-01.

BFN

Door maintenance is a significant problem at BFN; this issue was validated. Over 400 significant mechanical and electrical repairs have been performed on doors in 1986 alone. Several doors have been repaired several times and are considered chronic door problems due to their continual breakdown. A determination could not be made if initial repairs were unsatisfactory or that the design was deficient. However all final repairs were satisfactory. A review of LERs from 1984 to present, identified 15 doors with various problems including structural integrity being reduced by differential pressure across doors creating a high stress factor on both sides. However, only three of these doors were chronic problem doors identified earlier. The apparent cause is that maintenance is fixing the damage but not solving the problem. Chronic door maintenance problems are not being programmatically addressed. Appropriate modifications are not being identified to prevent recurrence of the problems.

The door maintenance problem is considered safety related due to the doors design requirements. However, the doors are being adequately repaired to perform their safety functions and therefore does not have a safety impact on plant startup. This activity will be tracked by CATD 30803-BFN-01.

WBN

The problems identified at SQN and BFN have not shown up at this stage of plant construction and startup. A review of 100 door MRs from 1985 through 1986 did not reveal any trend that would indicate that there was inadequate door maintenance. Interviews with cognizant maintenance personnel could find no significant problems with door maintenance. Therefore, the concern is not valid at WBN. However, due to the significant problems that have occurred at TVA's only two operating plants, these problems may occur during plant operations at WBN. Currently, WBN does not trend equipment failures that are not part of the Nuclear Plant Reliability Data System (NPRDS) data base listing. As door problems occur, similar situations to BFN and SQN could go undetected at WBN. CATD 30803-WBN-01 was initiated.

Conclusion

At SQN, this issue was found to be factual but corrective action was initiated prior to the evaluation.

At BFN, the issue was found to be factual and corrective action is being taken as a result of the evaluation.

At WBN, the issue itself did not identify a problem but, as a result of the evaluation, a different problem was identified that requires corrective action.

Generic Applicability

This issue was not evaluated at BLN due to the stage of construction and lack of current maintenance activities.

Issue 308.03-4 - Need to Check Torque Wrench Calibration

Concern GSB-85-001 raised this issue at SQN. Since torque wrench control and calibration is generic to all plants, this issue was evaluated as such. The scope of this evaluation only included maintenance and not construction.

The requirements for using calibrated measuring and test equipment (M&TE) are included in Regulatory Guide 1.33, February 1978 and implemented by TVA in the Nuclear Quality Assurance Manual, NQAM, Part III. This procedure establishes controls to ensure the M&TE used on safety related components are in conformance with prescribed technical requirements.

SQN

The SQN instruction AI-31, that controls this process does not require a recalibration or calibration check to be performed immediately after the use of the torque wrench. An NRC audit in January of 1985 indicated that the present tracking program was cumbersome, evaluations are sometimes difficult and corrective action is hard to implement due to the long periods of time between calibrations. The plant responded to these findings on February 6, 1985 (S53 850201 910) by indicating that these periods could be reduced if the torque wrenches were calibration checked after each usage. If the check shows that the tool is out of tolerance, the engineer could take immediate corrective action. This recommendation was implemented through a revision to AI-31, revision 5, referring to Section Instruction Letter (SIL) SS/MU-3 to ensure the tool is check after each usage. This concern was valid at the time it was written but has since been corrected. No further action is required.

BFN

The Standard Practice BF-17.5 complies to the NQAM requirements for BFN. As with SQN, this procedure does not require a calibration check of torque wrenches be performed after each usage. However, as a good practice, all torque wrenches are rechecked after each job and is documented in the tool room log (BF 17.5, Attachment 7). This log which is kept in the tool room, includes the usage date and the associated MR. Any torque wrench found out-of-calibration can be immediately identified and corrective action can be taken. This concern was not substantiated at BFN and no further action is required.

WBN

Subsequent to the corrective actions implemented at SQN, similar actions were initiated at WBN as verified through review of WBN procedure AI-5.9 and Material Section Letter, M-5. This letter contains the same post use calibration requirement as SQN in that each torque wrench be calibration checked following each use to assure its accuracy at the value used. This concern is therefore not valid. The calibration check is documented and maintained until the full range calibration is performed and found acceptable.

BLN

The calibration of torque wrenches at BLN also meet the requirements of NQAM, Part III per Standard Practice BLE-2. Each torque wrenches history is maintained on MMSIL-2 form which includes its unique

identifier, last calibration date, issue date, return date and users initial. Unlike SQN, BFN and WBN the torque wrenches are not calibration checked after each job. Calibration intervals vary between 26 weeks and one year allowing a torque wrench to be used many times between calibrations. In a particular case one wrench was used 10 times between calibrations. If the wrench is found out-of-calibration, all 10 jobs are suspect. This concern may be valid when the plant is operating. However, a wrench now found out-of-calibration is only an inconvenience and some extra work. Presently, this concern is not valid and does not have a safety impact. Resolution has been requested via 30803-BLN-03.

Conclusion

At SQN, this concern was factual but corrective action was initiated before the evaluation.

At BFN, WBN and BLN, the issue could not be verified as factual.

Issue 308.03-5 - MRs Being Signed Off Complete Without Work Being Performed (WBN)

The issue from concern IN-85-025-005 was that work was either incorrectly performed or incomplete but was being written off as complete to give the appearance of increased production. This issue was not validated. The Correction Action Report (CAR) and Discrepancy Report (DR) logs were reviewed for 1986. There were 66 reports that were related to maintenance personnel not following procedures. However, only two were related to adequacy or completeness of maintenance work. Both WB-CAR-85-057 and WB-DR-86-018R have corrective actions completed and accepted by QA.

The same issue was addressed in concern IN-86-15-002 in element 308.04. During this evaluation, a random sample of 40 closed out work packages from various maintenance sections were reviewed for satisfactory completion of work. Work was verified complete in all 40 of the packages by reviewing signoffs by the workers, foreman, operations and quality control. Another ten canceled work packages were reviewed to identify any work signed off as complete that was not performed. All of the MRs identified, were cancelled due to various reasons identified in MRs. None of the cancelled MRs had work performed or were signed off as complete.

In addition, 175 completed work packages were reviewed for configuration changes for Subcategory Report 30700. The conclusion from this evaluation was that the MRs adequately documented that work was performed to the requirements of the work packages. Indications of this were QC signoffs in various steps in the work instructions, verifications of electrical leads lifted and returned to normal, and material forms were referenced indicating that new material was installed during the performance of work. These indications collectively indicate that work was performed and completed. The work packages were closed out, the equipment was tested (if required) and the systems were returned to operable status.

Conclusion

This issue was not verified as factual.

Generic Applicability

The evaluation at WBN concluded that this item was not factual. No other site evaluations are necessary.

Issue 308.03-6 - Need to Secure Tubing in Accordance with Drawings (WBN)

Concern IN-85-108-X02 specifically addressed a hanger that was not installed in accordance with the as-constructed detail drawing. The concern was validated. The MR identified in the concern (A-483663) was located in the records management system and was found to resolve this discrepancy. It was completed and verified by Quality Control on July 3, 1985. This concern is considered to be an isolated incident and was resolved via normal channels.

Conclusion

This issue was factual but corrective action was initiated before the evaluation.

Generic Applicability

The evaluation determined this situation to be specific to WBN with no generic implications. No other site evaluations are necessary.

Issue 308.03-7 - Maintenance Request (MR) Safety Review Inadequate (WBN)

Two concerns, IN-85-129-X05 and IN-85-142-X10), were raised at WBN with regards to Maintenance Request (MR) being signed off without performing the safety review; both are valid.

The falsification issues are being evaluated by the Office of the Inspector General and not by this report. The term "safety analysis" as stated in the concern refers to job safety planning, personnel safety and work hazards.

The finding was observed by comparing the incident rate for recordable and lost time accidents between similar maintenance sections at SQN and WBN. A review of these results found an unacceptable recordable and lost time accident rate at WBN, specifically in Mechanical Maintenance. Industrial Safety Subcategory Report 90100 addresses this issue and Corrective Action Tracking Documents (CATD) were written to require corrective action. Therefore, no further action is required. These concerns were not safety-related.

The lost time accident rate was reviewed at SQN for the sole intent to compare the results to that at WBN. However, by performing this comparison, it is evident that SQN performs an adequate safety review due to their satisfactory accident record. No further action at SQN is required.

Conclusion

Both concerns are factual but corrective action was initiated before the evaluation was commenced.

Generic Applicability

For IN-85-142-X10, the WBN evaluation found the safety analysis referred to in the concern to be an industrial safety issue. A comparison of WBN industrial safety statistics to other sites indicated are area of concern. The issue of WBN industrial safety is addressed in the Industrial Safety CEG report 90100. As no nuclear safety-related issues were identified, no other site evaluations are necessary.

For IN-85-129-X05, the evaluation will be conducted by the Office of the Inspector General.

Issue 308.03-8 - MRs on Security Equipment Need to be Completed Promptly (WBN)

Issue IN-86-056-001 questions the maintenance work priority placed on security equipment to ensure plant security is not jeopardized. Maintenance procedure AI-9.2 addresses priorities of MRs and the methods used to determined the priorities. A cognizant public safety officer stated that the performance of MRs was not a problem at gate 10 and that Maintenance personnel worked the MRs promptly.

The officer stated that the problems with gate 10 identified in the concern were not with the magnetic switches but the adjustment and design of the gate which have been corrected. This issue is addressed in more detail in Element Report 312.11.

Conclusion

This issue was not verified as factual.

Issue 308.03-9 - Sprinkler System Drainage Inadequate (WBN)

The issue addressed is a specific concern, IN-86-96-001, requiring a 55 gallon drum to collect drainage of an auxiliary building pre-action sprinkler system. This concern was found to be valid. The fire protection engineer stated that during a spurious actuation of this system, water would drain through the alarm pressure sensor into the collector piping which would drain to the floor. The function of the 55 gallon drum is to collect the system drainage during the spurious actuation of the system. The system is of a pre-action design, in that when it activates the system header only charges and does not spray until a rise in temperature melts the links in the spray nozzles. The engineer stated that a Design Change Request (DCR) is being processed to address this problem.

This concern is valid due to the plant not being designed to accommodate the system drainage. This problem has been identified verbally to Division of Nuclear Engineering (DNE) and WBN is planning to initiate a DCR for evaluation/resolution of the problem. CATD 30803-WBN-02 was initiated to ensure completion of the issue.

Conclusion

This issue was factual but corrective action was initiated before the evaluation commenced.

Issue 308.03-10 - Maintenance Request Initiator Requires Work Update (WBN)

Concern IN-86-315-005 is that an MR initiator is not informed on the results of the work performed. The concern was found to be not valid. There are no written requirements that an MR initiator be notified upon work completion. If an individual has an interest in a specific MR, he can ask the maintenance planner for status. There are means for interested parties to receive status of MRs from initiating to completion. No further action is required.

Conclusion

This issue was not verified as factual.

Issue 308.03-11 Work Package Incomplete (WBN)

In concern IN-86-316-002, the CI did not believe all information required to perform work was included in the work package; this issue could not be validated. The foreman/general foreman is responsible for reviewing a work package for adequacy and completeness before its start in accordance with AI-9.2. If the craft do not have adequate information to perform the work, he is to inform his supervisor. The engineer can determine that information provided was adequate. Vendor manual information may not be applicable and should not be used unless it was previously approved for this work.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and found to be not valid. No other site evaluations are necessary.

Issue 308.03-12 Supervisor Review of Work Packages Required With Craft (SQN)

The issue identified in concern SQP-86-014-002 is the alleged requirement for craft supervision to review the work package with the craft before commencement of work. This issue could not be validated. Standard Practices SQM-1 and SQM-2 require supervision to review work packages for proper planning and to ensure the instructions are adequate. There are no requirements for supervision to review the work package with the craft. The craft is responsible for understanding the work package and to identify and problems with the instruction to his supervision. For safety related equipment, the craft is obligated to complete an instruction review sheet before work begins for any attached instructions. No requirement exists for supervision to review work package with the craft.

Conclusion

This issue was not verified as factual.

Generic Applicability

This concern was evaluated at the site of concern (SQN) and found to be not valid. No other site evaluations are necessary.

Issue 308.03-13 Questionable Hardware Repair Process (SQN)

Concern XX-85-071-003, which questions the hardware repair process, cannot be evaluated because of lack of information. The NRC expurgated file for this issue was reviewed and contained no additional information. The SQN Site Director was notified by memorandum.

Conclusion

This issue could not be evaluated or verified as factual.

Generic Applicability

Evaluation was attempted at the site of concern (SQN). There was not enough data to perform an evaluation; no other site evaluations are necessary.

Issue 308.03-14 Large Spill Was Misrepresented to NRC as Small Leak (SQN)

The NRC identified a concern, XX-85-096-N07 from the review of the QTC file that a large spill was reported to the NRC as a small instrumentation leak. This issue could not be validated. Licensing Event Report (LER SQRO-50-327/84030) reported that a thimble tube seal failed resulting in a reactor coolant pressure boundary leak of 25-35 gallons per minute while the plant was at 30 percent power. The leak was identified in gallons per minute (GPM) because the Technical Specification Limiting Condition of Operations (LCO) are measured in GPM. Since the plant had exceeded these limits, it was forced to shutdown. Reactor coolant leakage is a significant operating parameter and measurement in GPM is a much more meaningful measurement than total leakage. This measurement was reported accurately in this report. The total leakage of 16,000 gallons was identified in the body of the LER. This event was reported accurately to the NRC and identified the leak as significant.

Conclusion

This issue was not verified as factual.

Generic Applicability

The issue was evaluated at the site of concern (SQN) and found to be not valid. No other site evaluations are necessary.

Issue 308.03-15 Thimble Guide Incident Reccurrence

SQN

The issue identified in concern XX-85-096-005 is that this problem could occur again if the thimble guide tubes are repaired during plant operations. The thimble guide tubes are not designed to have maintenance performed on them at plant operating pressure. As a result of this incident, maintenance instructions were revised to prohibit maintenance or cleaning of the thimble guide tubes from being performed at any time when the reactor pressure is above atmospheric pressure and the coolant temperature is above 150°F. Procedure revisions also include implementation of a special tool control program. This concern was substantiated and identifies a problem but corrective action was taken as a result of the incident and has been completed.

WBN

The incident identified in XX-85-096-005 could also occur at WBN because of similarity of design at both plants. As a result of the SQN incident, WBN has made provisions to administratively control thimble guide tube activities and thereby effectively prevent occurrence of a guide tube ejection incident. The same requirements established at SQN have been implemented at WBN. This concern was thereby considered valid but action has already been taken as a result of the SQN incident. No further action is required.

Conclusion

This issue was factual but corrective action was initiated before the evaluation took place.

Generic Applicability

This concern was evaluated at SQN and WBN due to the similarity of design. Since BLN and BFN are different NSSS designs, no evaluations are necessary at those sites.

Issue 308.03-16 Repairs not to ASME Requirements

Concern 2850162005 addressed three specific areas relating to American Society of Mechanical Engineers (ASME) code requirements. The furmanite (sophisticated glue) issue was evaluated under this element at all plants whereas the patches and overlays issue was evaluated by the Welding Group of Employee Concerns. Although there is no portion of the Code which addresses temporary packing or gasket leak repair, holes that are drilled into ASME, Section III components should have an engineering evaluation performed to address the effects of stress increases caused by the removal of

metal and the shift in gasket loading caused by furmanite injection. Furmanite is a product that allows leak repairs to valves, piping, heat exchangers be made with systems at normal operating temperatures and pressures. This repair is performed by personnel specifically trained for this skill.

SQN

A specific case was identified at SQN where the unit-1 Turbine Auxiliary Feedwater Pump check valve had small holes drilled into the bonnet flange for furmanite injection without a safety evaluation being performed. Also, an evaluation was not performed on the compatibility of the furmanite product with its component's material for identification of long-term damaging effects. A new general specification G-85 has been drafted to provide guidance in the use of temporary sealants. This concern is therefore substantiated although there is not specific ASME code requirements which address the topic of temporary leak repair. This problem was identified previous to this evaluation, corrective action is in process and will be monitored via CATD 30803-SQN-02.

BFN

A review of all purchase orders and job requisitions from 1984 to present did not reveal any instance where Furmanite had been utilized on ASME Section III piping systems. Maintenance will not allow its usage on these systems to avoid any safety related problems in dealing with pressure boundary leak prevention. This concern was therefore not substantiated at BFN.

However, a problem does exist on the usage of furmanite on non-code equipment. A documentation review revealed that the use of furmanite is not controlled through the MR system. No MRs were identified showing the use of furmanite, yet the product was used at BFN on 19 separate occasions as identified on furmanite purchase orders. Also, no system is available to track the usage of furmanite on plant equipment so a permanent repair can be made at the first available outage. These problems were identified to BFN via CATD's 30803-BFN-02, 03 and 04.

WBN

An interview conducted with a cognizant maintenance engineer found that furmanite has not been used at WBN. Furmanite will be used only after the plant is in operation and General Construction Specification G-85 is written and approved. Also, implementing procedures will be written at that time and will be PORC reviewed and approved. Therefore, this concern was not substantiated at WBN.

BLN

Concern 2850162005 is not valid at BLN. Furmanite is not used at BLN and will not be considered until startup. The welding section of ECTG will evaluate the welding overlay and patches for ASME code requirements.

Conclusion

At SQN, the issue was factual and corrective action was initiated before the evaluation was started.

At BFN, the issue itself was not a problem but in the course of the evaluation, other problems were identified that require corrective actions.

At WBN and BLN, this issue was not verified as factual.

3.4 Element 308.04 - Program Deficiencies/Procedural Violations

Issue 308.04-1 Foreman Using Verbal Hold Orders (WBN)

The issue that foreman may cause unsafe work conditions because he does not like to use hold orders to perform work was evaluated from concern EX-85-048-001.

The concern that TVA foreman have work performed without hold orders is acceptable if the shift engineer has jointly agreed with the foreman that a clearance is not necessary. This is allowed per clearance procedure AI-2.12 for minor jobs (i.e. packing valves, troubleshooting). However, if the craft, foreman or shift engineer want the clearance, a hold order shall be written. Review of the CAR/DR Log, found no violations where the foreman required craft to work without hold orders. Industrial Safety Department in both construction and operations stated that no injuries had occurred because of workers working without proper clearance. Therefore, foreman using verbal hold orders and creating dangerous work conditions could not be substantiated. No further action is required.

Conclusion

This issue was not verified as factual.

Generic Applicability

This concern was evaluated at the site of concern (WBN) and found to be not valid. No other site evaluations are necessary.

Issue 308.04-2 Potential Safety Hazard with Temporary Hose Drainage (SQN)

Concern I-86-233-SQN raised the issue about a rubber hose being temporarily used to drain the condensate demineralizer waste evaporator; this issue was not validated. The CI stated that extensive modifications near the hose may cause a rupture and result in a personnel safety hazard. A reinforced bull hose has been installed to drain the evaporator off grade distillate and bottoms to the plant Floor Drain Collector Tank (FDCT). Radiation monitors are installed in key locations that will warn personnel when high level effluent exists. During routine operations, the hose is utilized to drain very low level radiation (less than background) off grade distillate that eventually goes to the river.

Therefore, during normal operation there is no danger of personnel contamination. Draining contaminated fluid is only necessary during and subsequent to an emergency evaporator shutdown necessitated by pump seal failure or other similar problem.

The CDWE operation procedure, System Operating Instruction SOI-77.1B3, "Waste Disposal System (Liquid)" was reviewed. It provides for personnel protection during evolutions of high radiation level drainage for pump seal failure, which requires dumping bottoms, and discharging the slurry tank to the FDCT. In these cases the procedure requires notification of health physics so that personnel can be cleared from the area. The addition of this hose provided for CDWE drainage in lieu of having all evaporator drainage routed to various floor drains which have occasionally backed up and caused contaminated water to flood the floors. Design work is in progress to remove the hose and install permanent pipe.

There have not been extensive modifications in this area. When welding and cutting has been performed near the hose the protection of burnable material is adequately provided in plant procedure AI-15. An individual stated that he has seen the bull hose covered during welding.

Conclusion

This issue was not verified as factual.

Generic Applicability

The focus of the 30804 evaluation was on adequate welding protection procedure requirements. This resulted in a not valid finding class. Evaluations at other sites are not necessary.

Issue 308.04-3 Inadequate Controls of Instrument Adjustment (WBN)

This issue was identified and evaluated originally under concern IN-85-142-006. Concern IN-85-142-X11 is an identical concern with the exception it did not identify a specific case as did the previous one. This issue is that instruments were adjusted to match control room instrumentation without being recalibrated. The specific case cited in the previous concern found this to be valid. The recommendations of this report required that Instrument Maintenance engineers and maintenance employees be "trained on the proper methods to apply when redundant indicators do not read within the acceptable tolerance and that adjusting the zero is not an acceptable method." Also the specific instrumentation in question was required to have proper documentation showing that corrections were made to that instrument.

Concern IN-85-142-006 was evaluated approximately seven months later by the ECTG under element report 30302. The findings substantiated the NSRS report (I-85-327-WBN) conclusions and agreed with the recommendations. This followup report also found the plant had responded satisfactorily to these recommendations. Further evaluations performed in 30302 element report could not find other instances where Instrument Maintenance engineering instructed technicians to adjust level indicators without documentation.

A review of the CAR and DR log from 1985 to present could find no other instances where Instrument Maintenance adjusted instruments without proper documentation. This concern has been substantiated but was corrected before this latest evaluation. This incident was an isolated case and could not be identified as a generic problem No further action is required.

Conclusion

This issue was factual but corrective action was initiated before the evaluation being done.

Generic Applicability

The evaluation determined this concern to be an isolated incident at WBN. Additional information was also obtained during the evaluation of IN-85-142-006 in element 303.02. No other site evaluations are necessary.

Issue 308.04-4 Check Valves Removed From Welding Gas Headers (WBN)

Concern IN-85-338-001 addressed an issue dealing with misuse of a temporary system; it could not be validated. The gas welding header is a temporary system currently installed in unit-2. An inspection performed by the evaluator found the system to have only capped angle valves coming off the headers.

These valves are connection points for the welding hoses. The valve caps are there to protect the valve threads and keep the opening covered. The only check valves that is needed for gas welding equipment are back flow preventors which are part of the regulators and torch equipment. This equipment is not to be left on the header when not in use. Additional check valves in the system are not required.

The temporary system is installed for construction purposes only. This system is not installed in unit-1 and will be removed from unit-2 upon completion of plant construction.

This concern appears to be raised as a safety concern. All welders are trained in welding safety. Welders are trained on how to use their equipment safely and back flow preventor usage is part of this training. The Industrial Safety Supervisor stated that no reports or violations on this subject had occurred. This concern required no further action.

Conclusion

The issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and found to be not valid. No other site evaluations are necessary.

Issue 308.04-5 TVA Rarely Consults Vendors for Repairs (WBN)

Concern IN-85-463-005 stated that instruments are repaired without consulting a vendor representative; it could not be substantiated.

TVA's position is that they have in-house technical maintenance capability to repair equipment. The skill of these personnel, along with the use of vendor supplied service manuals, is normally all that is required to make the repair. Vendors are only contacted when the problem resolution exceeds the in-house capability or when time delays are critical. Interviews with Instrument Maintenance personnel found a satisfactory rapport with equipment representatives especially with the Nuclear Steam Supply System (NSSS) representatives.

Conclusion

This issue was not verified as factual.

Issue 308.04-6 Nuclear Power Responsible for Repairs/Modifications at Turnover (WBN)

Concern IN-85-553-001 recommends that it is more economical for Nuclear Power to be responsible for modifications or repairs to turned over systems. This concern was not validated. The work control procedure, ID-QAP-1.3 specifically states that transfer of responsibility for modifications does not pass to nuclear power until the unit is licensed. DNC maintains overall responsibility for preparing workplans, coordinating schedule with DNE and Nuclear Power and performing actual modification. Nuclear Power assumes operational and maintenance responsibilities for plant equipment that has been tentatively transferred as required by Interdivisional Quality Assurance Procedure (ID-QAP) 1.2. Nuclear Power has the option of requesting assistance from DNC up until the completion of the 300-hour period of rated load operation of the unit. Due to the reorganization that gives DNC the responsibility for modifications this recommendation is not possible.

Conclusion

This issue was not verified as factual.

Issue 308.04-7 Fire Door Blocked Open Without Breach Permit (WBN)

Concern IN-85-895-002 identified a specific case where a door was blocked open without a breach permit being issued. This concern was substantiated. The door in question was a fire door at the airlock separating the Service and Auxiliary Building. During the time that this door was being modified it failed to operate properly on several occasions and was left open. Physical Security Instruction-2, Fire Protection Plan, requires that a breaching permit be issued any time a fire barrier is nonfunctional. The maintenance personnel involved in performing this work failed to obtain the proper permits to open the fire door. When the door failed to function during an evening or night shift, Public Safety personnel opened the door to allow personnel access and did not obtain the necessary permits. A Discrepancy (DR) Report was issued because of the breaching violation. The resolution to the DR was to ensure maintenance personnel are aware of the breaching permit requirements and follow the correct procedure while performing maintenance on fire doors. Public Safety officers have been instructed to contact the shift engineer for a permit if fire doors fail to operate and are opened. This particular instance is the only documented violation of the doors breaching permit requirement recorded between January 1, 1986, and February 4, 1987, it can be concluded that it is an isolated case and not a degradation of the Fire Door Program. No further action is required.

Conclusion

This issue was factual but corrective action was initiated before the evaluation was performed.

Generic Applicability

The evaluation of this concern determined the issue to be specific to WBN. No other site evaluation is necessary.

Issue 308.04-8 Material Not Being Sufficiently Supplied to Craft (WBN)

This issue was addressed by two concerns: IN-85-905-001 and IN-86-097-001, one addressed an inadequate supply of common material being maintained in stores and the other indicated the lack of common material on-hand causing work delays.

Material stocking levels and reorder points for spare parts are established by user organizations based upon their identified needs. Stocking levels for common usage items are established by the Power Stores Unit (PSU). At the time a stocked item inventory reaches the reorder point, PSU personnel review the actual usage history of the item since the last time the item was ordered and may adjust the reorder quantity and reorder point up or down dependent upon actual usage.

The Power Stores material issue history for October and November 1986 was reviewed and evaluated using the Monthly Nuclear Inventory Summary Report issued by the Materials Branch in Chattanooga. The actual total material issues made was 2,586 or an average 63 material issues each work day.

A review of the "Stockout Conditions Reported by 6200 Watts Bar Nuclear" report for the period October 1, 1985 through September 30, 1986, disclosed a total of 928 stockouts over a twelve month period. Since this total includes several items that were stocked-out more than one time, the actual items stocked-out is 221. This represents approximately 4 stockouts each work day or 6 percent of the total requisitions submitted.

A 10 percent sample of stockout items was selected at random and tracked on a monthly basis for one year in an attempt to observe a trend of stockout items. This sample indicated an upward trend of stockout items over this period.

Of the 221 stockout items, in a one year period, 65 items were stocked-out four or more times. This appears to indicate a trend of a stocking problem. However, further analysis revealed that only 28 items were material which could be used for plant equipment repair.

The remaining 27 items were specific make/model replacement parts or janitorial or facilities support materials not related to plant equipment.

Input provided by the Power Stores Unit Supervisor indicates more than 45,000 items are maintained in stock by Power Stores. This means that less than .06-percent of these items that could be used for plant equipment experienced four or more stockouts in the 12 month period.

The lack of adequate supply of material from Power Stores such as nuts, bolts, and sheet metals and other common items that may delay jobs could not be substantiated. It is both uneconomical and unrealistic to attempt to totally eliminate occasional stockout occurrences. Since Power Stores and Maintenance Planning already employ an ongoing process to optimize inventory stocking levels based upon actual usage history, additional corrective action is not warranted.

Conclusion

Concern IN-86-097-001 could not be verified as factual; IN-85-905-001 was factual but did not constitute a problem requiring corrective action.

Issue 308.04-9 Configuration Control of Vendor Manuals

Concern IN-86-073-002 questions the control of vendor drawings in shop vendor manuals to ensure they reflect as-constructed conditions. This concern was evaluated at all sites. The Nuclear Quality Assurance Manual (NQAM) part III, section 1 and Quality Notice ID-QAP-6.2 adequately address the requirements for and use of vendor manuals. Plant procedures for the implementation of these requirements have been developed at SQN and BFN; an evaluation of the requirements is being conducted at WBN. The implementation of these requirements has resulted in the establishment of an ONP Manager, Vendor Manual Control, identification of interfaces with DNE for technical reviews and processes to control the use of vendor manuals and drawings. R2

WBN

Vendor manuals are controlled according to the requirements of AI-4.4. This procedure controls all revisions to the manuals including updating drawings or schematics. If a manual is being controlled by a section other than Document Control (DCS), that group is sent the change to update the manual. An audit is performed by DCS once a year to ensure all manuals have not been lost and have proper revisions.

Drawings in these vendor manuals however, are considered 'information only' unless otherwise designated. If a drawing is deemed necessary to as-configure, it is to be placed under TVA's drawing control program. Drawings in the vendor manuals should not be used by the craft for performing work in the field unless appropriate approvals are obtained and the drawings are in TVA's drawing control program Drawing Management System (DMS).

During this evaluation it was observed that vendor drawings in the manuals are being used for trouble shooting and replacement of parts. In many instances, these drawings are not included in the DMS. An example of this is when Instrument Maintenance uses the vendor drawings to trouble shoot and repair a CSSC controller. When the problem was isolated, a part replacement was made using the manual as a source document. The schematics used have not been verified by TVA to reflect the actual configuration for that piece of equipment. If a part was replaced with a alternate part from a previous repair, this change is not reflected in the vendor manual schematics master file copy. It could only be found in the Instrument Maintenance copy.

In the fall of 1986, the NRC requested additional information from TVA concerning Generic Letter 83-28. This letter indicated that TVA may have problems establishing a vendor interface that ensures all applicable information is received to maintain vendor information up-to-date. Indications of these NRC concerns were observed from specific examples shown to this evaluator during this evaluation. These examples indicate that the vendor and TVA do not have an acceptable working interface to exchange information to ensure that TVA has the most current information.

The concern that vendor manuals in the shop do not contain the latest drawings and schematics is valid. The Document Control System for controlling vendor manuals at WBN appear to be adequate for incorporating all revision that are sent to them. However, there are no assurances that the vendor manuals reflect the configuration of the plant equipment even if the manual is certified. The manual may have reflected the as-constructed condition but updates from vendors are not always received and reviewed by the plant staff. Corrective action was requested via CATD 30804-WBN-01; corrective action will be accomplished prior to fuel load. |R2

The plant staff, in many instances contacts vendor directly to obtain the current revision of the vendor manual. It was also observed that the schematics in vendor manuals are being used not only for trouble shooting, but for identifying replacement components from non-certified manuals. These schematics, which were used from

manuals that are not certified, could not be found in drawing control of the Drawing Management System. CATD 30804-WBN-02 was initiated to resolve this problem; corrective action will accomplished prior to fuel load. |R2

Comprehensive corrective actions to be taken to resolve these items are detailed in Section 6.0, "Corrective Action", of this report. |R2

SQN

In 1985, Corrective Action Report, CAR 85-03-005 identified that Instrumentation was working from vendor drawings not validated in the field. At this time vendor drawings were to be used for information only and no program existed for verifying or "As-Constructing" (AC) these drawings. Drawing control procedure, Administrative Instruction AI-25 was modified at the beginning of 1986 to implement a new program for vendor drawings configuration control. The parent document, TVA Nuclear Quality Assurance Manual (NQAM, part III, section 1.1) was also revised by issuance of a quality notice (appendix A, dated November 29, 1985). This quality notice provided for use of best copy available vendor drawings. Specifically, AI-25 requires the vendor drawing user to verify if a "Configuration Control Drawing" existed before doing work in the field by requiring completion of the appropriate forms and consequently making a determination of the "Best Copy Available" (BCA) vendor drawing. A BCA vendor drawing is an unverified drawing or a drawing which has not been completely verified ("Partially Verified") against the existing plant configuration. It is the drawing that is determined to be the best available information onsite for a particular job application. BCA drawings are stamped "Best Copy Available" and also marked "Use with Caution." "Best Copy" authorization is good for 30 days from the date stamped. During the use of this drawing, the equipment/component will be visually inspected to compare the drawing to actual configuration if the portion being used has not been previously verified. The portion of a drawing which has been verified will be circled; eventually the entire drawing will be "As-Constructed." Consequently, this program provides for field verification of an unconfigured vendor drawing by field inspection and subsequent cognizant engineer review and approval. In accordance with current AI-25 (section 5.2.10) requirements, only drawings listed as "Controlled Copy," "Verified Copy," "Partially Verified," and "Workplan Copy" shall be allowed for use in the plant main control room. Other drawings are allowed in the plant but shall not be utilized in activities affecting quality. The new vendor drawing program is being utilized by plant personnel; four vendor drawing configuration packages (AI-25, attachment B's) were located in the drawing control unit. Since the above information identifies the methodology to assure accurate information is being used in the field for safety-related activites, no additional corrective action is necessary. |R2

The concern that uncontrolled vendor drawings have been used in the field is valid. This concern is safety related. However, this problem has been adequately documented, is being corrected, and a new program is in effect to "as-construct" or partially verify vendor drawings.

BFN

A review of CARs and DRs issued since January 1984 revealed seven (7) related nonconformances issued for use of invalid drawings in the field. None of the findings involved uncontrolled vendor manuals. A review was also conducted of the TVA NQAM, Site Director Standard Practices (SDSP) and BFN Standard Practices (BF). Drawing control procedure, BF-2.5, was modified in March 1986 to implement a new program placing vendor drawings in the configuration control system. The new program is identical to the SQN program as stated above. The concern that uncontrolled vendor drawings have been used in the field is not validated at BFN. The procedures and systems currently in place, in addition to the ongoing configuration control process, are sufficient to preclude this problem.

BLN

Some vendor drawings have in the past been incorrectly marked "AC" (As-Constructed) by DNC and were probably used in the field under that status. This procedure has since been changed deleting this requirement. NUC PR Standard Practice BLA-5.9 was revised May 28, 1986, to implement NQAM-III, 1.1, Quality Notice dated November 29, 1985. BLA-5.9 requires that only vendor drawings which have been verified/partially verified (V/PV) be used and if the drawing is not identified as V or PV, it must be reviewed and evaluated before use. A Drawing Management System (DMS) is used to store, update, and retrieve drawing information related to vendor drawings. If a non-verified vendor drawing is required to perform work, the BCA must be used and controlled as described in the SQN evaluation. Attachment 1 of BLA-5.9 will be completed during this visual inspection. Consequently, this program provides for field verification of an unconfigured vendor drawing by field inspection and subsequent system engineer review and approval. After system engineer approval, the drawings and associated forms are returned to DCU and the DMS is updated to indicate the V/PV status of the drawing. All affected personnel have received training in the use of vendor drawings as outlined in BLA-5.9.

The concern that uncontrolled vendor drawings have been used in the field was validated. However, a new program is in effect which requires use of a verified/partially verified vendor drawing or that field evaluation for correct configuration be performed if the vendor drawing is not already verified/partially verified. This concern is safety related. No further action is required.

Conclusion

At WBN, the issue was valid and corrective action is being taken as a result of this evaluation.

At SQN, the issue was factual but corrective action was initiated prior to the conduct of the evaluation.

At BFN, this issue could not be verified as factual.

At BLN, the issue was factual but corrective action was initiated prior to the conduct of the evaluation.

Issue 308.04-10 Jackhammers Used During Ice Loading

Concern IN-86-110-001 was evaluated at both SQN and WBN because of both plants having ice condensers. The configuration of the ice which is affected by the use of a jackhammer is the concern being addressed.

WBN

NSRS Investigation Report I-85-455-WBN evaluated this concern on October 15-18, 1985 and established that the concern was factual but of no consequence. The procedure used for loading the ice condenser MI-61.1 did not specify the use of a compacter but it required each basket to be filled with 1450-1550 pounds of ice. Westinghouse has conducted tests (WCAP 295/and 7040) using various configurations using ice chips or ice cubes of various shapes, baskets with and without steam flow holes, and a large block of ice with flow holes. Test results indicate that the performance was not strongly affected by ice configuration. Maintenance personnel confirmed the fact that a DNE soil compactor was used to obtain maximum allowable weight of ice per basket. However, there is no procedure restrictions that prohibit the use of compactors. Westinghouse has tested several configurations and determined that the only criteria that must be satisfied is the weight requirement of ice per basket. The method used to meet this requirement is not specified by Westinghouse.

SQN

Ice condenser weighing, addition, and removal of ice is controlled by SQN maintenance procedure MI-5.3. At SQN, basket space for ice addition is made utilizing a thermal drill. This is a cone-shaped insulated heat element that melts the necessary cavity for ice addition. A jack hammer or concrete vibrator was used briefly for demonstration purposes about four years ago. The demonstration was for evaluation of acceptable ice addition techniques. However, this technique has never routinely utilized a jack hammer for ice addition.

Therefore, the concern generated at WBN cannot be substantiated at SQN. No further action is required.

Conclusion

At WBN, this concern was factual but did not constitute a problem requiring corrective action.

At SQN, this concern could not be verified as factual.

Generic Applicability

This concern was evaluated at SQN and WBN. No other TVA sites have ice condensers; no other site evaluations are necessary.

Issue 308.04-11 Engineering Accepts Work Not Completed

The issue identified in concern IN-86-315-002 was evaluated at all plants. The issue being addressed was that engineering will disposition Notice of Indications (NOI) and Maintenance Requests (MR) without fixing.

WBN

NOIs are used to report unacceptable indications of components within the scope of ASME Section XI and which have been scheduled for examination. Any other discrepancies should be reported via MR, DR, CAR, etc. Dispositions to accept the condition "as-is" shall include the basis for the disposition. In addition, for dispositions to accept the condition "as-is", an Unreviewed Safety Question Determination (USQD) shall be prepared by the appropriate organization in accordance with established procedures and a copy submitted along with the NOI.

Interviews with the NDE inspection section personnel and a review of the NDE Inspection Section NOI Log revealed that there have been only three NOIs dispositioned "accept as-is" since the baseline inspection program was initiated. All three were dispositioned within the requirements of TI-50A. It was noted that several NOIs had been voided but none fell within the parameters provided in TI-50A.

The concern regarding MRs that were dispositioned without fixing was evaluated under concern JLH-86-001 of this element. The only difference is that engineering was cited in this concern. Plant Engineering is the only engineering group that is directly involved in the MR process. They become involved when the work to be performed is more complex than routine work packages (i.e. welding, special work instructions, etc.). They are normally not in a position to disposition the work without fixing.

In the review of the random sample of MRs where work was not performed, no cases revealed that Plant Engineering had dispositioned work as acceptable without fixing. Therefore, the concern could not be substantiated.

SQN

The NSRS Investigation Report I-85-738-SQN, along with discussions with Inservice Inspection (ISI) personnel, revealed NOIs have been dispositioned without providing apparent documentation of the final NOI resolution. NOIs can legally be re-evaluated or rectified by acceptance criteria change or reinspection by an NDE supervisor or a higher level examiner. This was substantiated by the NSRS report which did not identify any improper NOI acceptance. The SQN implementing surveillance instructions are currently being changed to provide better documentation of NOI resolution. New forms are being added which will require a statement to be made about how NOIs are resolved. Therefore, the concern that engineering writes off NOIs without taking proper corrective action was not substantiated.

BFN

Examination of all CARs and DRs issued since 1984 revealed 10 total related discrepancies. None of the discrepancies concerned improper dispositioning of NOIs and MRs. The discrepancies dealt with the fact that work was completed before formal approval to start work.

An assessment of the program for engineering dispositioning of these items was conducted. Specific Standard Practices BF-7.6 and 8.2 were reviewed to verify programmatic requirements for the dispositioning of MRs. The shift engineer is required to acknowledge work completed (BF-7.6, section 6.5). Interviews with QA/QC personnel did not reveal any additional problems in this area. This concern was not substantiated at BFN.

BLN

Interviews with cognizant personnel that have performed or been associated with the BLN baseline program established that improper NOI documentation or resolution has not been a problem. ISI activities at BLN have been limited to baseline UT and PT inspections on primary system piping. About 50 percent of this program is complete. ISI activities were stopped on June 2, 1985, when the plant fuel load was extended to 1993. It is very likely that the entire program will be repeated starting about two years before fuel load.

The concern that in-service or design personnel have written off NOIs without taking proper corrective action is not valid. ISI inspections are not being conducted at BLN. In addition, this has not been a problem with ISI inspections that have been completed which include only baseline PT and UT inspections. The BLN program will be upgraded in accordance with existing improvements that are being implemented at SQN with the revision of SI-114.1 and 114.2.

The fifth annual Systematic Assessment of Licensee Performance (SALP) report stated, "The implementation of the Inservice Inspection/Inservice Testing programs were well managed, and the inspection and testing activities well organized." ISI administration is controlled from the TVA Central Office and is therefore applicable to all nuclear plants.

Conclusion

This issue was not verified as factual at any of the plants.

Issue 308.04-12 Workplan Signed Off Prematurely (SQN)

Concern JAN-86-001 was a specific incident where a workplan, WP 10512, was prematurely closed out. Interviews with involved personnel and review of workplan established that this concern related to the premature closing of WP 10512 has been completely resolved. No generic problem could be found with premature close out of individual workplans before the drawing markup. In accordance with plant modification procedure AI-19 workplans are not verified complete by the document coordinator until it is verified that the appropriate preceeding workplan steps are completed. This includes drawing requirements, spare parts, nameplate data, and post modification tests. This concern was substantiated. However, this concern has been resolved and no further action is required.

Conclusion

This issue was factual but corrective action was initiated before the evaluation took place.

Generic Applicability

The SQN evaluation determined that the incident was an isolated case. No other site evaluations are necessary.

Issue 308.04-13 Motor Operator Grease Inspections Inadequate

Concern JLH-86-001 addresses three separate parts. The first part addresses a concern that the general foreman is signing off MRs for Limitorque operators as "no grease necessary" even if the grease levels are low. This issue is similar to concern TAK-85-004 in element 308.01 where the lubrication inspection of motor operator valve (MOV) limit switches was in question. These concerns were evaluated at all sites.

SQN

This concern was investigated by the SQN QC organization. The grease has been sampled on all Limitorque operators, and maintenance verified that they are properly greased. This was done in accordance with Maintenance Instruction MI-10.46. There was no indication that a foreman had canceled or deleted corrective action. This is documented in the QC inspection report dated June 13, 1986. This concern was therefore not substantiated.

WBN

Limitorque operators are inspected on an 18-month preventive maintenance (PM) schedule and are performed by a small mechanical maintenance group specifically dedicated to motor operators. They are the only group to perform maintenance on motor operators. If grease is required to be added, they are not required to obtain the foreman or general foreman's approval. The foreman reviews the MR upon completion of the work. The foreman has trained this select group on these procedures and relies on their judgments if grease levels are satisfactory.

The general foreman will review the work package only after the craft has completed the work, the foreman has reviewed the documentation and signed it off. The general foreman's approval signature is in the body of the procedure. He has no signoffs to the MR itself. Several PM packages were shown to the evaluator by the foreman. In no cases did the general foreman overrule or change any of the packages. This concern was not substantiated.

BFN

The PM program for Limitorque operators was evaluated in element 308.01 and found to be adequate. Since the shutdown of these units, all of the operators have been inspected and had the grease changed out to new grease. QC inspected all grease changeouts and additions. No specific incidents of inadequate grease levels were identified at BFN. The review of all CARs and DRs issued since January 1984 could not identify problems related to this issue. This concern could not be substantiated.

BLN

Only a few MRs have been turned in at BLN to add or replace the grease in the gearbox of Limitorque operators and the work requested by these MRs was performed satisfactorily. Mechanical Maintenance Instruction BLM MI-4101 "Performance of Lubrication" requires a QC inspector be present when grease is added and the inspector signs off on the MR that the correct type and quantity of grease is added. No DRs and CARs have been written to indicate a problem in this area. This issue was not substantiated at BLN or any other TVA site.

Conclusion

The first part of concern JLH-86-001 was not verified as factual at any of the four TVA plants.

Issue 308.04-14 MRs Signed Of Without Work Being Done

The second part of concern JLH-86-001 alleges that MRs are signed off by the general foreman as complete even if no work has been performed. This issue was also evaluated at all sites..

SQN

Cases were identified to the evaluator that MRs are sometimes closed out without work being completed. MRs A299897, A298222, and A2982200 were signed off without the conduit covers being replaced. A new MR was generated to reinstall covers. Since that time, a new system has been developed which require field tagging equipment out of service. This tag must be removed at completion of work. Thereby when the craft remove the tag an inspection of the equipment will ensure problems such as these will be eliminated. The supervisors have stressed the importance of strictly following procedures and will take disciplinary action when craft signoff a document that is incorrect or incomplete. This concern was therefore substantiated but corrective action was initiated before this evaluation.

WBN

Completed MRs are required to be signed by a supervisor indicating that the work performed by the craftsman was to the satisfaction of the appropriate maintenance section. The foreman reviews the work packages before notifying Operations that the repair work is complete. The general foreman is not required to signoff the MR that work is complete. If an MR references a Maintenance Instruction, the general foreman may then be required to have the final signoff of the instruction but is not required to signoff the MR.

A random sample of 40 closed out work packages from various maintenance sections were reviewed for satisfactory completion of work. Work was verified complete in all 40 of the packages by reviewing signoffs by the workers, foremen, Operations and Quality signatures. Another ten canceled work packages were reviewed to identify any work signed off as complete that was not performed. All of the MRs were canceled due to various reasons identified in the MRs. None of the canceled MRs had work performance or signed off as being complete. No cases could be found in all 50 work packages where the general foreman considered the work unimportant and signed off uncomplete MRs as complete.

In addition, 175 completed work packages were reviewed for configuration changes for Subcategory Report 30700. The conclusion from this evaluation was that the MRs adequately documented that work was performed to the requirements of the work packages. Indications of this were QC signoffs in various steps in the work instructions, verifications of electrical leads lifted and returned to normal, and material forms were referenced indicating that new material was installed during the performance of work. These indications collectively indicate that work was performed and completed. The work packages were closed out, the equipment was tested (if required) and the systems were returned to operable status. The issue that work was signed off as complete even if no work was performed could not be substantiated. No further action is required.

BFN

No incidents were identified at BFN relative to the general foreman signing off uncompleted work as complete. A Maintenance Instruction BF-7.11 was recently revised in September 1986 to ensure and allow that the responsible section supervisor has approval authority for maintenance work not performed. This concern was not substantiated.

BLN

Maintenance personnel interviewed expressed there have been no problems with MRs signed off as complete even though no work was performed. Control at BLN is not a problem because of the few number of MRs that are handled. No DRs or CARs have been written to indicate a problem in this area. This concern was therefore not substantiated.

Conclusion

The second part of concern JLH-86-001 could not be validated at BFN, BLN or WBN. At SQN, it was factual but corrective action was initiated prior to the conduct of the evaluation.

Issue 308.04-15 Non-QA Material Used in QA Application (SQN)

This was the third part of concern JLH-86-001 where non-QA material was allegedly used in QA applications and traceability was falsified on the MR. This issue was evaluated by both the Quality and the Intimidation/Harassment sections of employee concerns.

Conclusion

The third part of concern JLH-86-001 was not evaluated by the operations ECTG.

Issue 308.04-16 Violation of Procedures

SQN concern SQP-85-004-006 was evaluated at SQN, WBN, and BFN for violation of procedures. The specific example cited in the concern was the use of a different torque wrench than was specified in the procedure.

SQN

NSRS Investigation Report I-86-165-SQN indicated that 11 of 16 craft personnel interviewed stated that they had been directed to work without procedures or proper paperwork. Half of the craft interviewed stated they had been directed to use different tools from those required by the procedure. In the specific case cited in the concern, the maintenance supervisor could not refute the finding that a 0-24 in/lb. torque screwdriver was used in lieu of a 0-30 in/lb. torque screwdriver to tighten screws to 20 in/lbs. of torque. The supervisor stated that the torque screwdriver used fulfilled the technical requirement.

Further evaluation of the maintenance procedure program found several areas of concern. A review of the CAR data base found a significant number of violations, twenty-one, that were related to either having inadequate procedures or not having procedures. There have been four violations issued for not following maintenance procedures. The unit 1 violations were also common to unit 2. A survey of the quality assurance records revealed that one CAR (85-05-008) had been issued for not following maintenance procedures.

The fifth annual SALP report rated overall SQN maintenance as category 3, which indicated that both NRC and licensee action should be increased in this area. The report stated that personnel errors by instrument technicians caused several plant trips; however, some technicians performing maintenance tasks were observed using good work practices and implementing the management expressed philosophy of adhering to procedural requirements. It stated that some maintenance instructions were weak or nonexistent for some safety related activities.

There were several procedural violations (6) involving the failure to establish or implement procedures.

The concern that procedure violations occur at SQN was substantiated. This problem has been identified in several evaluations including the NMRG Report R-86-02-NPS. The SQN Maintenance Sections have made substantial progress and significant changes to improve performance in this area and also to provide management feedback if problems are identified by craft. Special maintenance training to craft personnel has been conducted which stressed the importance of following procedures. In addition to special training, electrical maintenance has feedback meetings every workday in which foremen have the opportunity to discuss problems. As identified in the TVA Nuclear Performance Plan, SQN is upgrading its nuclear operation, maintenance, and surveillance procedures, placing increased emphasis on compliance with procedures and has taken steps to identify any developing problems in nuclear operations. SQN is taking steps to improve maintenance accountability and steps are being taken to improve maintenance procedures. This will be followed through the issuance of CATD 30804-SQN-01.

WBN

The NMRG report cited some specific cases where procedure steps were not performed and that maintenance procedures were too restrictive. However, no cases were identified in that report or this evaluation that procedures were actually violated. In the specific case where a torque wrench is required, WBN maintenance procedures only state "Supply a Calibrated Torque Wrench Capable of Torquing to XX ft/lbs." The Mechanical Maintenance Supervisor indicated that this allows a qualified craftsman to select the tools within the capabilities of his skills and experience and does not restrict him to using a specific tool which may be unavailable. Therefore, this concern could not be substantiated at WBN.

BFN

The results of the evaluation at BFN were similar to WBN. A review of the CAR and DR log could find no incidents where maintenance procedures were violated. The specifications for torque wrenches in a procedure are the same as WBN. Therefore, this concern could not be substantiated. Because of several evaluations before employee concerns, including the NMRG report, BFN is involved in a major review and rewrite of maintenance instructions. This program is ongoing and a priority schedule is being established to meet critical commitments.

Conclusion

This concern was not verified as factual at either WBN or BFN. At SQN, it was factual but corrective action had already been initiated prior to the evaluation being performed.

Generic Applicability

This concern was not evaluated at BLN due to it still being in construction status.

Issue 308.04-17 Hanger Removed And Not Replaced (BFN)

Concern XX-85-102-001 deals with an uninspected hanger being removed and never replaced. An inspection program was initiated in 1979 as a result of an NRC IE Bulletin 79-14. This program evaluated the adequacy of piping system supports at BFN. Since then, an additional inspection program is now underway to inspect and evaluate all piping supports that were not initially inspected in 1979. This will be completed before startup. Any deficiency that is found will be corrected by either repairing or reconciliation of drawings. The current ongoing 79-14 program does not have a trending or category report to show how many problems of this type were encountered. Only two related CARs have been issued on this problem since 1984. The current program and procedures cover the requirements for removing and replacing hangers when they are identified in the scope of work to be performed.

Removal of the unspecified hanger could not be validated. However, the 79-14 program currently in progress will identify all conditions (hanger supports) adverse to configuration for disposition. Any missing hangers required for operation of the plant will be reinstalled according to design requirements.

The current ongoing 79-14 program is a "one shot" correction of existing problems, and does not address hanger removal/reinstallation for subsequent activities after program closeout. The existing program and procedures do not address methodology to control removal and subsequent reinstallation of hangers during maintenance/ modification activities required to gain access to equipment. This will be rectified via CATD 30804-BFN-01.

Conclusion

This issue was not a problem, but in the course of the evaluation an additional issue was identified that requires corrective action.

Generic Applicability

This concern was evaluated at BFN and could not be validated. A site issue was identified, however, concerning BFN specific procedures.. No other site evaluations are necessary.

Issue 308.04-18 Out-Of-Service Tags Being Violated (BLN)

Concern XX-85-122-023 is a personnel safety concern where craft allegedly has repeatedly operated out-of-service equipment; this was not substantiated. In 1984, the Institute of Nuclear Power Operations (INPO) performed a construction audit in 1984 (EDC 84 0608 701) that identified several problems with the station clearance hold order program. BLN responded by revising their clearance procedure BLO-1.2 to emphasize that personnel safety is TVA's highest priority and that each employee is instructed to become throughly familiar with this procedure. Future violations of the clearance procedure will be investigated to determine the cause of the violations and disciplinary action will be administrated accordingly. Also included was a commitment to conduct annual audits on all the clearances. The audits are performed quarterly on 25 percent of the clearances in accordance with BL SIL-43. A review of three recent audits performed in 1986 found no major discrepancies in the outstanding clearances.

The clearance procedure BLO-1.2 stresses personnel safety throughout the procedure. This procedure has been written to reflect INPO good practices as identified in OP-203, Protection of Employee Working on Electric and Mechanical Components. In interviews with the Operations Supervisor, and the Safety Engineers from both Construction and Nuclear Power, they could not identify any willful violations of the clearance as a result of clearance violations.

At the time this concern was written, the changes described in the findings had been implemented. There have been no clearance violations identified since BLN has implemented this program. No further action is required.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (BLN) and found to be not valid. No other evaluations are necessary.

3.5 Element 308.05 - Training Program Deficiencies

Issue 308.05-1 Cranes Improperly Used

This issue included two concerns EAC-85-004 and SQP-85-004-005 because of their similarities. Both concerns indicate that operators are side-loading cranes. These SQN concerns were evaluated at SQN, WBN, BFN and BLN for unsafe work practices. American Nuclear Society Institute Standard ANSI-B30.2-1976 strongly recommends the avoidance of side pulls and requires an evaluation to determine that the crane will not be overstressed and that no damage will occur as a result of the side pull. The Occupational Safety and Health Act (OSHA) endorses the ANSI standard.

SQN

Procedure SQM-31 and training lesson plans MTU-EMT-30.1 through 30.6 incorporate the requirements of the ANSI standard and OSHA Bulletin. However, crane operators indicate that side pulls are common. There is confusion as to side pulls being allowed or if engineering evaluations make them acceptable. Training stresses that side pulls are not allowed, whereas, engineering evaluations allow side pulls to occur under various conditions.

A program has recently been set up to evaluate the use of cranes TVA-wide. This is the Crane Consistency Program (CCP). The CCP-Special Project has been chartered to resolve issues of crane operations and has identified side pulls as a significant part of their charter. Ongoing inspections and resolution of problems found are currently being scheduled. This program is relatively new and has not yet issued any formal recommendations on side pulls.

Impact of the potential side pulls was evaluated against the Heavy Loads Program as required by NUREG 0612. No indication, either by interviews or documented inspection, was found that side pulls were performed on spent fuel assemblies or CSSC equipment. Also, Sequoyah Maintenance Instruction MI-9.4 requires inspections of the cranes before use. These inspections effectively preclude use of a damaged crane. Copies of inspections were obtained and reviewed. The inspections noted crane damage that was apparent at the time, and documented repair or justification for non-repair before use. Crane operators perform these inspections and crane operator training on inspections was reviewed and found to adequately cover the required areas of inspection.

Concerns SQP-85-004-005 and EAC-85-004 were determined to be valid in that side pulls have been performed in conflict with crane operator training. Foremen at SQN have not had similar training and the interviews indicated the foremen direct crane operators to perform side pulls. Further, it was determined that the required engineering evaluation was not performed for the majority of these side pulls. No evidence could be found that side pulls have been performed on safety related lifts. However, the findings of this evaluation concludes that programmatic deficiencies constitute a safety related finding. Corrections to these deficiencies will be corrected through CATD's 30805-SQN-01 and 02.

WBN

The CCP-Special Projects indicated that evidence of side pulls had been discovered and documented at Bellefonte and Watts Bar. Review of the crane operator lesson plans determined that side pulls are clearly prohibited by ANSI and OSHA regulations and this information is passed on to the crane operators. Interviews with four qualified crane operators revealed that an awareness of the requirements existed and only one case was cited where a side pull was performed. This isolated case was felt to be the result of inexperience and no future occurrences are anticipated. All four indicated that as emphasis has been placed in training, the potential for side pull performance has considerably decreased. Therefore, these concerns were not substantiated at WBN.

BLN

The only crane operated by Nuclear Power at this time is the Auxiliary Building 150-ton crane. Other cranes will be required to pass inspections before turnover from Construction to Nuclear Power. If any damage is noted, it will be repaired by Construction before turnover. Electrical maintenance crane operators indicated that side pulls are not performed and that foremen have stated that disciplinary actions would result if they were performed. Standard Practice BLM 6.1 Section 2.2.4 explicitly states the limitations placed on side pull performance by ANSI-B30.2. Training of crane operators was found to be adequate. Therefore, these concerns were not substantiated at BLN.

BFN

Interviews with crane operators at BFN and information gathered by the CCP-Special Project revealed that side pulls, although not common, have occurred at BFN. Inspections performed by CCP-SP personnel have not revealed conclusive evidence that crane damage has resulted from side pulls. See CATD 30805-BFN-01 for details.

A review of the crane operator and foreman training lesson plans and attendance logs revealed that the requirements regarding crane side pulls are clearly presented in MTS-110, "Crane Procedures and Administrative Controls." This plan defines side pulls and clearly emphasizes the requirements pertaining to them.

These concerns were found to be valid at BFN, however no evidence was discovered that these practices have had any impact on safety related equipment.

Conclusion

These concerns could not be validated as factual at BLN or WBN.

At BFN and SQN, the concerns were factual and corrective action is being taken as a result of the evaluations performed.

Issue 308.05-2 Plant Personnel Need More Training

Two concerns were categorized under the issue of plant training being deficient. Concern IN-85-495-001 was evaluated at WBN whereas XX-85-016-001 was evaluated at BFN.

WBN

The ONP at WBN is committed to the selection and training of personnel in accordance with the requirements of ANSI-N18.1-1971. This commitment is documented in the NQAM, part III, section 6.1 revision 1 dated November 10, 1986. WBN procedure APP 0202.08 meets those commitments for Mechanical and Electrical personnel. Both electrical and mechanical maintenance training programs at WBN have been submitted to INPO for accreditation, in accordance with INPO-85-002; Accreditation Criteria. Through various INPO evaluations from April of 1986 to February of 1987, the overall results are that the maintenance training program is in compliance with regulatory requirements and responsive to implementation of internally and externally identified enhancements. This concern was therefore not substantiated.

BFN

This concern was evaluated under two separate issues; Adequacy of Procedures (308.01) and Adequacy of Training (308.05). The NSRS report I-85-379-BFN did not address the overall adequacy of maintenance training as stated in the concern. A review of maintenance training found that the entire program has not yet been implemented. Efforts are ongoing to achieve INPO accreditation of

the maintenance training organization which involves a formal program to identify and train all important maintenance tasks. This effort is requiring a heavy workload of all training personnel and has a target date of June 1987. This concern is therefore substantiated. The issue of adequate maintenance training remains open pending implementation of the program to be submitted for INPO accreditation.

A review of the training schedule revealed that, while training is being conducted, the schedule is subject to extensive modifications based on requests from the plant in problem areas. While it is considered important to respond to those requests, evaluation and prioritization of task and/or subject training should be done to ensure that safety-related topics are not replaced with these requested classes. The current practice of training plant-requested topics is considered inadequate to resolve safety-related issues and this finding is safety-related. This will be resolved via CATD 30805-BFN-02.

Conclusions

Concern IN-85-495-001 was evaluated at WBN and was found to be not factual.

Concern XX-85-016-001 was evaluated at BFN and found to be factual; corrective action is being taken as a result of the evaluation.

Generic Applicability

The evaluation of concern XX-85-016-001 at BFN revealed the issue to be limited to BFN due to the current status of the training unit. No other site evaluations are necessary.

Issue 308.05-3 - Unqualified Personnel Operating MOVATS Equipment (WBN)

Concern IN-86-114-001 addressed an issue that the Motor Operator Valve Actuator Test System (MOVATS) is not being operated by qualified craft personnel; it was not substantiated. A review of the training records found that vendor training has been conducted onsite by MOVATS, Inc. between October 1985 and April 1986. Records of this training are not kept in the individuals training files, but each individual who received the training received a certificate of completion. It was determined that the personnel operating MOVATS received this training. Therefore, concern IN-86-114-001 is considered not valid in that MOVATS training was conducted and an adequate level of expertise was documented for the personnel operating MOVATS.

Conclusion

This issue was not verified as factual.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and found to be not valid. No other site evaluations are necessary.

Issue 308.05-4 - Improper Rigging of Reactor Coolant Pump Motors (WBN)

Concern WBN-0217 identified a possible problem with the rigging and lifting of the reactor coolant pump motors (RCP) at WBN while being removed for repairs. This work was performed in accordance with Special Maintenance Instruction SMI-68.f. Interviews with cognizant maintenance personnel indicated that the eye-bolts were, in fact, bent during the lifting of the motors. A change in type of eye-bolt used, (swivel-type) resolved the problem and no further occurrences were noted. Review of SMI-68.f revealed that there were no specific work instructions to perform the lift. Interviews with cognizant electrical maintenance personnel indicated that this is considered "within the skill of the craft."

No evaluation for potential adverse affects to the stators could be found. Post modification testing also did not involve high potential tests or motor current amp tests on the motors.

Concern WBN-0217 was valid. The lifting of the RCP motor stators did result in bent eye-bolts. Follow-up actions did not document or evaluate the potential adverse effects of the lift. As the RCP motors are not safety-related the issue is not safety related.

As a result of this evaluation, CATD 30805-WBN-01 was written to resolve the issue. The response from WBN line management contends that, after a review of all the supporting information, there was no nonconforming condition caused by the minor bending of the eye-bolts in this evaluation. This response was found acceptable.

Conclusion

This issue was factual and corrective action, in the form of a detailed review of the situation, was taken as a result of the evaluation.

3.6 Element 308.06 - Subjourneyman/Journeyman

Issue 308.06-1 - Subjourneymen Performing Journeymen Work

WBN

Nine concerns EX-85-012-001, EX-85-054-002, IN-85-128-001, IN-85-130-001, IN-85-589-002, IN-85-729-001, IN-86-022-002, IN-86-210-002, and PH-85-005-001 were evaluated under one issue: subjourneymen performing work for which they are not qualified. These concerns were not validated. A sample of 100 randomly selected Maintenance Requests (MRs) found that none were signed off by subjourneymen even though they were a part of the work crew. Maintenance Request Procedure AI-9.2, Revision 17 requires that the MR be signed off by the craft responsible for performing the work. No violations to this requirement was found in this sample.

Unlike construction subjourneymen, Nuclear Power subjourneymen are allowed to use power tools.. This may have lead to the confusion which caused these concerns to be written.

From the sample MRs, it is apparent that maintenance supervision is utilizing the subjourneyman-level personnel in the manner agreed to by TVA and the Tennessee Valley Trades and Labor Council. Beginning at the regulatory level, standards are in place which clearly spell out minimum experience levels for ONP Maintenance personnel. TVA polices invoke the regulations and lower-level procedures implement the requirements. At the lowest level, maintenance supervisory personnel are following the instruction. This evaluation did not uncover any evidence of equipment being left in compromised or indeterminate quality condition.

SQN

This issue was evaluated at SQN under concern IN-85-589-002; it was not valid. The same differences described above in the labor agreements between Construction and Nuclear Power for the subjourneyman classification exist at SQN. Construction does not allow unskilled personnel to use power tools. Nuclear Power has determined the subjourneyman to be semi-skilled which allows them to perform general shop cleanup, parts retrieval and assisting journeymen under his direct supervision. This may include the use of power tools. The work they perform in the category of assisting journeyman is under the direct supervision of the journeyman and is signed for by the journeyman.

AI-7 and electrical maintenance section letter EMSL E-45 prohibit use of subjourneymen for second party verification signoff on any maintenance work item. Since there is no specific restriction placed on the tasks which subjourneymen are allowed to perform, the verification serves to assure that qualified craftsmen supervise all work. SQN maintenance does presently employ subjourneymen. However, adequate procedural controls exist to prevent the subjourneyman from performing unsupervised work.

Conclusions

These concerns were not verified as factual at either WBN or SQN.

Generic Applicability

All listed concerns were evaluated at WBN and IN-85-589-002 was also evaluated at SQN. All evaluations were found to be not valid. Evaluations at other sites are not necessary.

Issue 308.06-2 - Laborers Used to Perform Mason Work (WBN)

Concern IN-85-693-003 which alleges that laborers perform cement mason work such as pouring concrete, grouting baseplates and laying blocks had been previously investigated at WBN by the NSRS, Report I-85-449-WBN. This investigation found the concern to be factually accurate but not to be in violation of any requirements. The quality of the work is controlled by test sampling and hold point inspections. Interviews with the QA concrete inspectors revealed that none of the laborers work was found unacceptable. Therefore this concern is valid but the practice is acceptable. No corrective action is necessary. An evaluation of this concern was also performed by the Management and Personnel (MP) category of employee concerns in Subcategory Report 71600.

Conclusion

The concern is factual but does not describe a problem that requires corrective action.

Generic Applicability

This issue was evaluated at the site of concern (WBN) and found to be a statement of fact but of no consequence. No other site evaluations are necessary.

3.7 Element 308.07 - Clam Control

There are three similar concerns, IN-85-948-001, 002, and 003 under this element that were evaluated at all four sites as one issue. The issue addressed was how Asiatic clams infest and clog plant water systems which could cause a degradation of the cooling water systems in the event of an accident. In 1981, the NRC mandated that licensees quantify clam infestation and establish a program to prevent degradation of plant equipment due to clam fouling. Each plant has developed a program to control this problem and submitted these commitments to the NRC. The programs at each plant have been in place now for several years and have been periodically revised to improve the programs. Included in these various programs are chlorination of the plant cooling systems (both normal and emergency) and fire protection systems that take suction from the lakes/rivers, periodic inspections for clam infestation and periodic testing to ensure the system has not been degraded. Results of these programs have found isolated cases where clams have been discovered in these systems, however, there has been no indication of any massive or recurring problem with clams at any plant. Therefore, except for one incident, these concerns were not substantiated. The incident was that blockage was found in the high pressure fire protection system at WBN during startup. A determination was made by Nuclear Power that the blockage was a result of debris left in pipe during construction. The engineering category of employee concerns had the responsibility for the evaluation of several concerns on this subject under subcategory 233.

At BFN and SQN, a finding was discovered that was related to this issue. A commitment was made to the NRC that an evaluation shall be performed on equipment failures that result in extended loss of chlorination capability. No procedures could be found addressing this commitment. See CATD's 30807-BFN-01 and 30807-SQN-01.

CATD 30807-BLN-01 was written and submitted to BLN requesting that the plant prepare SIs, for addressing clam control. BLN line response delineates the controls presently in place do address this situation and demonstrate that there is no oversight on their part in meeting the stated commitments.

Conclusions

At BFN, all three concerns were confirmed as not factual.

At BLN and SQN, IN-85-948-001 did not, in itself, present a problem, but the evaluation discovered an additional issue which required corrective action. The other two concerns were not validated at these two plants.

At WBN, IN-85-948-002 was found to be factual but corrective action was initiated prior to the evaluation being done. The other two concerns were not validated at WBN.

4.0 COLLECTIVE SIGNIFICANCE

A collective assessment of the element-level findings (section 3.0) led to the identification of subcategory-level findings which reflected adversely on management effectiveness:

a. Overall procedural inadequacies have been identified in maintenance based on deficiencies found.

b. The overall maintenance program including preventive, predictive, and corrective aspects has no specific direction or overall policy to identify the goals and objectives the program should satisfy.

c. The as-constructed configuration of plant equipment does not always reflect the vendor technical manuals controlled at the plants. The topic of configuration control is further discussed in Subcategory Report 30700.

d. The overall training of maintenance personnel has not included sufficient training in specific areas of specialized equipment or processes and general training for adequately documenting all work performed under the maintenance (MR) program.

Note: Similar symptoms and root causes were identified in NMRG report R-86-02-NPS.

Maintenance Procedural Program

The basis for finding 4.a was supported by specific elements detailed in the subcategory reports, as follows: |R2

- Upper-tier requirements not always incorporated: Subcategory Reports 30200 (BFN) and 30800 (SQN). |R2
- Equipment failure not trended: Subcategory Report 30800 (BFN) |R2
- Preventive Maintenance not complete: Subcategory Report 30800 (WBN, SQN and BLN). |R2
- MR instructions do not contain step signoffs or acceptance criteria as recommended in INPO Guidelines 85-038: Subcategory Report 30700 (WBN) |R2

- Work Instructions not technically sufficient: Subcategory Reports 30200 (BFN) and 30800 (WBN, SQN and BFN) |R2

- Surveillance Instructions not adequate: Subcategory Report 30800 (WBN) |R2

Maintenance Program Policies

With respect to finding 4.b, no corporate procedures or policies could be identified with respect to corrective or preventive maintenance. Hence, each plant defines their program differently and development of them are varied. Indications of this were specifically observed in the historical information input for tracking recurring problems. Retrievable information in many cases was either inconsistent or incomplete. The preventive maintenance program at each plant was not comprehensive. Some plants only emphasized safety related equipment and did not include important balance of plant equipment. The trending of PM results could not be found at any plant. The only trending program identified was for Nuclear Plant Reliability Data Systems (NPRDS) equipment to satisfy NRC requirements. Deficiencies in trending programs were identified at SQN and BFN as observed by the recurrence of door repairs. The absence of maintenance tracking was also observed at BFN through review and evaluation of furmanite repairs. Other examples of these weaknesses identified in other subcategories are listed below:

- Diesel generator starting failures - 30100

- Containment paint coatings - 30100

- Raychem - 30200

- RWST instrument failures - 30300

- Manhole cleanliness - 30400

- MR retrievability for maintenance trending - 30400

- Grouting procedure not incorporating design requirements - 31300

Vendor Technical Manual Configuration

Examples that support finding 4.c are addressed in Issue 308.04-09. The controlled vendor manuals used did not necessarily reflect the as-constructed condition. Programs are currently under development at BFN and SQN to correct this problem however WBN presently is not. Other examples of vendor manual control deficiencies were identified in Subcategory Report 30700.

Training of Maintenance Personnel

Examples of the finding 4.d were identified in subcategory report 30800 at SQN where crane operators were not given sufficient training. A Crane Consistency Program was initiated as a result of this problem. Subcategory Report 30800 found the Maintenance Training Program had not been fully implemented at BFN. There are also examples of craft not being properly trained at BFN in Subcategory Report 30200. Craft personnel performing the installation of Raychem sleeving did not all have formalized and documented training. Historically, TVA relied on the skill-of-the-craft and on-the-job-training to fulfill these requirements. Vendor training was not always documented properly to verify adequate training. R2 R2

5.0 ROOT CAUSE, PRELIMINARY ANALYSIS

Sections 3.0 and 4.0 discussed the specific findings for each of the element evaluations of this subcategory and their collective significance. This section presents the results of an independent review and analysis done on these specific element-level findings to identify the most frequently occurring and widespread root causes at the subcategory level. Patterns of recurring findings, called symptoms, were derived from the elements. These symptoms were tested for root causes and then analyzed collectively to identify which occurred most frequently and at the most sites. Details of the symptoms and root causes derived for each element are presented in Attachment D, "Summary of Symptoms and Root Causes."

A review and analysis of the symptoms and root causes, taken collectively, pointed to three significant subcategory-level root causes, as follow:

- Failure to incorporate design requirements into maintenance program and activities
- Inadequate maintenance program definition and inconsistency in implementation between sites
- Lack of clearly defined responsibilities and performance objectives and lack of organizational accountability to ensure an effective maintenance program in place

Corrective Action Tracking Documents (CATDs) were not issued specifically on these subcategory-level root causes. It was believed that corrective action being taken already by line management as part of the commitments made in the Nuclear Performance Plan were helping to address these root causes. However, line management was expected to use the subcategory-level root cause information as an aid in preparing

corrective action responses to subcategory-level CATDs that would preclude recurrence of the deficiency noted. The ECTG's process for judging the adequacy of line corrective action responses to subcategory-level CATDs included a determination of how well the applicable root causes were addressed by the response.

The significant root causes for all subcategories in the operations category provided part of the input for determining programmatic areas of weakness at the category level and the associated causes. In the operations category report, these programmatic weaknesses and associated causes are presented along with a discussion of how they are being corrected through implementation of the Nuclear Performance Plan and other corrective action programs.

6.0 CORRECTIVE ACTIONS

6.1 Corrective Actions at the Element Level

6.1.1 Element 308.01 - Adequacy of Procedures

WBN

CATD 308.01 WBN-01 was issued to WBN line management concerning the fact that the Nuclear Regulatory Commission has not reviewed the SI program to ensure compliance to commitments made by WBN in response to the severity level IV violation received in April 1985. An acceptable response to this CATD is as follows:

> "This CATD is for tracking only. It will be held open until the SI program is accepted by the NRC. Reference NRC inspection report 390/85-32-02, dated May 24, 1985. RIMS L44-850624-800."

SQN

A CATD (30801-SQN-01) was issued to SQN for the purpose of tracking the Maintenance Procedure Enhancement Program. This program is in progress and will be tracked by the Management Action Tracking System (MATS). An acceptable response was received as follows: |R2

> "Procedure program progress is being tracked on the Management Action Tracking System (MATS)."

BFN

A CATD was issued to BFN line management in regards to safety rigging of the Main Steam Relief Valves (MSRV) to and from the drywell. This CATD, 30801-BFN-01, outlines guidelines for specific rigging procedures. The line management response is:

"The proposed corrective plan for CATD No. 30801-BFN-01 is detailed on the attachment.

"These activities are not a restart item.

"These activities will require DNE involvement and are being pursued for use during the upcoming Unit 3 outage.

ATTACHMENT

1. "A specific rigging procedure will be implemented with sufficient detail to remove the MSRV's. Instructions for rigging installation and removal will be incorporated into MMI-13 procedure.

2. "Two jib cranes will be added to facilitate the transfer of the MSRVs. One jib crane will be installed between cranes 1 and 2. The other will be installed between 7 and 8.

3. "During installation and removal of the MSRVs, temporary W6X25 beams will be installed connecting the jib cranes together. These beams will contain hoists, similar to the ones on the jib cranes, for transferring the MSRVs between the jib cranes.

4. "Hatches will be installed in the grating on the south end to facilitate the transition of the MSRVs to the lower elevation.

5. "Instructions for anchoring the jib cranes during operation and during the installation or removal of the MSRVs will be incorporated into MMI-13 procedure."

BLN

A CATD, 30801-BLN-01, was issued to line management concerning the problem that neither DNC nor ONP preventative maintenance programs have included requirements for inspection of limitorque valve operator grease for hardening. An acceptable response was received from BLN line management as follows:

"The BLN (DNC and ONP) PM program data base will be revised to include requirements for lubricant inspection in the Limitorque limitswitch gears of the operators. This action will be completed by July 1, 1987."

6.1.2 Element 308.02 - Preventative Maintenance

SQN

Three CATD's were issued to SQN line management. CATD-30802-SQN-01 concerns problems with preventative maintenance instructions which should be cleared up. CATD-30802-SQN-02 is associated with the use of vendor manuals in preparation of Maintenance Requests (MR). CATD-30802-SQN-03, is tracking a Quality Notice that will define the vendor manual program at SQN.

"CATD No. 30802-SQN-01 - NMRG report R-86-02-NPS, review of maintenance, has identified findings in the preventive maintenance program area that will require enhancement plans for the PM program.

"The issues identified in the ECTG report 308.02 SQN concerning problems with PM instructions should be resolved when the NMRG findings are resolved. Since the enhancement plan has not been developed and a final plan is not available, the GAP for this report should be to adequately resolve NMRG findings A-3, E-1, E-3, E-5, and F-2 which will also satisfy problems identified in this report."

"CATD No. 30802-SQN-02 - A revision to SQM2 to include a statement on the use of vendor manuals for WR work instructions is not needed. SQM1, Sequoyah Nuclear Power Maintenance Program, appendix C gives guidelines for determining when MR work instructions are appropriate and when PORC reviewed instructions are needed for CSSC maintenance activities. As indicated in SQM-1 appendix C, whenever step by step instructions from a vendor manual are needed for CSSC work that is not within the skill of the craft, a PORC reviewed instruction is required.

"CATD No. 30802-SQN-03 - A Quality Notice is being prepared to replace ID-QAP6.2 which will define the vendor manual program for SQN. This Quality Notice is on the DQA restart list. 4-23-87

"Procedures AI-23 and SQEP-39 will be revised to reflect the requirements in the Quality Notice prior to restart.

"A program plan is being developed to identify pre-restart and post-restart scope and implementation schedules (This item coordinated with Mildred McGuire - Configuration Control Project Manager).

Procedure program progress is being tracked on the Management Action Tracking System (MATS). 4-23-87

6.1.3 Element 308.03 - Corrective Maintenance

WBN

CATD, 30803-WBN-01, was issued to line management identifying a chronic door maintenance problem at WBN. An acceptable response was received from WBN line management as follows:

"Seven of the most used fire doors have been found damaged from combination of variable air pressure, heavy traffic and abuse. DCR 0694 has been written to replace these doors with a more durable type door before fuel load.

"We presently have in effect a program for periodic inspection of all fire doors as described below.

"Preventative Maintenance procedure, PM 271.74, is performed once a month on the interim ABSCE doors. This inspection requires checking the weatherstripping and the operation of each door.

"Surveillance Instruction 7.31 requires inspecting the fire doors and all hardware every six (6) months and performing a functional test (the door shall close and latch when released from the fully open position) on each door.

"Surveillance Instruction 7.53 requires verifying that each unlocked fire door is closed at least once per 24 hours and that each locked closed fire door is closed at least once per seven (7) days.

"If any door or its hardware is found to be defective through these inspections, a Maintenance Request (MR) is written to correct the problem.

"The information from MRs written for each individual door will be used to develop a maintenance history record for each fire door. A Site Services Special Project Group will be developing a data base and trending program for non-NPRDS reportable items such as fire doors utilizing the EQIS data base. This trending program will help us identify continually recurring problems and locate the root cause."

CATD 30803-WBN-02 was issued to line management to track a Design Change Request (DCR) that is to be written to address the fire protection system drains in the Auxiliary Building.

SQN

Two CATD's were issued at SQN to line management. CATD 30803-SQN-01 has three parts which are listed as follows: a) questions pertaining to the CSSC designation of work activities need to be addressed including impact of non-CSSC work being done in potentially vital areas, b) open maintenance items should be closed out, and c) training for the dedicated door crew should be enhanced. The second CATD, 30803-SQN-02, is associated with the tracking and implementation of General Construction Specification G-85 for the use of furmanite at SQN. The line management response to these CATD's is stated as follows:

CATD-30803-SQN-01

"We have reviewed the subject report and have determined no additional corrective action is necessary to resolve the employee concerns. As detailed by the report, four of the five concerns investigated have had adequate corrective action taken. The remaining concern, DHT-85-003, is the only concern in question.

"Concern DHT-85-003, which originated in Mechanical Maintenance, had two parts. One, the employee felt fire and security doors may not meet applicable codes and standards and two, the employee did not understand why mechanical work on these doors was classified as CSSC while electrical and instrument work was classified as non-CSSC. As stated in the attachments to the reference, the ECTG determined there are no outstanding safety-related issues.

"The concern was substantiated and then resolved to the employee's satisfaction by Mechanical Maintenance by the following actions:

1. "Verified the ASSCK testing would ensure ABSCE doors were properly functioning as ABSCE boundary doors.

2. "Revised SI-261, "Visual Inspection of Technical Specification Fire Doors" to reflect requirements from applicable codes and standards as well as recommendations from the Safety Staff.

3. "Implemented new MI-16.1, "Repair and Maintenance of Fire Doors and Various Fire Door Hardware" which provides acceptable repair methods for non-functional fire doors or directs the craft to appropriate engineering staff for decisions. This procedure is PORC reviewed.

4. "Provided formal training to the door crew and other carpenters, engineers, and managers.

5. "Provided additional training to the Mechanical Maintenance Engineering Section employee responsible for fire door program and procedures.

6. "Placed orders for doors to replace deteriorating doors and began their installation.

7. "Ensured previously identified deficiencies from the Appendix R walkdown assigned to Mechanical Maintenance have been completed.

8. "Reviewed previous SI-261 performance data to ensure deficiencies identified have been corrected.

9. "Established a dedicated door crew with a foreman to specifically work on doors.

10. "Established an adequate inventory of door hardware.

11. "Established a working relationship with the DNE Engineer, Tom Drinnen, for problems which require an ECN to correct or for which his expertise is needed.

"Three additional items, which are currently in the Mechanical Maintenance assignment tracking system, remain open. The subject report recommends in Section VII these items need to be completed to resolve the concern. However, it is our position that numerous actions taken to date are adequate to resolve the employee concern. The remaining three Mechanical Maintenance assignment activities recommended by the report were items the line manager investigating the initial employee concern felt would be enhancements to the overall fire door program. They were not then and are not now considered relevant to resolution of the previously stated concerns.

"Section VII of the report also recommends two additional activities: documentation of the CSSC designation and retraining/requalification of the door crew/carpenters.

"All five of these recommendations (three Mechanical Maintenance assignments and two additional items) are addressed individually below for your information only.

MM 1294 - Fire Door Drawings

"This assignment was made to develop drawings of each fire door with enough information (such as hinge placement, hardware placement, exact dimensions, etc.) to determine which doors are interchangeable to allow initial stocking of spare doors.

"Although we are progressing on this item, it is apparent from doors measured thus far that no two doors are alike. The tolerance on hinge placement as well as the uniqueness of TVA's location of hardware on the doors has virtually eliminated the possibility of interchangeability on CSSC fire doors. In all likelihood, this item will only be completed as replacement doors are ordered and will be removed from the tracking system.

MM 1295 - Initial Stock of Fire Doors

"This item is a sister assignment to MM 1294. It was originally envisioned there was good interchangeability of fire doors since many are the same nominal size and swing.

"If this had been the case, which it is not, the plan was to set up spare doors in Power Stores which could fit a variety of locations and provide us good insurance against fire doors which fail to meet acceptance criteria. As explained above in MM 1294, this interchangeability does not exist. The only spare doors which we now plan to stock are those for which use is anticipated because of a deteriorating specific fire door in the plant. This item will also be dropped from our tracking system.

MM 1298 - Breach Permits

"This assignment was made to revise the breach permit form to readily distinguish between a breach for ABSCE reasons and a breach for fire barrier reasons.

"Although this item was not a part of the employee concern, it was identified as an item which would improve the program when the concern was originally investigated by the line manager. The action will still be completed but is not relevant to closure of the employee concern.

CSSC Designation

"As explained to Mr. Gilmore, the ECTG Evaluator, the mechanical activities on fire doors are treated as CSSC as required by Sequoyah Standard Practice, SQA134 "CSSC List," Appendix A, Part II, Item 15. The reason for the CSSC designation is the doors

provide fire protection by maintaining combustible products and gasses in a confined area. In addition, many fire doors are also ABSCE or control building doors which serve the added CSSC function of pressure confinement. On the other hand, the electric strike plates, cardreaders, electric hinges, position indicators, etc., provide no barrier to fires or fire products nor do they provide for pressure confinement. Furthermore, they are not listed as CSSC in SQA134, and our maintenance planners plan the work requests accordingly.

"The employee concern in this area stemmed from purely a lack of understanding which we specifically addressed to the concerned individual and generally addressed to carpenters attending the fire door training class at the POTC. The fire door crew foreman, the fire door engineer, and the Mechanical Maintenance Group Management are able to address this question adequately to any new employee who has the same question. For these reasons, no further action is planned.

Retraining

"The question of retraining or requalification of door crew employees does need to be addressed, but not as a part of the employee concern. Our thoughts right now are the door crew does not need additional formalized training but will need briefing on major revisions to MI-16.1 or SI-261. This briefing will be conducted by the engineer, door crew foreman, or Engineering Section Supervisor.

"We are considering providing fire door training to all nonfire door crew carpenters to elevate their understanding of the stringent requirements on fire doors in the event they have to work on them on an emergency basis. Again, the question of retraining and qualification of carpenters who work on fire doors is a management decision which will be tracked within Mechanical Maintenance and addressed in a timely manner. It is not an activity considered to be essential to closing out the employee concern since the requirements on fire doors are now clearly outlined in PORC approved procedures (MI-16.1, SI-261, and Physi-13).

"Activities 200050236 on the P2 schedule have been changed to Larry Bryant's name and will be closed out as "no action required" at the next update.

CATD-30803-SQN-02

This CATD was issued for tracking purposes only; it is a closed item at the time of writing this report.

4-23-87

BLN

Three CATD's were issued to line management at BLN. CATD-30803-BLN-01, is concerned about a potential problem with certain valve seats (BIF) after extended dry plant lay up. CATD-30803-BLN-02 is also associated with BIF valves and would require shelf life documentation, as well as an evaluation to identify necessary spare parts which should be procured upon construction restart. CATD 30803-BLN-03 is concerned about suspect work due to out-of-calibration torque wrenches. An acceptable response was received from BLN line management as follows:

"The following CAP applies to both CATD 30803-BLN-01 and CATD 30803-BLN-02:

BIF butterfly valves have presented several problems which have been identified, documented (i.e., NCRs 1819, 2170, 2186, 2187, 2231, etc.) and are being tracked and worked to satisfactory performance of equipment operation. This concern as raised via the Construction Employee Concern Program, BNP-QCP-10.35-17 was documented, reviewed with the employee as to the action taken, and closed since the employee agreed that a safety-related concern was being addressed as noted by the above listed NCRs. All valves which are active valves or perform critical functions will be tested in accordance with their respective design function requirements prior to being placed in service for plant operation. Any deficiencies noted will be corrected at that time.

Concern 17

Resolution:

1. "Conditions of seat leakage in butterfly valves have previously been reported in Bellefonte non conformance report NCRs BLP1819, 2180, 2186, 2187, and 2231 and the corrective actions are stated in the NCR dispositions.

2. "Butterfly valves may exhibit some leakage depending on the seat shelf-life, pre-service conditions and subsequent maintenance after installation. Valve seats may deteriorate if past the minimum shelf life, or may be damaged during installation or by foreign materials during valve operation before system flushing and cleaning.

3. "Valve vendor has indicated measures to be taken to minimize such failures in vendor letter dated June 18, 1983 (MEB 830524 505) and this information was provided to OC by letter dated June 24, 1983 (MEB 830630 171).

4. "Preservice and inservice leak tests are required for valves whose leakage could have an adverse affect on safety function(*). These valves are listed in ASME Section XI Inservice Valve Testing Program (L55 82093 801). Other valves for which leakage would not affect safety but which may impact maintenance activities would be considered for seat maintenance/replacement. OE purchases replacement seats for valves as identified by OC, as is currently being done on OC purchase request BM-109.

5. "Butterfly valves are currently used with good performance in TVA and other power generating facilities. Changing to a gate or other type of valve would be extremely expensive, considering the piping reanalysis cost in addition to the valve cost. The possibility of replacing these valves was previously addressed in Bellefonte potential impact item PII 179 BLP 830729 065). This item was closed when determined that failures were not due to a generic design deficiency. Replacement of the valves was not justified.

6. "System design is based on a single failure criteria. A standby system provides for safe shutdown if a single train is inoperable.

*ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition IWV-2200 and IWV-3420. (Note: For reference only since code edition commitment has not yet been established.)

Concern No. 8-17

"The employee stated some of the valves in the plant were rusted, some from leaking air conditioners, etc. The employee stated they were okay inside, but just looked bad.

Response

"BLN/NUC PR is now preparing a Preventive Maintenance and Long-Term Layup program for all equipment installed at BLN. This program is to include a system-by-system review of TVA and vendor recommendations and requirements. This review

will also include a determination of the short-or long-term system operability requirements. Once this review is completed, layup or preventive maintenance specifications will be identified that may require additional measures. Some areas such as valves and piping associated with air handling units and chiller packages that are sustaining some deterioration due to sweating or water leakage have been identified and corrective measures have been initiated. However, many of the systems containing carbon steel piping and components are designed with a corrosion allowance taken into consideration, other systems may be designed to be coated. This information will be reviewed as part to the NUC PR program. This program is to be completed by April 30, 1986.

Concern No. 8-19

"No preventive maintenance system to prevent rust buildup on valves (example - needle valves in GS system).

Response

"Same response as concern 8-17

Concern No. 8-20

"No preventive maintenance system to prevent rubber seats to dry and crack on butterfly valves (example - butterfly valves in the KH system).

Response

"Presently NUC PR is reviewing the manufacturer's recommendations for preventive maintenance and long-term layup of rubber seat butterfly valves. In general these recommendations will be followed except in situations where they cannot be implemented for reasons such as accessibility constraints, and system configuration constraints. In addition, some seat damage has occurred due to improper limit switch settings and malfunction of limit switches due to hardened grease. This information is being reviewed during the development of the preventive maintenance and long-term layup programs. The development of these programs is to be completed by April 30, 1986. In any case, all valves which are active valves or performed critical functions will be tested in accordance with their respective design functions before being placed in service for plant operation. Any deficiencies noted will be corrected at that time."

An acceptable response for CATD 30803-BLN-03 was received from BLN line management as follows:

"It is management's position that existing procedural requirements meet TVA and industry guidelines on calibration of maintenance and test equipment (i.e., torque wrenches). Consequently we do not feel it is necessary to change to a more frequent calibration frequency. At a later date, should discrepancies occur with the existing calibration program, we may wish to reevaluate and consider shorter durations between calibration intervals."

BFN

Four CATDs were issued to line management at BFN. CATD 30803-BFN-01 is concerned with chronic door maintenance problems are not being programmatically addressed. An acceptable response was received from BFN line management as follows:

1. "Actions to identify all similar items indicated by the stated problems and the date(s) for completing them.

   a. "By review of Maintenance Requests (MRs) and a walkdown of all doors, it has been decided that all CSSC, high radiation, fire rated, vital area, and flood doors could eventually fall in this category of chronic door maintenance problems.

   b. "This was begun several months ago (September 1986) & is continuing everyday. It will not be completed until all doors are repaired or replaced which will be by unit 2 startup.

2. "Actions taken or planned to correct the identified and similar items or instances & the date(s) for completing these actions.

   a. "The mechanical portion, of the doors, is being handled by a revision to Mechanical Maintenance Instructions (MMI) 116.

   b. "There is also a preventive maintenance program being started for all doors.

   c. "The electrical portion, of the doors, is being handled by Electrical Maintenance Instruction (EMI) 8.

d. "Actions identified are being resolved by either replacement Design Change Requests (DCRs), Engineering Change Notices (ECNs), Appendix R, or Purchase Requests for repair parts or complete new items.

e. "The electrical items identified are being resolved by the following:

aa. "DCR's 3392 and 3393 have been written and submitted to change out electric strikes on several doors with microswitches which will solve the problems identified concerning doors being closed but still show being open.

bb. "Appendix R - ECN P0879 is changing out several doors & miscellaneous items to resolve other problems.

cc. "The turnstiles mentioned in your report are still being modified under ECN P0738 which has not been completed because of the problems. Electrical Design is working to remove all of the faults from the system and make it operational and functional.

dd. "After all of the above are completed and with the inspections per EMI-8 this should resolve all problems.

ee. "All of the work to complete these items will be finished by unit 2 startup or earlier.

f. "The mechanical items identified are being resolved by the following:

aa. "Purchasing of new doors & ordering replacement parts to return existing doors back to their original design.

bb. "Purchase Requests were placed on the following dates:

1. "September 23, 1986 - Replacement parts for door 235, Request No. 380779.

2. "December 18, 1986 - Replacement parts for door 273, Request No. 382831.

3. "January 13, 1987 - Replacement parts for RHRSW pumping station doors A, B, C, and D.

4. "January 15, 1987 - Complete door and spare parts for door 235.

5. "January 15, 1987 - Complete door and spare parts for door 248.

cc. "There are several other requisitions being written at this time for problem doors.

dd. "After the replacement parts & new items are installed, they will come under the revision of MMI-16 and the preventive maintenance program which has been started on doors.

ee. "These items will be finished by unit 2 startup or earlier.

3. "Actions taken or planned that will preclude the recurrence of the identified problems & the date(s) for completing these actions.

a. "After the DCRs, ECNs, and Appendix R items are completed, it is believed that regular inspections and maintenance per EMI-8 will preclude the recurrence of the electrical problems identified.

b. "After the receipt of all new materials, doors, and completion of the MRs received, it is believed that the revision to MMI-116 and the newly begun preventive maintenance program will preclude the recurrence of the mechanical problems identified.

c. "The actions taken or planned to preclude the recurrence of the identified problems will be completed by unit 2 startup or earlier.

4. "Actions completed to date and the results achieved.

a. "All items are in progress at this time. None have been completed and no results can be given."

CATD 30803-BFN-02 is concerned with no system for tracking temporary repairs to ensure permanent repairs are made in future outages. An acceptable response was received from BFN line management as follows:

"Temporary repairs which cause an alternation to a plant component are now approved and tracked by the methods described in the Plant Manager's Instruction (PMI) 8.1, Temporary Alternations." 3-4-88

CATD 30803-BFN-03 is concerned with many cases were found where work was performed by contract services and no MR or TR was used as required by SDSP 6.2 and BF 7.6. An acceptable response was received from BFN line management as follows:

"Prior to implementation of Standard Practice BF 7.6, maintenance request tracking was inadequate. In addition to requiring tracking, the revised standard practice now requires that all maintenance activities be performed by the MRs. No further action is needed regarding the procedures. Past usage of injected sealants at BFN is being investigated by Compliance Tracking Item Number NCO 860935 014 regarding Sequoyah Nuclear Plant Inspection Report 86-27." 3-4-88

CATD 30803-BFN-04 is concerned that there are presently no working procedures which provide instructions and acceptance criteria for the use of temporary sealants at BFN, and the assurance that permanent repair/replacement are made when plant conditions permit. An acceptable response was received from BFN line management as follows:

"General Construction Specification G-85 was approved for use of March 2, 1987. BFN site implementing instructions will be prepared by July 15, 1987. The specification requires that these sealants be regarded as temporary repairs, and as such, they will be controlled in accordance with PME-8.1. PME-8.1 controls and tracks plant temporary alterations and requires their eventual removal or their permanent incorporation through the design change process."

6.1.4 Element 308.04 - Program Deficiencies/Procedure Violations

WBN

Two CATD's have been issued to line management at WBN. CATD-30804-WBN-01 states that vendor manuals and their drawings do not reflect the current plant configuration and CATD-30804-WBN-02 states that vendor drawings which are not part of the Drawing Maintenance System are being used to make repairs to CSSC plant equipment. An acceptable response to these CATDs has been received from WBN line management as follows:

"Item G - IN-86-073-002, Section III, FINDINGS, outlined three specific examples substantiating this concern. Investigation of these examples were conducted with the following results:

1. "Vendor Manual 0528, Beckman 8800, "Controller for Auxiliary Feedwater." The controlled copy was 015-82433, dated April 1975. Instrument Maintenance was using manual 015-82433-C, dated March 1982. This manual was retrieved and placed in the vendor manual control program. It's origin was indeterminate; however, since it had not been processed by TVA and placed in the control program, it must be assumed the manual was informally received by TVA.

2. "Vendor Manual 0784, Foxboro, Volume II, does not have the new information incorporated from a modification made in late 1984 to add automatic control to the Feedwater System during low flow condition. No record could be found that TVA had received this information. WBEP Electrical will contact the vendor to ensure the latest copy of the manual is available for TVA use.

3. "Westinghouse Vendor Manual 0787 (N3M-2-25), for the Reactor Vessel Level Indication System did not incorporate the 1986 revision. Instrument Maintenance was using outdated information until observing a Westinghouse Service Representative using the 1986 revision of the manual. No record could be found of TVA formally receiving this information. WBEP NSSS section will contact the vendor to ensure the most current revision of this manual is available for TVA use.

   "Instrument Maintenance will review existing procedures (AI 4.3 and AI 4.4) for adequacy in controlling vendor manuals. They will be revised, if necessary, and maintenance employees will be trained on their utilization.

   "TVA has outlined in the NQAM, Part I, Section ID-QAP-6.2, an integrated TVA vendor manual program for Sequoyah Nuclear Plant and Browns Ferry Nuclear Plant. The program can be implemented at other nuclear plants at the option of the Site Director. This program is currently being evaluated by WBN site management. The ONP Document Control and Records Management Branch is currently preparing directives and standards to centralize control of vendor manuals at each site. A method of interfacing periodically with vendors to ensure

the currency of vendor manuals is being developed. In addition, interfaces with DNE for technical review of manuals will be developed to ensure vendor manual content is applicable to the as-configured status of a plant. This requirement will ensure all manuals, such as those above received informally, are placed under control. An ONP Program Manager, Vendor Manual Control, has been appointed to develop these policies and directives.

"The Watts Bar Site will develop site-specific procedures to implement requirements of ID-QAP-6.2 and related ONP policies and directives. A specific action plan identifying vendor manuals for safety systems or effecting safety-related systems will be developed. Existing manuals be placed under "Conditional Use" status prior to WBEP DNE review. The manuals will be placed in "controlled" status after WBEP review. Other manuals will be placed in "Information Only" status with concurrence of effected site organizations. This plan will include provisions for evaluating any manual deficiencies identified to determine needed corrective actions.

"Vendor manual drawings have been used extensively by instrument maintenance in troubleshooting the internals of plant process instrumentation. As a result of the troubleshooting activities, repairs have been made to instruments that required the use of drawings contained in vendor manuals. Almost none of the process instrument vendor manual drawings are contained in DMS. (However, no evidence has been presented to demonstrate that any instrumentation was incorrectly repaired by uncontrolled vendor manual drawings and the instrumentation then being returned to operable status.) However, in order to ensure the safety-related plant process equipment has not been degraded as a result of repairs performed using uncontrolled vendor drawings, the following actions will be taken. 1. All surveillance instructions will be performed on all applicable instrumentation before its required mode of operability to ensure proper equipment function. 2. In accordance with memorandum from George Toto to S. A. White dated March 2, 1987 (T16 870302 897), all QA level II items installed in safety-related equipment will be dedicated for its use and a condition adverse to quality (CAQ) issued to track instances where documentation is insufficient to permit dedication. In order to preclude recurrence of the identified problem training will be provided by 11/15/87

to all maintenance personnel in each section on the vendor manual and drawing requirements of AI-4.3 and 4.4. Subsequent to the training, any vendor drawings required for repair work will be statused by DMS in accordance with AI-4.3 and formal revisions to vendor manuals will be processed in accordance with AI-4.4 on an as needed basis.

"Corrective actions will be taken to update the vendor manuals and status the drawings identified in the ECSP Report Number 308.04-WBN by 11/15/87.

"The Beckman manuals will be certified in accordance with AI-4.4 and the manual drawings will be statused to the drawing maintenance system in accordance with AI-4.3. No further maintenance requiring the use of the uncontrolled vendor manuals will be performed on the Beckman 8800 controllers until such certifications has been accomplished.

Note: NCR W-370-P has been issued to replace the subject controllers with a new type.

SQN

CATD 30804-SQN-01 issued to line management at SQN is associated with problems under the "Program/Procedure" violations of subcategory report 30800. The CAP issued by SQN is as follows:

"Corrective Action Plan

A. IN-86-073-002

"Per the conclusions of this report, 'this problem has been adequately documented, corrected, and a new program is in effect.'

B. IN-86-315-002

"The verification of the WR associated with the NOI SQ-189 re-examination is complete and the issue resolved in accordance with C. R. Brimer. The required revisions to SI-114.1 and .2 to address 1) NDE record changes and 2) NDE procedure revisions are complete and PORC-approved in accordance with John Lewis.

C. IN-86-110-001

"Per conclusions of this report, this concern is not valid.

D. SQP-85-004-006

"The actual concern related to electrical craft being instructed to deviate from procedure MI-10.37 has been corrected. The SQN maintenance sections have made substantial progress and significant changes to improve performance in associated problem areas (examples of such are identified in the element report). Continuing corrective action for this problem area is in progress and is a goal of the new TVA Nuclear Performance Plan.

"Since this is an on-going type of endeavor without a finite ending, no specific follow-up assignment will be made, but a continued effort will be maintained.

E. JAN-86-001

"Per the conclusions portion of this report, this concern is resolved, and the CI no longer has a problem. Since the completion of ECN L5880 has no bearing on the actual concern, the completion of ECN L5880 will not be tracked in accordance with this element report.

F. I-86-233-SQN

"Per conclusions of this report, this concern is not valid.

G. JLH-86-001

1. "Per conclusions of this report, the Limitorque grease concern is unsubstantiated.

2. "The item concerning the signing off of MRs incorrectly as complete per this report has been addressed. The long-term corrective action is covered by Concern No. SQP-85-004-006, plus the new WP program is in effect.

3. "The non-QA material and traceability concern has also been addressed. The corrective action necessary to resolve this concern has been completed."

BFN

The CATD issued to line management at BFN, CATD-30804-BFN-01, is concerned with the lack of a program to ensure the proper removal and reinstallation of hangers in the plant. An acceptable response was received from BFN line management as follows:

"MAI-23 & MMI-164 are in place to facilitate hanger removal & reinstallation for maintenance/modification activities. MMI-175, "Repair of Hangers & Supports," is in the preparation stage & is to be completed March 15, 1987. MMI-175 references MMD-164 when removal of a support is needed. MAI-23 is currently being used for modification work on supports. MMI-175 will be used for maintenance purposes. The approval & use of MMI-175 for hangers repair per ISI generated MRs & NOIs is a RESTART item. (T41 870306 050)"

6.1.5 Element 308.05 - Training Program Deficiencies

WBN

CATD-30805-WBN-01, is concerned with the bending of eye-bolts during the hoisting of Unit #1 Reactor Coolant Pump (RCP) stators. An acceptable response was received from WBN line management as follows:

"During the performance of SMI-68.F, the craft were informed in Appendix B to install eye-bolts in the stator housings in order to remove them from lower containment. Because the actual repair work being done on the stators was to be done at the Power Service Shop, it was necessary to set the stators on their side on a truck. In order to do this, the eye-bolts were used along with both hooks on the crane to drift the stators onto their sides. Only two stators were removed before the swivel eye-bolts were bought and used; however, only the second stator removed resulted in slight bending of the eye-bolt shanks. Visual examination by the responsible engineer; craft foreman; and Westinghouse service representative, who worked with the TVA employees during the entire project, found no evidence of stator damage and a determination was made that there was not a nonconforming condition."

"Tests for vibration, running current, bearing and winding temperature, and insulation integrity were performed on the RCP motors upon completion of the modifications to the motors; the last two motors being run on January 9, 1987, when cooling water was restored to the motors because the

instrument sense lines had been removed because of an employee concern. These tests were performed to prove the operability of the motors after the modifications were completed and not as a result of the eye-bolts bending. The results of these tests proved the motors to be in excellent condition which reinforces our earlier determination that no damage was done to the stator windings and a nonconforming condition did not exist.

SQN

Two CATD's were issued to line management at SQN. Both CATD's were concerned with the crane side pulls and their conflict with plant and ANSI standards. The second CATD, CATD OP 308.05-002-SQN, is also concerned about long-term remedies to the crane side pull problem. The responses from management are stated as follows:

CATD OP-308.05-001-SQN and CATD OP-308.05-002-SQN

"1. Requirement

"The subject employee concern was addressed by report 308.05 SQN rev 1 issued on October 2, 1986 by the Employee Concerns Task Group. In that report the proposed Immediate and Long Term Corrective Actions were the following:

a. "Immediately issue instructions to crane operators and their foremen regarding the acceptability and requirements for performing side pulls.

b. "Ensure CCP-Special Projects addresses the issue of crane side pulls for long-range corrective actions.

"After review of the subject response R. C. Denney, Employee Concerns Special Project Manager, ONP, DSC-P, SQN requested additional documentation to support the above Corrective Actions (S03 861021 802).

2. Resolution

a. "The CCP Special Project Manager will immediately issue a Bulletin to each site identifying the danger of side pulls. Instructions will be given to disseminate this information to the operators, foremen, general foremen, and rigging personnel. The Bulletin will state that side pulls will not be

8-23-88

30805-SQN-01 only

made unless authorized by the Division of Nuclear Engineering who will evaluate the effects and approve side pulls considered necessary to perform essential tasks. This is required by ANSI B30.20.

b. "The CCP Special Project was chartered to develop an ONP procedure to ensure safe crane operations. This procedure is presently being developed and will replace some existing operation instructions and will incorporate others. The procedure requires certification or qualification of all personnel directly related to making lifts.

"This certification/qualification requires extensive classroom training as well as a demonstrated skills test. The required training modules to accomplish certification/qualification have been identified (attachment), and include the module "Proper Overhead Crane Operating Practices" which addresses side pulls among other topics. This Module is one of 7 required to certify an operator, and is also required to certify Riggers, Supervisors (1st and 2nd Line), Crane Coordinators, Flaggers, Annual Inspectors, Certifiers, and Annual Maintenance personnel.

"The course content currently being developed is the responsibility of the ONP Training Office, but it will be reviewed and approved by the CCP Special Project. Periodic evaluation of the training program and implementation of the Crane Operations Procedures will be conducted by DNE in order to measure the effectiveness of the program.

"The CCP Crane Operations Procedure is under development and its anticipated completion is January 1987."

BFN

CATD 30805-BFN-01 was issued to BFN line management to identify that crane operators are potentially performing side pulls in conflict with ANSI-B30.3-1976, and without prior engineering evaluations. An acceptable response was received from BFN line management as follows:

"All Browns Ferry Nuclear Plant crane operators have been trained to avoid side-loading. After a side-loading incident on the refuel floor, the importance of avoiding side-loading conditions was reemphasized in a memorandum from C. G. Wages (R36 860331 820) dated April 1, 1986. Since April 1, 1986, no evidence of side-loading exists at BFN. However, sessions

have been scheduled for December 15, 1986 and December 16, 1986 to reemphasize the importance of avoiding side-load conditions during lifting operations."

CATD 30805-BFN-02 was issued to BFN line management concerning that maintenance training unit has not implemented a schedule to ensure that all safety related tasks are not replaced by other topics. An acceptable response was received from BFN line management as follows:

"The Browns Ferry Training Branch now has a Job Task Analysis Unit onsite. One of their responsibilities is to ensure that tasks requiring training, including safety-related tasks, are not removed from the task list without formal task analysis. The Maintenance Training Unit is currently working with plant maintenance organizations (Electrical, Mechanical, and Instrumentation) to identify training needs for 1987. This training will be coordinated with the Job Task Analysis Unit to ensure that the training includes or supplements training on safety-related tasks. These practices are a matter of standard operating procedures for accredited programs."

6.1.6 Element 308.06 - Subjourneymen/Journeymen

No corrective action was required for this element since the concerns were not substantiated.

6.1.7 Element 308.07 - Clam Control

WBN

CATD 308.07-WBN-01 was initiated by ECTG but was voided prior to issuing to line management.

SQN

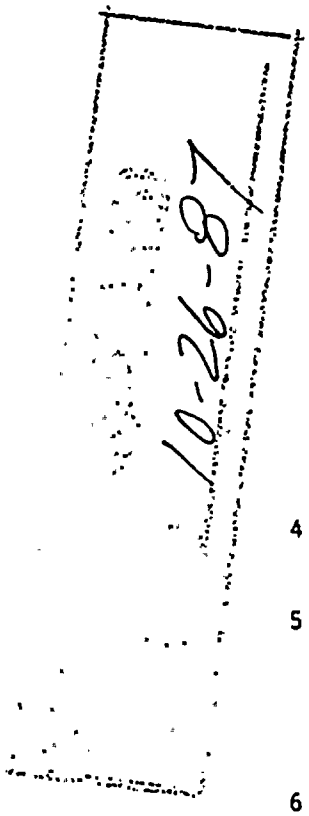
CATD 308.07-SQN-01 issued to line management in regards to SQN commitments to NRC regarding clam and chloride control. The response to this CATD was as follows:

"See memorandum SO3 860912 804. This report does not require corrective action. SQN complies with the six identified NRC commitments as numbered below:

1. "SI-712 requires continuous chlorination of the ERCW from May through October.

2. "SI-712 & SI-171 require continuous chlorination of the RCW/RSW & HPFP systems for two 3-week periods at the beginning & end of the clam spawning period each year.

3. "Chlorination equipment failures are addressed in SQM 32 & SI-712. According to Joe Johnson, TVA's aquatic biologist, "flushing" refers to the use of nonchlorinated water, & "shock chlorination" synonymous with "continuous chlorination."



"SQN's procedures call for continuous chlorination (shock chlorination). When ever chlorination is interrupted, for any reason including equipment failures, the required action is to re-establish continuous chlorination.

"A determination will be made whether or not to elaborate on the wording ("chlorine equipment failures, will be evaluated for adding flushing or shock chlorination"), at the time the next revision is made to SQM 32 & SI-712, to make the meaning clearer to the average reader. A revision to do so is not required at the present time.

"Data sheets to document equipment failures are not required; no commitments were made to the NRC to do so.

4. "SQN is not committed to an annual inspection of ERCW piping for clams (L33 820924 802 and A27 820907 034).

5. "Annual test of centrifugal charging pumps & safety injection pumps are covered in SI-40 & SI-129, respectively. The current revisions being prepared by the Mechanical Engineering & Test section include references to SQM 32.

6. "The heat exchanger inspection program is covered in SI-679.

"Additional comments made in the report are addressed below:

A. "T. S. 08.01.01.14.03 provides guidelines for control of Asiatic clams. Only items to which SQN has made commitments are included in SQM 32.

B. "SQN is not committed to drain/clean/inspect the CCW conduits. SQM 32, revision 2, does not contain a statement to do so.

C. "SQM 32, revision 2, contains a list of SIs used to meet the requirements outlined in SQM 32.

D. "SI-692, revision 1, has new prerequisites which make it possible to perform the SI.

E. "SI-697, revision 0 includes an expanded data sheet which should satisfy QA documentation requirements.

F. "SI-704 and SI-185 are not used to meet any clam control requirements."

10-26-87

BFN

CATD 30807-BFN-01 was issued at BFN to line management. The CATD was concerned about the lack of procedures or documents to verify BFN's commitments to NRC clam and chlorine control. BFN's response to the CATD is stated as follows:

"A permanent change is being submitted to initiate evaluation of effected systems following failure of chlorination equipment for periods greater than fourteen days. This submitted change shall be incorporated into CI-1001 no later than January 31, 1987.

10-20-88

The cross referencing of chlorination documents is adequate and needs no further action."

BLN

CATD-30807-BLN-01, was issued to BLN line management. This CATD states that BLN needs plant SI's for clam control and related activities. An acceptable response was received from BLN line management as follows:

1. "The report states that BLN does not have concrete lined ERCW pipes. The ERCW main headers at BLN are, indeed, lined with concrete.

10-29-88

2. "BLOG-YA, the operating guidelines for the hypochlorite system, does not contain data sheets to record chlorine levels because sampling and the collection of data is a responsibility of the chemical lab who recommends changes in injection rates to operation personnel. The pertinent data is being gathered and preserved by the chemical group. This responsibility is assigned in BLE4.4.

3. "A revision request to BNP-QCP-6.23 Revision 0 was submitted on January 15, 1987, to provide for the evaluation of additional corrective action if chlorine equipment failure longer than 30 days are encountered.

4. "BNP-QCP-6.23 Revision 0 will also be revised to include a rework section to document what occurred when the data did not meet acceptance criteria. This revision was submitted concurrent with item 3 above.

5. "The requirement in BLOG-YA to chlorinate when water temperature reaches 62 degrees Fahrenheit in late May or early June and ends when the water temperature falls below 62 degrees Fahrenheit (usually in late October) is based on Standard Practice BLE4.4 which implements the requirements of T.S. 08.01.01.14.03 (formerly DPM N75M6). This is consistent with the commitment document which states: "The Design Guide, DG-M12.4, document specifies that provisions are to be made in the design such that during clam spawning season, or whenever the rinse water temperature exceeds 60 degrees Fahrenheit, the essential cooling system may be chlorinated continuously." This does not mean that chlorination will start at 60 degrees Fahrenheit but that the system is designed such that chlorination injection availability can commence at or above 60 degrees Fahrenheit. Consequently, we find no disconnect between the commitment document and the procedures in effect at BLN. ONP-BLN Standard Practice BLE4.4 clearly defines the program and establishes responsibilities for a clam control program for the operating plant and implement the requirements delineated in T.S.08.01.01.14.03, R0. (U01 870203 802)"

6.2 Corrective Action at Subcategory Level

No subcategory level CATDs are being sent to TVA corporate management to address the findings of this subcategory report as presented in Section 5.0 of this report because the NMRG report and Nuclear Performance Plan specifically target these findings.

7.0 ATTACHMENTS

Attachment A - Subcategory Summary table

Attachment B - Listing of Concerns by Issue

Attachment C - Checklist for Root Cause Analysis

Attachment D - Summary of Symptoms and Root Causes

Attachment E - Graph of Symptoms Versus Root Causes

Attachment F - Bar Charts of Symptoms

Attachment G - Bar Charts of Root Causes

Attachment H - CATDs

Attachment I - List of Evaluators by Element/Report

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 CORRECTIVE MAINTENANCE

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL / 2 SAF RELATED BF	BL	SQ	WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - 01 SUBCAT - 30
BFNIESC-86-01	01	OP	30803	N BFN	1 Y 2 SR	N NA	N NA	N NA		OECP	MR A 592164 ISOLATION VALVE IN SWITCH YARD, FIRE HYDRANT NO.026505. THIS IS BELIEVED TO BE A CSSC SYSTEM ON WHICH A NON CSSC VALVE IS BELIEVED TO BE INSTALLED. THE MR THAT WAS WORKED WAS NOT REVIEWED BY QC. PLEASE LOOK INTO THIS AS THE VALVE MAY BE CHANGED OUT MONDAY MORNING 01-13-86	3.3 308.03-1
INPQCP10.35-1701		OP	30803	N BLN	1 N 2 NA	Y SR	N NA	N NA		OECP	BUTTERFLY VALVES IN WATER SYSTEMS LEAK SO THAT EQUIPMENT CAN'T BE SERVICED/REPAIRED WITHOUT SHUTTING DOWN A TRAIN OF ERCW. REPAIR PARTS ARE NOT READILY AVAILABLE AND GLUE USED TO PUT THE SEATS IN HAS LIMITED SHELF LIFE.	3.3 308.03-2
HT-85-003	01	OP	30803	N SQN	1 Y 2 SR	N NA	Y SR	Y SR		OECP	INADEQUATE MAINTENANCE OF DOORS WHICH ARE A PART OF ABSCE, FIRE DOORS, OR SECURITY DOORS.	3.3 308.03-3
AC-85-004	01	OP	30805	N SQN	1 Y 2 SR	Y SR	Y SR	Y SR		OECP	MONORAIL CRANES IN AUXILLARY BUILDING ELEVATION 714 ARE SOMETIMES SIDE LOADED WHILE HANDLING MISSILE PLUGS FROM FILTER CUBICLES.	3.5 308.05-1
X -85-012-00101 T50074		OP	30806	N WBN	1 N 2 NA	N NA	N NA	Y SR	EX-85-010-002	QTC	WATTS BAR-SUB-JOURNEYMEN ARE DOING THE WORK OF QUALIFIED FITTERS. PER C/I, SUB-JOURNEYMEN ARE NOT CRAFTSMEN AND THEY DO NOT HAVE TRAINING AS QUALIFIED FITTERS. 6 OR 8 SUB-JOURNEYMEN ARE DOING THE WORK OF FITTERS IN NUCLEAR POWER MAINTENANCE DEPT. (NO NAMES GIVEN.) C/I HAD NO FURTHER INFORMATION.	3.6 308.06-1

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 PROGRAM DEFICIENCIES, PROCEDURE VIOLATIONS

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OF SUBCAT - 3(
EX -85-048-00101 T50169	OP	30804	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	A TVA FOREMAN DOES NOT LIKE TO OBTAI N WRITTEN HOLD ORDERS TO PERFORM WOR K. HE TRIES TO HAVE WORK PERFORMED BY USING JUST A VERBAL HOLD ORDER. HE CREATES DANGEROUS WORK CONDITIONS FOR HIS WORKERS. CONSTRUCTION CONC ERN. NAMES AND DETAILS TO THIS SPEC IFIC CASE ARE KNOWN TO QTC AND ARE W ITHHELD TO MAINTAIN CONFIDENTIALITY.	3.4 308.04-1
X -85-053-01101 T50228	IH	60300	S	WBN	1 N N N Y 2 NA NA NA NO		QTC	DOUBLE VERIFICATION SIGNOFFS FOR PRE VENTATIVE MAINTENANCE ON VALVES WERE FORGED. DETAILS KNOWN TO QTC WITHH ELD DUE TO CONFIDENTIALITY. NO FURT HER INFORMATION MAY BE RELEASED. UN IT 1 NUC. POWER DEPT. CONCERN. CI H AS NO FURTHER INFORMATION. NO FOLLO W-UP REQUIRED.	3.2 308.02-1
02	OP	30802	S	WBN	1 N N N Y 2 NA NA NA SR				
X -85-053-01201 T50276	IH	60300	S	WBN	1 N N N Y 2 NA NA NA NO		QTC	PREVENTIVE MAINTENANCE CARDS FOR VAL VES WERE FALSIFIED TO REFLECT THAT P REVENTIVE MAINTENANCE WAS PERFORMED, WHEN IT HAD NOT BEEN (UNIT 1). SPE CIFIC VALVE NUMBERS WERE NOT PROVIDE D. DETAILS KNOWN TO QTC, WITHHELD D UE TO CONFIDENTIALITY. NO FURTHER I NFORMATION MAY BE RELEASED. NUCLEAR POWER DEPARTMENT CONCERN.	3.2 308.02-1
02	OP	30802	S	WBN	1 N N N Y 2 NA NA NA SR				
X -85-054-00201 T50165	OP	30806	N	WBN	1 N N N Y 2 NA NA NA SR	EX-85-010-002	QTC	C/I ASSIGNED TO A SUB-JOURNEYMAN AND HAD NO OPTION BUT TO USE THE SUBJOU RNEYMAN AS A JOURNEYMAN. NUCLEAR PO WER CONCERN. C/I HAS NO FURTHER INF ORMATION.	3.6 308.06-1
SB-85-001 01	OP	30803	N	SQN	1 Y Y Y Y 2 SS SS SS SS		OECP	SINCE WE DO NOT CHECK CALIBRATION OF TORQUE WRENCHES IMMEDIATELY AFTER A JOB, WE COULD HAVE DEGRADED BOLTING WHEN WE START UP AND COULD CONTRIBU TE TO NUCLEAR SAFETY PROBLEMS, SHUTD OWNS, AND INCREASED DOSE DUE TO REWO RK ON MORE THAN ONE JOB.	3.3 308.03-4

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 PROGRAM DEFICIENCIES, PROCEDURE VIOLATIONS

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30
:-86-233-SQN	01	30105	S	SQN	1 N N Y Y 2 NA NA SR SR		NSRS	AN ANONYMOUS INDIVIDUAL MAILED IN A POTENTIAL SAFETY HAZARD ASSOCIATED W ITH THE CONDENSATE DEMINERALIZER WAS TE EVAPORATOR (CDME) ON EL 706 OF TH E AUXILLARY BUILDING AT SQN. THE OR IGINAL STAINLESS STEEL PIPING FOR PU MPING "BOTTOMS" FROM THE CDME WAS RE MOVED AND REPLACED BY A TEMPORARY RU BBER HOSE. EXTENSIVE MODIFICATIONS ARE BEING PERFORMED OVER THE RUBBER HOSE. WELDING HOT CHIPS HAVE BEEN O BSERVED FALLING ON THE RUBBER HOSE. DAMAGE TO OR RUPTURE IN THE HOSE WO ULD RESULT IN POSSIBLE PERSONNEL	3.4 308.04-2
	02	30804	S	SQN	1 N N Y N 2 NA NA SR NA				
N -85-025-00501 T50278	IH	60300	S	WBN	1 N N N Y 2 NA NA NA NO		QTC	PAPERWORK (MAINTENANCE REQUESTS) WHI CH INDICATED THAT WORK HAS COMPLETE WERE SIGNED BY DEPARTMENT PERSONNEL DUE TO SUPERVISION'S (NAME KNOWN) DE SIRE TO INCREASE PRODUCTION. HOWEVE R, THE WORK REPRESENTED BY THESE MAI NTENANCE REQUESTS WAS, IN FACT, INCO MPLETE OR INCORRECTLY PERFORMED. NU CLEAR POWER DEPARTMENT CONCERN. C/I HAS NO FURTHER INFORMATION.	3.3 308.03-5
	02	30803	S	WBN	1 N N N Y 2 NA NA NA SS				
N -85-108-X0201 T50065	OP	30803	H	WBN	1 N N N Y 2 NA NA NA SR		QTC	TUBING DOWNSTREAM OF 1-DRV-68-503 SH OULD BE SECURED TO UNISTRUT PER AS-C ONSTRUCTED SUPPORT DETAIL 47A465-1-3 4. THIS DISCREPANT FIELD CONDITION HAS BEEN NOTIFIED BY THE PRE-OPERATI ONS TEST GROUP TO NUCLEAR POWER MECH ANICAL MAINTENANCE GROUP VIA A MAINT ENANCE REQUEST NO. A-483663, DATED 6 /25/85, PER ERT REQUEST.	3.3 308.03-6

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

ATEGORY: OP PLANT OPER. SUPPORT
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY
SUBCATEGORY: 308 SUBJOURNEYMAN/JOURNEYMAN

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30
(N -85-128-00101 T50209	OP	30806	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	TVA HIRING SUB-JOURNEYMEN FITTERS TO PERFORM WORK THEY ARE NOT QUALIFIED TO DO. EXAMPLE: PIPE FIT-UP & VALV E ASSEMBLY. CI FEELS THE SUB-JOURNE YMEN ARE UNSKILLED CRAFTSMEN WHICH E FFECTS THE QUALITY OF WORK. CI COUL D NOT PROVIDE ANY SPECIFICS/DETAILS. NUCLEAR POWER CONCERN. NO FURTHER INFORMATION AVAILABLE.	3.6 308.06-1
N -85-129-X0501 T50273	IH	60300	S	WBN	1 N N N Y 2 NA NA NA NO		QTC	THE MAINTENANCE REQUESTS ARE SIGNED WITHOUT PERFORMING THE SAFETY REVIEW EACH TIME CAUSING POTENTIAL FALSIFI CATION OF DOCUMENTS. CI HAS NO FURT HER INFORMATION. NUCLEAR POWER DEPA RTMENT CONCERN.	3.3 308.03-7
02	OP	30803	S	WBN	1 N N N Y 2 NA NA NA NO				
N -85-129-00301 T50116	MP	70601	S	WBN	1 N N N N 2 NA NA NA NA	IN-85-129-003	QTC	IN THE PAST, AN M-4 IN NUCLEAR POWER WOULD NOT ALLOW MAINTENANCE WORKERS TO READ MANUALS/INSTRUCTIONS ON HOW TO PERFORM WORK ON INSTRUMENTATION. CI WOULD NOT SPECIFY NAME OF M-4 O R OTHER DETAILS. UNIT 1 CONCERN.	3.1 308.01-1
02	OP	30801	S	WBN	1 N N N Y 2 NA NA NA NO				
N -85-130-00101 T50074	OP	30806	N	WBN	1 N N N Y 2 NA NA NA SR	EX-85-010-002	QTC	PIPEFITTERS USING "SUBJOURNEYMEN" TO PERFORM WORK THAT ONLY JOURNEYMEN A RE QUALIFIED TO DO. THIS INVOLVES U SING POWER TOOLS. THIS HAPPENED WIT HIN THE LAST THREE WEEKS (APRIL - MA Y 1985) IN UNIT 1 - MECHANICAL MAINT ENANCE SECTION. C/I HAS NO MORE DET AILS.	3.6 308.06-1
N -85-142-X1001 T50235	IH	60300	S	WBN	1 N N N Y 2 NA NA NA NO		QTC	FOREMEN DO NOT PERFORM THE SAFETY AN ALYSIS FOR A MAINTENANCE REQUEST YET FALSIFY THE MR BY SIGNING IT SIGNIF YING THAT A SAFETY ANALYSIS WAS PERF ORMED. (NAMES/DETAILS KNOWN TO QTC AND WITHHELD TO MAINTAIN CONFIDENTIA LITY.) CONSTRUCTION DEPARTMENT CONC ERN. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED.	3.3 308.03-7
02	OP	30803	S	WBN	1 N N N Y 2 NA NA NA SR				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY
.TEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 308 PROGRAM DEFICIENCIES, PROCEDURE VIOLATIONS

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30:
N -85-142-X1101 T50235	OP	30804	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	CI REPORTED SEVERAL EXAMPLES WHERE I NSTRUMENT READINGS WERE OFF A SIGNIF ICANT PERCENTAGE AND EMPLOYEES WERE DIRECTED TO "ADJUST" TO ZERO CAUSING FALSE READINGS IN THE CONTROL ROOM AND FALSIFICATION OF ALL APPLICABLE RECORDS. (NAMES/DETAILS KNOWN TO QT C AND WITHHELD TO MAINTAIN CONFIDENT IALITY.) NO FURTHER INFORMATION MAY BE RELEASED. CONSTRUCTION DEPARTME NT CONCERN. CI HAS NO FURTHER INFOR MATION. NO FOLLOW UP REQUIRED.	3.4 308.04-3
N -85-338-00101 T50039	OP	30804	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	CHECK VALVES ARE CONSTANTLY BEING RE MOVED WITHOUT AUTHORIZATION FROM WEL DING GAS HEADER SYSTEM IN BOTH UNITS #1&2.	3.4 308.04-4
N -85-393-00201 T50098	MP	70601	S	WBN	1 N N N N 2 NA NA NA NA	IN-85-393-002	QTC	SUPERVISOR (KNOWN) WENT AGAINST ACKN OWLEDGED ADVICE OF SUBORDINATES (KNO WN) AND HAD WASTEFUL AND UNNECESSARY MAINTENANCE DONE ON PLANT EQUIPMENT (PUMPS AND MOTERS, FLOW METERS). C I HAS NO FURTHER INFORMATION.	3.2 308.02-2
02	OP	30802	S	WBN	1 N N N Y 2 NA NA NA SR				
N -85-463-00501 T50036	OP	30804	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-463-005	QTC	TVA RARELY CONSULTS THE VENDOR REPRE SENTATIVE WHEN REPAIRING AN INSTRUME NT.	3.4 308.04-5
N -85-495-00101 T50043	OP	30805	S	WBN	1 N N N Y 2 NA NA NA NO	IN-85-495-001	QTC	MORE TRAINING IS NEEDED FOR CRAFT AN D ENGINEERING PERSONNEL CONCERNING T HE TYPES OF EQUIPMENT FOUND IN THE P LANT. INVERTERS, BATTERIES AND GENE RATOR EXCITATION WERE REFERENCED AS EXAMPLES WHERE EQUIPMENT TRAINING IS NEEDED. NO FURTHER SPECIFICS ARE A VAILABLE.	3.5 308.05-2
02	OP	30905	S	WBN	1 N N N Y 2 NA NA NA NO				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

'TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 PROGRAM DEFICIENCIES, PROCEDURE VIOLATIONS

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT -- OP SUBCAT - 30
N -85-553-00101 T50050	OP	30804	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-553-001	QTC	WHEN CONSTRUCTION COMPLETES INSTALLATIONS AND TURN THOSE INSTALLATIONS O VER TO NUCLEAR POWER, NUC. POWER SHO ULD BE RESPONSIBLE FOR ANY MODS/REPA IR. NUC. POWER COULD DO THE WORK FA STER AND AT LESS COST THAT CONSTRUCT ION. NUC. POWER SAYS BUDGETS DO NOT ALLOW THIS ACTION.	3.4 308.04-6
N -85-589-00201 T50055	OP	30806	N	WBN	1 N N Y Y 2 NA NA SR SR	EX-85-010-002	QTC	POWER DIVISION IS USING SUBJOURNEYMA N LEVEL CRAFT PERSONNEL TO PERFORM W ELDING, WIRING AND OTHER OPERATIONS WHICH REQUIRE A CERTIFIED TRAINED JO URNEYMAN TO PERFORM PROPERLY. ALL C RAFTS WERE ALLEGED TO BE INVOLVED IN THIS PRACTICE. NO FURTHER DETAILS AVAILABLE.	3.6 308.06-1
N -85-601-00201 T50057	MP	70601	S	WBN	1 N N N N 2 NA NA NA NA		QTC	MANAGEMENT MAKES NO EFFORT TO CORREC T IDENTIFIED PROBLEMS IN THE MAINTEN ANCE (SURVEILLANCE INSTRUCTION) AREA	3.1 308.01-2
02	OP	30801	S	WBN	1 N N N Y 2 NA NA NA SR				
N -85-677-00101 T50063	MP	70605	S	WBN	1 N N N N 2 NA NA NA NA		QTC	WBNP HAS REQUIRED TO REVIEW ALL SURV EILLANCE INSTRUCTIONS FOR COMPLIANCE TO NRC & WB ADMIN. REQUIREMENTS. S TAFF HAS GIVEN GUIDANCE FOR A THOROU GH REVIEW REGARDLESS OF TIME. WHEN ALLOWED TIME BEGAN TO APPROACH THE C RITICAL STAGE FOR PLANNING, THE EMPL OYEES WERE PUT ON AN EXHAUSTIVE O/T SCHEDULE. EMPLOYEES TOLD "GET IT DO NE" THE QUALITY OF RESPONSE HAS BEEN SACRIFICED FOR SCHEDULE. TIME FRAM E: JUNE 1, 1985. GROUP: INST. MAINT.	3.1 308.01-3
02	OP	30801	S	WBN	1 N N N Y 2 NA NA NA SR				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No.: 30803-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-BFN-02 4. INITIATION DATE 02/10/87
5. RESPONSIBLE ORGANIZATION: ~~Maintenance~~ 5-4-87
6. PROBLEM DESCRIPTION: ☒ ~~QR~~ ☒ ~~NQR~~ There is no system for tracking temporary repairs to ensure permanent repairs are made in future outages.

☒ ATTACHMENTS ~~DRAFT~~

7. PREPARED BY: NAME Randy Sutt DATE: 02/10/87
8. CONCURRENCE: CEG-H Thomas F. Hill for WRL DATE: 2/15/87
9. APPROVAL: ECTG PROGRAH MGR. D W Stevenson for DATE: 2/17/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE ATTACHMENT A

CATD upgraded to QR - BFN to be notified by 5-4-87 WRL
Since this is considered a program enhancement NO CAQR is requested.

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR. S K Hall Jr DATE: 4-17-87
12. CONCURRENCE: CEG-H: W.R. Long DATE: 5-1-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAH MGR: James R Russell DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2177T

EGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 SUBJOURNEYMAN/JOURNEYMAN

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 308
I -85-693-00301 T50122	MP	71602	S	WBN	1 N N N N 2 NA NA NA NA	I-85-449-WBN	QTC	LABORERS IN THE MODIFICATION AND FIELD SERVICES DO CEMENT MASON WORK INCLUDING PATCHING REDHEADS, POURING CONCRETE, GROUTING BASEPLATES, AND LAYING BLOCKS. CI MAINTAINS THAT CEMENT MASONS GO THROUGH A 2 1/2 YEAR APPRENTICESHIP AND MUST HAVE 6 YEARS EXPERIENCE BEFORE HIRING IN AT WBNP WHILE THE LABORERS GET ONLY 20 MINUTES OF CLASSROOM TRAINING. CI FEELS THIS PRACTICE IS UNFAIR AND TO DATE THE CEMENT MASON UNION HAS FAILED TO CORRECT THE SITUATION. NAMES OF PRINCIPALS ARE KNOWN. CI HAS NO ADD	3.6 308.06-2
02	OP	30806	S	WBN	1 N N N Y 2 NA NA NA SR				
I -85-729-00101 T50066	OP	30806	N	WBN	1 N N N Y 2 NA NA NA SR	IN-85-627-002	QTC	SUBJOURNEYMEN ARE ALLOWED TO PERFORM WORK WHICH NORMALLY REQUIRES THE EXPERIENCE OF A JOURNEYMAN. THIS APPLIES TO ALL CRAFT DISCIPLINES WITHIN THE POWER DIVISION.	3.6 308.06-1
N -85-825-00201 T50086	OP	30801	S	WBN	1 N N N Y 2 NA NA NA SR	I-85-339-WBN	QTC	TVA HAS SEVERAL PROCEDURES WHICH NEED TO HAVE PROTIONS REWRITTEN FOR CLARITY OR MORE DEFINED CRITERIA. EXAMPLES ARE TI-27 PART 3 ("COGNIZANT ENGINEER SHALL DETERMINE ACCEPTANCE AS IT APPLIES...". NO METHOD OF DOCUMENTING THIS ACCEPTANCE EXISTS.) MIA-14 ("COGNIZANT ENGINEER OR QUALIFIED PERSONNEL CAN COMPLETE THE DATA SHEET AS APPROPRIATE".) NO DEFINATION OF " QUALIFIED PERSONNEL" EXISTS.	3.1 308.01-4
02	OP	30901	S	WBN	1 N N N Y 2 NA NA NA SR				
I -85-889-X0601 T50188	OP	30801	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-889-X06	QTC	CI STATED THAT ENGINEERS ARE SUPPOSED TO DO SI WALKDOWNS, BUT CRAFT DID AND DID WELL. WHEN NRC PRAISED THE ENGINEERING FOR THEIR EXCELLENT JOB, THE ENGINEERING DID NOT PASS ON THE CREDIT TO THE CRAFT WHICH RESULTED IN LOW MORALE. CONSTRUCTION DEPT CONCERN. CI HAS NO FURTHER INFORMATION.	3.1 308.01-5

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 PROGRAM DEFICIENCIES, PROCEDURE VIOLATIONS

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED DF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 308
I -85-895-00201 T50091	OP	30804	N	WBN	1 N N N Y 2 NA NA NA SR	IN-85-895-002	QTC	IN UNIT 1 ON THE 3RD SHIFT THE FIRE DOOR AT THE AIRLOCK AT ELEV. 713' HO ULD BE BLOCKED OPEN WITHOUT A BREECH PERMIT BEING ISSUED. VIOLATION OCC URED ON OCCASION OVER THE PAST 2 MON THS. THE GUARD AT THE SECURITY POST IN THE AREA DID NOT RESPOND TO THE VIOLATION.	3.4 308.04-7
I -85-905-00101 T50091	OP	30804	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-905-001	QTC	LACK OF ADEQUATE SUPPLY OF RAW MATER IALS FROM POWER STORES. MANY TIMES NUTS & BOLTS AND SHEET METAL THAT AR E COMMON ARE NOT IN STOCK AND MANY J OBS HAVE TO WAIT FOR PARTS. (NO FOL LOWUP REQUIRED).	3.4 308.04-8
I -85-948-00101 T50251	OP	30807	N	WBN	1 Y Y Y Y 2 SR SR SR SR		QTC	INTAKE PUMPING STATION CANNOT OR DOE S NOT SCREEN OUT MUSSELS. THE MUSSE LS FOUND IN LINES ARE VERY SMALL AND PERHAPS ARE HATCHING. THE ECRW LIN E IS ALSO CLOGGED WITH CONCRETE DEBR IS. AN 8" LINE MAY HAVE A 1 1/2" OP ENING FOR WATER FLOW. THE FIRE PROT ECTION SYSTEM WILL NOT OPERATE PROPE RLY DUE TO THIS CLOGGING. EXAMPLE: 6" F.P. LINE IN UNIT 1 "HOT SHOP" WA S CUT 2-4 YEARS AGO, AND A 1' LENGTH OF PIPE HAD ENOUGH DEBRIS TO FILL A HARD HAT (713' ELEV. BEHIND SECURIT Y). CI HAD NO FURTHER INFORMATI	3.7 308.07-1
I -85-948-00201 T50251	OP	30807	N	WBN	1 Y Y Y Y 2 SR SR SR SR		QTC	PIPES TO THE SPRINKLER HEADS IN THE SWITCH YARD ARE FILLED WITH MUSSELS AND DEBRIS. EXAMPLES OF PAST CLOGGI NG ARE WHERE THE 4" DIAMETER HEADER JOINS THE 1" DIAMETER AROUND EVERY T RANSFORMER. CI HAD NO FURTHER INFOR MATION. CONSTRUCTION DEPARTMENT CON CERN.	3.7 308.07-1

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO' CAT - OP SUBCAT - 30.
N -85-948-00301 T50251	OP	30807	N	WBN	1 Y Y Y Y 2 SR SR SR SR		QTC	THE FLUSH HOSE HAS STOPPED UP WITH M USSELS AND IDENTIFIED WHILE FLUSHING THE SYSTEM TWO YEARS AGO. AUX. BLD G., UNIT #1, 692' ELEV. THIS SYSTEM HAS F.P. AND HAS SUPPOSED TO BE "DR Y". CI HAD NO FURTHER INFORMATION. CONSTRUCTION DEPARTMENT CONCERN.	3.7 308.07-1
N -86-022-00201 T50109	IH	60300	S	WBN	1 N N N Y 2 NA NA NA NO	IH-86-022-002	QTC	UNSKILLED PEOPLE (SUB-JOURNEYMEN) WO RKING ON MAINTENANCE EQUIPMENT AND O THER ITEMS. SUB-JOURNEYMAN HAS SIGN ED OFF AS A CRAFT INSPECTOR. CI HAS NO MORE INFORMATION. NO FOLLOW UP REQUIRED.	3.6 308.06-1
02	OP	30806	S	WBN	1 N N N Y 2 NA NA NA SR				
N -86-056-00101 T50113	OP	31211	S	WBN	1 N N N Y 2 NA NA NA NO		QTC	MAINTENANCE REQUESTS NEED TO BE COMP LETED FASTER ON SECURITY EQUIPMENT. EXAMPLE BEING: BALANCE MAGNETIC SWI TCH AT GATE 10 AT THE INTAKE PUMPING STATION HAS BEEN UNSERVICEBLE FOR A PPROXIMATELY 1 WEEK. CI HAS NO FURT HER INFORMATION. NUCLEAR POWER CONC ERN. NO FOLLOW UP REQUIRED.	3.3 308.03-8
02	OP	30803	S	WBN	1 N N N Y 2 NA NA NA NO				
N -86-073-00201 T50194	OP	30804	N	WBN	1 Y Y Y Y 2 SR SR SR SR		QTC	THE MECHANISM EXISTS FOR TECHNICIANS TO VERIFY IF THE VENDOR MANUALS KEP T IN THE SHOP CONTAIN THE LATEST UPD ATED DRAWINGS OR SCHEMATICS. USING OUT OF DATE DRAWINGS OR SCHEMATICS C OULD CAUSE THE PLANT INSTRUMENTS TO BE PLACED (UNKNOWINGLY) IN AN OUT OF CONFIGURATION STATUS. DETAILS KNOW N TO QTC, WITHHELD TO MAINTAIN CONFI DENTIALITY. CI HAS NO ADDITIONAL IN FORMATION. NUC. POWER CONCERN. UNI T 1.	3.4 308.04-9

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 CORRECTIVE MAINTENANCE

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 308
I -86-096-00101 T50120	OP	30803	N	WBN	1 N N N Y 2 NA NA NA NO	IN-86-096-001	QTC	THE SPRINKLER SYSTEM IN THE AUX. BLDG. (EL. 713' & 692') REQUIRES DRAINING PERIODICALLY. THERE IS A 55 GALLON DRUM IN PLACE TO CATCH THIS DRAINAGE, BUT IF NOBODY IS THERE, WATER RUNS ALL OVER THE FLOOR. CI FEELS TVA SHOULD INSTALL A FLOOR DRAIN TO CATCH THIS WATER. CI HAS NO ADDITIONAL INFORMATION. (NUC PWR CONCERN/UNIT #1/ONGOING PROBLEM.	3.3 308.03-9
I -86-097-00101 T50120	OP	30804	N	WBN	1 N N N Y 2 NA NA NA NO	IN-86-097-001	QTC	POWER STORES DOES NOT PROVIDE MATERIAL TO THE CRAFTS IN A TIMELY MANNER. SOMETIMES IT TAKES 1-2 DAYS TO GET EVERYDAY MATERIAL LIKE COMMON FASTENERS. CI HAS NO ADDITONAL INFORMATION. UNIT-COMMON/NUC. PWR CONCERN/ONGOING PROBLEM.	3.4 308.04-8
N -86-103-00301 T50119	OP	30802	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	DEPARTMENT (KNOWN) IS PERFORMING WORK WITHOUT THE APPLICALBLE MAINTENANCE REQUEST (MR) IN THEIR POSSESSION (NAMES KNOWN). CI EXPRESSED THAT WORKERS MUST HAVE THE MR IN THEIR POSSESSION WHILE PERFORMING WORK. UNIT # 1, ELEV 713', NUCLEAR POWER CONCERN, TIME FRAME-CURRENTLY OCCURRING. CI HAS NO FURTHER INFORMATION.	3.2 308.02-3
N -86-110-00101 T50129	OP	30804	N	WBN	1 N N Y Y 2 NA NA SS SS	I-85-455-WBN	QTC	DURING ICE LOADING, TVA USED JACK HAMMERS TO COMPACT ICE TO ACHIEVE THE MINIMUM BASKET WEIGHT REQUIREMENTS. THIS COULD RESULT IN "CHANNELING" OF ICE AND ENDANGER CONTAINMENT INTERGRITY DURING A LOCA (LOSS OF COOLANT ACCIDENT). CI HAS NO ADDITIONAL INFORMATION., UNIT #1/NUC POWER CONCERN.	3.4 308.04-10

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

ATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 TRAINING PROGRAM DEFICIENCIES

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30
EN -86-114-00101 T50126	OP	30805	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	UNQUALIFIED PERSONNEL (DISCIPLINE KNOWN) OPERATING MOTOR OPERATED VALVE TEST SYSTEM (MOVATS) EQUIPMENT. THESE PERSONNEL HAVE NOT BEEN FORMALLY TRAINED IN EQUIPMENT OPERATION, AND DO NOT POSSESS THE BASIC SKILLS NECESSARY TO TEST THESE COMPONENTS IN A PROPER MANNER. DETAILS KNOWN TO QTC, WITHELD DUE TO CONFIDENTIALITY. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION.	3.5 308.05-3
N -86-210-00201 T50170	OP	30806	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	IF TVA IS GOING TO KEEP HOURLY HELP IN MECHANICAL MAINTENANCE, THEY SHOULD KEEP THE BEST QUALIFIED PERSONNEL THEY HAVE INSTEAD OF SUB-JOURNEYMEN. CONSTRUCTION DEPT CONCERN. CI HAS NO ADDITIONAL INFORMATION.	3.6 308.06-1
N -86-315-00201 T50210	OP	30804	N	WBN	1 Y Y Y Y 2 SR SR SR SR		QTC	ENGINEERING DESIGN DRAGS PROBLEMS OFF BEFORE THEY ARE FIXED. TO MAKE THIS POINT CLEAR, CI STATED THAT WHEN INSPECTION DEPT. ISSUES NOTICE OF INDICATIONS OR MAINTENANCE REQUESTS (NOI'S & MR'S) THAT ENGINEERING WILL DISPOSITION THEM WITHOUT FIXING. CI STATED THIS AS A GENERIC CONCERN. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION.	3.4 308.04-11
N -86-315-00501 T50172	OP	30803	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	IF A MAINTENANCE REQUEST IS WRITTEN BY ISI PERSONNEL, THERE IS NO WAY OF ISI KNOWING IF IT GETS PROPERLY FIXED. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOW UP REQUIRED.	3.3 308.03-10
N -86-316-X0901 T50168	OP	30802	N	WBN	1 Y Y Y Y 2 SR SR SR SR	I-85-788-WBN	QTC	TVA CANNOT HAVE A SAFE AND ADEQUATE PREVENTIVE MAINTENANCE PROGRAM IF ENGINEERING CONTINUES TO DISREGARD THE VENDOR'S MANUALS FOR SAFETY RELATED EQUIPMENT. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION.	3.2 308.02-4

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 CORRECTIVE MAINTENANCE

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30
N -86-316-00201 T50168	OP	30803	N	WBN	1 N N N Y 2 NA NA NA SR	I-85-788-WBN	QTC	CI WAS INVOLVED IN REPAIRING A SPECIFIC PIECE OF EQUIPMENT. THE CI LOOKED AT THE VENDOR'S MANUAL AND REALIZED THE WORK PACKAGE DID NOT INCLUDE ALL NECESSARY REPAIR DETAILS THE VENDOR CALLED FOR. PROBLEM WAS PRESENTED TO AN ENGINEER WHO PROCEEDED TO INFORM THE REPAIRMAN THAT HE HAD ALL THE PAPERWORK HE NEEDED RIGHT IN THE WORK PACKAGE. NUCLEAR POWER COCNERN. NAMES AND DETAILS ARE KNOWN TO QTC AND WITHHELD TO MAINTAIN CONFIDENTIALITY. NO FOLLOWUP REQUIRED.	3.3 308.03-11
N -86-316-00301 T50168	OP	30801	N	WBN	1 N N N Y 2 NA NA NA SR	I-85-788-WBN	QTC	IF THE WORK PACKAGE DISAGREES WITH THE VENDOR'S MANUAL, WORKERS CAN NOT REPAIR ACCORDING TO THE VENDOR'S MANUAL. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION. FOLLOWUP NOT REQUIRED.	3.1 308.01-6
N -86-316-00501 T50168	OP	30801	N	WBN	1 N N N Y 2 NA NA NA SR	I-85-788-WBN	QTC	A WORK PACKAGE CALLED FOR REMOVING SPECIFIC PARTS FROM A PARTICULAR PIECE OF EQUIPMENT, BUT THE WORK PACKAGE DID NOT COVER REPLACING THEM AFTER THE REPAIR. THE ENGINEER WAS TOLD THAT THE WORK PACKAGE DID NOT CALL FOR REPLACING THE SPECIFIC PARTS. THE ENGINEER SAID, "YOU HAVE AMPLE PAPERWORK TO DO THE JOB". NAMES AND DETAILS TO THE SPECIFICS ARE KNOWN TO QTC AND ARE WITHHELD TO MAINTAIN CONFIDENTIALITY. NUCLEAR POWER DEPT. CONCERN. CI HAS NO MORE INFORMATION. FOLLOWUP NOT REQUIRED.	3.1 308.01-6
N -86-316-00601 T50168	OP	30801	N	WBN	1 N N N Y 2 NA NA NA SR	I-85-788-WBN	QTC	WORK PACKAGES ARE FREQUENTLY INCOMPLETE WHEN CHECKED AGAINST VENDOR'S MANUALS. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION.	3.1 308.01-6

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 30
N -86-316-00701 T50168	OP	30801	N	WBN	1 N N N Y 2 NA NA NA SR	I-85-788-WBN	QTC	ENGINEERING DOES NOT TAKE THE TIME O R EFFORT TO WRITE COMPLETE WORK PACK AGES THAT COMPLY WITH THE VENDOR'S M ANUALS. THEY HAVE BEEN SHOWN TIME A FTER TIME THAT THE WORK PACKAGES DO NOT CONTAIN ENOUGH DETAILS TO COMPLE TE THE JOB CORRECTLY. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFO RMATION.	3.1 308.01-6
AN-86-001	01	OP	30804	N	SQN	1 N N Y N 2 NA NA SS NA		OECP	PHONE CALL RECEIVED ABOUT DWG. BEING MARKED UP FOR WP10512 (CLASS 1E FIL ES ID) WITHOUT COMPLETING THE WORK.	3.4 308.04-12
LH-86-001	01	IH	60300	S	SQN	1 N N Y N 2 NA NA NO NA		OECP	(1) MRS WHICH REQUIRE THE ADDITION OF GREASE TO LIMITORQUE VALVE OPERAT ORS ARE SIGNED BY A GENERAL FOREMAN AS "NO GREASE NECESSARY" WHEN, IN FA CT, THE GREASE LEVELS ARE LOW OR NEE DS REPLACING. (2) MRS WHICH THE GE NERAL FOREMAN CONSIDERS UNIMPORTANT ARE SIGNED OFF AS COMPLETE EVEN THOU GH NO WORK WAS PERFORMED. (3) NON-QA MATERIAL IS INSTALLED IN QA APPLI CATIONS, AND TRACEABILITY IS FALSIFI ED ON THE MR.	3.4 308.04-13 308.04-14 308.04-15
	02	OP	30804	S	SQN	1 Y Y Y Y 2 SS SS SS SS				
	03	QA	80504	S	SQN	1 N N Y N 2 NA NA SS NA				
	04	QA	80519	S	SQN	1 Y Y N Y 2 SS SS NA SS				
AS-85-004	01	OP	30801	N	SQN	1 N N Y N 2 NA NA SR NA		OECP	ADEQUACY OF MI 10.48 (MOTOR LUBS)	3.1 308.01-7
AS-86-001	01	OP	30801	N	SQN	1 N N Y N 2 NA NA SR NA		OECP	ADEQUACY OF MI 6.20	3.1 308.01-7
H -85-005-00101 T50032	OP	30806	N	WBN	1 N N N Y 2 NA NA NA SR	EX-85-010-002	QTC	POSSIBILITY OF SUBJOURNEYMEN PERFORM ING JOURNEYMEN'S WORK IN NUC PWR.. ALTHOUGH INDIVIDUAL HAD NO PERSONAL KNOWLEDGE OF THIS, HE STATED THAT HE THOUGH THIS SHOULD BE LOOKED INTO & VERIFIED ONE WAY OR ANOTHER.	3.6 308.06-1

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 PREVENTATIVE MAINTENANCE

CONCERN NUMBER	CAT	SUB CAT	SHR D	PLT LOC	1 REPORT APPL 2 SAF RELATED DF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 308
CP10.35-8-19 01	OP	30802	N	BLN	1 N Y N N 2 NA SR NA NA		OECP	NO PM TO PREVENT RUST BUILD UP ON HY DROGEN SYSTEM NEEDLE VALVES.	3.2 308.02-5
QP-85-004-00501 T50233	OP	30805	N	SQN	1 Y Y Y Y 2 SS SS SS SS		QTC	CRANES ARE PERFORMING SIDE PULLS WHI CH IS IN CONFLICT WITH THE CRANE OPE RATOR TRAINING. NUCLEAR POWER CONCE RN. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED.	3.5 308.05-1
QP-85-004-00601 T50233	OP	30804	N	SQN	1 Y N Y Y 2 SR NA SR SR	I-86-165-SQN	QTC	PROCEDURE MI-10.37 REQUIRES A 0-30 I N. LB. TORQUE WRENCH BE USED YET CRA FT ARE TOLD TO USE A 0-24 IN. LB. TO RQUE WRENCH. CI FEELS CRAFT SHOULD NOT BE ASKED TO VIOLATE A PROCEDURE. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP R EQUIRED.	3.4 308.04-16
QP-86-009-00401 T50273	OP	30801	N	SQN	1 N N Y N 2 NA NA SS NA		QTC	MAINTENANCE INSTRUCTIONS ARE UNCLEAR AND DO NOT PROVIDE ADEQUATE INSTRUC TION. DETAILS KNOWN TO QTC, WITHHEL D DUE TO CONFIDENTIALITY. NO FURTHE R INFORMATION MAY BE RELEASED. NUCL EAR POWER DEPARTMENT CONCERN.	3.1 308.01-8
QP-86-014-00101 T50276	OP	30801	N	SQN	1 N N Y N 2 NA NA SR NA		QTC	FOREMEN DO NOT ALWAYS SUPPORT THE CR AFT IN PROVIDING THEM WITH EVERYTHIN G THEY NEED TO DO THE JOB, E. G. REQ UIRED PRINTS. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION.	3.1 308.01-8
QP-86-014-00201 T50276	OP	30803	N	SQN	1 N N Y N 2 NA NA SR NA		QTC	ALTHOUGH THE FOREMEN ARE REQUIRED TO SIGN A DOCUMENT STATING THEY HAVE R EVIEWED THE WORK PACKAGE WITH THE CR AFT ASSIGNED TO THE JOB, THEY IN FAC T OFTEN DO NOT REVIEW THE WORK PACKA GE AT ALL WITH THE APPLICABLE CRAFT. NUCLEAR POWER CONCERN. CI HAS NO F URTHER INFORMATION.	3.3 308.03-12
AK-85-002 01	OP	30801	N	SQN	1 N N Y N 2 NA NA SS NA		OECP	M & A1-9 DOES NOT SPECIFY TORQUE FOR SCREWS LESS THAN #10	3.1 308.01-9

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 ADEQUACY OF PROCEDURES

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30
AK-85-004	01	30801	N	SQN	1 Y Y Y Y 2 SS SS SS SS		OECP	LUBRICATION OF GEARED LIMIT SWITCHES ON MOV'S NOT PROPERLY INSPECTED	3.1 308.01-10
BN-0217	01	30805	N	WBN	1 N N N Y 2 NA NA NA NO		OECP	IMPROPER LIFTING AND RIGGING OF COOL ING PUMP MOTORS AND PARTS ON 757 EL. BENDING I BOLTS, POPPING AND CRACKI NG WHEN LIFTING. LIFTING SIDEWAYS O N I BOLTS.	3.5 308.05-4
BN-242	01	30801	N	WBN	1 N N N Y 2 NA NA NA NO		OECP	INSTRUMENT CALIBRATION MANUALS ARE N OT READILY AVAILABLE FOR ALL INSTRUM ENTS ROUTINELY CALIBRATED. DOCUMENT CONTROL UNIT OFTEN TAKES HOURS TO F IND MANUALS SINCE THEY ARE FILED BY SYSTEM OR CONTRACT RATHER THAN BY PR OPER NAMES WHICH WOULD BE BETTER. ALSO DOCUMENT CONTROL UNIT IS NOT MA NNED 24 HOURS A DAY CAUSING DELAYS O N BACKSHIFTS. M & TE UNIT NEEDS A C OPY OF ALL CALIBRATION MANUALS.	3.1 308.01-11
X -85-016-00101 T50033	01	30801	S	BFN	1 Y N N N 2 SR NA NA NA	I-85-379-BFN	QTC	BROWNS FERRY NUCLEAR PLANT, UNITS 2& 3, CRAFT PERSONNEL ARE NOT APPROPRIA TELY TRAINED, NOR ARE THEY PROVIDED APPROPRIATE PROCEDURES WHICH PROVIDE SPECIFIC TECHNICAL INSTRUCTIONS FOR PERFORMANCE OF THE WORK. FOR EXAMP LE CRAFT PERSONNEL ARE NOT FAMILIAR WITH THE MECHANICS OF ANCHOR BOLT IN STALLATION AS DEFINED BY GENERAL CON STRUCTION SPECIFICATION G-32, REV. 1 0, 4/1/85. CRAFT PERSONNEL ARE ONLY PROVIDED A COPY OF MAI-4, A MODIFIC ATION PROCEDURE WHICH PROVIDES GENER AL GUIDANCE AND DOCUMENTATION AP	3.1 308.01-12
	02	30805	S	BFN	1 Y N N N 2 SR NA NA NA				3.5 308.05-2
X -85-071-00301 T50159	OP	30803	N	SQN	1 N N Y N 2 NA NA SR NA		QTC	SEQUOYAH: CI HAS GENERAL QUESTION AB OUT HARDWARE REPAIR PROCESS, AND REQ UESTED THAT QTC INVESTIGATE. DETAIL S KNOWN TO QTC; WITHELD TO MAINTAIN CONFIDENTIALITY. NO FOLLOWUP REQUIR ED.	3.3 308.03-13

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 308 CORRECTIVE MAINTENANCE

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTIO CAT - OP SUBCAT - 30
X -85-096-N0701	OP	30803	N	SQN	1 N N Y N 2 NA NA SR NA		NRC	NRC IDENTIFIED THE FOLLOWING CONCERN FROM REVIEW OF QTC FILE. "AS A RESULT OF THE THIMBLE GUIDE TUBE INCIDENT ABOUT 34,000 GALLONS OF RADIOACTIVE WATER SPILLED BUT WAS MISREPRESENTED TO THE NRC AS NO AMOUNT OF LEAKAGE AND AS A SMALL INSTRUMENTATION LEAK." (REF: XX-85-096-005)	3.3 308.03-14
X -85-096-00501 T50179	OP	30803	N	SQN	1 N N Y Y 2 NA NA SR SR	I-85-614-SQN	QTC	SEQUOYAH: THE RADIATION MONITOR TUBE PROBLEM (THIMBLE GUIDE TUBE INCIDENT) IN UNIT 1 IN APRIL 1985 COULD OCCUR AGAIN, BECAUSE THE EQUIPMENT IS NOT PROPERLY DESIGNED TO BE FIXED DURING PLANT OPERATION. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. CONSTRUCTION DEPT. CONCERN. C/I HAS NO FURTHER INFORMATION.	3.3 308.04-15
X -85-102-D0101 T50208	OP	30804	N	BFN	1 Y N N N 2 SR NA NA NA		QTC	BROWNS FERRY: A CERTAIN SIZE HANGER WAS TAKEN OUT OF A SPECIFIC ROOM AND NOT REPLACED. THE DRAWING SHOWS IT IN PLACE. A PARTICULAR WORK GROUP WAS SUPPOSED TO PUT IT BACK IN 1984. NUCLEAR POWER CONCERN. CI HAS NO FURTHER INFORMATION. DETAILS KNOWN TO QTC, WITHELD DUE TO CONFIDENTIALITY.	3.4 308.04-17
X -85-106-N0201	OP	30801	N	BFN	1 Y N N N 2 SR NA NA NA		NRC	NRC IDENTIFIED THE FOLLOWING CONCERN FROM THEIR REVIEW OF THE QTC FILES: CONTROL AND ADEQUACY OF PROCEDURES FOR HANDLING MAINTENANCE OF MSRV'S IS IN QUESTION. UPON FURTHER REVIEW, THE CONCERN HAS BEEN EXTRACTED FROM XX-85-106-001.	3.1 308.01-13
X -85-122-02301 T50214	OP	30804	S	BLN	1 N Y N N 2 NA SR NA NA		QTC	BELLEFONTE: OUT OF SERVICE TAGS FOR VALVES, ELECTRICAL EQUIPMENT, ETC., HAVE BEEN VIOLATED EVERYWHERE. THIS PRESENTS AN EXTREMELY SERIOUS PERSONNEL SAFEIY PROBLEM. CI HAS NO FURTHER INFORMATION. ANONYMOUS CONCERN VIA LETTER.	3.4 308.04-18
02	OP	30904	S	BLN	1 N Y N N 2 NA SR NA NA				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

TENNESSEE VALLEY AUTHORITY
OFFICE OF NUCLEAR POWER
EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)
EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

TEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 308 CORRECTIVE MAINTENANCE

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 308
350162005	01	30803	S	NPS	1 Y Y Y Y 2 SS SS SS SS		NSRS	TVA MAKES REPAIRS TO THEIR NUCLEAR P LANTS WHICH ARE NOT IN ACCORDANCE WI TH ASME CODES, SUCH AS OVERLAYS, PAT CHES, AND EVEN FURMATITE (SOPHISTICA TED GLUE). (SQN ISSUES ADDRESSED IN RPT WP-25-SQN R0)	3.3 308.03-16
	02	50825	S	NPS	1 Y Y Y Y 2 SS SS SS SS				

76 CONCERNS FOR CATEGORY OP SUBCATEGORY 308

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

LISTING OF CONCERNS BY ISSUE

The Maintenance Subcategory (30800) is comprised of 76 concerns grouped into seven elements addressing 59 issues.

Element 308.01 - Adequacy of Procedures

Issue 308.01-1	Craft not allowed to read manual to perform work. (IN-85-129-003)
Issue 308.01-2	Management does not correct identified problems. (IN-85-601-002)
Issue 308.01-3	Questionable quality review of surveillance instructions. (IN-85-677-001)
Issue 308.01-4	Procedures need clarification and more defined criteria. (IN-85-825-002)
Issue 308.01-5	Crafts not credited for surveillance instruction walkdowns. (IN-85-889-X06)
Issue 308.01-6	Work packages do not contain sufficient information. (IN-86-316-003, IN-86-316-005, IN-86-316-006, IN-86-316-007)
Issue 308.01-7	Adequacy of Maintenance Instructions. (MAS-85-004, MAS-86-001, SQP-86-009-004)
Issue 308.01-8	Communications between craft and foreman inadequate. (SQP-86-014-001)
Issue 308.01-9	MA&I-9 does not specify torque requirements for small screws. (TAK-85-002)
Issue 308.01-10	MOV limit switch lubrication not properly inspected. (TAK-85-004)
Issue 308.01-11	Vendor manuals not available. (WBN-242)
Issue 308.01-12	Craft not provided with sufficient procedures. (XX-85-016-001)
Issue 308.01-13	Procedure for inadequate MSRV removal. (XX-85-106-N02)

Element 308.02 - Preventative Maintenance

Issue 308.02-1	PMs on valves are signed off without being performed. (EX-85-053-011, EX-85-053-012)
Issue 308.02-2	Supervisor required unnecessary work to be performed. (IN-85-393-002)
Issue 308.02-3	Work performed without MR in possession. (IN-86-103-003)
Issue 308.02-4	Engineering disregards vendor manuals for PM program. (IN-86-316-X09)
Issue 308.02-5	Hydrogen system PM is not adequate. (QCP10.35-8-19)

Element 308.03 - Corrective Maintenance

Issue 308.03-1	Non-CSSC valve installed in CSSC system. (BFNIESC-86-01)
Issue 308.03-2	Butterfly valves leak and spare parts not available. (BNPQCP10.35-17)
Issue 308.03-3	Inadequate door maintenance. (DHT-85-003)
Issue 308.03-4	Need to check torque wrench calibration. (GSB-85-001)
Issue 308.03-5	Maintenance Requests (MR's) are being signed off complete without work being performed. (IN-85-025-005)
Issue 308.03-6	Need to secure tubing in accordance with drawings. (IN-85-108-X02)
Issue 308.03-7	Maintenance Request safety review inadequate. (IN-85-129-X05, IN-85-142-X10)
Issue 308.03-8	Maintenance Requests on security equipment need to be completed promptly. (IN-86-056-001)
Issue 308.03-9	Sprinkler system drainage inadequate. (IN-86-096-001)
Issue 308.03-10	Maintenance Request Initiator requires work update. (IN-86-315-005)
Issue 308.03-11	Work package incomplete. (IN-86-316-002)
Issue 308.03-12	Supervisor review of work packages required with craft. (SQP-86-014-002)

Issue 308.03-13	Questionable hardware repair process. (XX-85-071-003)
Issue 308.03-14	Large spill was misrepresented to NRC as small leak. (XX-85-096-N07)
Issue 308.03-15	Thimble guide incident recurrence. (XX-85-096-005)
Issue 308.03-16	Repairs not to ASME requirements. (2850162005)

Element 308.04 - Program Deficiencies/Procedure Violations

Issue 308.04-1	Foreman using verbal hold orders. (EX-85-048-001)
Issue 308.04-2	Potential Safety Hazard with Temporary Hose Drainage. (I-86-233-SQN)
Issue 308.04-3	Inadequate Controls of Instrument Adjustments. (IN-85-142-X11)
Issue 308.04-4	Check valves removed from welding gas header. (IN-85-338-001)
Issue 308.04-5	TVA rarely consults vendors for repair. (IN-85-463-005)
Issue 308.04-6	Nuclear Power responsible for repairs/Modifications at turnover. (IN-85-553-001)
Issue 308.04-7	Fire door blocked open without breach permit. (IN-85-895-002)
Issue 308.04-8	Material not being sufficiently supplied to craft. (IN-85-905-001, IN-86-097-001)
Issue 308.04-9	Configuration control of vendor manuals. (IN-86-073-002)
Issue 308.04-10	Jackhammers used during ice loading. (IN-86-110-001)
Issue 308.04-11	Engineering accepts work not completed. (IN-86-315-002)
Issue 308.04-12	Workplan signed off prematurely . (JAN-86-001)
Issue 308.04-13	Motor operator grease inspections inadequate. (JLH-86-001)
Issue 308.04-14	MR's are signed off without work being done. (JLH-86-001)

Issue 308.04-15 Non-QA material used in QA applications. (JLH-86-001)

Issue 308.04-16 Violation of Procedures. (SQP-85-004-006)

Issue 308.04-17 Hanger removed and not replaced. (XX-85-102-001)

Issue 308.04-18 Out of service tags being violated. (XX 85-122-023)

Element 308.05 - Training Program Deficiencies

Issue 308.05-1 Cranes improperly used. (EAC-85-004, SQP-85-004-005)

Issue 308.05-2 Plant personnel need more training. (IN-85-495-001, XX-85-016-001)

Issue 308.05-3 Unqualified personnel operating MOVATS equipment. (IN-86-114-001)

Issue 308.05-4 Improper lifting rigging on RCP's (WBN-0217)

Element 308.06 - Subjourneymen/Journeymen

Issue 308.06-1 Unqualified subjourneymen performing journeymen work. (EX-85-012-001, EX-85-054-002, IN-85-128-001, IN-85-130-001, IN-85-589-002, IN-85-729-001, IN-86-022-002, IN-86-210-002, PH-85-005-001)

Issue 308.06-2 Laborers are used to perform cement mason work. (IN-85-693-003)

Element 308.07 - Clam Control

Issue 308.07-1 Clams clogging heat exchangers. (IN-85-948-001, IN-85-948-002, IN-85-948-003)

Checklist for Root Cause Analysis

1. Procedure lacks specifics to perform task.
2. Personnel lack sufficient training in the applicability/use of procedure.
3. Lack of understanding regulatory requirements or commitments.
4. Lack of adequate system, process, or administrative controls to ensure commitments are reflected in procedures or processes.
5. Inadequate communication within functional group.
6. Inadequate communication between functional groups.
7. Management Assumed Risk.
8. Procedures incomplete or failed to incorporate all technical requirements.
9. Error in judgment by qualified individuals.
10. Unqualified individuals performing the task.
11. Insufficient time to perform task.
12. Inadequate prerequisites defined to ensure satisfactory completion of task.
13. Personnel performed task knowingly in violation of procedure/process.
14. Personnel error in following procedures.
15. Failed to identify root cause of previous deficiencies.
16. Failed to take appropriate action to preclude reoccurrence.
17. Inadequate process to detect adverse trends.
18. Inadequate acceptance criteria defined to ensure satisfactory task completion.
19. Management attentiveness to trends.
20. Lack of accessibility to documentation.
21. Inadequate controls for review of results to ensure compliance with commitments.
22. Timeliness of changes to commitments or changes to licensing/regulatory requirements.
23. Isolated incident.
24. Random error.
25. Other - i.e., equipment related failure.

ATTACHMENT D
SUMMARY OF SYMPTOMS AND ROOT CAUSES

For Element 308.01, Adequacy of Procedures, there was a potential for negative findings at the subcategory level based on the four element evaluations and the NMRG Report R-86-02-NPS. The following symptoms were identified and recurred throughout the evaluation:

(a) Procedures not containing adequate information or being clear enough to perform work.

(b) Procedures not incorporating information from upper-tier documents such as design/construction and licensing issues

(c) Vendor manual control program does not assure vendor manuals are as-constructed documents. Vendor/TVA interface and TVA evaluation of vendor initiated manual changes not controlled.

(d) Procedure for MR tracking systems does not identify maintenance history and trending for all plant equipment including both CSSC and Non-CSSC

(e) Post maintenance test guidelines are not procedurally addressed to ensure uniform testing on all equipment prior to returning to service, and verify a re-establishment to as-constructed configuration..

(f) Gray area between a maintenance activity and a modification activity.

(g) Dual standards applied to safety related and non-safety related application and passive attitude relative to procedural compliance has a very deleterious effect when the attitude contaminates maintenance programs.

The evaluation effort was not able to categorically state that deficiencies existed in the above areas but there is reason to believe that continuing or escalated management attention should be placed on maintenance activities to integrate long established programs into the configuration control, design verification arena.

Although the concerns for Element 308.02, Preventive Maintenance, were not substantiated, program deficiencies were noted as a result of these evaluations and concurring NMRG findings.

(a) Vendor manual control program inadequacies at all sites.

(b) PM instructions not included for all plant equipment required for plant reliability.

(c) Deficiencies in complete master equipment list that identify all system and equipment for all sites

(d) The lack of previous corporate support to implement a comprehensive PM program.

For Element 308.03, Corrective Maintenance, there was potential for negative findings at the subcategory level exhibited by the following symptoms: a) Inadequate work control (corrective maintenance activities), and b) Inadequate work control (vendor control for Furmanite). The first symptom occurred at SQN and BFN, and the second symptom occurred only at BFN. As these symptoms were tested for root cause, the appropriate root causes were judged to be as follows:

(a) Lack of adequate system, process, or administrative controls to ensure commitments are reflected in procedures or processes (BFN)

(b) Procedures incomplete or failed to incorporate all technical requirements (SQN)

(c) Inadequate prerequisites defined to ensure satisfactory completion of task (SQN)

(d) Personnel error in following procedures (BFN)

(e) Failure to take appropriate action to preclude recurrence (BFN)

(f) Inadequate process to detect adverse trends (BFN)

(g) Inadequate acceptance criteria defined to ensure satisfactory task completion (SQN)

For Element 308.04, Program Deficiencies/Procedure Violations, there were potential negative findings at the subcategory level exhibited by the following symptoms: a) Inadequate work control (procedure violation - not following procedures), b) Inadequate materials control (traceability - problem with not using forms properly), and c) Inadequate design control (vendor manuals). The first two symptoms were indicated for SQN, and the third symptom was identified for WBN. As these symptoms were tested for root cause, the appropriate root causes were judged to be as follows:

(a) Lack of understanding regulatory requirements or commitments (WBN)

(b) Lack of adequate system, process, or administrative controls to ensure commitments are reflected in procedures or processes (WBN)

(c) Procedures incomplete or failed to incorporate all technical requirements (SQN)

(d) Personnel performed task in violation of procedure/process (SQN)

(e) Failed to identify root cause of previous deficiencies (WBN)

(f) Failed to take appropriate action to preclude reoccurrence (SQN)

(g) Inadequate controls for review of results to ensure compliance with commitments (WBN)

For Element 308.05, Training Program Deficiencies, there were potential negative findings of the subcategory level exhibited by the following symptom: Inadequate work control (crane side pulls). This symptom was evaluated at SQN and BFN and as this symptom was tested for root cause, the appropriate root causes and applicable plant sites were judged to be as follows:

(a) Lack of adequate system, process, or administrative controls to ensure commitments are reflected in procedures or processes (SQN, BFN)

(b) Unqualified individual performing the task (SQN, BFN)

No analysis for root cause was required in the other elements of this subcategory report because no symptoms of problems were readily apparent.

The analysis of the symptoms and root causes is depicted graphically in Attachments E, F, and G. Attachment E is a plot of each element's symptoms versus the root cause pointed out by the symptom. Root cause numbers on the horizontal axis correspond to the 25 items on the "Checklist for Root Cause Analysis" found in Attachment C. Attachment F contains bar graphs showing the number of times each of the symptoms identified for the subcategory occurs for the various plants. Symptom numbers on the horizontal axis in this attachment correspond to the symptoms as listed in Attachment E. Attachment G contains bar graphs showing the number of times each root cause appears in the subcategory for the various plants.

Several observations can be made in studying these attachments. First, it can be seen from Attachments E and F that BFN and SQN share two symptoms in common, one with respect to work control for crane operations and the other with respect to work control for corrective maintenance activities. Next, Attachments E and G show that WBN, BFN, and SQN share root cause number 4 (Lack of adequate system, process, or administrative controls to ensure commitments are reflected in procedures or processes). At SQN, root cause number 8 (Procedures incomplete or failed to incorporate all technical requirements.) appears more than once as shown on Attachment G.

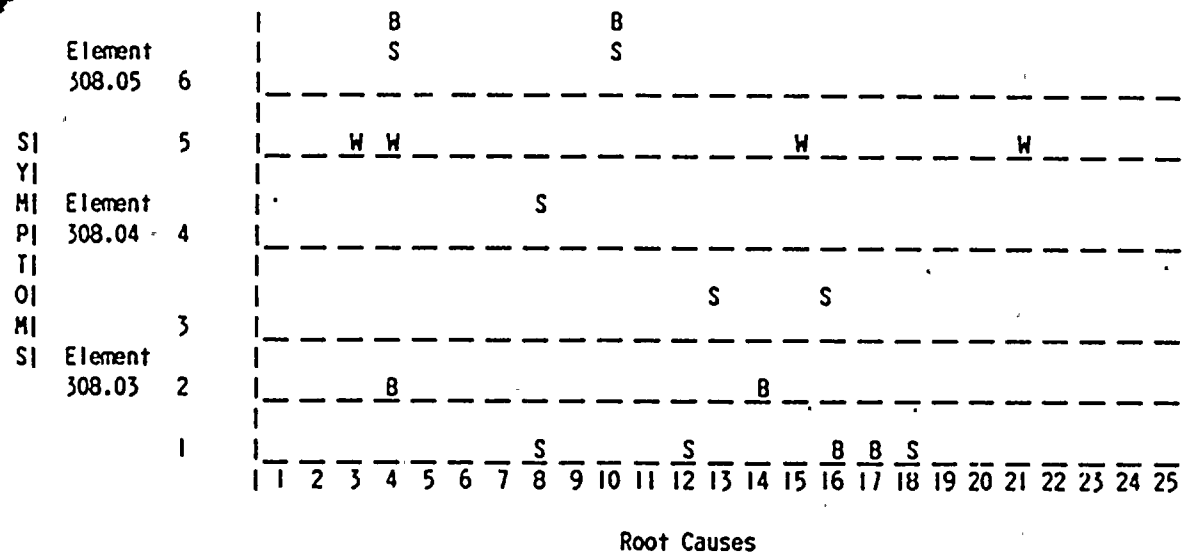
ATTACHMENT E
SYMPTOMS VS ROOT CAUSES
SUBCATEGORY 308

Revision 2

Symptoms

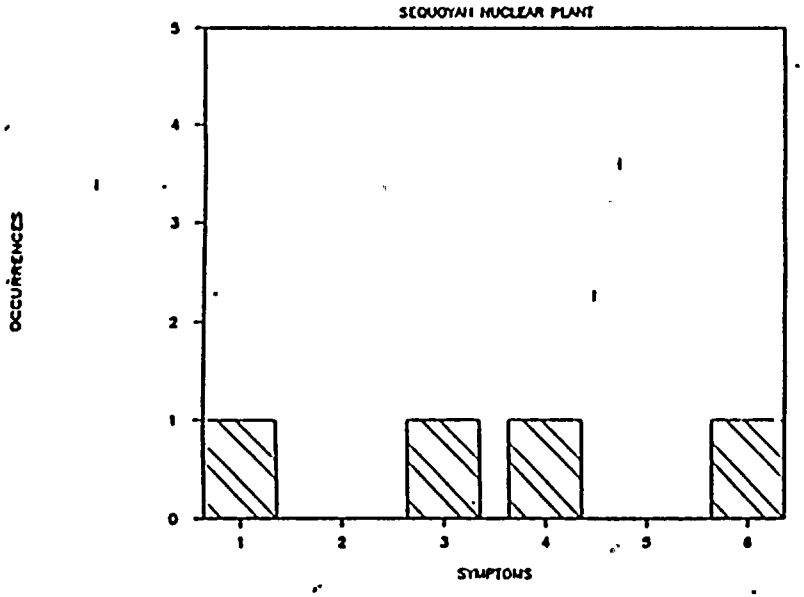
1. Inadequate work control (corrective maintenance activities)
2. Inadequate work control (vendor control for Furmanite)
3. Inadequate work control (procedure violation - willfully not following procedures)
4. Inadequate materials control (traceability problem with not using form TVA 575)
5. Inadequate design control (vendor manuals)
6. Inadequate work control (crane side pulls)

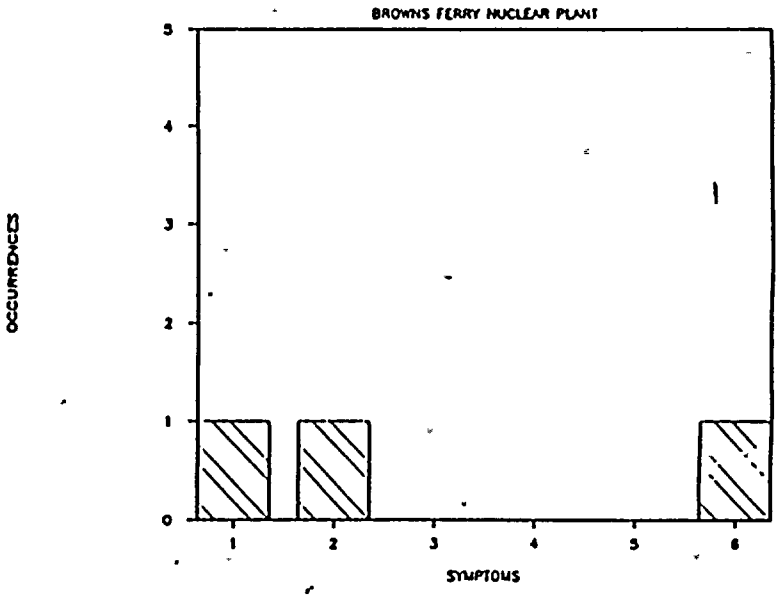
KEY: W = WBN
S = SQN
B = BFN
L = BLN

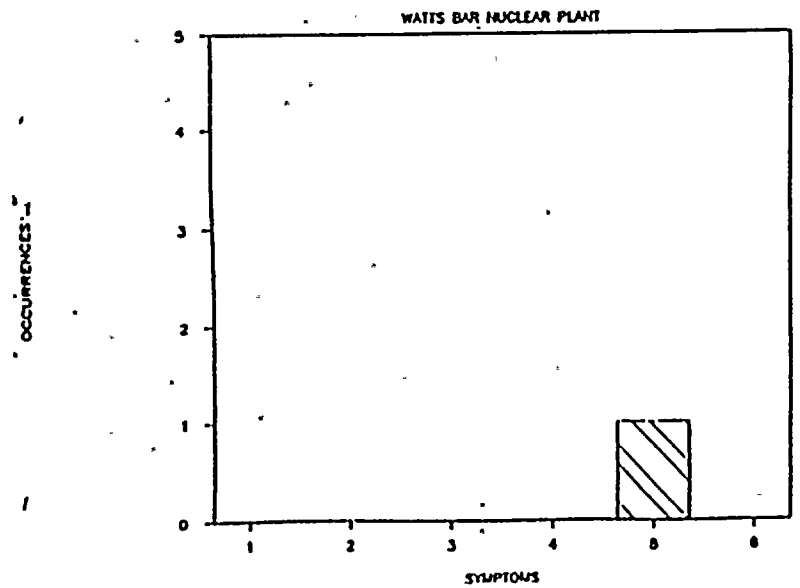


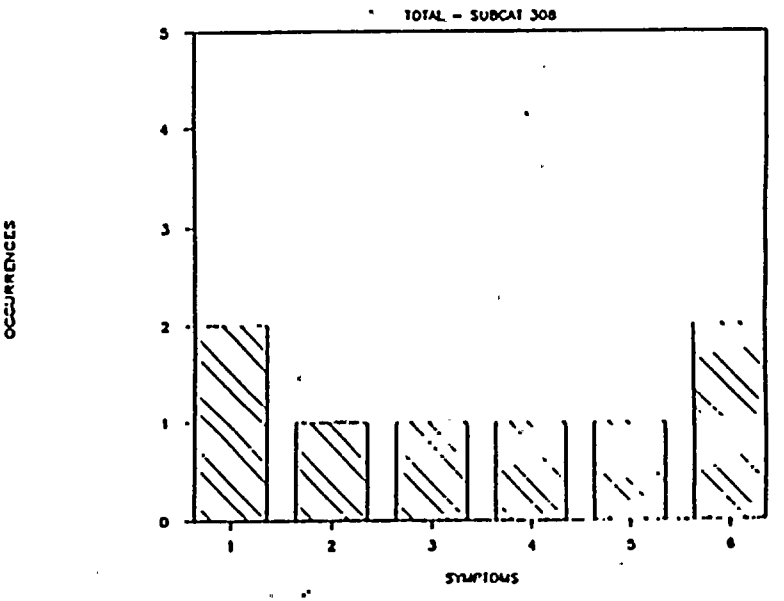
OCCURRENCES VS SYMPTOMS

TOTAL – SUBCAT 308





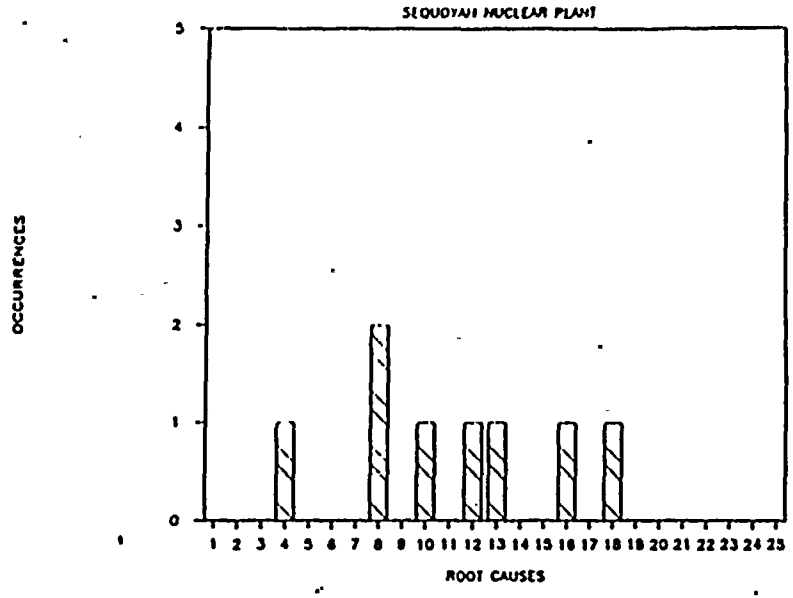


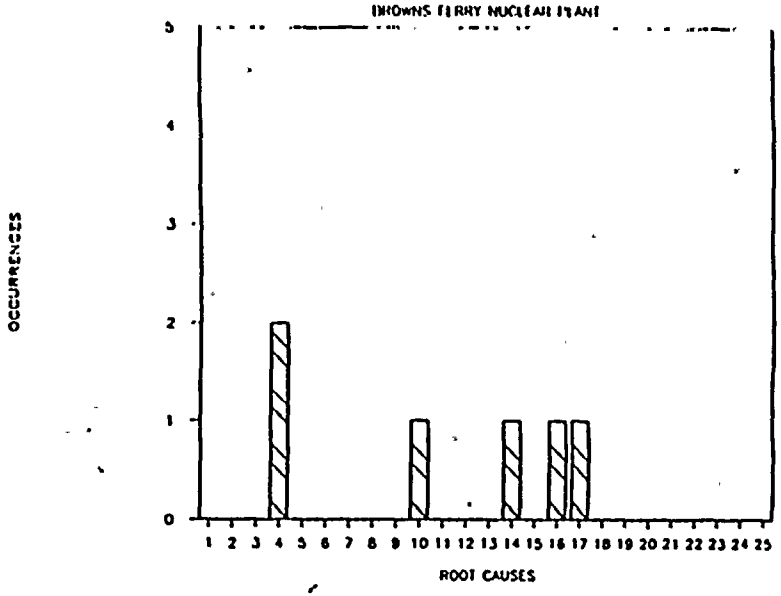


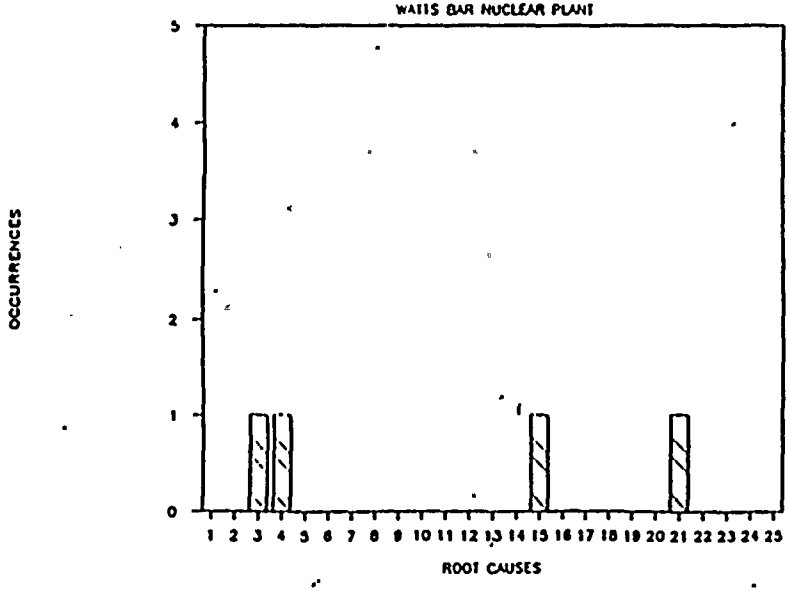
ATTACHMENT F

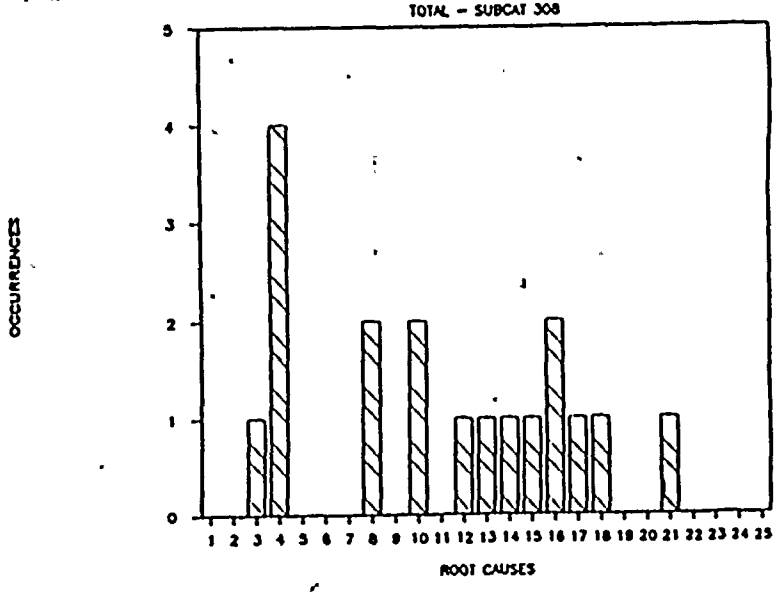
OCCURRENCES VS ROOT CAUSES

TOTAL – SUBCAT 308









ATTACHMENT G

ATTACHMENT H Revision 2

Subcategory 30800

CORRECTIVE ACTION TRACKING DOCUMENTS (CATD's)

CATD Number	Corrective Action Plan Approved	CATD Number	Corrective Action Plan Approved
30801-WBN-01	Yes	30805 WBN-01	Yes
30801-SQN-01	Yes	30805 SQN-01	Yes
30801-BFN-01	Yes	30805 SQN-02	Yes
30801-BLN-01	Yes	30805 BFN-01	Yes
		30805 BFN-02	Yes
30802 SQN 01	Yes		
30802 SQN 02	Yes	30807 WBN-01	"Void"
30802 SQN 03	Yes	30807 SQN-01	Yes
		30807 BFN-01	Yes
30803 WBN 01	Yes	30807 BLN-01	Yes
30803 WBN 02	No		
30803 SQN 01	Yes		
30803 SQN-02	Yes		
30803 BLN 01	Yes		
30803 BLN 02	Yes		
30803 BLN 03	Yes		
30803 BFN-01	Yes		
30803 BFN-02	Yes		
30803 BFN 03	Yes		
30803 BFN 04	Yes		
30804 WBN 01	Yes		
30804 WBN 02	Yes		
30804 SQN 01	Yes		
30804 BFN 01	Yes		

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No.: 308.01-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30801-WBN-01 4. INITIATION DATE
5. RESPONSIBLE ORGANIZATION: Instrument Maintenance
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR The Nuclear Regulatory Commission has not reviewed the SI program to ensure its compliance to commitments WBN made in response to the severity Level IV violation received in April, 1985.

☐ ATTACHMENTS

7. PREPARED BY: NAME Randy Sutt DATE: 2-10-87
8. CONCURRENCE: CEG-H Thomas F. Hutton for WRL DATE: 2/14/87
9. APPROVAL: ECTG PROGRAM MGR. DATE: 3/20/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Acceptance of the SI program by the NRC and closure of violation (NRC Inspection Report 390/85-32-02, Dated 5-24-85, RIMS L44-850624-800).

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/HGR: For tracking purposes only DATE: 2/14/87
12. CONCURRENCE: CEG-H: Thomas F. Hutton for WRL DATE: 2/24/87
    ~~CRP:~~ W.R. Lagergren DATE: 3-19-87
    DATE:
    DATE:
    DATE:
    ECTG PROGRAM MGR: James R Russell for DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.01 SQN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30801-SQN-01 4. INITIATION DATE 3-3-87
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR The Maintenance Procedure Enhancement Program at SQN is scheduled for completion in two phases:
   1. 8 months after startup (high risk procedures)
   2. 21 months after startup (low risk procedures)

☐ ATTACHMENTS

7. PREPARED BY: NAME [signature] DATE: 3-3-87
8. CONCURRENCE: CEG-H Thomas F. Huth [signature] DATE: 3-3-87
9. APPROVAL: ECTG PROGRAM MGR. [signature] for DATE: 3/12/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Procedure program progress is being tracked on the Management Action Tracking System (MATS).

During closeout [initials] 8/17/87 ensure CAQR initiated [initials] 8/17/87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: Tracking Only DATE: 3/3/87
12. CONCURRENCE: CEG-H: Thomas F. Huth [signature] DATE: 3/3/87
    SRP: ______ DATE: ______
    ______ DATE: ______
    ______ DATE: ______
    ______ DATE: ______
    ECTG PROGRAM MGR: James K Russell [signature] FCR DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

1631T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.01-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30801-BFN-01 4. INITIATION DATE
5. RESPONSIBLE ORGANIZATION: Plant Maintenance
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR The Phase II Task Force has recommended that appropriate personnel should meet and develop a plan for safety rigging the main stream relief valves to and from the drywell. Included in this plan should be development of a specific rigging procedure, a modification for installing a hatch in the drywell grating, and the addition of jib cranes and dedicated rigging equipment for MSRV removal.

☒ ATTACHMENTS

7. PREPARED BY: NAME Randy J. Sutt DATE: 11-12-86
8. CONCURRENCE: CEG-H *Thomas F. Huth for URL* DATE: *12-01-86*
9. APPROVAL: ECTG PROGRAM MGR. *[signature] for* DATE: *12-07-86*

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: The proposed corrective plan for CATD No. 30801-BFN-01 is detailed on the attachment. *R33 870129 854*

These activities are not a restart item.

These activities will require DNE involvement and are being pursued for use during the upcoming unit 3 outage.

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR. *S. R. Hall* DATE: *1-29-87*
12. CONCURRENCE: CEG-H: *Thomas F. Huth for URL* DATE: *2-8-87*
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: *James R Russell* DATE: *3-14-87*

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2591T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.01-BLN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30801-BLN-01 4. INITIATION DATE 11-11-86
5. RESPONSIBLE ORGANIZATION: Bellefonte Nuclear Plant
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Neither DNC nor ONP preventative maintenance programs have included requirements for inspection of Limitorque valve operator grease for hardening.

☒ ATTACHMENTS

7. PREPARED BY: NAME M. Murphy DATE: 11-11-86
8. CONCURRENCE: CEG-H: W.R. Logan DATE: 11-13-86
9. APPROVAL: ECTG PROGRAM HGR. DW Stewart for DATE: 11-13-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE Attached

During close out verify a CAQR was initiated. WJRL 4-6-87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/HGR: Louis P. Claxton DATE: 3/31/87
12. CONCURRENCE: CEG-H: W.R. Logan DATE: 4-6-87
SRP: N/A DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM HGR: BK Wibb for DATE: 7/13/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2518T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.02 SQN Revision 0

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30802 SQN 01 4. INITIATION DATE October 9, 1986
5. RESPONSIBLE ORGANIZATION: WRL 5-4-87
6. PROBLEM DESCRIPTION: ~~☐ QR~~ ~~☒ NQR~~ Problems have been identified with preventative maintenance instructions as identified in this report. Line Management is requested to provide corrective action(s) to be taken.

☐ ATTACHMENTS

7. PREPARED BY: NAME T. W. White DATE: 10/09/86
8. CONCURRENCE: CEG-H W. R. Lagergren DATE: 10/14/86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE:

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: ~~SEE THE CAP TRANSMITTED BY MEMORANDUM S53 861031 814~~ 1-20-88

CATD upgraded to "QR" on 5-4-87. No CAQR will be requested because the identified problems are a subset of CA [illegible] the [illegible] identified problems
WRL 5-4-87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: H. B. Rankin [illegible] DATE: 11-20-86
12. CONCURRENCE: CEG-H: W R Lagergren * DATE: 4-7-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell DATE: 9-10-87

VERIFICATION AND CLOSEOUT *Original CATD missing. Reviewed CAP & NMRG report and concur. Resigned WRL 4-7-87

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE TITLE DATE

2047T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.02 SQN Revision 0

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30802 SQN 02 4. INITIATION DATE 10/09/86
5. RESPONSIBLE ORGANIZATION: Operations
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR The Generic Concern Task Force Report recommended that a revision be made to SQM2, "Standard Practice Maintenance Management System" to include a statement on the use of vendor manuals. This has not been accomplished. Please provide resolution.

☐ ATTACHMENTS

7. PREPARED BY: NAME T. W. White DATE: 10/09/86
8. CONCURRENCE: CEG-H W. R. [signature] DATE: 10/14/86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 10/17/86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEE THE CAP TRANSMITTED BY MEMORANDUM S53 861121 814 / S03 86 1128 811

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: H. B. Rankin / for DATE: 11-21-86
12. CONCURRENCE: CEG-H: Thomas F. Hutr / WRL DATE: 12/03/86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2047T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: 308.02 SQN Revision 0

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30802 SQN 03
4. INITIATION DATE 10/09/86
5. RESPONSIBLE ORGANIZATION: Operations
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR The Generic Concern Task Force Report recommended improving the March 1988 date for implementation of the Vendor Manual Control Program. This has not been addressed. Provide status/resolution for an earlier implementation date for the vendor Manual Control Program.

☐ ATTACHMENTS

7. PREPARED BY: NAME T. W. White — DATE: 10/09/86
8. CONCURRENCE: CEG-H W. R. Lagergren — DATE: 10/14/86
9. APPROVAL: ECTG PROGRAM MGR. M. W. Rubin — DATE: 10-17-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See CAR 87-07 TRANSMITTED BY MEMORANDUM SSB 861121 814/503 861125 811

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: H. B. Rankin for — DATE: 11-20-86
12. CONCURRENCE: CEG-H: Thomas J. Hunter for WRL — DATE: 12/03/86
SRP: N/A — DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: W. T. Russell — DATE: 4/21/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

W. R. Lagergren — SIGNATURE
OPS CEG-H — TITLE
4-21-87 — DATE

2047T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No.: 308.03 WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-WBN-01 4. INITIATION DATE 1-21-87
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Chronic door maintenance problems have been identified at SQN and BFN (ECSP Report Number 308.03 SQN, BFN). Doors were being continuously repaired to correct the damage, however the actual cause of the problem (i.e., high differential pressure, door design limitations, etc.) was not corrected. The trending of door failures was not tracked. Since no program currently tracks door failures, a potential exists for the same situation to occur at WBN.

☒ ATTACHMENTS F5

7. PREPARED BY: NAME Richard Gunnels DATE: 1-21-87
8. CONCURRENCE: CEG-H Thomas F. Hutton for WRC DATE: 2/2:/87
9. APPROVAL: ECTG PROGRAM MGR. D W Blevins for DATE: 2/26/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE ATTACHED CAL

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: Whiting S. Dells DATE: 3/2/87
12. CONCURRENCE: CEG-H: W. R. Lagg DATE: 3-7-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell for DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

3275T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.03-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-WBN-02 4. INITIATION DATE 2-25-87
5. RESPONSIBLE ORGANIZATION:
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR CATD 30803-WBN-02 is being used to track a Design Change Request (DCR) that is to be written to address the fire protection system drains in the Auxiliary Building. The problem identified was a 55-gallon drum that collects the system drainage during spurious actuation of the sprinkler system.

☐ ATTACHMENTS

7. PREPARED BY: NAME Richard Gunnels DATE: 2-25-87
8. CONCURRENCE: CEG-H Thomas F. Hyatt for WRL DATE: 2-25-87
9. APPROVAL: ECTG PROGRAM MGR. R R Shell for DATE: 3/20/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

During closeout ensure CAQR initiated NRH 8/17/87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: Tracking Only DATE: 2-25-87
12. CONCURRENCE: CEG-H: Thomas F. Hyatt for WRL DATE: 2-25-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell For DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

3960T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: OP 308.03-SQN Rev. 1

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 30803-SQN-01 4. INITIATION DATE 10-20-86
5. RESPONSIBLE ORGANIZATION: WBN Maintenance
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR (1) The question pertaining to the CSCC designation of work activities (mechanical versus instrument and electrical) needs to be addressed including the impact upon the access to potentially vital areas of the plant due to the non-CSSC work. (2) Open maintenance action tracking items 1294, 1295 and 1298 (Reference 26) should be completed and closed out. (3) The training activity conducted for the dedicated door crew appears to be a one time only class, without provision for periodic retraining or training of new personnel assigned to the dedicated door crew. The need for recurring training should be evaluated. ☐ ATTACHMENTS
7. PREPARED BY: NAME G. D. Gardner DATE: 10-20-86
8. CONCURRENCE: CEG-H W.R. Long DATE: 10-22-86
9. APPROVAL: ECTG PROGRAM HGR. M U Ruloff DATE: 10-23-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEE CAP TRANSMITTED BY MEMORANDUMS (SS3 861022 835) OR/AND (SQ3 861029 801)

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [signature] DATE: 11/4/86
12. CONCURRENCE: CEG-H: W.R. Long JTH DATE: 11/5/86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM HGR: James R. Russell FOR DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

_____ _____ _____

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.03-SQN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-SQN-02 4. INITIATION DATE 12-16-86
5. RESPONSIBLE ORGANIZATION: DNE
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR General Construction Specification G-85 is tentatively scheduled for issuance in January 1987, as per TVA response in Inspection Report 50-327/86-27, item D2.1-1. Closure of this item and implementation of G-85 is being tracked by CATD 30803-SQN-02. Plant implementing procedures will need to be written after G-85 is issued before the use of furmanite at SQN.

☐ ATTACHMENTS

7. PREPARED BY: NAME R. Sutt DATE: 12-16-86
8. CONCURRENCE: CEG-H J Thomas F. Huffstetler for DATE: 12/18/86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 4/7/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See memorandum L44 860729 801 "Sequoyah Nuclear Plant units 1 and 2 - NRC OIE Region II Inspection Report 50-327/86-27 and 50-328/86-27 - response to deficiencies and unresolved items (D2.1-1).

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/HGR: L44 860729 801 DATE:
12. CONCURRENCE: CEG-H: J Thomas F. Huffstetler for CXL DATE: 12/18/86
SRP: DATE:
NA DATE:
DATE:
DATE:
ECTG PROGRAM MGR: [signature] for DATE: 4/22/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

W.R. Lagergren OPS CEG-H 4-22-87
SIGNATURE TITLE DATE

1686T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: 308.03 - BLN

1. Immediate Corrective Action Required: ☐ Yes ☑ No
2. Stop Work Recommended: ☐ Yes ☑ No
3. CATD No. 30803-BLN-01 4. INITIATION DATE 10-24-86
5. RESPONSIBLE ORGANIZATION: Bellefonte ONP
6. PROBLEM DESCRIPTION: ☑ QR ☐ NQR Plant layup will shorten the Life of BIF Elastomer Valve seats if they remain dry or kept in the the closed position for an extended period. Any BIF valve that falls in this category, should be identified as a potential problem during restart.

Concern: BNP-QCP-10.35-17

☐ ATTACHMENTS

7. PREPARED BY: NAME R. J. Sutt DATE: 10-24-86
8. CONCURRENCE: CEG-H W. L. Long DATE: 11-19-86
9. APPROVAL: ECTG PROGRAM HGR. D. W. Hurst for DATE: 11-19-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See attachment
Transmitted to ECTG VIA 401 861222 800

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/HGR: 401 861222 800 DATE: 12-22-86
12. CONCURRENCE: CEG-H: Thomas F. Hutton for WRL DATE: 1-14-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM HGR: B. R. Little for DATE: 7/13/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2353T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: 308.03 - BLN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-BLN-02 4. INITIATION DATE 10-23-86
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Known problems have occurred with BIF Butterfly Valves, however BIF recommends not retaining spare parts or spare valves. Due to the criticality that these valves are maintained in an operable condition, an evaluation should be made on how many and what types of spares should be procured for BIF valves. However valves should not be ordered until after plant start up schedule is resumed and purchased order requirements to be imposed on the supplier should include shelf life requirements for the valves and/or replacement parts subject to deterioration during storage.

☒ ATTACHMENTS

7. PREPARED BY: NAME R. J. Sutt DATE: 10-23-86
8. CONCURRENCE: CEG-H per W. R. Long DATE: 11-13-86
9. APPROVAL: ECTG PROGRAM MGR. D. Williams for DATE: 11-19-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See attachment
Transmitted to ECTG VIA U01 861222 800 + JTM 1/14/87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: U01 861222 800 DATE: 12-22-86
12. CONCURRENCE: CEG-H: Thomas F. Hitt for WRL DATE: 1-14-87
SRP: N/A DATE:
DATE:
DATE:
DATE:
ECTG PROGRAH HGR: G. R. Hobbs for DATE: 7/13/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE | TITLE | DATE

2353T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.03 - BLN

1. Immediate Corrective Action Required: ☐ Yes ☑ No
2. Stop Work Recommended: ☐ Yes ☑ No
3. CATD No. 30803-BLN-03 4. INITIATION DATE
5. RESPONSIBLE ORGANIZATION: Mechanical Maintenance
6. PROBLEM DESCRIPTION: ☐ QR ☑ NQR Torque wrenches are used on several different jobs without being calibration checked. By procedure this is acceptable, however if wrench is found to be out-of-calibration, then all jobs performed using that wrench since it's last calibration date are suspect.

Concern: SSB-85-001

☐ ATTACHMENTS

7. PREPARED BY: NAME Randy Suth DATE: 10-22-86
8. CONCURRENCE: CEG-H [illegible] DATE: 11-19-86
9. APPROVAL: ECTG PROGRAM MGR. [illegible] DATE: 11-19-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See attachment
Transmitted to ECTG VIA U01 861222 500 1 JTH 1/14/86

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: U01 861222 800 DATE: 12-22-86
12. CONCURRENCE: CEG-H: Thomas F. Hutton for WRL DATE: 1-14-87
SRP: DATE:
N/A DATE:
DATE:
DATE:
ECTG PROGRAM MGR: [illegible] for DATE: 7/13/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2353T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 30803-8FN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-8FN-01 4. INITIATION DATE 02/10/87
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Chronic door maintenance problems are not being programmatically addressed. Appropriate modifications are not identified to prevent recurrence of chronic problems.

☒ ATTACHMENTS DRAFT

7. PREPARED BY: NAME R. J. Sutt DATE: 02/10/87
8. CONCURRENCE: CEG-H Thomas F. Hecht for GKL DATE: 2/15/87
9. APPROVAL: ECTG PROGRAM MGR. D.L. Shankman for DATE: 2/17/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:
SEE ATTACHMENT A

During close out verify a CAQR was initiated WRL 5-1-87

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: G.C. Hall for DATE: 4-17-87
12. CONCURRENCE: CEG-H: W.L. Stang DATE: 5-1-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell FOR DATE: 3-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2177T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No.: 30803-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-BFN-03 4. INITIATION DATE 02/10/87
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR Requirements of SDSP 6.2 and BF 7.6 specify Maintenance Requests (MRs) be written for all maintenance work including performance of maintenance by contract services. Many cases were found where work was performed by contract services and no MR or TR was used.

☒ ATTACHMENTS

7. PREPARED BY: NAME Randy Sutt DATE: 02/10/87
8. CONCURRENCE: CEG-H Thomas F. Huth WRL DATE: 2/14/87
9. APPROVAL: ECTG PROGRAM MGR. DATE: 2/17/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:
SEE ATTACHMENT

CATD updated to be att'd 3-4-88

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: S C Hall for DATE: 4-17-87
12. CONCURRENCE: CEG-H: W. R. DATE: 5-1-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

217/T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 30803-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30803-BFN-04 4. INITIATION DATE 02/10/87
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR There are presently no working procedures which provide instructions and acceptance criteria for the use of temporary sealants at BFN and the assurance that permanent repair/replacement are made when plant conditions permit.

☒ ATTACHMENTS DRAFT

7. PREPARED BY: NAME Randy Sutt DATE: 02/10/87
8. CONCURRENCE: CEG-H Thomas F. Huth for WRL DATE: 2/15/87
9. APPROVAL: ECTG PROGRAM MGR. D Watson DATE: 2/17/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:
N SEE ATTACHMENT A

During close out process verify CTAR has been initiated WRL 5-1-87

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: J R Hall for DATE: 4-17-87
12. CONCURRENCE: CEG-H: W.K. Seay DATE: 5-1-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM HGR: James R Russell DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2177T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.04-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30804-WBN-01 4. INITIATION DATE
5. RESPONSIBLE ORGANIZATION: Maintenance/Document Control
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Vendor manuals and their drawings do not reflect the current configuration in the plant.

☐ ATTACHMENTS

7. PREPARED BY: NAME Randy Sutton DATE: 02/12/87
8. CONCURRENCE: CEG-H: Thomas F. Hurst for WRL DATE: 2/20/87
9. APPROVAL: ECTG PROGRAM MGR. C.W. Stewart for DATE: 2/25/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

See Attached CAP.

During close out process issue that a CAQR was initiated. LKL 3-19-87

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR. Patrick Lyon DATE: 3/9/87
12. CONCURRENCE: CEG-H: J. R. Lagan DATE: 3-10-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell for DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

3615T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.04-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30804-WBN-02 4. INITIATION DATE
5. RESPONSIBLE ORGANIZATION: Instrument Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Vendor drawings which are not part of the Drawing Maintenance System are being used to make repairs to CSSC plant equipment.

☐ ATTACHMENTS

7. PREPARED BY: NAME Randy Sutt RS DATE: 02/12/87
8. CONCURRENCE: CEG-H Thomas F. Huth for WRL DATE: 2/20/87
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 2/26/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

The attached NR does not indicate that the problem was considered generic. During close out issue CAQR initiated to tstff for generic applicability. WRL 3-19-87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: Whiting S. Delk DATE: 3-9-87
12. CONCURRENCE: CEG-H: W.K. [signature] DATE: 3-17-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell RR DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE TITLE DATE

361ST

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: 308.04 SQN

1. Immediate Corrective Action Required: ☐ Yes ☑ No
2. Stop Work Recommended: ☐ Yes ☑ No
3. CATD No. 30804-SQN-01 4. INITIATION DATE 11-12-86
5. RESPONSIBLE ORGANIZATION: Sequoyah
6. PROBLEM DESCRIPTION: ☑ QR ☐ NQR Various problems falling under the element "Program/Procedure" violations. See element report conclusions for specific problem descriptions.

☐ ATTACHMENTS

7. PREPARED BY: NAME Tom Huth DATE: 11-12-86
8. CONCURRENCE: CEG-H W.L. Long DATE: 11-13-86
9. APPROVAL: ECTG PROGRAM HGR. for DATE: 4/7/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SQN's response is acceptable. The specific concern corrective actions are shown in the revised element report.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/HGR: S53 861104 918 DATE: 11-7-86
12. CONCURRENCE: CEG-H: W.L. Long DATE: 11-13-86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM HGR: James R Russell DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2534T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.04-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30804-BFN-01 4. INITIATION DATE 11/14/86
5. RESPONSIBLE ORGANIZATION: Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR The existing program and procedures do not address methodology to control removal, and subsequent reinstallation, of hangers during maintenance/modification activities required to gain access to equipment. The current ongoing 79-14 program is a "one shot" correction of existing problems, and does not address hanger removal/reinstallation for subsequent activities after program closeout

☐ ATTACHMENTS

7. PREPARED BY: NAME R.W.Bass DATE: 11/14/86
8. CONCURRENCE: CEG-H Thomas F. Hunter DATE: 1/23/87
9. APPROVAL: ECTG PROGRAM MGR. DATE: 1/30/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: MAI-23 and MMI-164 are in place to facilitate hanger removal and reinstallation for maintenance/mod activities. MMI-175, "Repair of hangers and supports", is in the preparation stage and is to be completed 3/15/87. MMI-175 references MMI-164 when removal of a support is needed. MAI-23 is currently being used for modification work on supports. MMI-175 will be used for maintenance purposes. The approval and use of MMI-175 for hanger repairs per ISI generated MR's & NOI's is a restart item.
During closeout verify CAQR initiated WRL 3-23-87 ☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: J. R. Hall for DATE: 3-4-87
12. CONCURRENCE: CEG-H: W. R. Logan DATE: 3-7-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell for DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

25547

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 308.05-WBN Draft

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30805-WBN-01 4. INITIATION DATE 2/5/87
5. RESPONSIBLE ORGANIZATION: Maintenance Engineering
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR Eye bolts were bent during lifting of the unit 1 Reactor Coolant Pump (RCP) stators. No documented evaluations were found to determine if damage to the stators occurred during the lifts.

THIS ITEM COMPLETED DATE: 8-8-88

☒ ATTACHMENTS

7. PREPARED BY: NAME M. Murphy DATE: 2/5/87
8. CONCURRENCE: CEG-H Thomas A. Huth for WRL DATE: 2/7/87
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 2/9/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE ATTACHED

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [signature] DATE: 2/12/87
12. CONCURRENCE: CEG-H: Thomas F. Huth for WRL DATE: 2/18/87

SRP: ______ DATE: ______
______ DATE: ______
______ DATE: ______
______ DATE: ______

ECTG PROGRAM MGR: James R Russell PWC DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

3565T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: OP 308.05-SQN R1

1. Immediate Corrective Action Required: ☑ Yes ☐ No
2. Stop Work Recommended: ☐ Yes ☑ No
3. CATD No. OP 308.05-001-SQN 4. INITIATION DATE 10-02-86
5. RESPONSIBLE ORGANIZATION: SQN Elect & Mech Maintenance
6. PROBLEM DESCRIPTION: ☑ QR ☐ NQR Crane side pulls are in conflict with the requirements of ANSI-B 30.2-1976 and SQN-31.

Note from CEG-H
OP 308.05 SQN R0 was rejected by SRP because we stated that the findings were not safety related. We concurred OEA opposed the finding and conclusion. WRL

☑ ATTACHMENTS

7. PREPARED BY: NAME Richard M. Gunnels DATE: 10-02-86
8. CONCURRENCE: CEG-H W.R. Lagergren DATE: 10-6-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 10-7-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE THE CAP TRANSMITTED BY MEMORANDUM
SQ2860[illegible]405

During close out ver. of CI/QR initiated. WRL 3-20-87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: O.R. Walter DATE: 11/10/86
12. CONCURRENCE: CEG-H: W.R. Lagergren DATE: 11-12-86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAH HGR: James R Russell DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: OP 308.05-SQN R1

1. Immediate Corrective Action Required: ☒ Yes ☒ No (WEL 11/6/86)
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 308.05-002-SQN 4. INITIATION DATE 10-02-86
5. RESPONSIBLE ORGANIZATION: CCP-Special Projects (DNE & Mech Eng)
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Crane side pulls are in conflict with the requirements of ANSI-B 300.2-1976 and SQM-31. Response should include long-term corrective actions for the issue of crane side pulls.

Note from CEG-H
OP 308.05 SQN R0 was rejected by SRP because we stated that the findings were not safety related. We concurred and upgraded the finding and conclusion.

☒ ATTACHMENTS

7. PREPARED BY: NAME Richard H. Gunnels DATE: 10-02-86
8. CONCURRENCE: CEG-H Thomas F. [illegible] DATE: [illegible]
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 10-7-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE THE CAP TRANSMITTED BY MEMORANDUM B25-861031-002 ALSO ATTACHED FOR YOUR USE IS BACK GROUND INFORMATION ABOUT THE CCP, (B44 860514 088 AND A02 860605 016)

During close out verify CAQR initiated WEL 3-20-87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: D.R. Walker DATE: 11/6/86
12. CONCURRENCE: CEG-H: W.R. [signature] DATE: 11-12-86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell for DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.05-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30805-BFN-001 4. INITIATION DATE 10-27-86
5. RESPONSIBLE ORGANIZATION: Electrical Maintenance
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Crane operators are potentially performing side pulls in conflict with ANSI-B30.2-1976. Specifically, performing side pulls without prior engineering evaluation. This also conflicts with plant procedures and crane operator training.

☒ ATTACHMENTS

7. PREPARED BY: NAME M. W. Murphy DATE: 10-27-86
8. CONCURRENCE: CEG-H [signature] DATE: 11-13-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] for DATE: 11-13-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: All Browns Ferry Nuclear Plant (BFN) crane operators have been trained to avoid side-loading. After a side-loading incident on the refuel floor, the importance of avoiding side-loading conditions was reemphasized in a memorandum from C. G. Wages (R36 860331 820) dated April 1, 1986 (attached). Since April 1, 1986, no evidence of side-loading exists at BFN. However, sessions have been scheduled for December 15, 1986 and December 16, 1986 to reemphasize the importance of avoiding side-load conditions during lifting operations.

Based on CAP No OR problem exist. ARL 3-23-87

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: R33 861212 839 DATE: 12/10/86
12. CONCURRENCE: CEG-H: Thomas F. Huth for ARL DATE: 2/7/87
SRP: / DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell on DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.05-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30805-BFN-002 4. INITIATION DATE 10-27-86
5. RESPONSIBLE ORGANIZATION: Maintenance Training
6. PROBLEM DESCRIPTION: ☒ QR ☐ NQR Maintenance Training Unit has not implemented a schedule to ensure that all safety-related tasks are not replaced by other topics. Tasks identified by efforts to achieve INPO accreditation are replaced by plant requests without evaluation.

☒ ATTACHMENTS

7. PREPARED BY: NAME M. W. Murphy DATE: 10-27-86
8. CONCURRENCE: CEG-H [signature] DATE: 11-13-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 11-11-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: The Browns Ferry Training Branch now has a Job Task Analysis Unit onsite. One of their responsibilities is to ensure that tasks requiring training, including safety-related tasks, are not removed from the task list without formal task analysis. The Maintenance Training Unit is currently working with plant maintenance organizations (Electrical, Mechanical, and Instrumentation) to identify training needs for 1987. This training will be coordinated with the Job Task Analysis Unit to ensure that the training includes or supplements training on safety-related tasks. These practices are a matter of standard operating procedure for accredited programs.
R37 86/1221 844
Based on CAP no QR [illegible] WRL 3-23-87

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [signature] DATE: 12/18/86
12. CONCURRENCE: CEG-H [signature: Thomas F. Hutto] DATE: 2/7/87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell for DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE TITLE DATE

DEC 18 1989

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 308.07-SQN-RO

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30807-SQN-01 4. INITIATION DATE 10-20-86
5. RESPONSIBLE ORGANIZATION: SQN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR It appears as though SQN's clam control program does not clearly meet several commitments made to the NRC. These include documenting chlorination equipment failures and ERCW pipe inspections.

☐ ATTACHMENTS

7. PREPARED BY: NAME F. W. Swearingen DATE: 10-20-86
8. CONCURRENCE: CEG-H W. R. Long DATE: 10-22-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 11/7/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SQN's Chemical Section has provided sufficient evidence to ensure commitments are being met. ERCW flow tests are performed which would detect flow degradation. The issue surrounding chlorination equipment was coupled with the Cl residue. Wording is in the SI to either flush or resume chlorination following residuals below minimum acceptable, after 14 days of low residuals.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: SQ3 860912 804 DATE: 9-16-86
12. CONCURRENCE: CEG-H: S53 861010 961 DATE: 10-16-86
CEG-H JFH 2/10/87 ~~SRP:~~ W. R. Long DATE: 10-22-86
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: James R Russell for DATE: 9-10-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

2135T

ECSP Corrective Action Tracking Document (CATD)

INITIATION

Applicable ECSP Report NO: 308.07
Revision 0

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30807 BFN 01 4. INITIATION DATE 10/3/86
5. RESPONSIBLE ORGANIZATION: Operations
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR
No plant SI was found to document chlorine equipment failures and evaluations for clam control. All clam control documents need reference to each other.

☐ ATTACHMENTS

7. PREPARED BY: NAME F. W. Swearingen DATE: 10/3/86
8. CONCURRENCE: CEG-H [signature] DATE: 2/8/87
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 8-14-87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: A permanent change is being submitted to initiate evaluation of effected systems following failure of chlorination equipment for periods greater than fourteen days. This submitted change shall be incorporated into CI-1001 no later than January 31, 1987.

The cross referencing of chlorination documents is adequate and needs no further action. R33 861119 819
RAO 861212 819

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [signature] DATE: 12-18-86
12. CONCURRENCE: CEG-H: [signature] DATE: 2/7/87
SRP: [signature] DATE:
[signature] DATE:
[signature] DATE:
[signature] DATE:
ECTG PROGRAM MGR: James R Russell DATE: 8-14-87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: 308.07 Revision 0

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 30807 BLN 01 4. INITIATION DATE 10/3/86
5. RESPONSIBLE ORGANIZATION: Operations
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR
Plant SIs for clam control need to be written to include all commitments and relate all activities. Construction BNP-QCP 6.73, Revision 0, now controls; it needs revision to document chlorine equipment failures and evaluation.

☒ ATTACHMENTS

7. PREPARED-BY: NAME F. R. Swearingen DATE: 10/3/86
8. CONCURRENCE: CEG-H W. R. Lagg DATE: 10/14/86
9. APPROVAL: ECTG PROGRAM MGR. M. Mullen DATE: 10/15/86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See attachment. 4 01 870203 807

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: 4 01 870203 802 DATE: 2/3/87
12. CONCURRENCE: CEG-H: Thomas F. Hutto for WRC DATE: 2/6/87
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: R Pettit Jr DATE: 7/13/87

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

SIGNATURE	TITLE	DATE

ATTACHMENT I

LIST OF EVALUATORS BY ELEMENT/PLANT

Element 308.01

SQN	WBN	BFN	BLN
Gunnels	Sutt	Sutt	Muir
Meers			Gunnels
Sutt			

Element 308.02

SQN	WBN	BFN	BLN
Gunnels	Gunnels	Gunnels	Gunnels

Element 308.03

SQN	WBN	BFN	BLN
Gilmore	Gilmore	Sutt	Sutt
	Gunnels		

Element 308.04

SQN	WBN	BFN	BLN
Murphy	Sutt	Bass	Halley
Halley	Aycock	Gunnels	Sutt
	Elliot		

Element 308.05

SQN	WBN	BFN	BLN
Murphy	Murphy	Murphy	Murphy
	Richards		

Element 308.06

SQN	WBN	BFN	BLN
Aycock	Aycock	N/A	N/A

Element 308.07

SQN	WBN	BFN	BLN
Swearingen	Swearingen	Swearingen	Swearingen
	Aycock		