EMPLOYEE CONCERNS

SPECIAL PROGRAM

VOLUME 3
OPERATIONS CATEGORY

SUBCATEGORY REPORT 31100
HEALTH PHYSICS

UPDATED

TVA

NUCLEAR POWER

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TVA EMPLOYEE CONCERNS
SPECIAL PROGRAM

REPORT NUMBER: 31100

REPORT TYPE: Subcategory

REVISION NUMBER: 1

TITLE: Health Physics

REASON FOR REVISION:

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

PREPARATION

PREPARED BY:

Brenda Southerland/Randy Sutt — Randy J. Sutt (SIGNATURE) — 7/7/87 (DATE)

(Note: Evaluators listed in Attachment I)

REVIEWS

PEER: [signature] (SIGNATURE) — 7/13/87 (DATE)

TAS: WAK 29 Jul 87 — James E Wortley III (SIGNATURE) — 7/29/87 (DATE)

CONCURRENCES

		CEG-H: S. Hamrick	7/28/87
SIGNATURE	DATE	SRP: [signature]* SIGNATURE	7/29/87 DATE

APPROVED BY:

James R Russell	7-29-87	N/A	
ECSP MANAGER	DATE	MANAGER OF NUCLEAR POWER CONCURRENCE (FINAL REPORT ONLY)	DATE

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

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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

Health Physics

Subcategory Report 31100

Executive Summary

I. SUMMARY OF ISSUES

The Health Physics Subcategory contains 72 concerns which raise 42 issues about health physics practices and policies, ALARA concept, training and control of radiation areas and personnel exposure.

Twenty issues were found to be not factually accurate. Six issues were factually accurate but did not require corrective action. Eleven issues were factually accurate, but the problems were being addressed before the Employee Concerns program. Three issues were factual and presented problems for which corrective action either had been or is being taken as a result of the employee concerns program. Two 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. R1

II. SUMMARY OF FINDINGS

Several conditions were found in violation of design, construction, or operating requirements. Each of these conditions, called specific deficiencies, required corrective action to fix the specific problem. Some also will require additional corrective action to preclude recurrence of similar problems.

1. At WBN, the Final Safety Analysis Report was found to have paragraphs disjointed and sections of text missing. Deficiencies were also noted in the program for modifying the steam generator platforms, Panel O-L-14 relocation, high maintenance instrumentation being located in high radiation areas, installation of permanent barricades, interfacing for accumulator instrumentation, ALARA walkdown findings, and the possibility of using contaminated hoses for connecting to breathing air manifolds.

2. Deficiencies related to the biennial feedback questionnaire were identified for WBN and SQN.

3. Deficiencies were found at SQN in regard to the lack of direction for Radiological Incident Reports to HP supervision or operations management, mishandling of Radiation Work Permits (RWPs) as QA documents, inadequate maintenance of radiological safety-related documents, and the reuse of damaged C-zone clothing.

4. A deficiency in the implementation of the ALARA suggestion program was found at BFN and SQN.

5. A generic deficiency was noted in regard to training requirements for personnel qualified by ANSI N18.1.

III. SUMMARY OF COLLECTIVE SIGNIFICANCE

A collective assessment of the element-level findings led to the identification of two subcategory level findings, one at WBN and one at SQN. These findings were determined to reflect adversely on management effectiveness at these two sites:

(a) During the initial design of WBN, there was a lack of corporate guidance and design input criteria with respect to ALARA considerations.

(b) There is a lack of management accountability at SQN with respect to the extent of QA record requirements that should be applied to Radiation Work Permit (RWP) timesheets.

IV. SUMMARY OF ROOT CAUSES

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

1. Various Health Physics procedures lack sufficiently detailed instruction steps, lack some technical requirements, or are otherwise incomplete.

2. Errors in judgment were made by qualified individuals in regard to procedures or processes.

3. Procedures and processes have inadequately defined prerequisites to ensure satisfactory completion of tasks.

V. SUMMARY OF CORRECTIVE ACTION

The following corrective action responses have been received from line managers at the affected plants for specific deficiencies noted during this evaluation.

1. In regard to text missing in the FSAR, WBN line management had committed to revise the FSAR which will resolve the inaccuracies of the disjointed and missing sections of text.

2. WBN line management responded to the deficiency related to biennial feedback questionnaire by stating that the evaluations of training by supervisors was not deleted, only the feedback form. Instead, a requirement for a Training Evaluation Report was instituted which also limits evaluation to those sites trainees are assigned.

3. SQN line management reported that in regard to the resolution of feedback questionnaires, applicable instructions and procedures have been revised to address the in-plant phase of training or impact to training requirements.

4. With respect to Radiological Incident Reports (RIR) not being directed to the attention of management, SQN has committed to send RIR summaries to the plant manager and HP staff.

5. For problems associated with RWP timesheets, SQN has revised applicable procedures to reflect the current status of classifying timesheets as QA or non-QA, and emphasized the instruction provided to workers in General Employee Training (GET) on the required method for making corrections to QA documents and the use of RWP timesheets.

6. To deal with inadequate implementation of the ALARA suggestion and preplanning program, SQN line management has revised procedures reflecting the limitations, and will make extra efforts to respond to suggestions in a timely manner.

7. SQN line management has revised an instruction to allow ample time for management review and approval before the deadline to correct the problem associated with the timely submittal of annual ALARA reports.

8. In response to the ALARA program not incorporating requirements of Regulatory Guide 8.8, SQN indicated that it is not committed to implementing Regulatory Guide 8.8 but does use it as a reference guide. Additionally, SQN has cited TVA and SQN instructions which support their ALARA planning efforts and the Radiological Control Branch will issue specific guidance regarding the application of ALARA considerations. |R1

9. In one instance where in a question was raised as to whether documentation of radiologically safety-related activities is maintained according to American Nuclear Insurers (ANI) requirements, SQN line management responded that the document requirements are really only recommendations of ANI, however, dose-related records are maintained for a lifetime of the plant in accordance with ANI recommended standard practice. |R1 |R1

10. For problems associated with the reuse of damaged C-zone clothing, SQN line management emphasized that clothing is inspected by laundry personnel and that the responsibility for checking clothing before use is that of the individual users. Also, SQN line management stated that laundry operations are now under direction of the Radiation Control Group which would provide tighter controls. An inspection on November 6, 1986 confirmed that fewer damaged clothing items were left in the laundry undetected. |R1 |R1

11. BFN line management has reported in their responses to the problems associated with the ALARA suggestion program that they had developed a computerized tracking system to identify the status of each ALARA suggestion.

12. In regard to the deficiency related to the hiring of personnel as fully qualified by ANSI N18.1 and bypassing the basic phase of training and a review/approval by the Office Training Committee, BFN reported that the TVA training program was designed for individuals who will become ANSI qualified and does not apply to individuals hired outside TVA. However, corporate RADCON is preparing standards on the selection, qualification, and training of Radiological Control (RADCON) personnel which should remove any ambiguity in the interpretation of requirements. PMP 0202.12 will also be revised accordingly.

1.0 CHARACTERIZATION OF ISSUES

1.1 Introduction

The Health Physics Subcategory is comprised of 72 employee concerns that raise 42 issues concerning health physics (HP) practices and policies, As Low As Reasonably Achievable (ALARA) concept, training, and control of radiation areas and personnel exposure.

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 311.01 - Health Physics Staff Training

Issue 311.01-1 - HP Personnel Lack an Adequate Working Knowledge: |R1

XX-85-024-001
XX-85-102-009
XX-85-102-012

This issue contains three concerns that HP personnel lack an adequate working knowledge at Watts Bar Nuclear Plant (WBN), Sequoyah Nuclear Plant (SQN), and Browns Ferry Nuclear Plant (BFN). The concerned individual (CI) cited an incident where technicians were not aware of protective clothing requirements.

1.2.2 - Element 311.02 - Radioactive Material Control

Issue 311.02-1 - Improper Dumping of Contaminated Material:

IN-85-049-002
IN-85-049-004
IN-85-720-002
IN-86-287-001
OO-85-005-011
XX-85-005-001

This issue containing five concerns that deal with improper dumping of contaminated material from SQN to WBN and one concern that involves the release of contaminated water to the river at SQN. The concerns stated that contaminated water and dirt were transported to WBN and taken to the intake pumping station, a field, or to the river and dumped. One concern stated that the contaminated material was spread on the ground at WBN by a bulldozer. |R1

Issue 311.02-2 - Radioactive Spill Into Uncontrolled Drain System:

XX-85-101-003

This issue deals with a radioactive spill into an uncontrolled drain system due to a valve in the Turbine Building being left open at WBN, SQN, and Bellefonte Nuclear Plant (BLN). The concern was over the verification of valve lineups and isolation of system draining flowpaths.

Issue 311.02-3 - Radioactive Material in Uncontrolled Area:

EX-85-091-002
JAM-86-001

This issue contains two concerns, one each for WBN and SQN. At SQN, a CI stated that contaminated materials stored in lockers and cabinets were not properly labeled. At WBN, a piece of metal surveyed by HP was found in the breakroom, it was left in the area without any restrictions, warnings or control for about two weeks.

Issue 311.02-4 - Safeguarding Contaminated Material:

EX-85-091-001

At WBN, a CI was concerned about a barrel marked "contaminated material" being moved by laborers through the machine shop building. The CI believed there should be a better means to protect the personnel handling of such materials from radioactive contamination. |R1

Issue 311.02-5 - Contaminated Fire Hoses:

BFP-85-001-001

The CI alleged that fire hoses used for the fire at BFN 8-10 years ago were taken offsite for personal use. The CI believed that the hoses may still pose a health hazard.

Issue 311.02-6 - Green Tag Requirement:

MRS-85-003

The CI indicated that the green tag was no longer required at the clean tool room at SQN.

1.2.3 - Element 311.03 - Exposure Limits and Records

Issue 311.03-1 - Daily Radiation Exposure Limits:

IN-85-301-006
XX-85-008-001

This issue contains two concerns regarding daily exposure limits. The CI questioned whether the daily limits of acceptable radiation exposure are the same at WBN as SQN. The CI alleged that there were numerous overexposures at SQN and could result in an employee being laid off.

Issue 311.03-2 - Changing Exposure Allowances on RWPs:

XX-85-028-001

The CI stated that while at another TVA facility, the individual was exposed to the maximum amount of radiation; however, the RWP was adjusted by HP to reflect an increase in allowable dose.

Issue 311.03-3 - Exposure During Radiographic Operations:

XX-85-048-003

At SQN, a CI indicated that he was exposed to radiation during x-rays of pipe welds and is concerned about the dosage received since TLDs and dosimeters were not worn at this time.

Issue 311.03-4 - Omission of Exposure Data:

BFN-85-017-001

The CI alleged that his name was removed from the HP computerized exposure data base at BFN and then was added later.

Issue 311.03-5 - Workers Not Receiving Similar Doses:

XX-85-002-001

At BFN, the CI expressed concern that employees within a section were not receiving approximately the same exposure dose.

Issue 311.03-6 - Use of Dosimetry Cards:

IN-85-991-001
IN-86-025-001
WI-85-047-002

Three concerns involve use of dosimetry cards in this issue. The CIs questioned the use of dosimetry cards at WBN and were concerned about losing or damaging the cards. One CI believed WBN should use the existing system that other TVA sites use.

1.2.4 - Element 311.04 - HP Policy, Practices, and Management Control

Issue 311.04-1 - Authority to Enforce HP Procedures:

IN-85-499-003

At WBN, the CI believes that authority is not given to enforce Health Physics procedures for monitoring radiation exposure if they are intentionally violated by employees.

Issue 311.04-2 - Management's Attitude Toward Radiological Control:

SQP-86-009-001
XX-85-025-001
XX-85-026-001
XX-85-009-002
BFN-85-019-002
BFN-85-020-001

This issue contains six concerns; three are for SQN, two for BFN, and one for BLN. The CIs were concerned about plant management's attitude toward radiological protection and safety at SQN, BLN, and BFN. Situations that were raised included an individual passing through airborne contaminated areas without respirators; employees remaining in radiation/contamination areas; employees being radioactively contaminated when the incident was preventable; management directing older workers to reach radiation exposure levels first, and HP receiving inadequate support of management for safety programs.

Issue 311.04-3 - Policy on Hair Length and Beards:

EX-85-117-003
IN-85-642-002

Two concerns for WBN are contained in this issue. The CIs indicated that some HP technicians have extremely long hair and alleged that an individual was told to shave his beard or be sent home even though the individual was on a visitor's pass and had only three days left before leaving the security area.

Issue 311.04-4 - Radiological Controls, Surveys, Decontamination, and Emergency Procedures:

XX-85-098-002
IN-85-219-001
I-86-238-SQN
JLH-86-003
JMA-85-001

The CIs expressed concerns about (1) the practice of having to search for a frisker when exiting a C-zone which can result in the spread of contamination at SQN, (2) possibility of not securing ABSCE-type breaches upon evacuation of the auxiliary building at SQN, (3) emergency procedures be written encompassing all aspects of possible emergency situations in a C-zone at SQN, (4) adequacy of radiological controls and decontamination procedures at WBN, and (5) inadequate monitoring of radiation areas at SQN.

Issue 311.04-5 - HP Response to Radiation/Contamination Alarms:

XX-85-084-001
XX-85-066-001

At SQN, CIs expressed two concerns that when notified of higher than expected radiation levels, HP did not immediately respond to investigate the problem and alleged that HP would respond to some radiation alarms by unplugging the units.

Issue 311.04-6 - Lower Containment Entries:

WI-85-038-001
XX-85-015-001
SQP-86-009-002

CIs at both WBN and SQN expressed two concerns which question the practice of entering lower containment while the reactor was operating for non-emergency repairs and believed that the practice should be re evaluated based on recent studies on neutron exposure.

Additionally, a CI alleged that the transfer of responsibility for HP from Muscle Shoals to SQN compromises established HP policies regarding personnel access during unit operation.

Issue 311.04-7 - Improperly Completed RWP Timesheets:

XX-85-028-X02
XX-85-028-X03

The CIs alleged in two concerns for SQN that a specific RWP timesheet contained falsified signatures and that RWPs were not being completed per procedure requirements.

Issue 311.04-8 - Inadequate Knowledge of System Contents:

XX-85-063-001

The CI indicated that SQN operators and HP personnel failed to know and verify the contents of a system before authorizing the line in the Turbine Building to be opened.

Issue 311.04-9 - Adequacy of SQN HP Program (Miscellaneous):

RII-85-A-0064

A CI at SQN questioned the adequacy of the HP program in regard to implementation, lost sources, monitor locations, smears, and air samples.

1.2.5 - Element 311.05 - ALARA

Issue 311.05-1 - Winning ALARA Suggestions Not Implemented:

BFN-85-002-001

The CI alleged that modifications have not been performed to agree with winning ALARA suggestions at BFN.

Issue 311.05-2 - Hazards Associated With Manway Doors:

IN-85-869-001
XX-85-052-001

CIs at WBN and SQN expressed two concerns over the exposure received and the safety hazards associated with opening and closing the manway doors at the bottom steam generator due to the complicated process necessitated by poor design.

Issue 311.05-3 - Time Required to Repair/Recalibrate Instrumentation:

IN-86-044-001
WBN-0065

At WBN, CIs alleged in two concerns that process monitoring instrumentation which require excessive amounts of time to repair and recalibrate is located in a high radiation area or in the Unit 1 raceway and should be moved to another location.

Issue 311.05-4 - Unrestricted Access to High Radiation Areas:

WBN-0186
WBN-0294

CIs indicated in two concerns that barricades should be installed to prevent unrestricted access to high radiation areas at WBN.

Issue 311.05-5 - Safety Hazards Associated With Access to Valve:

WBN-225

The CI contended that the valves on Safety Injection System (SIS) accumulators at WBN are difficult to access when personnel are dressed out and recommended relocating valves to reduce safety hazard and reduce exposure.

Issue 311.05-6 - ALARA Program:

This issue addressed the ALARA program, in general, and was not a result of a specific concern.

1.2.6 - Element 311.06 - HP Facilities, Clothing, and Protective Equipment

Issue 311.06-1 - Leave Site Without Monitoring:

HLA-85-001

CI stated that personnel can leave the site without a final check for contamination at SQN.

Issue 311.06-2 - Lack of Portal Monitors at Plant Exits:

MRS-85-002

The CI indicated that no portal monitors exist at plant exits at SQN.

Issue 311.06-3 - Method of Collecting Self-Reading Dosimeters:

IN-85-142-002
XX-85-055-001

CIs at WBN and SQN alleged that self-reading pocket dosimeters collected in metal boxes could be knocked off-scale.

Issue 311.06-4 - Use of Face Masks:

SQN-85-001-001

A CI alleged that during outages, some personnel in an area have been required to wear respirators while others have not.

Issue 311.06 5 - Unavailability of Small-Sized Gloves:

XX-85-036-001

The CI contended that C-zone gloves are not being ordered in small sizes at SQN causing employees to use larger size gloves and resulting in a possible safety hazard.

Issue 311.06-6 - Reuse of Outer Gloves:

XX-85-101-004

The CI alleges that insufficient attention is given in regard to minimizing radiation exposure due to the policy of reusing outer gloves in radiation areas at SQN.

Issue 311.06-7 - Post Accident Sampling Room:

IN-85-092-001

The CI indicated that the Post Accident Sampling Facility (PASF) at WBN is too small for men to dressout in this area.

Issue 311.06-8 - Unavailability of C-zone Clothing:

I-86-235-SQN

The CI alleged that the proper C-zone clothing for entering the rooms at the Condensate Demineralizer Waste Evaporator Building at SQN was not available.

Issue 311.06-9 - Location of TLD Badge Racks:

IN-86-105-001

The CI was concerned that the TLD badge racks were located under the main steam lines and that in the event of a primary to secondary leak the badges could pick up a significant dose. Additionally, the CI stated that TLD processing would be suspended due to the location of the Dosimetry Issue Building.

Issue 311.06-10 - Unrepaired C-zone Clothing:

MRS-85-004

The CI alleged that C-zone clothing was not being patched by the laundry at SQN.

1.2.7 - Element 311.07 - Radioactive Effluents/Uncontrolled Areas

Issue 311.07-1 - Inadequate Provisions and Documentation to Protect Personnel from Radiation Between Units:

IN-85-114-001
IN-85-463-009
IN-85-499-002

The CIs expressed three concerns that there were inadequate provisions and documentation mechanisms to protect personnel in Unit 2 from airborne radiation and contamination sources from Unit 1 at WBN.

Issue 311.07-2 - Unrepresentative Air Quality Checks:

WBN-0292

The CI stated that air quality checks should be more representative at WBN.

Issue 311.07-3 - Impact on Environment/Public:

IN-85-126-001

A CI was concerned about the impact of WBN operation on the surrounding area and the public.

Issue 311.07-4 - Uptake of Radioactive Substances Due to Similar Fittings:

WBN-0291

The CI alleged that there was a potential of introducing radioactive substances to other systems due to similar fittings being used for air, water, and contaminated drain connections.

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 were initiated or determined to have already been initiated.

2.2 Specific Methodology

The evaluators reviewed applicable sections from the following baseline requirements documents: Final Safety Analysis Report (FSAR), Technical Specifications, Radiation Protection Plan (RPP), TVA Program Manual, Environmental Impact Statement, TVA Nuclear Quality Assurance Manual (NQAM), Standard Practices and applicable Regulatory Guides.

To ensure consistency and implementation of the requirements found in these documents, the evaluators reviewed applicable Administrative Instructions (AI's), Section Instruction Letters (SIL's), Radiological Control Instructions (RCI's), Technical Instructions (TI's), Radiation Work Permits (RWP's), and Surveillance Instructions (SI's). In addition, the evaluators reviewed line management reports, Nuclear Safety Review Staff (NSRS) reports, training lesson plans, QA audit reports, INPO and NRC Inspection Reports, applicable memorandums, NRC expurgated files and other reports on concerns previously investigated.

The evaluators conducted informal interviews with cognizant personnel when required either to verify document-based findings or to provide nondocument-based evaluations input. Interviews were conducted with personnel in Radiological Control including individuals cognizant in the ALARA concept, dosimetry, laundry operations, and other radiological field operations; Electrical Maintenance; Instrument Maintenance; Mechanical Maintenance; Training; Emergency Planning; Division of Nuclear Engineering; Welding; Power Stores; Construction; Public Safety; Licensing and Industrial Safety. Inspections of specific areas and equipment were also performed as required by the investigation of some concerns.

3.0 FINDINGS

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

3.1 Element 311.01 - Health Physics Staff Training

Issue 311.01-1 - HP Personnel Lack an Adequate Working Knowledge of Personnel

WBN

The concern addressing poorly trained HP technicians at BFN was evaluated for applicability to WBN and was not substantiated. Individuals with previous experience and/or training were evaluated against ANSI-N18.1-1971 qualification requirements by both the Personnel Department and a Health Physics supervisor. It also was found that TVA had established an extensive Technician Training program which had been accredited by INPO whose standards were designed to ensure training requirements cover the job performance requirements. Furthermore, it was determined that instructors for the technician basic training were qualified in their specialty field and were certified in accordance with the Nuclear Training Program Manual (NTPM). Additionally, On-the-Job Training (OJT) instructors had exceeded qualifications set by ANSI standards and had received the OJT evaluator course as required by the NTPM.

However, during the course of the evaluations for WBN, SQN, and BFN, a programmatic deficiency was identified in one key area. Individuals hired as ANSI-qualified technicians were not evaluated against the training program requirements. The evaluation of credit for bypassing basic training was not submitted to the Office Committee for review and appropriate action, nor was the credit given reviewed. Additionally, individuals hired with previous experience were not evaluated for OJT experience at plants which had achieved power operation. Although these practices did not result in regulatory noncompliance, they did result in procedural noncompliance.

During the evaluation of the effectiveness of the training program at WBN, it was discovered that supervisor feedback questionnaires were not being addressed. CATD 31101-WBN-01 was written to address this issue. In its response, WBN line management stated that no corrective action was required since the method for providing feedback had been changed. (See section 6.1.1) |R1

SQN

A SQN concern and a BFN concern generically applicable to SQN addressing the issue of poorly trained HP personnel working in radiated areas were previously investigated by NSRS and were not substantiated at SQN. This evaluation confirmed the findings of the NSRS report (I-85-734-SQN) by reviewing NRC, INPO accreditation, and Quality Auditing Branch (QAB) audits for the HP training section. No pertinent concerns, violations, or deviations were found. This evaluation concurs with conclusions reached in the NSRS report. Additionally, interviews were conducted to determine if improvements identified by NSRS had been implemented. Resolution of the items were found to have been addressed and resulted in revisions to the POTC basic phase training format. However, a minor deficiency was identified by this evaluation in the area of response to supervisor feedback questionnaires concerning the in-plant training phase and retraining requirements. CATD 31101-SQN-01 was written to address this deficiency. |R1

Another concern dealing with the same basic issue and identifying an incident with respect to a HP technician's lack of knowledge for protective equipment requirements was also not substantiated. In addition to the evaluations performed for the previous concerns, appropriate documentation was reviewed, and interviews were conducted with eight HP technicians to determine their awareness of protective clothing/equipment requirements. It was found that they demonstrated good judgement and an ability to make decisions in accordance with requirements. Furthermore, they were aware of their ability to alter work requirements or stop work, as required.

BFN

The concern regarding a poorly trained HP staff with respect to working in radiated areas was not substantiated. It was found by this evaluation that INPO had recently completed an accreditation evaluation for the HP technician training program. INPO identified weaknesses in the in-plant performance verification sheets. It was determined by this evaluation that the commitments made by BFN to correct the weaknesses were underway. Also, a review of the requirements of the Training Program Manual and BFN Standard Practices revealed no deficiencies; however, problems were identified in the implementation of these procedures. Personnel hired as fully qualified by ANSI-N18.1 bypass the basic phase of training at the POTC. This training bypass is not reviewed or approved by the Office Training Committee as required. CATD 31101-NPS-01 was sent to Power Operations Training Center to identify this problem. In addition, based on problems identified with the supervisor feedback resolutions in the SQN evaluation, interviews conducted at BFN indicated that the feedback results were not forwarded to the appropriate individual. R1

Conclusion

The issue at all plants does not identify a problem, but as a result of the employee concerns evaluation, problems were discovered for which corrective action was required. The problem identified at WBN, SQN and BFN involved inadequate resolution of supervisor feedback questionnaires. The other problem identified at BFN was attaining appropriate approvals for previously qualified personnel being exempted from the basic phase of POTC training. R1

Generic Applicability

This issue was evaluated at SQN, BFN and WBN. An effective evaluation at BLN would not be possible due to the minimum health physics responsibilities now in existence at BLN.

3.2 Element 311.02 - Radioactive Material Control

Issue 311.02-1 - Improper Dumping of Contaminated Material

WBN

Three concerns which addressed the issue of radioactive liquid waste from SQN being dumped at WBN were not substantiated. This evaluation had found that a dumping incident at WBN was conducted; however, the material being dumped was a boric acid solution

previously used in SQN's preoperational testing six months before initial criticality. It was determined that all dumping that had been done at WBN was in accordance with state and EPA regulations and had involved only nonradioactive materials. As a result, the movement of the soil by bulldozer for use in the Intake Pumping Station did not require any Health Physics restrictions. |R1

Two additional concerns also pertaining to dumping material from SQN on the ground at WBN were previously investigated by QTC (IN-85-720-002) and were not substantiated. Their investigation had determined that the concerns were in regard to alum sludge generated at SQN was dumped (ground spread) at WBN. It was concluded that the dumping was performed in accordance with existing state regulations and that the source (alum sludge) was not associated with contaminated systems at SQN.

Soil samples from the affected area were taken and indicated normal background levels. This evaluation fully concurred with the findings of the previous investigation.

SQN

The concern in this issue in regard to dumping radioactively contaminated material from SQN to WBN was not substantiated. It was determined by reviewing radioactive waste shipment procedures and contracts involving transport between the sites that alum sludge and a boric acid solution were transported to WBN from SQN. Neither of these materials were radioactively contaminated. As discussed in the WBN evaluation, all dumping was done in accordance with state and EPA requirements at the time of the reported incident.

The other concern in this issue addressing dumping contaminated water into the river at SQN was substantiated; however, corrective action was taken and it is no longer considered a problem. It was verified by Environmental Operating Reports that during the third and fourth quarters of 1980 and the first two months of 1981, SQN released Phosphorus-32 into the Tennessee River. Technical Specification 3.11.1.2 quarterly limit and 10CFR50 Appendix I for annual dose limit was exceeded. TVA informed NRC of their calculations and stopped these releases from the radwaste system in February 1981, pending confirmation of the source of radioactivity and the initiation of corrective actions. TVA issued two reports describing the investigations and the corrective actions that were taken as a result of the releases. Subsequent calculations and sampling activities after corrective actions were implemented revealed no further problems.

Conclusion

The concerns that involved contaminated material being sent from SQN and dumped at WBN could not be verified as factual. The incident involving SQN releasing contaminated water to the river in 1980 and 1981 was factual and identified a problem but corrective action was initiated before the employee concerns evaluation of the issue was undertaken. R1

Generic Applicability

These concerns were evaluated at the site of concern and determined to be a plant specific issue. No other site evaluations are necessary.

Issue 311.02-2 - Radioactive Spill Into Uncontrolled Drain System

WBN

The issue regarding a radioactive spill into the uncontrolled drain system due to a valve in the Turbine Building at SQN being left open was previously investigated by NSRS Report Number I-85-543-SQN and was evaluated for generic applicability to WBN. The concern was not substantiated at WBN. The concern occurred at SQN during the moisture carryover acceptance test using a radioactive sodium source. It was determined in the previous investigation for SQN that the contaminated water entered the SQN yard holding pond due to a valve on a sample sink not being rechecked prior to the sodium injection. This evaluation determined that the procedures governing this activity at WBN were adequate to prevent an occurrence similar to that at SQN.

SQN

The radioactive spill into the uncontrolled drain system at SQN was substantiated as a statement of fact; however, it was no longer considered a problem based on the findings of a previous investigation performed by NSRS (I-85-543-SQN). Their investigation determined that an open sink valve had not been rechecked prior to the initiation of the moisture carryover acceptance test which resulted in radioactively contaminated water entering the turbine sump and being pumped to the holding pond. It was determined by NSRS that reports and proper actions had been taken by SQN. Additionally, the moisture carryover test is a "one-time" procedure and will not be conducted again at SQN. This evaluation concurred with the findings of the NSRS report.

BLN

The issue with respect to the radioactive spill into the uncontrolled drain system at SQN was evaluated at BLN and was not substantiated. According to interviews and reviews conducted during the evaluation, it was determined that the procedure required for testing the turbine (i.e. moisture carryover test) had not been written due to the delayed condition of the plant. Standard practices at BLN did imply that instructions would provide verification of test prerequisites (i.e., valve lineup). |R1

Conclusion |

This issue was not verified as factual at WBN or BLN. The issue was factual at SQN but corrective action was initiated before the employee concerns evaluation of the issue was undertaken. |R1

Generic Applicability |

This issue was determined to be SQN specific. No evaluation at BFN is necessary. |R1

Issue 311.02-3 - Radioactive Material in Uncontrolled Areas

WBN

The issue concerning a piece of radioactive material being found in a break area at WBN was not substantiated. Due to the lack of available information (i.e. location), a definitive investigation could not be performed. The HP Program was examined, and the surveillance procedures for shop areas and other clean areas were found to be adequate to prevent this type of occurrence.

SQN

A SQN concern in this issue dealt with contaminated material being stored in unidentified lockers or containers and had previously been investigated by SQN line management. The concern was substantiated at SQN and corrective action was implemented prior to this evaluation. |R1
The previous investigation determined that the HP survey that was initiated did not find any untagged or unlabelled contaminated materials; however, they did find a bagged and tagged hose in an unlabelled storage box. As a result, corrective actions were implemented by line management to ensure all lockers, cabinets, gang-boxes, and other containers were properly labelled as requested by HP. This labeling program was verified and allows HP to perform periodic surveys on all containers in the regulated areas.

SQN and BFN

During the evaluation of this issue by the Operations Category of the ECTG, there was an incident at SQN and BFN involving loss of fission chamber sources. A special team investigated this incident separately from any ECTG evaluation. The results of this special investigation were not known at the time of this report's writing, and the conclusions of the ECTG with respect to the radioactive material issue do not reflect the findings of the special investigation.

Conclusion

The issue could not be verified as factual at WBN, but was found factual at SQN. Corrective action for the problem however, was initiated before the employee concerns evaluation of the issue was undertaken. R1

Generic Applicability

R1

This concern was evaluated at the site of concern and determined to be a plant specific practice corrected prior to the ECTG evaluation.

Issue 311.02-4 - Safeguarding Contaminated Material

WBN

A barrel marked "contaminated material" being moved by a group of laborers in the machine shop building without any safeguards was a concern previously investigated by WBN line management. The concern was not substantiated. Based on that investigation, it was determined that the drum did not contain radioactive contamination but rather some other form of contamination, such as asbestos or PCBs. Therefore, no HP supervision or HP safeguards were initiated. Interviews conducted in this evaluation also concurred that the "contaminated material" designation is not used at WBN for radioactive material.

Additionally, containers on-site that did contain radioactive material are designated as such and were found not to have been moved at the time or location of the specified incident. This evaluation concurred with the findings of the previous investigation.

Conclusion

R1

The issue could not be verified as factual.

Issue 311.02-5 - Contaminated Fire Hoses

BFN

The issue involving the removal of contaminated fire hoses from the BFN site was previously investigated by line management and was not substantiated. It was determined by the previous investigation that fire hoses used in a 1975 fire in the cable spreading area were blackened from smoke; however, the hoses were not used in a contaminated area at the time of the incident. This evaluation reviewed HP survey records for contamination release surveys in 1975 and found evidence that the fire hoses were, in fact, not contaminated and were released to be used offsite.

Conclusion

R1

This issue could not be verified as factual.

Issue 311.02-6 - Green Tag Requirements

SQN

The issue regarding the dropping of the green tag requirement at the clean tool room at SQN was substantiated as a statement of fact, however, it was not a problem. Based on a previous investigation by line management, it was determined that the green tags are no longer required due to the implementation of the "power block" concept at SQN. This concept had resulted in the relocation of the clean tool room from the restricted area. Before the "power block" concept, tools had to be surveyed by HP and tagged before they could be returned to the clean tool room. Now, a survey and green tag clearance is required at the point of exit from the regulated area. This evaluation concurred with the previous line investigation at SQN.

R1

Conclusion

This issue was factually accurate, but was not a problem.

3.3 Element 311.03 - Exposure Limits and Records

Issue 311.03-1 - Daily Radiation Exposure Limits

WBN

This issue addressed two concerns dealing with the daily limits of radiation exposure at WBN which was previously investigated by line management. The issue was not substantiated at WBN. Federal regulations do not require daily dose limits. Only quarterly dose

limits and limits for total lifetime dose are established in Title 10 CFR Part 20. As stated in the line report, these regulations are implemented by TVA through their Radiological Protection Plan (RPP) and Radiological Control Instructions (RCIs). No daily dose requirement was found in these documents. The only reference to a daily limit was made in regard to the need of a RWP if exposure might exceed 50 mrem/day. |R1

Another part of this issue that was evaluated at SQN and determined generically applicable to WBN dealt with cases of overexposure which could result in employees being laid off. Although overexposures were not a problem at WBN or SQN, lay-offs are a possibility at TVA and therefore, would substantiate this part of the concern. As stated in the line report and confirmed by interviews at WBN, it is possible for individuals to be laid off if they exceed or come close to exposure limits. Any worker who exceeded a dose limit for any monitoring period is not permitted to enter a radiologically controlled zone for the remainder of that period. When workers reach their dose limit, efforts are made to place the individual elsewhere. To date, no TVA employee or contractor has been laid off for this reason at WBN.

SQN

The concern in this issue regarding the questioning of daily exposure limits at SQN and overexposure resulting in layoffs was previously investigated by line management. Although part of this issue (possibility of layoffs) was substantiated, it has not been a problem at SQN. As described in the WBN findings, TVA has implemented the Federal Regulation requirements through the RPP and RCIs. No requirements were identified for daily dose limits. The requirements for the use of an RWP when exposure might exceed 50 mrem/day was the only reference to a daily limit. In regard to the overexposures at SQN several years ago, the line investigation reported that there had been no cases of personnel overexposure in excess of regulatory limits at SQN. This was confirmed by interviews with SQN HP in this evaluation.

The other part of this issue which dealt with layoffs had the same findings as described for WBN. Layoffs are an option for TVA if a worker met or exceeded established exposure limits. HP management indicated that this option has not been implemented at SQN.

Conclusion

The issue concerning daily limits of radiation exposure being violated could not be verified as factual. The possibility of employees being laid off upon reaching their dose limits could be factually accurate, however no such case has occurred. |R1

Issue 311.03-2 - Changing Exposure Allowances on RWPs

SQN

The issue regarding an employee receiving the maximum amount of radiation due to RWP being adjusted to reflect an increment in dose allowances was previously investigated by line management and NSRS Report XX-85-028-001. The issue was not substantiated as stated; however, deficiencies were found in other areas during the evaluation. With regard to the specific concern, the previous investigation had reviewed RWP timesheets and found no evidence of individual's dose exceeding established limits. A RWP timesheet was identified where a change was made to the item stating "Do not exceed ____ mrem per entry or 50% of RAD" (remaining allowable dose). The CI had been made aware that the amount was only a guideline based on the HP's estimate of what is required to accomplish the job. Procedures also allowed this value to be changed as dictated by conditions.

During the course of the previous investigation, NSRS did note discrepancies in handling RWP timesheets. SQN committed to NSRS to revise appropriate HP procedures regarding QA record requirements. These deficiencies have been resolved for the most part, specifically in regard to transcription of RWP timesheets. However, there still remained the lack of a clear definition of QA record requirements for RWP timesheets and the problem of personnel in the field not handling RWPs in accordance with QA record requirements as determined by this evaluation. Employees do receive training in GET on QA record procedures and are instructed that RWP timesheets must be used according to QA record requirements. This evaluation concurred with the findings of the previous investigation. CATD 31103-SQN-01 was initiated to address this issue. |R1

Conclusion

The issue concerning HP adjusting the maximum allowable dose for individuals is not factual, but as a result of the employee concerns evaluation a problem was discovered for which corrective action was initiated. |R1

Generic Applicability

This concern was evaluated at SQN and found to be not valid. A peripheal issue regarding SQN practices on RWPs was identified. No other site evaluations are necessary.

Issue 311.03-3 - Exposure During Radiographic Operations

SQN

The issue in regard to an individual being exposed to radiation during x-rays of a pipe weld was previously investigated by line management and was not substantiated. Based on information provided by the QTC report, XX-85-048-003, the previous evaluation determined that the individual was not present within the regulated area set up by the radiographers for welding operations. Radiographers are trained in controlling radiographic operations according to the requirements of 10 CFR 34. These boundaries were set in accordance with 10 CFR 20.105 requirements, such that the maximum exposure rate is less than 2 mr/hr at the boundary and no dosimetry will be required outside of the regulated area boundary. This evaluation concurred with the findings of the previous investigation. | | R1 | | |

Conclusion | | R1 |

This issue cannot be verified as factual. |

Issue 311.03-4 - Omission of Exposure Data

BFN

The issue with respect to an individual's name being removed from the HP computerized exposure data base and was later added was not substantiated. It was determined by this evaluation that two dose tracking systems were used by TVA. The Radiation Exposure Management System (REMS) maintained a permanent record of an individual's quarterly, annual, and lifetime doses. Once a dose was recorded on REMS, the exposure history was never removed. The Health Physics Dose Tracking System (HPDTS) maintained an individual's current exposure history at the site while that individual was working in regulated areas. It was found that if a worker was terminated or had a change of job status, the individual's name would be removed from the HPDTS onsite but not from REMS. The name would reappear on the HPDTS if the individual returned to work in a regulated area at the site. A cross-check performed quarterly on the two systems is used to resolve any discrepancies in exposure histories.

Conclusion | | R1 |

This issue cannot be verified as factual. |

Issue 311.03-5 - Workers Not Receiving Similar Exposures

BFN

This issue addressed the practice of workers in the same section not receiving approximately the same exposure and was not substantiated. It was found that procedures stated that work assignments in radiologically controlled areas will be distributed to keep doses to individuals relatively uniform where practical. Supervisors are also required to designate work assignments without causing substantial increases in total overall exposure. By reviewing exposure printouts of different craft disciplines it was determined that the overall individual exposures were relatively uniform.

Conclusion

R1

This issue cannot be verified as factual.

Issue 311.03-6 - Use of Dosimetry Cards

WBN

This issue incorporated three concerns regarding the use of dosimetry cards for tracking dose at WBN and was not substantiated. Two of these concerns were previously investigated by line management. The line report stated that the dose card was a mechanism for the worker and/or supervisor to maintain an awareness of his/her dose, as well as providing a record of the Radiation Work Permits (RWPs) used by an individual. If a card was lost or damaged, a new one is obtained from Health Physics. However, the thermoluminescent dosimeter (TLD) badge keeps the official dose record. Additionally, interviews conducted with HP supervisors over the absence of sign in/out sheets (RWP timesheets) at WBN determined that either timesheets or dose cards could be lost or damaged. HP personnel stated that dose cards are easier to track and allowed doses to be more readily available than the timesheets. WBN instructions also provided workers on their responsibilities with respect to dose cards. This evaluation determined that the line report adequately addresses the scope of the concerns as stated, and concurs with the findings and conclusions of the report.

R1

R1

Conclusion

This issue cannot be verified as factual.

3.4 Element 311.04 - HP Policy, Practices, and Management Control

Issue 311.04-1 - Authority to Enforce HP Procedures

WBN

The issue raised about proper authority not being given to enforce HP procedures for monitoring radiation exposure was previously investigated by WBN line management and was not substantiated. The previous investigation identified procedures and standards which gave the authority for disciplinary actions and enforcement of radiation control procedures. It also stated that WBN has had violations and disciplinary actions in the two years prior to their investigation in spite of WBN not being operational. This evaluation concurred with those findings based on reviewing applicable documentation and interviewing cognizant personnel. Based on an interview with an ALARA engineer and a review of applicable logbooks a total of 29 Radiological Awareness Reports (RARs) and no Radiological Incident Reports (RIRs) had been written for radiological deficiencies and violations. Disciplinary actions did occur as a result of some of the RARs. Requirements for HP authority to stop work was also confirmed by interviews and a review of the Radiological Control Program.

Conclusion

This issue cannot be verified as factual. | R1 |

Issue 311.04-2 - Management's Attitude Toward Radiological Control

SQN

This issue was comprised of three concerns at SQN. The first concern dealt with an incident where SQN personnel were contaminated, and stated that the incident, which could have been prevented, reflected poor management's attitude regarding radiological health and safety. It was not substantiated at SQN. No evidence of personnel contamination as a result of poor management attitudes toward radiological safety was found through reviews of documentation for reportable and nonreportable incidents. Personnel Contamination Reports and RIRs were reviewed which documented personnel contamination and any investigative activities that were required. No information detailing the incident specified in the concern was found. This evaluation did not identify any deficiencies in the SQN personnel contamination control program.

The second concern which involved plant management's direction that older employees be assigned "hot" (high radiation) work in order for them to reach their radiation exposure levels first was previously investigated by NSRS, Report I-85-513-SQN, and found not substantiated at SQN. Their investigation and review of radiation exposure records found no evidence that older individuals working at SQN had received a disproportionate level of exposure when compared to other workers in their sections or organization. Interviews with a craft foreman employed during the time frame of the concern found there was an unawareness of any "management direction" regarding the assignment of personnel to "hot work" based upon age. This evaluation concurred with the findings of the NSRS report.

The third concern of this issue which alleged inadequate upper management support to the Health Physics Department to enforce an effective radiological safety program and the lack of disciplinary action for personnel who intentionally bypass monitors was not substantiated in an investigation performed by SQN line management. Based on their findings, no actual incidents were identified where employees did not receive disciplinary action for deliberately bypassing radiation monitors. Additionally, interviews conducted with HP personnel and reviews of plant procedures and records did not indicate inadequate upper management support to enforce an effective radiological safety program. It was determined through a documentation review that RIRs were initiated and the incidents were investigated for corrective and disciplinary actions as required. The SQN line management made recommendations to upgrade the RIR program based on their investigation. These included providing feedback to HP technicians on the RIRs and ensuring prompt action by management. CATD 31104-SQN-01 was issued to address this problem. |R1

BFN

Two concerns were evaluated at BFN for this issue. The first concern which stated there was an emphasis for craftsmen to remain in radiation/contamination areas regardless of the hold status was substantiated, however, corrective action had already been implemented by BFN. The problem of individuals staging in radiation areas was identified by HP and brought to the attention of plant management. As a result, the Plant Manager instructed (in writing) that all sections were to halt the practice of allowing individuals to loiter in radiation areas and to maintain ALARA policies.

The second concern in regard to an individual being required to pass through airborne contamination areas without a respirator was considered indeterminate without specific data on the location and time of the incident. However, a review of procedures indicated that controls were in place to prevent such an occurrence. RWPs were required for entry into an airborne area. If levels are found to be less than 25% of the maximum permissible concentration (MPC) in an airborne area, then respirators were not required. Therefore, it was possible to enter an airborne area without a respirator and still comply with plant procedures and NRC regulations. If an individual had entered an area where respirators were required, this would have resulted in an RIR being written. No evidence was found to indicate any incidents of this type. In addition, interviews with HP personnel indicated that in the past individuals had been allowed to wear respirators if they wanted to, even though it was not required. Due to problems associated with this practice, it has since been stopped.

BLN

The concern regarding inadequate upper management support being provided to the HP department in order to enforce an effective radiological safety program was not substantiated at BLN. It was determined that the BLN radiological safety program was supported by management through implementation of active Radiological Control Instructions (RCI), the Construction Policy Manual, the NQAM and Standard Practice BLN-2.8. Based on a review of available documentation, there have been no RIRs filed in the HP Department. However, RIRs filed in the Construction Radiological Safety Group had involved people crossing radiation boundaries. In all cases, an investigation was found to have been conducted. Of the cases reviewed, results indicated some degree of disciplinary action taken for intentional crossings.

Conclusion

At SQN, the issue itself did not identify a problem, but as a result of the employee concerns evaluation a problem was discovered for which corrective action was initiated. At BFN, a concern with employees required to remain in radiation areas was factual but corrective action was initiated before the employee concerns evaluation of the issue was undertaken. At BLN, the issue could not be verified as factual. R1

Generic Applicability

The issues that were not verified as factual were not required to be evaluated at other sites. The issue found factual at BFN was a specific practice at BFN which is not generic to other sites. R1

Issue 311.04-3 - Policy on Hair Length and Beards

WBN

This issue consisted of two concerns at WBN. The first concern dealt with some HP technicians having extremely long hair and was previously investigated by WBN line management. This concern was substantiated since it was a statement of fact, but it was not considered a problem. The previous investigation determined that this concern regarded the appearance of employees (i.e., individual had shoulder-length hair) and was not industrial safety or HP related. TVA has not established "dress code" requirements and site instructions have required that hair be maintained so it cannot interfere with vision or become a hazard in normal or emergency conditions. It was also stated that the responsibility for determining if an employee's hair meets this requirement rests with his supervisor and plant management. This evaluation concurred with the findings of this report.

The second concern which involved a situation where an employee was told to shave his beard or be sent home was previously investigated by line management in conjunction with QTC (IN-85-642-002). That investigation had determined that the concern could not be substantiated without compromising the identity of the individual.

A survey that was conducted of all Public Safety Supervisors did not find any evidence of the referenced incident. Furthermore, documentation that was reviewed stated that only personnel requiring unescorted picture badge access into plant protected areas was required to be clean shaven. Based on information provided by QTC, it was found that the individual in question was on a visitor's badge; therefore, it was not necessary for him to shave. Visitor badges were issued to personnel with beards who are on short-term work assignments or are pending completion of badging requirements and must be escorted. This evaluation concurred with the line management/QTC report.

Conclusion

The issue about HP technicians having long hair is factually accurate but unless it interferes with vision or becomes a hazard for working conditions it is not a problem. R1

Issue 311.04.4 - Radiological Controls, Surveys, Decontamination, and Emergency Procedures

WBN

The WBN concern questioning the adequacy of radiological controls and decontamination procedures was not substantiated. It was determined that the limits and standards to which TVA adheres for establishment of radiological controls during operation and decontamination activities were adequate. 10CFR20 established the general requirements for the protection of personnel against exposure to radioactive material in restricted areas. Controls and limits were also established in TVA's Radiation Protection Plan. Radiological Control Instructions (RCIs) were the implementing procedures and established limits and guidelines governing the radiological control program. Additionally, HP instructions implementing the RCIs provided details in the areas of administration, dosimetry, and technician instruction letters.

These procedures were reviewed and found to be in compliance with the regulatory requirements for limits on airborne exposures. Since there were no airborne areas at WBN during the evaluation, the implementation of these procedures/ programs were not readily observable; however, controls at posted radiological areas were observed and reviewed for adequacy. Decontamination activities were also not observable since WBN has not begun operation at the time of this evaluation; however, a review of procedures that had been written, drafts of decontamination instructions, and interviews with cognizant personnel indicated that adequate controls were being developed at WBN.

SQN

Four concerns were incorporated into this issue for SQN. The first concern which stated that radiation areas were not monitored often enough, was not substantiated by a previous investigation by NSRS (Report I-85-615-SQN). The frequency of surveys required by Radiological Control Instructions RCI-1 and RCI-14 were found to satisfy the requirements and commitments of TVA. The frequency of radiation surveys in specific areas of the plant and in situations where radiation conditions might change were determined on a case-by-case basis. All applicable requirements were satisfied. This evaluation concurs with the findings of the NSRS.

The second concern which consisted of a request to implement a procedure encompassing all aspects of possible emergency situations in a C-zone, was not substantiated. The evaluation consisted of a review of current HP procedures governing radiological safety in contaminated areas and SQN emergency procedures, policies, and guidelines to determine the adequacy of each to mitigate C-zone emergency situations. No deficiencies were identified upon examining general programmatic areas (i.e., training for emergencies, scope of employee responsibilities, training for access into radiologically controlled areas). Existing radiological protection procedures, emergency procedures, and personnel training programs were determined to adequately address the handling and mitigation of any potential C-zone emergency situation based on interviews with cognizant personnel and review of applicable instructions and reports.

Another concern which raised questions about the location of friskers in regard to their proximity to contaminated area exits and the probability of spreading contamination while searching for a frisker was a statement of fact, however, it was not a problem. According to procedure, individuals were required to frisk immediately after or as soon as possible upon exiting a C-zone. However, it was determined by field walkdowns that friskers were placed throughout the plant in locations as convenient as possible to existing C-zones with regard to background radiation requirements. Some friskers were moved away from zoned areas due to excessively high background levels and, consequently, could result in contamination being spread to the area where the frisker was located when individuals left those areas. Based on procedural reviews, the movement of friskers and the possibility of spreading contamination were in compliance with regulatory and plant procedural requirements. Interviews with training personnel also revealed that GET classes informed personnel that friskers may not be readily available and discussed the actions that workers were required to do in the event they had to search for a frisker (i.e., contact HP and stay in place). No evidence of programmatic deficiencies were identified in this evaluation.

The fourth concern expressed that, in the event of a radiation or evacuation alarm or an evacuation announcement, the operator in charge of the Auxiliary Building Secondary Containment Enclosure (ABSCE) type breach may leave the area without sealing the breach was not substantiated. It was determined through interviews and review of applicable procedures that operators were instructed on the required procedures and were knowledgeable of their responsibility to seal any ABSCE type breaches before evacuating or leaving the area. Additionally, an Unreviewed Safety Question Determination (USQD) was required by Technical Instruction (TI)-77 to assess the ability for isolating the breach within four minutes of receiving an isolation or high radiation signal. |R1

Conclusion |R1

The issue at both SQN and WBN could not be verified as factual.

Issue 311.04-5 - HP Responses to Radiation/Contamination Alarms

SQN

Two concerns were evaluated at SQN for this issue. The first concern which noted questionable practices by HP, such as unplugging activated radiation alarms, was not substantiated in a previous investigation by NSRS (Report I-85-806-SQN). Their investigation could find no evidence that HP personnel did not properly respond to radiation monitor alarms (portal monitors, hand/foot monitors, or friskers). Interviews had been conducted with individuals who would have readily observed HP practices involved in these events. These individuals could not recall any situations where HP personnel unplugged or turned off a radiation monitor when alarming to true radiation levels. This evaluation reviewed applicable documentation which supported the findings of the NSRS report, and therefore this evaluation concurs with the NSRS.

The other SQN concern in regard to HP personnel not responding to radiation alarms or unknown radiological situations where the radiological safety of plant personnel could be compromised was previously investigated by SQN line management. It was not substantiated. It was determined in the investigation that SQN had not experienced abnormal radiation levels during periods of operation. The only event that did result in unanticipated radiation levels in the Reactor Building was the thimble tube ejection incident in April 1984. It was found that HP had been present at the beginning of the event and maintained control throughout the recovery process. Furthermore, HP supervisors could not recall any instance that would coincide with this concern. This evaluation concurred with the findings of the SQN line report.

Conclusion

R1

The issue could not be verified as factual.

Issue 311.04-6 - Lower Containment Entries

WBN

This issue incorporated two concerns which raised questions concerning personnel exposure to neutron radiation when entering lower containment while the reactor is at power and was previously investigated by Sequoyah line management. It was not substantiated at WBN. The previous investigation indicated that containment entries were in compliance with 10CFR20 requirements regarding neutron dose assessment. Based on survey data, the investigation also found that the quality factor for neutrons could be increased by a factor of five without exceeding dose limits. Therefore, it was determined that the practice of entering lower containment while at power for non-emergency repair was acceptable from a dose standpoint and did not need to be re-evaluated. This evaluation concurred with the findings of this report and, in addition, performed reviews of applicable procedures and conducted interviews at WBN. Requirements for entering containment at WBN were found to be similar to SQN. It was determined through interviews and review of procedures that the practice of entering containment at power at WBN, like SQN, was not expected to occur frequently and exposure would be maintained within allowable limits. Additionally, this evaluation also identified a Design Change Request that had been issued at SQN and WBN to correct problems with the RCP motors and to eliminate the need for someone to enter lower containment to check the oil level while the reactor was operating.

A review of the NSRS Report I-84-012-SQN which investigated the thimble tube ejection accident at SQN was determined not to be a direct result of entry into containment while the reactor was at power; therefore, this issue was not substantiated at WBN.

SQN

This issue of entering lower containment was reflected in three concerns at SQN. The first concern which involved the transfer of responsibility of HP from Muscle Shoals to Sequoyah resulting in compromises to existing HP policies regarding personnel access during unit operation, was not substantiated at SQN. It was determined by this evaluation that the concern only pertained to containment entries. A review of applicable procedures, including prior revisions, revealed no significant changes in entry limitations or requirements during or after the transfer of authority in question. Interviews conducted with cognizant management personnel also indicated that specific guidelines for Reactor Building entry had not been changed to any great extent during this period.

The other two concerns questioned the practice of entering lower containment for non-emergency repairs while the reactor was operating based on recent studies of neutron exposures were not substantiated in a previous investigation conducted by SQN line management. As discussed in the WBN evaluation which also identified the SQN line response report as a basis for its findings, all TVA nuclear facilities adhere to the quality factor required by 10CFR20 in determining neutron dose. In regard to the recent studies which recommended an increase in the quality factor for neutron dose assessment, survey data revealed that the use of an even more conservative quality factor would not result in a greater risk than already existing from the effect of gamma radiation. Based on actual data at SQN, neutron doses are typically a factor of ten less than gamma doses. Therefore, the practice of entering lower containment while at power for non-emergency repairs did not need to be re-evaluated from a dose standpoint. The practice of entering containment at power also had no direct bearing on the thimble tube ejection accident at SQN as alleged in these concerns. The incident was reviewed in NSRS Investigation I-84-012-SQN and was not substantiated. This evaluation concurred with the findings of the SQN line management and the NSRS reports.

Conclusion

R1

This issue was not verified as factual at either WBN or SQN.

Issue 311.04-7 - Improperly Completed RWP Timesheets

WBN

The issue concerning the completion of RWP timesheets not being made in accordance with procedure requirements was previously investigated by NSRS for SQN Report I-85-514-SQN and was determined not to be substantiated at WBN. The evaluation for SQN found that the problems with the RWP timesheets centered on the improper correction of quality assurance records in regard to the transcription of information (i.e., signatures) on RWP timesheets. The evaluation for WBN was based on the findings of the SQN investigation. No RWPs were available for review at WBN due to the status of the plant; however, reviews of applicable procedures and interviews with cognizant personnel were conducted to identify similar problems at WBN. Since RWP timesheets were not used at WBN, required changes and corrections to procedures identified for deficiencies at SQN were not applicable to WBN. WBN was, however, conducting training on dose cards to ensure workers were familiar with the QA and other recordkeeping requirements.

SQN

Two concerns were raised in regard to this issue at SQN. The first concern identified a RWP sign-in sheet that contained falsified signatures. This concern was previously investigated by NSRS Report I-85-514-SQN and was not substantiated. The original sign-in sheet had been transcribed to a new sign-in sheet without traceability to the original. Therefore, the evaluation for verifying falsified signatures was indeterminate. This evaluation concurs with the NSRS findings.

The second concern which dealt with RWPs not being completed per procedure was also previously investigated by NSRS Report I-85-514-SQN. This evaluation concurs with the NSRS investigation which determined this concern to be substantiated; however, corrective actions were implemented based on the NSRS report. The NSRS evaluation found that corrections were being made to RWPs without traceability to the original documentation and recommended a revision to HP-SIL-7 to clearly define the QA record requirements for transcription of information between RWPs. For those timesheets reviewed in the NSRS investigation where problems had been identified, NSRS recommended that supplemental information be provided in regard to the traceability of the original worker sign-in sheets. In regard to changes on RWPs to reflect current airborne radiological information, HP proposed changes to the RWP and timesheets should resolve the problem of individuals making improper entries on timesheets. Sequoyah had responded to the NSRS report recommendations by making the necessary procedural revisions to reflect the current status of determining/classifying RWP timesheets as QA or non-QA and to define the requirements for transcription of information between RWPs. Procedural reviews and interviews by this evaluation confirmed the corrective actions taken by SQN.

In addition, issue 311.03-2 identified QA record deficiencies in SQN RWP timesheets and noted corrective actions that were required to define QA record requirements for RWP timesheets and handling RWPs in the field in accordance with QA record requirements. These findings were also applicable to the findings for this issue.. This evaluation concurred with the findings of the NSRS report.

BFN

The SQN concern involving RWPs not being completed per procedural requirements was not validated at BFN. The procedure changes required at SQN based on the NSRS investigation were already incorporated into BFN procedures. A review of the applicable procedures identified the controls for transcribing data from RWP timesheets were in place.

BLN

The SQN concern that RWPs were not being completed per procedure requirements was not substantiated at BLN. RWPs were not being used at BLN due to their delayed mode of operation. Special Work Permits have been used at BLN for nuclear fuel inventory and are classified as a QA document. However, SWP did not require any related timesheets; and, therefore, transcription of data was not applicable.

Conclusion

This issue which was initiated at SQN, was verified as factual and identified a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken. This issue was not verified factual at WBN, BFN or BLN.

Generic Applicability R1

This issue was evaluated at all sites and only verified factual at site where concerns were initiated (SQN).

Issue 311.04-8 - Inadequate Knowledge of System's Contents

SQN

This issue which involved a concern where HP and Operations personnel failed to know and verify system contents in the Turbine Building before authorizing the breaching of the system, was not substantiated in a previous investigation by NSRS Report I-85-513-SQN. Their investigation could not find any evidence of the specific event described in the concern. Scenarios involving system breaches were identified; however, it was determined that HP and Modification personnel had adequately performed their required tasks and did not reveal a lack of knowledge of the system contents prior to breaching the system. HP personnel had treated these systems as potentially contaminated and required protective equipment and designated work areas until HP would verify the area and system were clean based on their surveys after the breach was made. Additionally, interviews with Modifications personnel did not reveal any negative statements about the adequacy of HP personnel knowledge of plant systems, and further revealed that HP had established conservative protective requirements as detailed in the RWP. A Modifications supervisor also stated that he considered his personnel responsible for determining contamination sample points before breaching a system, understanding what contamination may exist, and knowing the potential leakage paths. Neither HP nor Modifications personnel considered Operations personnel responsible for informing craft workers of system's contents. This evaluation concurred with the findings of the NSRS report.

Conclusion

R1

The issue was not verified as factual.

Issue 311.04-9 - Adequacy of SQN HP Program (Miscellaneous)

SQN

This issue covered eight items of concern relating to the adequacy of the SQN HP program. The issue involved the implementation of the program, lost sources, monitor locations smears, and air samples. One item involved charges of intimidation and harassment and was referred to the office of the inspector general. None of the other seven items were substantiated. Their findings are discussed below.

The item that TVA lacked the ability to run an HP operation was not substantiated. It was determined by reviewing procedures and audits/evaluations, observing implementation of the instructions, reviewing program documentation, performing walkdowns, and interviewing HP personnel that TVA did not lack the ability to run an HP program. Past NRC reports had given radiological control satisfactory and high level of performance ratings. INPO had also identified a Good Practice in one of their evaluations.

Additionally, the HP program at SQN is under the direction of an individual who meets the qualification criteria for the position of Radiation Protection Manager as required by Regulatory Guide 1.8.

The item on an unreported loss of a radioactive source was also not substantiated. It was found that procedures provided guidelines for source inventory and control and that the sources were routinely inventoried on a weekly basis and documented accordingly. Inventories from 1985 and 1986, which was the time frame of the alleged incident, were reviewed with no discrepancies being found. In addition, this evaluation made an independent survey of the source locker and verified that all sources were accountable. In addition, interviews with HP technicians indicated no recollection of a missing source as described in the concern.

Radiation monitors not being located according to procedure ASIL-3 was also not substantiated. The attachment to ASIL-3 contained a list of the radiation monitors and their location. Two HP technicians who had completed performance verification sheets within the last year stated that all monitors were in the proper locations. Additionally, a random verification was performed by walkdown and found that those monitors checked were located in accordance with ASIL-3's attachment.

The items concerning smears being thrown into the trash and the smears counting area being used as an eating area were not substantiated. The evaluation for these items consisted of interviewing HP field operations personnel and observation of the counting facilities and review of applicable procedures. It was determined that smears were handled on a designated countertop in the counting room which is posted as a regulated area (i.e., no eating, drinking, or smoking allowed). Other areas of the count room were not regulated areas. The HP lab counting room and regulated countertop were required to be surveyed daily. Any contamination found in these areas were required to be immediately deconned. Smears were required to be placed in a "contaminated material" container and not in normal trash receptacles.

The item of concern about air samples being taken improperly (i.e., at floor level) and respirators not being worn in high contamination areas was not substantiated. It was determined through interviews with HP trainers and training supervisors that technicians were instructed on the placement of air samples to achieve a representative sample of the workers' breathing zone and in the avoidance of contaminated surfaces. Random observations of technicians pulling air samples revealed proper sampling practices. All technicians observed were also knowledgeable of the required task. In regard to the use of respirators in high contamination areas, it was determined that guidelines have been established for respirator usage in NUREG 0041 and were implemented at SQN. Contamination levels which exceeded 10,000 dpm was the basis for the use of respiratory protection. Randomly selected RWPs were reviewed to verify technicians followed the guidelines provided in HP procedures. All RWPs reviewed met these guidelines.

The last item of this issue dealt with HP technicians not covering the air sampler heads before and after exiting areas that were monitored. This item was not substantiated based on interviews with an HP supervisor and reviewing applicable HP procedures. There were no requirements for covering air sample heads before or after sampling. Technicians were taught to avoid cross contamination of the sample filters; however, the method of accomplishing this was left to the discretion of the technicians. Observations of technicians pulling air sample revealed proper sampling technique. In the event cross contamination occurred, the resulting air data would err in a conservative way and would not compromise worker safety.

Conclusion

R1

This issue could not be verified as factual.

3.5 Element 311.05- ALARA

Issue 311.05-1 - Winning ALARA Suggestions Not Implemented

BFN

The concern in this issue sited three specific items where modifications had not been implemented based on winning ALARA suggestions. The first suggestion dealt with a piping modification to drain to a sump/drain external to the area and was not substantiated. No evidence was found in the ALARA files due to the vagueness of the concern; however, the ALARA group had implemented a program that addressed this type of problem site-wide through the use of two methods of contamination control. These methods would help eliminate the occurrences as described by this suggestion.

The second suggestion involved installing shielding between the Fuel Pool Cooling Heat Exchanger and Reactor Water Cleanup (RWCU) precoat area and was also not substantiated based on the findings of the investigation performed by the ALARA staff which detailed a cost-benefit analysis of the suggestion. The analysis had weighed several factors which included average manhours spent in the area, average exposure rates, initial cost of implementation of the suggestion, and the time required to recover that cost. The results had indicated that it would not be cost effective to implement the suggestion at that time. This evaluation concurs with findings of the ALARA staff. |R1

The third suggestion was in regard to relocating the drywell control air suction filter blowdown valve to outside the drywell and was substantiated. Corrective actions are in the process of being evaluated at BFN. Based on a review of the ALARA files and case histories and interviews with ALARA personnel, this suggestion had been recommended to be implemented. However, due to the lack of a response to several correspondences sent to the Electrical Maintenance Section requesting their review and investigation of the suggestion and the lack of a tracking system by the ALARA staff, the suggestion had not been acted upon or implemented. The ALARA staff had been developing several methods to track ALARA suggestions to prevent problems of this nature in the future, which included the development of a computerized tracking system and addressing suggestions which show no progress of implementation in the ALARA committee meetings. Suggestion #3 has been scheduled as a review topic in the next meeting for implementation and corrective action. CATD 31105-BFN-01 and -02 were issued to address this problem. |R1

Conclusion

Concern #3 of this issue was factual and identified a problem for which corrective action is being taken as a result of an employee concern evaluation. R1

Issue 311.05-2 - Hazards Associated with Manway Doors

WBN

The two concerns regarding personnel safety in opening the manway door at the bottom of the steam generator was substantiated in a previous investigation by NSRS (Report No. I-85-558-SQN) and an ALARA review (No. 001-86); however, corrective actions had been implemented by WBN. It was determined in the NSRS report that the present method of removing bolts from the primary manway covers was hazardous and increased radiation exposure time. The new tensioning method designed by Westinghouse (WB-DCR-652) would require considerably less time (20 manhours) to complete and would achieve lower doses for the personnel involved. Additionally, it was reported that the problems associated with the removal of the manway covers was compounded by working in cramped environments (i.e. steam generator platforms). WB-DCR-629 was written to modify the platforms to provide more space and allow equipment to be transferred to other generators thereby minimizing the possibility of equipment damage, personal injury, and reducing exposure time. ECN-6115 was submitted for the installation of the new equipment for the platforms. The ALARA review supported the fact that a significant amount of radiation exposure time would be reduced with the use of other methods to open and close the covers. This evaluation concurs with findings of the NSRS and ALARA review. CATD 31105-WBN-01 which will implement modification of the steam generator platform. CATD 30108-WBN-01 was issued to track the new stud-tensioning device. R1

This evaluation also determined that Mechanical Maintenance was revising MI-68.7 to caution personnel to stay clear of the swing arm when the covers were being raised and lowered.

SQN

The two concerns regarding personnel safety in opening the manway door at the bottom of the steam generator were substantiated in a previous investigation by NSRS (Report No. I-85-558-SQN) and corrective actions have been implemented at SQN. It was determined in their evaluation that personnel safety was a significant issue in handling manway covers because of space constraints, weight of the covers, and restrictive protection clothing. The investigation by NSRS had referenced a schedule for implementing a stud and nut configuration for securing the steam generator covers. This substitution was expected to eliminate problems seen with the bolts presently used and reduce the time required to install the manway covers. Site services at SQN had stated that contracts would be issued for this configuration in the immediate future. Furthermore, SQN was investigating the use of electric hoists for handling the manway covers. In addition to the proposed design changes, a new manway shield was utilized which has been effective in reducing exposure rates at the steam generator openings. Site Services also had studies underway to explore other mechanisms that would enhance the safety and reduce closure times. This evaluation also determined that ALARA preplan reports 85-063 and 86-020 adequately implemented the requirements of RCI-10 in regard to precautionary actions taken to reduce personnel exposure. This evaluation concurs with the findings of the NSRS.

Conclusion

This issue is factual and identifies a problem at both SQN and WBN, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken.

Generic Applicability

R1

This issue was evaluated at SQN and WBN as the steam generator designs are essentially identical. It was found at both plants that the adequate corrective action had been initiated prior to the ECTG evaluation. No other site evaluations are necessary, as the steam generator design at BLN is different and BFN has no steam generators.

Issue 311.05-3 - Time Required to Repair/Recalibrate Instrumentation

WBN

Two concerns were evaluated for this issue at WBN. The concern raising an ALARA question about repairing and calibrating process monitoring instrumentation equipment in a potentially high radiation area was substantiated in an ALARA Review 86-X1016; however, corrective actions have been implemented by WBN to correct the problem. It was determined in the ALARA review and by observation that the instrumentation mentioned in the concern was located in a potentially high radiation area at WBN based on radiation data from SQN and FSAR, Volume 12. The relocation of the panel was scheduled to be discussed by the ALARA committee to determine the responsible action party. This evaluation concurs with findings of the ALARA review. CATD 31105-WBN-02 was written to obtain current status and schedule for moving panel 0-L-14. |R1

The second concern involved the time required to repair or calibrate equipment in the Unit 1 raceway and was substantiated in a ALARA Review 86-009; however, corrective actions have been implemented by WBN. The findings of the ALARA review determined that by replacing the transmitters mentioned in the concern with newer, more reliable equipment as described in WB-DCR-597, 48 manhours would be saved per calibration. The current equipment also had a high failure rate which would have increased the exposure received due to repair work. ECN-6005 was issued to install the new equipment which will make calibration and repair work more efficient, thereby reducing radiation exposure time. The current evaluation concurs with the findings of the ALARA review. CATD 31105-WBN-03 was written to track the closure of ECN-6005. |R1

SQN

Two concerns were also evaluated at SQN for this issue. The WBN concern involving recalibration of the level transmitter located in the Unit 1 raceway was not substantiated at SQN. It was determined by visual inspection and reviewing survey data and RWP timesheets that panel 0-L-14 was not located in a high-radiation area. There was also no evidence of action levels established in RCI-10 being exceeded which would warrant ALARA evaluation or constitute an ALARA concern.

The second WBN concern involved the time required to repair and calibrate process monitoring instrumentation in a high radiation area and was not substantiated based on the low exposures received for maintenance and calibration of the level transmitters. It was found that radiological survey data indicated that the referenced activities involved personnel exposure levels too low to be considered ALARA concerns. Therefore, no ALARA evaluation was warranted.

Conclusion

This issue at WBN was factually accurate and identified a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken. This issue at SQN could not be verified as factual. R1

Generic Applicability

This concern was evaluated at SQN and WBN due to this similarity of design and layout. No other site evaluations are necessary.

Issue 311.05-4 - Unrestricted Access to High Radiation Areas

WBN

Two concerns address the issue of unrestricted access to potentially high radiation areas at WBN. The first concern involved the area of the RCS loop penetration through the reactor shield wall and was substantiated in the ALARA Review 86-005; however, no corrective action was required. The ALARA review indicated that instructions did exist concerning high radiation area posting and requirements for entry inside the polar crane wall area. Instructions RCI-14 and Technical Specification 6.12.2 both stated that for high radiation areas (greater than 1,000mr/hr) accessible to personnel where no enclosure could be reasonably constructed around an individual area, then that area should be barricaded, conspicuously posted, and a flashing light should be activated as a warning device when the reactor is at power; the Plant Manager will also review and approve any lower containment entry before an individual is allowed access to the high radiation area. An interview by this evaluation confirmed that HP will also provide constant coverage for these entries and Public Safety will guard containment entrances. This evaluation concurred with the findings of this report.

The other concern in regard to the area of the return air duct from the regenerative heat exchange inside the polar crane wall was substantiated by an ALARA Review 86-003; however, corrective actions have been implemented to prevent unrestricted access. The ALARA review determined that the return air ducts for the regenerative heat exchangers could be reasonably barricaded with a grating in the shape of a T-bar that could be positioned to satisfy requirements in radiological control instruction RCI-14 and Technical Specification 6.12. Additionally, it was found that a locking device needed to be installed on the grating that covers the opening in the floor of the regenerative heat exchanger. However, the RC 5 loop penetrations in the reactor shield wall could not reasonably be barricaded due to possible movements caused by thermal expansions and confined space. It was also stated that HP personnel will provide constant coverage and post the areas as required by procedure. This evaluation concurred with the findings of the ALARA Review. CATD 31105-WBN-04 was written to obtain the status and provide a schedule for the T-bar installation. |R1

Conclusion

This issue is factual and identified a potential problem but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken. |R1

Generic Applicability

This issue was discovered at WBN as an ALARA concern based on the experience gained from SQN. BLN and BFN are not similar in design and therefore evaluations were not necessary.

Issue 311.05-5 - Safety Hazards Associated With Access to Valve

WBN

The concern addressing the need of relocating valves on SIS accumulators to reduce the safety hazard and exposure time was substantiated in the WBN Access Survey; however, corrective actions have been implemented. This evaluation concurs with the WBN Access Survey. Additionally, a Hazard Assessment Worksheet IM-006-85 was performed on this issue. Based on the Access Survey, it was determined that before maintenance and calibration could be performed on the SIS accumulator valves, carpenters and steamfitters were required to perform their tasks in confined spaces in the upper accumulator rooms. Instrument maintenance had suggested moving the valves to a lower, more accessible location which reduced potential |R1

scaffolding accidents and reduced exposure time. As a result, WB DCR-633 was issued for new interfacing of the SIS accumulators which would relocate the accumulator level instrumentation, reduce manhour expenditure, and limit potential radiation exposure. By relocating the valves and instrumentation to a more accessible area, the need for scaffolding and the associated safety hazard would be eliminated. |R1
CATD 31105-WBN-05 was written to track closure of DCR-633. |

Conclusion |

This issue is factual and identifies a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken.

Generic Applicability |

|R1

This concern was evaluated at WBN only. However, the issue was also evaluated at SQN under concern IN-85-189-001. This concern was not evaluated at BFN or BLN due to the absence of valid, safety related findings at WBN or SQN. Additionally, it was found at the subcategory level that access problems are likely to exist at all sites. Therefore, corporate action will address this possibility, precluding specific evaluations by Operations at BFN or BLN.

Issue 311.05-6 - Generic - ALARA Program

WBN

INPO, in May and June of 1985, conducted a Construction Project Evaluation identifying that the TVA WBN's ALARA design review program needed to be expanded (Finding DC-2-1). The INPO finding stated "the radiation protection section is not reviewing all appropriate project drawings to ensure that ALARA considerations are addressed." As a result of incomplete reviews, some equipment was being located unnecessarily in high radiation areas which violated Safety Evaluation Reports commitments 12.002 and 12.005. TVA agreed that improvement in this area was needed. As a result, an ALARA Engineering walkdown of Unit 1 at WBN was performed to meet commitment of the NRC Deviation which stated, "complete the review of plant walkdown of Unit 1 to ensure that ALARA problems during operations are minimized." WBN QA also performed the ALARA walkdown in response to a Plant Compliance request to verify adequate completion of the HP walkdown. There were 182 ALARA concerns identified. HP at WBN is currently reviewing the ALARA concerns to determine their disposition. CATD 31105-WBN-06 was written to track the closure of the NRC deviation |R1
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The NQAM emphasizes reviews of ALARA-related DCRs/ECNs, and FSAR Vol. 12 commits the ALARA program to assure that specific administrative documents and procedures "emphasize the importance of ALARA through the design, testing, startup, operation, maintenance, and decommissioning phases of TVA nuclear plants." The ALARA program adequately addresses these commitments in AI-2.7.1, 3.5, RCI-1, and the Radiological Protection Plan (RPP). These procedures emphasized ALARA-related reviews of DCRs, plant procedures, pre-job planning, purchasing, contracting, construction, maintenance, and operating activities.

SQN

A review of NRC and Nuclear Quality Audit and Evaluation (NQA & E) Branch Reports was conducted regarding the SQN ALARA program. The NRC reports indicated weaknesses in the SQN ALARA Committee reviews of pre-and post-job assessments and the employee suggestions program. These items will be reviewed by NRC in a follow-up inspection; however, in regard to the ALARA program at SQN, no violations or deviations were identified.

The NQA & E audit reports revealed four deviations in the ALARA program at SQN. The first involved the lack of incentives and encouragement for employees to participate in the employee suggestion program. In item #2, it was found that annual ALARA reports were not issued on time. Item #3 related to the ALARA Preplanning Reports requirements not adequately addressing Regulatory Guide 8.8 requirements, and the last deficiency dealt with record retention of RWPs and ALARA reports. A CATD was written on each of these deviations for line management response (31105-SQN-01, -02, -03, and -04). R1

Although NRC and NQA and E audits indicated several problems in the SQN ALARA program, this evaluation concluded that within the scope of the concerns assigned to this element, the ALARA program was effective and adequate in identifying and minimizing radiological hazards.

Conclusion

This issue is factual and presents a problem for which corrective action is being taken as a result of the employee concerns evaluation. R1

3.6 Element 311.06 - Health Physics, Clothing, and Protective Equipment

Issue 311-06-1 - Leave Site Without Monitoring

WBN

The SQN concern in regard to personnel leaving the site without a final check for contamination was a statement of fact; however, it was not a problem at WBN. Due to the status of operation at WBN, there were no contaminated areas in the plant. It was also determined that there was no requirement for performing a final check for contamination before leaving the site. |R1

SQN

The concern stating that personnel can leave the site without a final check for contamination was not substantiated. SQN's HP Department had provided instrumentation throughout the plant for workers to monitor themselves for contamination in the form of portal monitors and friskers. In addition, a permanently manned control point was staffed with HP technicians to observe and control personnel and equipment exiting the regulated area. Administrative controls were also found to reasonably ensure personnel were monitored. In the event an individual deliberately bypassed the monitoring process, the individual was subject to having an Radiological Inspection Report (RIR) written and corrective or disciplinary action taken. |R1

BFN

The concern in regard to leaving the site without monitoring evaluated at WBN and SQN was not substantiated at BFN. It was determined by a physical inspection of the plant that monitoring systems were utilized to prevent the spread of contamination when exiting C-zones and regulated areas. In addition, portal monitors were located in the gatehouse exits to monitor personnel leaving the controlled area. Based on an interview with HP personnel, additional frisking systems are provided to ensure a final contamination check at the gatehouse exits in the event portal monitors were out of service.

BLN

The same concern was not substantiated in the evaluation for BLN. There were no contamination areas at BLN due to the status of the plant; therefore, there was no need or requirement for monitoring before leaving the site.

Conclusion

|R1

This issue could not be verified as factual at any site.

Issue 311.06-2 - Lack of Portal Monitors at Plant Exits |R1

WBN

The SQN concern stating that no portal monitors exist at plant exits was a statement of fact at WBN; however, it was not considered a problem. It was determined that since WBN had no contaminated areas because of its status, no requirements for monitoring at plant exits existed.

SQN

The concern that no portal monitor exists at the plant exit was not substantiated. It was determined by visual observation that there was a portal monitor at the plant exit. However, the use of this monitor was not mandatory and there were no regulatory, TVA, or SQN procedural requirements for its usage. Portal monitors were placed there for the benefit of concerned employees and to provide a greater confidence in the radiation protection program.

BFN

The SQN concern evaluated at BFN in regard to lack of portal monitors was not substantiated. A portal monitoring system was observed to be in place and operating at the plant exits in accordance with FSAR-BFNP. Two identical portal monitors were located in each plant gatehouse. In the event the monitors were out of service, HP personnel stated that additional friskers would be provided to ensure a final check.

BLN

The same SQN concern was evaluated at BLN and found not substantiated. Portal monitors were not needed or required at BLN due to the status of the plant (i.e., no radiation or contamination areas).

Conclusion

|R1

This issue could not be verified as factual at any plant.

Issue 311.06-3 - Method of Collecting Self-Reading Dosimeters

WBN

Two concerns were evaluated at WBN involving the use of metal boxes being used to collect self-reading pocket dosimeters which could cause the dosimeters to be knocked off-scale. Neither concern was substantiated at WBN. It was found that the collection boxes at WBN were lined on the bottom with a foam/sponge material and were designed to allow dosimeters dropped into the box to roll down an incline to the bottom. Examination of dosimeter reading records for WBN showed no evidence of dosimeters being knocked off-scale. Additionally, if the dosimeters were knocked off-scale and an individual did not record his dose on his dose card, an individual's TLD would still provide the official dose record.

SQN

The concern stating that self-reading pocket dosimeters were collected in a metal box was factual as identified by a TVA Radiological Health Staff Line Report. The line report also stated that pocket dosimeters were no longer being collected in drop boxes but were being stored in TLD dosimeter badge racks in a specific slot identified by TLD number. In the past, off-scale readings were reported in only .018 percent of the total dosimeters dropped at SQN. This evaluation concurred with the findings of line report.

BFN

The SQN concern regarding the collection of dosimeters in metal collection boxes was a statement of fact at BFN but was not considered a problem. It was found that collection boxes at BFN were collected in a foam padded metal box which would reduce the possibility of the dosimeter going off-scale. Although off-scale dosimeters had been turned into Dosimetry, the actual number attributed to being dropped in collection boxes could not be determined. Off-scale dosimeter readings result in an investigation and determination of an individual's actual dose by reading the TLD worn by the individual.

Conclusion

R1

This issue was factually accurate, but what it describes is not a problem.

Issue 311.06-4 - Use of Face Masks

SQN

The concern noting that some personnel were required to wear face masks while others in the same area (including HP) were not, was substantiated as a statement of fact; however, no corrective actions were required. The occurrences described in the concern had occurred at SQN but were justifiable based on the conditions detailed on the applicable RWPs. Respirator usage was based on the job assignment and not necessarily the area where the work was performed. Based on interviews and review of procedure, audits, and other documentation, no evidence was found to conclude that the SQN Respiratory Protection Program was not properly and professionally administered in accordance with all applicable requirements. In addition, interviews with HP technicians revealed that they were aware of protective equipment requirements and make adjustments to respiratory usage in an area if required.

Conclusion

R1

This issue was factually accurate, but what is describes is not a problem.

Issue 311.06-5 - Unavailability of small-sized Gloves

WBN

The SQN concern regarding not having enough C-zone gloves in the small-size was not substantiated at WBN. At the time of the evaluation, the ordering process for C-zone gloves had not been implemented. However, specifications for protective clothing had been developed which included various sizes of gloves.

SQN

The concern regarding the lack of enough small-size gloves was substantiated at SQN; however, corrective actions were implemented after the problem resulted in an injury. It was determined that as a result of the incident which involved the usage of gloves that were too large, smaller gloves were utilized at the site. It had been indicated in an interview that it was not practical to order every size glove, so only the most common sizes were ordered. It was found that SQN Power Stores now stock the smaller sizes and that there have been no other safety incidents regarding the use of gloves.

BFN

The SQN concern evaluated at BFN involving the lack of purchasing smaller size gloves was not substantiated. It was determined that the glove size ordered at BFN had been adequate and that no requests for ordering additional sizes had been received by Building Services. No complaints concerning insufficient quantities of various size gloves were identified based on interviews with cognizant personnel.

BLN

The same SQN concern was evaluated at BLN and determined not substantiated. The delayed condition of the plant had dictated that C-zone clothing items including gloves were not to be ordered at this time. Therefore, the problem of not ordering smaller sized gloves could not be evaluated.

Conclusion

At SQN, this issue was factual and identified a problem, but corrective action for the problem was initiated before the employee concerns evaluation of the issue was undertaken. At all other sites, the issue could not be verified as factual. R1

Issue 311.06-6 - Reuse of Outer Gloves

WBN

The SQN concern regarding the reuse of contaminated outer gloves was previously investigated by NSRS (Report I-85-652-SQN). It was not substantiated at WBN. There were no contaminated areas at WBN; therefore, there were no contaminated clothing being generated or laundered. Procedures for laundry operations and contamination control at WBN were being developed at the time of this evaluation and will establish contamination limits in accordance with NRC guidelines and TVA procedures.

SQN

The concern regarding the reuse of contaminated outer gloves was substantiated as a statement of fact in a previous investigation by NSRS (Report I-85-652-SQN); however, it was not considered a problem. The investigation determined that the level of fixed contamination was within prescribed levels for cleaned protective clothing as required by the RPP. This was based on a random sample of C-zone gloves and shoe covers. It was also found that the reuse

of such gloves with fixed contamination at established levels was not found to represent "insufficient attention to detail" as described in the concern. However, NSRS did recommend that GET lesson plans be revised to better explain fixed contamination levels to workers. It was determined by reviewing the applicable lesson plans that Training had made revisions to the applicable GET HP courses. This evaluation concurred with the findings of the NSRS report.

BFN

The SQN concern in regard to the reuse of outer gloves was factual but not considered a problem at BFN. It was determined through interviews and review of applicable procedures and reports that protective clothing was surveyed by the laundry monitoring system and/or technicians before being released for reuse. Trip points were set on monitors to ensure contamination levels on protective clothing did not violate plant procedures. In addition, random surveys of protective clothing were also performed on the stocked shelves in the plant to ensure contamination levels were within acceptable limits. |R1

Conclusion

At SQN and BFN, the issue was factually accurate, but what it describes is not a problem. At WBN, the issue could not be verified as factual. |R1

Issue 311.06-7 - Post Accident Sampling Room

WBN

The concern stating the post accident sample room was too small to dressout was previously investigated by line management at WBN and was not substantiated. It was determined that the Post Accident Sampling Facility (PASF) was neither designed to dressout, nor was it intended that dressout be accomplished there. It was also found in this evaluation that training for PASF activities included dressout in a designated area before entering the Auxiliary Building which contained the PASF. This evaluation concurred with the findings of the line management report. |R1

Conclusion

This issue could not be verified as factual. |R1

Issue 311.06-8 - Unavailability of C-zone Clothing

SQN

The concern over the availability of proper C-zone clothing for entering the Condensate Demineralizer Waste Evaporator (CDWE) Building was not substantiated. It was observed during a walkthrough inspection that protective clothing was readily available for entering the CDWE. Clothing bins were found at the 706-foot elevation entrance to the CDWE Building and were stocked. An interview with a Building Services employee did reveal, however, that they did not routinely stock the clothing bins at the 706-foot elevation but were typically stocked by individuals for their own use.

Conclusion

R1

This issue could not be verified as factual.

Issue 311.06-9 - Location of TLD Badge Racks

WBN

The concern regarding the location of TLD badges near the main steam lines was a statement of fact at WBN; however, it is not considered a problem. TLD badge racks were found at the Dosimetry Issue Building under the main steam lines. However, due to the status of WBN, it was determined that there was no chance of a primary to secondary leak that would affect TLD badges. Based on interviews with HP and Dosimetry personnel, it was stated that an alternative location for the badge racks and plans for separate Dosimetry Building were being evaluated.

Conclusion

R1

This issue could not be verified as factual.

Issue 311.06-10 - Unrepaired C-zone Clothing

WBN

The SQN concern stating that C-zone clothing were not being patched by the laundry was not substantiated. There were no contaminant areas at WBN which required C-zone clothing, therefore, no C-zone clothing was generated.

SQN

The concern noting C-zone clothing were not being patched by the laundry was substantiated, and corrective action was required. Visual inspections of C-zone laundry and interviews were conducted with laundry personnel. Although it was possible to find C-zone clothing with holes, it was apparent that the laundry did routinely patch or repair damaged C-zone clothing. A random sample of 21 laundered C-zone clothing revealed that 8 were patched, 11 had one or more holes of less than 1/2 inch diameter. Based on the fact that half of the items surveyed were found with unpatched holes, this indicated that the plant's efforts to maintain serviceable C-zone clothing were inadequate. However, it was stressed in memorandums and training that each worker had the responsibility to ensure the serviceability of his protective equipment. CATD 31106-SQN-01 was written to identify this problem to line management. |R1

BFN

The SQN concern in regard to unrepaired C-zone clothing was not substantiated at BFN. Based on interviews and review of NRC and INPO inspection reports, it was determined that protective clothing was surveyed and inspected in accordance with radiological control instructions before being released for use. No sampling was done at BFN because of the lack of violations (indications) at BFN. No violations were identified in the use of protective clothing for the past two years. For visible defects that were detected, a heat sealing machine was used for repairs. |R1

BLN

The same SQN concern was not substantiated at BLN. It was determined that due to the status of the plant, C-zone clothing was not being used or processed by plant personnel. Therefore, no requirement for laundry operations existed.

Conclusion

This issue was identified as factual at SQN and presented a problem for which corrective action has been or is being taken as a result of employee concerns. At all other sites, this issue could not be verified as factual. |R1

3.7 Element 311.07 - Radioactive Effluents/Uncontrolled Areas

Issue 311.07-1 - Inadequate Provisions to Protect Personnel from Radiation Between Units

WBN

The three concerns that involved potential airborne radiation releases from Unit 1 which could affect personnel in Unit 2 were not substantiated. Due to the status of WBN, there were no known sources of airborne radiation releases and no observations of associated activities could take place. However, it was determined that Administrative Instruction, AI-1.6 established interface points between Unit 1 and Unit 2 to ensure "the integrity of Unit 1 operation" and to "minimize potential radiological hazards to personnel completing construction and testing of Unit 2." It was observed that security barriers were in place to aid in the identification and control of radiological hazards by limiting access providing boundaries between areas requiring personal monitoring and in limiting the spread of contamination. During normal operation of Unit 1, it was found that routine radiation, contamination, and airborne surveys would be taken at the fence between Units 1 and 2 and in rooms and corridors containing common system piping. In addition, continuous air monitors sample the air at designated locations. The Radiation Emergency Plan (REP), GET, and plant procedures also provided instructions to workers in the event airborne radioactivity was detected above the established limits. |R1

Conclusion

This issue could not be verified as factual. |R1

Issue 311.07-2 - Unrepresentative Air Quality Checks

WBN

The concern regarding the number of air quality checks needing to be more representative was not substantiated. It was determined by reviewing survey results and applicable procedures and conducting interviews with cognizant personnel that airborne radioactivity surveys were made on a continuous routine and unscheduled basis. Surveys were performed in both inside and outside potential radiological areas. In addition, breathing air quality tests were performed to ensure the breathing air met specifications and requirements of 29CFR1910. No violations of any regulatory requirements or management policies were identified.

Conclusion

R1

This issue could not be verified as factual.

Issue 311.07-3 - Impact on Environment/Public

WBN

The concern in this issue questioned the impact of normal WBN operation on the surrounding area as well as the effect of radiation on the public was not substantiated based on a previous investigation by WBN line management and this evaluation. Line management had determined that the WBN Environmental Statement (ES) had addressed the impact during normal operation of WBN on the surrounding areas which involved land use, water use, fossil fuel consumption, chemical effluents, and radioactive effluents. The ES was prepared for the NRC and made available to the public and other agencies in 1978. In addition, this evaluation reviewed the FSAR and applicable plant procedures which expressed that during normal operation of WBN, regular and constant monitoring of effluents would be conducted to ensure effluent levels met Federal regulations and TVA requirements for minimizing exposure to the public.

Conclusion

R1

This issue could not be verified as factual.

Issue 311.07-4 - Uptake of Radioactive Substances Due to Similar Fittings

WBN

The WBN concern in this issue identified the potential of radioactive substances being introduced into other systems due to similar connections being used for service air, demineralized water (DW), and contaminated drain connections and was substantiated at WBN; however, corrective actions have been implemented based on ALARA Review 0291 and NRC Audit 50-390/85-20. Based on their findings, two possibilities for wrong hookup were identified: 1) connecting a breathing air manifold to a DW line, and 2) using contaminated hoses for connecting breathing air manifolds to Service Air. The NRC audit recommended tagging all Service Air lines to denote "Service Air Outlet." A random inspection confirmed that they had been tagged and were inspected regularly for compliance.

To prevent the use of contaminated hoses for connecting breathing air manifolds to Service Air, HP was revising TSIL-19 to include requirements for HP certification of manifold installation before use, a hold order requirement on Service Air valves and designated air lines for hookup. This evaluation concurred with the findings of these reports. CATD 31107-WBN-01 was written to obtain the status of the procedures being revised. |R1

Interviews with Respiratory Protection Supervisors at SQN and BFN revealed that fittings on the hookup lines and manifold for breathing air, demineralized water, and contaminated drains are not unique, however, several precautions are performed prior to and during use to prevent wrong hookups such as hold orders, HP verification and tagging. Hoses are clearly marked "Breathing Air Only." No incidents associated with wrong hookups have occurred to date at WBN, SQN, or BFN. |R1

Conclusion

The issue was factually accurate at WBN, SQN, and BFN however, BFN and SQN precautions are taken to ensure this is not a problem. Corrective action was taken for the problem at WBN before the employee concerns evaluation of the issue was undertaken. |R1

4.0 COLLECTIVE SIGNIFICANCE

A collective assessment of the element-level findings (Section 3.0) led to the identification of two subcategory-level findings, one at WBN and one at SQN. These findings were determined to reflect adversely on management effectiveness at these two sites and dealt with ALARA and with management accountability as follows:

(a) During the initial design of WBN, there was a lack of corporate guidance and design input criteria with respect to ALARA considerations.

(b) There is a lack of management accountability at SQN with respect to the extent QA record requirements should be applied to RWP timesheets.

4.1 Insufficient Attention to ALARA Considerations (WBN)

With respect to the first finding, Design Change Requests have had to be initiated to move process instrumentation and valves in order to locate them out of potentially high radiation areas. Barricades or other engineering controls have also had to be added to prevent access into potentially high radiation areas. Also, an ALARA Engineering walkdown of Unit 1 performed by WBN QA resulted in 182 ALARA deficiencies being identified. All of these findings seem to point to a lack of understanding of ALARA regulatory requirements during initial design. This subcategory level finding regarding ALARA is similar to the subcategory level finding presented in Subcategory Report 30500, "Accessibility." In that report, it is stated that there has been a lack of corporate control over initial design activities and over modification activities relative to accessibility consideration for equipment operation and maintenance and for ALARA situations. |R1

4.2 Lack of Management Accountability (SQN)

With respect to the second finding, there is a lack of clear definition of QA record requirements for RWP timesheets at SQN. Personnel are trained in GET that RWP timesheets must be treated as QA records. However, this evaluation found instances where personnel in the field do not handle RWPs in accordance with QA record requirements and it is endorsed by line management. Management is not being held accountable for deciding proper policy and for enforcing it. Also, personnel are being given training which conflicts with what they see put into actual practice. This negative reinforcement of training could be sending a subtle message to employees that training is primarily a formality conducted to meet requirements and does not necessarily reflect actual work practice. Such an attitude could lead to repeated poor work practices.

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 the root causes for all elements were then analyzed collectively to identify which occurred most frequently and at the most sites. Details of the symptom and root causes derived for each element are presented in Attachment D, "Summary of Symptoms and Root Causes." |R1

The review and analysis of these symptoms and root causes taken collectively pointed to three significant root causes for the subcategory:

- Various HP procedures were incomplete or fail to incorporate all technical requirements (WBN, SQN, BFN).
- There have been errors in judgement made by qualified individuals (WBN, SQN, BFN).
- There have been inadequate prerequisites defined to ensure satisfactory completion of various tasks related to HP (WBN, SQN, and BFN).

These three root causes derived from root cause analysis are supported by various element-level findings at WBN, SQN, and BFN. The first root cause is supported by the inadequacy of ALARA considerations in procedures for reviewing initial design at WBN. For the second root cause, evaluations of training experience for individuals at each of the three sites were not being submitted by POTC to the Office Training Committee, and the QA audit at SQN was performed against Reg. Guide 8.8. With respect to the third root cause, no prerequisites were in place for any of the three sites to ensure training evaluations that allowed individuals to be hired with previous experience without having OJT at a plant that had achieved power operation, and the QA audit task at SQN had incorrect prerequisites.

6.0 CORRECTIVE ACTION

6.1 Corrective Action at Element Level

WBN

A CATD (OP 31100-WBN-01) was issued to WBN line management regarding disjointed paragraphs and missing text from the WBN FSAR. An applicable response to this CATD received from WBN line management was as follows:

"The individual resolution of immediate action for I-00311 will be accomplished by Final Safety Analysis Report (FSAR) revision which will be submitted to the Nuclear Regulatory Commission (NRC) by March 16, 1987. Numerous inaccuracies in the Watts Bar FSAR have been documented under Significant Condition Report (SCR) GEN NEB 8602 and will be satisfactorily resolved by a comprehensive FSAR verification plan. The objective of the FSAR verification is both an update to achieve accuracy and the development of an interface with the change control programs for design and operations. This will provide for the maintenance of FSAR accuracy. That plan is part of the Design Baseline and Licensing Verification Program which is clearly identified on the Watts Bar Integrated Schedule and is a prerequisite to fuel loading."

THIS ITEM COMPLETED DATE: 6-27-88

6.1.1 Element 311.01 - Health Physics Staff Training

WBN

One CATD (OP 31101-WBN-01) was issued to WBN line management to identify the failure of the HP Department of not returning biennial feedback questionnaires supplied by PORC in accordance with applicable procedures.

WBN line management responded to the CATD in the following manner:

> "No Corrective Action required. Feedback forms deleted from TCI-12 revision of October 1986. 1985 Feedback forms were not submitted because Watts Bar had no trainees in 1985."

THIS ITEM COMPLETED DATE: 6-27-88

Concurrence of this CAP was based on a review of TCT-12 on October 27, 1986. This review determined that the evaluations of training by supervisors was not deleted. The evaluation method and process was revised which deleted the feedback form and instituted the requirement for a Training Evaluation Report. This revision also limited evaluation to those sites to which trainees are assigned.

SQN

One CATD (31101-SQN-01) identifying deficiencies in the resolution of feedback questionnaires was issued to SQN. The acceptable response to this CATD received from SQN line management was as follows:

> "No further action required based upon recent revisions to applicable instructions as follows: Health Physics Training (Non-GET) Procedure 0202.12 R2, 3786; Division of Nuclear Training Standard Practice DCT 12, 10/86; C, HP and Safety Training Section Instruction Letter T6, R2, 3/86."

THIS ITEM COMPLETED DATE 9/9/88

In the response, an example of a recent evaluation report of HP technicians' job performance was provided. The report showed that the in-plant phase of training and impact of retraining requirements is being adequately addressed.

BFN (NPS)

A CATD (31101-NPS-01) was issued to POTC based on the BFN evaluation identifying that the requirement for the Office Training Committee to review and approve a bypass of the basic phase of training was not being implemented.

The acceptance response to this CATD received from BFN line management was as follows:

> "The objective of PMP 0202.12 is to produce and maintain technically competent health physics technicians, including technicians qualified in accordance with ANSI N18.1-1971. Personnel hired into TVA as fully ANSI-qualified by definition meet requirements. ANSI N18.1 requires that technicians in responsible positions have two years of experience in their specialty. In addition, one year of related technical training is suggested but not required. The TVA training program is an internal program designed for individuals who will eventually become ANSI-qualified but does not apply to individuals hired from outside TVA who are already fully ANSI-qualified.

"Thus, we do not interpret PMP 0202.12 to require training waivers for such individuals. PMP 0202.12 does require approval of waivers allowing credit for trainees for certain portions of the training program. Thus, no specific corrective action is required.

"However, corporate Radiological Control (RADCON) is preparing, in coordination with site RADCON organizations and the Division of Nuclear Training (DNS), standards on selection, qualification, and training of RADCON personnel within the Office of Nuclear Power (ONP). These standards will be developed and issued by June 30, 1987, contingent upon the ONP procedure system allowing their approval and issuance. These standards will specifically address the issue raised by the concern and will remove any residual ambiguity in interpretation of requirements for education, training, and experience for health physics technicians. PMP 0202.12 is being reviewed in conjunction with development of the standards and will be revised as necessary to be consistent with the standards."

6.1.2 Element 311.02 - Radioactive Material Control

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

6.1.3 Element 311.03 - Exposure Limits and Records

SQN

A CATD (31103-SQN-01) was issued to SQN line management concerning the handling of RWP timesheets and correcting QA documents. Part of the acceptable response to this CATD received from SQN line management was as follows:

"The QA record requirements for RWP timesheets are disseminated to all personnel utilizing the timesheets via the General Employee Training (GET) course GET-002.2, Level II/Health Physics Training. During the practical factors portion of the class, all personnel must utilize the RWP timesheet and are evaluated on proper timesheet sign-in and sign-out. They are also instructed in the required method for making corrections to a QA document."

THIS ITEM COMPLETED
DATE 10-26-87

Health Physics management response regarding RWP timesheet requirements are included in the SQN response to the CATD issued for 311.04.

6.1.4 Element 311.04 - HP Policy, Practices and Management Control

SQN

A CATD (31104-SQN-01) was issued to SQN line management in conjunction with the 311.03 element report. The CATD covers the case of RWP's not being handled as a QA document in the field and RIR's not coming to the attention of HP Supervisors or SQN operations management. The acceptable responses to this CATD and the CATD issued for 311.03 regarding RWP timesheet requirements, received from SQN line management, were as follows:

"Pertinent procedures have been revised to reflect the current status of determining/classifying RWP-timesheets as QA or non-QA; however, all RWP-timesheets are retained as lifetime records."

"AI-7 Revision 39 incorporated information in Attachment 2 beside Radiation Work Permit Timesheets that said "(only when used for dose history records)." Date of Rev. 7/14/86. Note: Revision 40 dated 8/8/86 and Revision 41 dated 10/9/86 did not change this information.

"RCI-14 Revision 5 dated 5/1/86 under Section III.0 states: "The RWP is a QA record when completed and authenticated by signature and date of the HP Shift Supervisor." Also Section V.A.5 states that "RWP Timesheets used for assessment of MPC hours and noble gas skin dose are QA documents." Section VII Quality Assurance (QA) restates and emphasizes the above QA records.

"ASIL-4 Revision 11 dated 5/29/86 added a clarification to Table I "QA Records Lifetime Retention Period" which stated beside the RWP timesheets: "(per AI-7)." But this is under the column titled "Record Title."

THIS ITEM COMPLETED
DATE: 8/12/87

HPSIL-7 Revision 15 dated 5/15/86 states:

"IV. QUALITY ASSURANCE

A. "Completed Radiation Work Permits (RWP's) and RWP Timesheets used to track airborne exposure (MPC hours and skin exposure) are QA documents and are to be handled in accordance with requirements of ASAL-4 and AI-7.

B. "All RWP Timesheets are not QA documents. To ensure that those timesheets that are used to track airborne exposures are identified as QA documents, they will be stamped as "QA Records" prior to being sent to the Data Processors.

C. "All QA documents will be listed and transferred utilizing a QA document/record transmittal sheet.

"Recommendation to distribute RIR summaries to HP staff has been incorporated (first communications mailed for review 9/29/86) and will be issued each quarter. In the future the summary sheet will be mailed to the plant manager as a possible agenda item for his weekly meeting."

THIS ITEM COMPLETED
DATE: 8-12-88

6.1.5 Element 311.05 - ALARA

WBN

Six CATD's were sent to WBN line management regarding the status and schedule for modifications to the SG platforms, removal of a panel from a high radiation area, implementation of an ECN which will provide more reliable equipment in a high radiation area, installation of T-bar barricades, new interfacing of SIS accumulator instrumentation, and the disposition of each deficiency identified in an ALARA walkdown.

WBN line management's response to the CATD (OP 31105-WBN-01) issued in regard to tracking the modifications to the SG platforms was as follows:

"Closure of ECN 6115 will adequately address the concern in ECSP Report Number 311.05-WBN."

In response to the CATD (OP 31105-WBN-02) requesting status and schedule for the relocation of Panel 0-L-14 from a potentially high radiation area, WBN's line management replied with the following:

"The following represents the status of relocation of PNL-0-L-14:

1. RAD CON will submit a DCR for relocation of PNL-0-L-14.

2. Change Control Board will review DCR upon submittal.

3. Upon approval by the Change Control Board, the DCR will be forwarded to DNE for design changes per ECN.

4. Plant will implement ECN.

The tracking document which should be used is the DCR. In order to minimize future similar occurrences, RAD CON performs ALARA reviews of all designs and modifications per AI-2.75 and AI-8.10."

The response from WBN line management in regard to the placement of more reliable equipment to reduce exposure during calibration/maintenance activities (CATD OP 31105-WBN-03) was as follows:

"Closure of ECN 6005 will adequately address the concern in ECSP Report Number 311.05-WBN."

The acceptable response to the CATD (OP 31105-WBN-04) from WBN line management with respect to the status schedule for the installation of T-Bar barricades on return air duct penetrations for the regenerative heat exchanger was as follows:

"The following represents the status schedule for installation of T-Bars on return air duct penetrations for regenerative heat exchanger:

1. RAD CON to submit DCR to install T-Bar or equivalent barricade at penetration to regenerative letdown HX room, units 1 and 2.

2. DCR to be submitted for approval by 2-19-87.

3. This condition is limited in scope to the regenerative letdown HX cubicle, therefore a generic evaluation will not be necessary."

In response to the CATD (OP 31105-WBN-05) issued in regard to tracking the new interfacing of SIS accumulation instrumentation, WBN line management replied with the following:

"Closure of DCR 633 will adequately address the concern in ECSP Report Number 311.05-WBN."

The acceptable response from WBN line management to the CATD (OP 31105-WBN-06) regarding the tracking of the closure of the disposition of each deficiency in the ALARA walkdown was as follows:

"Closure of NRC Deviation 390/85-33-01 and CCTS No. NCO-85-0257-009 will adequately address the concern in ECSP Report Number 311.05-WBN."

SQN

SQN line management was issued four CATDs (31105-SQN-01, 02, 03, 04) based on the findings of NQA&E Branch Reports concerning the ALARA suggestion program, annual ALARA reports, ALARA program preplanning report requirements, and radiological safety-related activities documentation. Although SQN did not issue a corrective action plan specific to the CATD's, they did provide their response to the QA audit which was considered an acceptable response. Their response was as follows:

"NUCLEAR QUALITY AUDIT AND EVALUATION BRANCH REPORT
NO. QSS-A-86-00

Deviation No. QSS-A-[illegible]-0022-002

The SQN ALARA suggestion program is not being implemented in accordance with standard practice SQN-145.

THIS ITEM COMPLETED
DATE 3-1-88

"Deviation Details

A. Only one of four ALARA suggestions submitted in 1986 has been responded to. The remaining three (submitted in February, May, and June) remain incomplete.

SQN-145, "As Low As Reasonably Achievable (ALARA) Suggestion Program," Revision 0, Section III states, "...the ALARA engineer will evaluate the suggestion and should provide a written response within two weeks..."

THIS ITEM COMPLETED
DATE: 3-4-88

"SQN Response to QSS-A-86-0022-D02

SQN agrees with the deviation. Deviation detail A states that the deviation was the result of failure to provide a written response for the ALARA suggestions within a two week time period. Experience indicates some ALARA suggestions require significant investigation before an adequate response can be given. Therefore, SQN-145 was revised on August 14, 1986, the day of the audit finding, to remove reference to response time limitations. Even though the response time limitations have been removed from SQA-145, the ALARA staff will make every effort to respond to the suggestions in a timely manner.

"Deviation Details

B. SQA-145, Attachment 1 is not being used to document the response as required.

SQA-145, Section III also states, "...the response will be recorded on Part B of the ALARA suggestion form..." (the suggestion form is Attachment 1).

"Response

SQN agrees with the deviation. In this particular case, the suggestion response was made on a separate sheet due to inadequate space for a proper response on Attachment 1.

This has been an approved method for response in the past. In the event additional space is required for an adequate response, Attachment 1 of SQA-145 will be labeled "see attached sheet." As of August 22, 1986, all 1986 ALARA suggestions received contain a properly documented response as required by SQA-145.

"Deviation No. QSS-A-86-0022-D03

Contrary to the Radiation Protection Plan (RPP), SQN Annual ALARA Reports are not being submitted to the Manager of Nuclear Power within 90 days after the beginning of the new calendar year.

"Deviation Details

A. Site QA staff in survey 9-85-P-007 (September 13, 1985) identified that the annual ALARA reports for 1983 and 1984 were submitted after the 90-day limit.

B. The 1985 report was also submitted late.

Radiation Protection Plan, Revision 2 states in Section 4.5:

> Each site director shall submit an annual ALARA report...within 90 days after the beginning of the new calendar year...

"Response

SQN agrees with this deviation. For the purpose of this audit, no response is provided in reference to the 1983 and 1984 annual ALARA reports since they were addressed as a result of survey 9-85-P-007.

The 1985 Annual ALARA Report was initially prepared in early March 1986 and submitted to the plant manager for review in mid-March. The plant manager requested a format change for the report which resulted in further delay. The final report was submitted to the plant manager on March 28, 1986, for approval. The RIM's tracking number was assigned on April 2, 1986; however, the report was not submitted to the manager of the Office of Nuclear Power until April 7, 1986. To reduce the possibility of further deviations in this area, HPSIL-25 was revised on March 10, 1986, to require submittal of the Annual ALARA Report from the Radiological Control Section to the Site Director within 60 days after the beginning of the new calendar year. This commitment should allow ample time for management review and approval to meet the April 1 deadline.

THIS ITEM COMPLETED
DATE: 3-4-88

"Deviation No. QSS-A-86-0022-D04

SQN's ALARA program does not incorporate all the requirements of Regulatory Guide 8.8.

"Deviation Details

A. When plant groups exceed ALARA goals, no corrective action is documented. Currently there are six groups in excess of their goal. No documentation of the reason or any corrective action taken was available for review by the audit team.

Regulatory Guide 8.8-1978, Section C.1.b.1.c states that "Corrective actions are taken when attainment of the specific objectives appear to be jeopardized."

THIS ITEM COMPLETED
DATE: 3-4-88

"Response

SQN disagrees with the deviation. Regulatory Guide 8.8 is a SQN reference document as defined in the Radiation Protection Plan, Rev. 3, and as such no commitments have been made concerning the entire implementation of this document.

Standard Practice SQA-129 establishes performance goals for the site and for individual plant groups. Performance against these goals is reviewed by the managers on a monthly basis using the Plant Performance Report. Additionally, a meeting is held at the end of the fiscal year to review the overall performance. A meeting was held with the plant managers on October 28, 1986. One of the activity items resulting from that meeting was a request to the Health Physics supervisor to provide a summary report on work activities that had resulted in unanticipated exposures.

"Deviation Details

B. SQN's RCI-10 does not include Regulatory Guide 8.8 requirements for decontamination, lighting, prejob briefing, or review of previous jobs as a part of the prejob report.

Regulatory Guide 8.8, Section C.3.a states that, "...Preparations and plans should reflect the following considerations:

(5) ..decontamination...

(6) ..preoperational briefing...

(13)..auxiliary lighting..."

THIS ITEM COMPLETED
DATE: 3-4-88

"Response

SQN disagrees with the deviation. Regulatory Guide 8.8 is a SQN reference document as defined in the Radiation Protection Plan, Revision 3, and is not required for full implementation.

RCI-10, Section IV, states that the responsible work supervisor shall ensure that all workers are briefed on the work, procedure, RWP protective requirements and special instructions, radiological conditions, and ALARA considerations prior to the start of the work. RCI-10, Attachment 1, provides a flow chart for use in completing an ALARA Planning Report (APR). Included in the flow chart is the block to "Brief Workers." RCI-10, Section IV also states that "ALARA" considerations which have been proven effective for repetitive tasks should be incorporated into the controlling procedures."

The Radiological Control Branch will issue specific guidance regarding the application of ALARA considerations for work activities. While SQN believes that our present ALARA planning is achieving its purposes, any further detailed criteria issued by Radiological Control will be implemented when it is issued.

"Deviation No. QSS-A-86-0022-D05

SQN is not maintaining documentation of radiological safety-related activities as required by American Nuclear Insurers (ANI).

"Deviation Details

RWP timesheets and ALARA planning reports are not maintained as QA records. ANI/MAELU Information Bulletin 80-1A, "Records Retention and Documentation of Radiological Safety-Related Practices" (L99 821201 001) states in Section VIII, titled "Work Assignments (Radiation Work Permits)":

...It is the intent of this section to set forth the records which are necessary to establish where and when an individual was working in a radiation controlled area, what he was doing there, the radiological environment in which he was working, the radiological controls and evaluations where they were applied to his working in a radiation controlled area, and any special requirements or conditions which may have existed at the time. Additionally, the records must show that proper authorization and control of an individual's radiation exposure was exercised by responsible plant management individuals.

"Response

SQN disagrees with the deviation. ANI/MAELU Information Bulletin 80-1A is an information notice and not a requirement referenced in any SQN procedure. A telephone conversation with ANI personnel further concludes that maintaining RWP timesheets and ALARA planning reports as lifetime records is a recommendation and whether or not they are designated as "QA" records is immaterial. It should be noted that standard practice at SQN is to maintain all dose-related records including RWP's and ALARA planning reports for lifetime of the plant."

BFN

Two CATDs were issued to BFN line management. One CATD (31105-BFN-001) identified the lack of a formalized ALARA suggestion tracking system. The acceptable response to this first CATD received from BFN line management was as follows:

"A computerized tracking system has been developed to identify the status of each ALARA suggestion. However, procedure development and personnel training will be completed by the end of January 1987.

THIS ITEM COMPLETED DATE: 2-6-87

Existing ALARA suggestion information will be loaded into the program by the end of March 1987. The new ALARA suggestion tracking system will be fully operational by April 1, 1987."

The other CATD (31105-BFN-002) identified problems associated with Electrical Maintenance's correspondence control. The acceptable response to this second CATD received from BFN line management was as follows:

"1. Electrical Technical Section responded to the one ALARA suggestion identified as requiring a response.

2. Electrical Technical Section has already implemented a tracking system for items requiring response. Items requiring response are given an assignment number, assignment date, due date, and description (which includes references). This information along with initials of the responsible engineer are entered into the computer program tracking log. A printout is generated each month. The printout is reviewed and updated throughout the month by the section supervisor.

3. Refer to memorandum from T. F. Ziegler to A. W. Sorrell dated November 24, 1986, "Browns Ferry Nuclear Plant - ALARA Suggestion for Relocating Drywell Control Air Filter Blowdown Valve - CATD No. 31105-BFN-002 (R39 861124 892)."

THIS ITEM COMPLETED
DATE: 4/3/88

6.1.6 Element 311.06 - HP Facilities, Clothing, and Protective Equipment

SQN

One CATD (31106-SQN-001) was issued to SQN line management concerning the number of damaged C-zone clothing articles issued for reuse which reflects on the lack of attention given to their maintenance and serviceability. The acceptable response to the CATD received from SQN line management was as follows:

"As described in reference 8 (memorandum from R. Prince to P. R. Wallace, "SQN-Employee Exit Interview Concerns" 8-11-86), the responsibility for ensuring the workers do not wear torn or damaged protective clothing lies with each individual. In any event, the Radiological Control Group has recently taken over the operation of the laundry. This will allow for tighter controls to be established at the working level.

"On November 6, 1986, a random inspection of 50 C-zone coveralls was performed. Two of these coveralls were found to have small (half inch) holes in them. Again, even though these coveralls are inspected by laundry personnel during the laundering cycle a small percentage will still get through, which is why workers must inspect the clothing themselves. A large number of C-zone clothing (principally white coveralls) was recently disposed of for this and other reasons. I believe this action eliminated a major portion of the torn articles and should resolve this issue."

THIS ITEM COMPLETED DATE 12-2-86

6.1.7 Element 311.07 - Radioactive Effluents/Uncontrolled Areas

WBN

One CATD (31107-WBN-01) was issued to WBN line management over the current status for updating procedures which includes requirements for manifold installation, hold orders and designated air lines. The acceptable response to this CATD from WBN line management was as follows:

"Historical Problem Description and Proposed Solution

Problem:

Possibility of using contaminated hoses for connecting MSA Breathing Air Manifolds to Service Air.

Previously Proposed Solution

Physical Changes:

1. Use designated air lines for MSA Breathing Air Manifolds.

THIS ITEM COMPLETED DATE 12-21-86

2. Change MSA Breathing Air Manifold input couplings from Chicago type to a different type, unique within the plant.

3. Use an adapter, Chicago type to a different type, to connect from Service Air to inlet hose for MSA Breathing Air Manifolds.

THIS ITEM COMPLETED
DATE: 7-27-88

Administrative Changes:

1. Revise RCI-4 and HP-TSIL-19.

2. Have HP certify manifold installation.

3. Put a hold order on Service Air valves being used for breathing air manifolds.

4. Have HP control air lines for breathing air manifolds.

5. Have HP control the adapter.

"Current Plant Situation

WBN is a preoperational power plant. At present, there is no possibility of radioactive fission and/or corrosion product contamination of Service Air, Service Air valves, or air lines. Fuel load is estimated to be at least two years' away.

"Necessary Action

Corrective action to preclude the use of contaminated air hoses for connecting the MSA Breathing Air Manifolds to Service Air are warranted and must be in place prior to initial criticality. Until then, there is no hazard.

Upon further investigation of the previously proposed corrective action, WBN Radiological Control (Rad Con) has concluded that a slight modification of the previously proposed solution will provide acceptable corrective action. Specifically, WBN Rad Con concludes that an adapter from Service Air to the inlet hose of the MSA Breathing Air Manifold is unnecessary. WBN Rad Con plans to use special designated air lines under the control of Rad Con to connect Service Air to MSA Breathing Air Manifolds. These air lines would have a Chicago-type

fitting on one end (for connection to Service Air) and a different type fitting on the other end (for connection to the MSA Breathing Air Manifold). The air lines would also be identified with a special sleeving material, which has been secured for this purpose. The type of fitting to be used on the MSA Breathing Air Manifold has not been settled. Discussions are underway with MSA at this time. If the solution can be used, no adapter is necessary to ensure that an uncontaminated air line will be used.

Administratively, HP-TSIL-19 and RCI-4 will require revision and are scheduled for the second and third quarter of 1987 respectively. Because corrective action does not require immediate implementation, we propose to maintain the present schedule for instruction review/rewrite. When revised, the instructions will reflect RAD CON control of designated air lines for MSA Breathing Air Manifolds which are identifiable by special sleeving and a unique fitting on one end. The MSA Breathing Air Manifold will be changed accordingly. Additionally, RAD CON personnel will certify correct installation prior to use of the MSA Breathing Air Manifold. To prevent the inadvertent disconnection of a MSA Breathing Air Manifold from Service Air, RCI-4 will also stipulate that a hold order be placed on Service Air valves to be used for supplying air to the manifolds.

"Completion Dates

Assuming changing the coupling on the MSA Breathing Air Manifold is permissible and a suitable coupling is obtained before April 30, 1987, HP-TSIL-19 and RCI-4 will be revised before September 30, 1987. At this point, all action should be completed."

THIS ITEM COMPLETED BY DATE: 12/30/87

6.2 Corrective Action at Subcategory Level

01 and 02 HWM 8/7/87

CATD 30500-NPS-~~03~~ being sent to TVA corporate management under Report 30500, "Accessibility," adequately addresses the first finding of this subcategory as presented in section 4.0 of this report, i.e., lack of corporate guidance and design input criteria with respect to ALARA consideration. The problem of management accountability as cited in the second subcategory-level finding is discussed in the Operation Category Report as one of the root causes found throughout the category's major findings. Because of this higher-level treatment of the topic of management accountability, no subcategory-level CATD is being issued under this report.

7.0 ATTACHMENTS | R1

Attachment A - Subcategory Summary Table

Attachment B - Listing of Concerns by Element/Issue

Attachment C - Checklist for Root Cause Analysis

Attachment D - Summary of Symptoms and Root Causes |

Attachment E - Graph of Symptoms Versus Root Cause |

Attachment F - Bar Charts of Symptoms |

Attachment G - Bar Charts of Root Causes | R1

Attachment H - CATDs |

Attachment I - List of Evaluators by Element/Plant |

ATTACHMENT A

Subcategory Summary Table

\TEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 ALARA

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 - 311 rev. 7 SECTION/ISSUE
BFN-85-002-00101	OP	31105	N	BFN	1 Y N N N 2 NO NA NA NA		NSRS	DURING THE EXIT INTERVIEW THE CI GAV E THREE EXAMPLES WHERE MODIFICATIONS HAVE NOT BEEN PERFORMED TO AGREE WI TH WINNING ALARA SUGGESTIONS. 1. MODIFY PIPING TO DRAIN TO A SUMP/DRAIN EXTERNAL TO AREA. 2. INSTALL SHIELDING BETWEEN FUEL POOL HEAT EXCHANGER AN D RWCU PRECOAT AREA.3. RELOCATE DRY WELL CONTROL AIR SUCTION FILTER BLOW DOWN VALVE TO OUTSIDE DRYWELL.	3.5 311.05-1
BFN-85-017-00101	OP	31103	N	BFN	1 Y N N N 2 SR NA NA NA		NSRS	DURING THE EXIT INTERVIEW THE CI STA TED THAT HIS NAME WAS REMOVED FROM T HE HP COMPUTERIZED EXPOSURE DATA BAS E AND WAS LATER ADDED. HE IS CONCER NED THAT SOME OF HIS EXPOSURE DATA M AY HAVE BEEN OMITTED.	3.3 311.03-4
BFN-85-019-00201	OP	31104	N	BFN	1 Y N N N 2 SR NA NA NA		NSRS	DURING AN EXIT INTERVIEW THE CI STAT ED THAT HE HAD BEEN REQUIRED TO PASS THRU AIRBORNE CONTAMINATION AREAS (WHERE RESPIRATORS AND AIR PACKS WERE REQUIRED) WITHOUT WEARING RESPIRATO RY EQUIPMENT. HE IS CONCERNED ABOUT EXPOSURE IN SUCH CASES.	3.4 311.04-2
BFN-85-020-00101	OP	31104	N	BFN	1 Y N N N 2 SR NA NA NA		NSRS	DURING THE EXIT INTERVIEW THE CI STA TED THAT THERE IS AN EMPHASIS FOR CR AFTMEN TO REMAIN "IN THE HOLE" (IN R ADIATION/CONTAMINATION AREAS) REGARD LESS OF THE HOLD STATUS. THIS IS NO T IN KEEPING WITH HP TRAINING TO MIN IMIZE RADIATION EXPOSURE.	3.4 311.04-2
BFP-85-001-00101 T50233	IH	60300	S	BFN	1 Y N N N 2 NO NA NA NA		QTC	THE FIRE HOSES USED TO CONTROL THE B ROWNS FERRY FIRE 8-10 YEARS AGO WERE TAKEN OFF SITE BY AN EMPLOYEE (NAME KNOWN) FOR PERSONAL USE. THESE CON TAMINATED HOSES MAY STILL BE STORED IN THEIR CONTAINERS POSING A HEALTH HAZARD. CI HAS NO FURTHER INFORMATI ON. NO FOLLOW UP REQUIRED.	3.2 311.02-5
02	OP	31102	S	BFN	1 Y N N N 2 NO NA NA NA				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 . RADIOACTIVE MATERIAL CONTROL

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 311 REV. 1 SECTION/ISSU
EX -85-091-00101 T50192	OP	31102	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	CI SAW A GROUP OF LABORERS PULLING A BARREL DOWN THE HALL IN THE MACHINE SHOP BLDG., ELEV 729', AND THE BARREL WAS MARKED "CONTAMINATED MATERIAL". THERE NEEDS TO BE A BETTER MEANS OF SAFEGUARD OR HEALTH PHYSICS PERSONNEL HANDLING SUCH MATERIAL. TIME OF OCCURRENCE WAS AROUND JULY OR AUGUST 1985. CI HAS NOT SEEN THIS TYPE OF INCIDENT HAPPEN SINCE. CONSTRUCTION DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION.	3.2 311.02-4
EX -85-091-00201 T50192	OP	31102	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	A PIECE OF METAL WAS IN A SPECIFIC BREAK AREA AND A HEALTH PHYSICS TECHNICIAN WAS CHECKING THE METAL AND SAID IT HAD A READING OF 200. IT LAID IN THE SHOP ABOUT 2 WEEKS WITHOUT ANY RESTRICTIONS, WARNINGS, OR CONTROL. INCIDENT OCCURRED IN SEPT. 1985. CONSTRUCTION DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION. DETAILS KNOWN TO QIC AND WITHHELD TO MAINTAIN CONFIDENTIALITY.	3.2 311.02-3
EX -85-117-00301 T50200	OP	31104	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	SOME HEALTH PHYSICS TECHNICIANS HAVE EXTREMELY LONG HAIR. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION. -GENERIC CONCERN-	3.4 311.04-3
HLA-85-001 01	OP	31106	N	SQN	1 Y Y Y Y 2 NO NO NO NO		OECP	PERSONNEL CAN LEAVE THE SITE WITHOUT A FINAL CHECK FOR CONTAMINATION.	3.6 311.06-1
I-86-235-SQN 01	OP	31106	N	SQN	1 N N Y N 2 NA NA NO NA		NSRS	AN ANONYMOUS INDIVIDUAL MAILED IN A SAFETY CONCERN TO NSRS STATING THAT THE PROPER C-ZONE CLOTHING FOR ENTERING THE ROOMS AT THE CONDENSATE DEMINERALIZER WASTE EVAPORATOR BUILDING IS NOT READILY AVAILABLE. PREVIOUS ATTEMPTS TO PLACE SOTRAGE CABINETS STOCKED WITH C-ZONE CLOTHING IN THE AREA HAVE BEEN TURNED DOWN.	3.6 311.06-8

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

ATEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 311 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

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 - 311 REV.1 SECTION/ISSUE
I-86-238-SQN 01	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA		NSRS	AN ANONYMOUS INDIVIDUAL MAILED IN A SAFETY CONCERN TO NSRS REQUESTING TH AT EMERGENCY PROCEDURES BE WRITTEN T O ENCOMPASS ALL ASPECTS OF POSSIBLE EMERGENCY SITUATIONS IN A C-ZONE. P ROCEDURES SHOULD COVER SPECIFIC AREA S, SUCH AS: SPREAD OF CONTAMINATION , POSSIBILITY OF INJURY, POSSIBILITY OF A FIRE. POSSIBILITY OF POOR BREA THING ATMOSPHERE, ETC.	3.4 311.04-4
IN -85-049-00201 T50050	OP	31102	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	RADIOACTIVE CONTAMINATED WATER FROM SEQUOYAH WAS BROUGHT TO WATTS BAR AN D DUMPED ON THE GROUND BELOW THE WAT TS BAR SCRAPYARD. (APPROX. 275,000 GALLONS OF RADIOACTIVE CONTAMINATED WATER) THIS TOOK PLACE APPROX. 5 YEA RS AGO DURING 1980. AFTER CONTAMINA TED WATER DRIED, THE SOIL WAS HAULED DOWN TO THE INTAKE PUMPING STATION WHERE IT WAS COMPACTED AND USED FOR THE INTAKE PUMPING STATION BASE. CI HAS NO FURTHER INFORMATION.	3.2 311.02-1
IN -85-049-00401 T50050	OP	31102	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	OPERATOR (NAME NOT KNOWN) OF BULLDOZ ER WHICH PICKED UP THE RADIOACTIVE C ONTAMINATED SOIL (REFERENCE CONCERN # IN-85-049-002) WAS NOT GIVEN ANY P ROTECTIVE CLOTHING (ANTI-C'S) WHEN T HE CONTAMINATED DIRT WAS LOADING ONT O DUMP TRUCKS AND HAULED DOWN TO THE INTAKE PUMPING STATION. THIS TOOK PLACE APPROX. 5 YEARS AGO DURING 198 0. CI COULD NOT PROVIDE ANY ADDITIO NAL INFORMATION.	3.2 311.02-1
IN -85-092-00101 T50001	OP	31106	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-092-001	QTC	POST ACCIDENT SAMPLE ROOM TO SMALL. MEN CANNOT DRESSOUT IN THIS AREA.	3.6 311.06-7

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY
CATEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 311 RADIOACTIVE EFFLUENTS/UNCONTROLLED AREAS

CONCERN NUMBER	CAT	SUB CAT	SHRD	PLT LOC	1 REPORT APPL 2 SAF RELATED BF BL SQ NB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - OP SUBCAT - 311 REV./ SECTION/ISSUE
IN -85-114-00101 T50024	OP	31107	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	INADEQUATE PROVISIONS EXIST TO PROTECT PERSONNEL IN UNIT 2 FROM AIRBORNE PARTICLES AND LOCAL RADIATION SOURCES. PROTECTION IS LIMITED TO A CHAIN ANCHOR FENCE	3.7 311.07-1
IN -85-126-00101 T50089	OP	31107	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-126-001	QTC	IMPACT OF WATTS BAR PLANT OPERATION ON SURROUNDING AREA AND EFFECT OF RADIATION TO PEOPLE IN SURROUNDING AREA. CI HAD NO FURTHER INFORMATION.	3.7 311.07-3
IN -85-142-00201 T50087	OP	31106	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-142-002	QTC	SELF READING POCKET DOSIMETERS ARE COLLECTED IN A METAL BOX LOCATED ON E LEV. 708', ENTRY PORTAL IN TURBINE BUILDING BY THROWING DOSIMETERS IN BOX. THEY COULD BE KNOCKED OFF SCALE. NO ADDITIONAL INFORMATION AVAILABLE FROM CI.	3.6 311.06-3
IN -85-219-00101 T50008	OP	31104	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	QUESTIONS THE ADEQUACY OF RADIOLOGICAL CONTROLS AND DE-CONTAMINATION PROCEDURES IN VIEW OF THE AIRBORNE CONTAMINATION PROBLEMS WHICH OCCURRED AT SEQUOYAH. QUESTIONS THE ALLOWABLE RADIATION LEVELS CONSIDERED ACCEPTABLE	3.4 311.04-4
IN -85-301-00601 T50177	OP	31103	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-301-006	QTC	WILL THE DAILY LIMITS OF ACCEPTABLE RADIATION EXPOSURE AT WATTS BAR BE THE SAME AS SEQUOYAH? CONST. DEPT. CONCERN. NO FOLLOW UP REQUIRED.	3.3 311.03-1
IN -85-463-00901 T50036	OP	31107	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	AIRBORNE RADIATION FROM UNIT #1 SIDE WILL AFFECT PERSONNEL ON UNIT #2 SIDE AS NO PROTECTION IS IN PLACE.	3.7 311.07-1
IN -85-499-00201 T50031	OP	31107	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	THERE IS NO MECHANISM IN PLACE TO DOCUMENT AIRBORNE EXPOSURE RECEIVED BY EMPLOYEES ON UNIT #2 CONSTRUCTION IN THE EVENT OF UNIT #1 AIRBORNE CONTAMINATION EMPLOYEES LEAVE BEFORE NAMES CAN BE RECORDED.	3.7 311.07-1

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

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. SECTION CAT - OP SUBCAT - 311 REV/ SECTION/ISSUE
IN -85-499-00301 T50031	OP	31104	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-499-003	QTC	AUTHORITY IS NOT GIVEN TO ENFORCE HE ALTH PHYSICS PROCEDURES FOR MONITORI NG RADIATION EXPOSURE IF THEY ARE IN TENTIONALLY VIOLATED BY EMPLOYEES.	3.4 311.04-1
IN -85-642-00201 T50062	OP	31104	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-642-002	QTC	EMPLOYEE TOLD TO SHAVE HIS BEARD OR BE SENT HOME. EMPLOYEE WORKING BEHI ND SECURITY ON A VISTORS PASS AND HA D 3 DAYS LEFT BEFORE LEAVING THE SEC URITY AREA. SAFETY OFFICER (LT.) VE RIFIED TO THE SUPERVISOP THAT THE EM PLOYEE DID HAVE TO SHAVE HIS BEARD. EMPLOYEE TOOK VACATION TIME TO AVOI D A CONFRONTATION WITH SUPERVISOR OV ER THIS ISSUE. MAY 1985 (NAMES/DETA ILS KNOWN TO QTC).	.3.4 311.04-3
IN -85-720-00201 T50099	OP	31102	N	WBN	1 N N N Y 2 NA NA NA SR		QTC	NUCLEAR WASTE FROM SEQUOYAH WAS DUMP ED ON WATTS BAR SITE IN JULY 1984. DELINE TO BE CONTACTED FOR ADDITIONA L INFORMATION. FOLLOW UP NOT REQUIR ED.	3.2 311.02-1
IN -85-869-00101 T50155	OP	30108	S	WBN	1 N N Y Y 2 NA NA SR SR	IN-85-869-001	QTC	MANWAY DOOR AT THE BOTTOM STEAM GENE RATOR TAKES APPROX. 20 MINUTES TO OP EN AND 3-4 HOURS TO CLOSE DUE TO A C OMPLICATED PROCESS NECESSITATED BY P OOR DESIGN. IF THE COMEALONG SLIPS, IT IS MOST LIKELY THAT PERSONNEL WO ULD BE PINNED BETWEEN THE SIDING ARM AND HAND RAIL. THERE ARE 5 REMS/HO UR EXCAPING WHILE THIS DOOR IS OPEN. A WAY TO OPEN/CLOSE THIS DOOR MUST BE FOUND THAT WOULD TAKE ONLY 20 MI NUTES TOTAL. CONSTR. DEPT. CONCERN. UNITS 1 AND 2. CI HAS NO FURTHER INFORMATION. NO FOLLOWUP REQUIR	3.5 311.05-2
02	OP	31105	S	WBN	1 N N Y Y 2 NA NA SR SR				
IN -85-991-00201 T50100	OP	31103	N	WBN	1 N N N Y 2 NA NA NA NO	IN-85-991-002	QTC	EMPLOYEE DOES NOT UNDERSTAND HOW DOS IMETRY CARDS ARE TO BE MAINTAINED OU TSIDE THE WORK AREA WITHOUT BEING LO ST OR DAMAGED. CI HAS NO FURTHER IN FORMATION. NO FOLLOW UP REQUIRED.	3.3 311.03-6

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 EXPOSURE LIMITS AND RECORDS

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 - 311 REV.) SECTION/ISSU
IN -86-025-00101 T50109	OP	31103	N	WBN	1 N N N Y 2 NA NA NA NO		QTC	HEALTH PHYSICS HAS INITIATED A PROGR AM WHERE EACH INDIVIDUAL WILL KEEP T RACK OF HIS DOSIMETER READING BY ISS UING CARDS FOR THE EMPLOYEES TO CARR Y WHILE WORKING ON A JOB REQUIRING A N RUP. IF CARD IS LOST OR DAMAGED T HE INDIVIDUAL HAS ONLY ONE OTHER MEA NS OF DETERMINING RAD DOSE, BY TLD B ADGE. CI HAS NO FURTHER INFORMATION . NO FOLLOW UP REQUIRED.	3.3 311.03-6
IN -86-044-00101 T50177	OP	31105	N	WBN	1 N N Y Y 2 NA NA NO NO	IN-86-044-001	QTC	PROCESS MONITORING·INSRUMENTATION (O -PI-77-197,O-PI-77-176, O-PI-77-34) IS LOCATED IN A HIGH RADIATION AREA. BECAUSE THESE INSTRUMENTS HAVE REQ UIRED EXCESSIVE AMOUNTS OF TIME TO R EPAIR AND RECALIBRATE, THE ALARA CON CEPT WOULD BE BETTER SERVED BY MOVIN G THE PANEL (O-L-14) TO A LOWER RADI ATION AREA. ELEVATION 676 NUC. POWE R CONCERN. UNIT. 1. CI HAS NO ADDI TIONAL INFORMATION. NO FOLLOW UP RE QUIRED.	3.5 311.05-3
IN -86-105-00101 T50119	OP	31106	N	WBN	1 N N N Y 2 NA NA NA NO	IN-86-105-001	QTC	TLD BADGE RACKS, LOCATED AT THE DOSI METRY ISSUE BLDG., ARE UNDER THE MAI N STEAM LINES (708' ELEV.TURBINE BLD G.,UNIT #1). IN THE EVENT OF A PRIM ARY TO SECONDARY LEAK, THE BADGES IN THE RACK COULD PICK UP SIGNIFICANT DOSE. THERE SHOULD BE A BETTER LOCA TION FOR THE TLD RACKS AND THE TLD I SSUE BUILDING. IF THE TLD ISSUE BUI LDING HAD TO BE EVACUATED, TLD PROCE SSING WOULD BE SUSPENDED BECAUSE THE TLD READERS FOR WBNP ARE IN THIS BU ILDING. NUCLEAR POWER. CI HAS NO M ORE INFORMATION.	3.6 311.06-9

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

ATEGORY: OP PLANT OPER. SUPPORT

SUBCATEGORY: 311 RADIOACTIVE MATERIAL CONTROL

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 - 311 REV.1 SECTION/ISSUE
IN -86-287-00101 T50178	IH	60400	S	WBN	1 N N N Y 2 NA NA NA NO	IN-86-287-001	QTC	WASTE WAS BROUGHT TO WBNP FROM SEQUOYAH BY TANK TRUCKS IN APRIL '84. CI IS CONCERNED ABOUT THE DUMPING PRACTICES AND AUTHORIZATION AND TYPE OF WASTE BEING DUMPED. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. CONSTRUCTION DEPT. CONCERN. CI HAS NO FURTHER INFORMATION.	3.2 311.02-1
02	OP	31102	S	WBN	1 N N N Y 2 NA NA NA SR				
JAM-86-001 01	OP	31102	N	SQN	1 N N Y N 2 NA NA SR NA		OECP	RADIOLOGICAL HYGIENE PROBLEM OF CONTAMINATED MATERIAL STORED IN LOCKERS AND CABINETS WHICH ARE NOT PROPERLY LABLED. MATERIAL STORED IN AUX. BUILDING.	3.2 311.02-3
JLH-86-003 01	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA		OECP	PER TVA'S GET CLASS AND PLANT PROCEDURES, EMPLOYEES ARE TO FRISK AS SOON AS EXITING A "C-ZONE". CURRENTLY, AN EMPLOYEE HAS TO SEARCH FOR A FRISKER. IN THE PROCESS OF LOOKING FOR A FRISKER, AN EMPLOYEE CAN CONTAMINATE DOORS AND/OR THE FLOOR. ONE OF TVA'S OBJECTIVES IS TO KEEP DOWN CONTAMINATION, AND THE CURRENT PROCESS DOES NOT ADEQUATELY CONTROL THE SPREADING OF CONTAMINATION.	3.4 311.04-4
JMA-85-001 01	OP	31104	N	SQN	1 N N Y N 2 NA NA SS NA		OECP	A HIGH RISK POSSIBILITY OF NOT SECURING ABSCE TYPE BREACHES. IF A VALID HIGH RADIATION CONDITION OCCURRS IN THE AUX. BUILDING OR DURING AN ANNOUCED EVACUATION OR EVACUATION ALARM SOUNDED MAY CAUSE PERSON TO LEAVE AUX. BUILDING PRIOR TO SEALING PENETRATION.	3.4 311.04-4
MRS-85-002 01	OP	31106	N	SQN	1 Y Y Y Y 2 NO NO NO NO		OECP	NO PORTAL MONITOR EXISTS AT PLANT EXIT	3.6 311.06-2
MRS-85-003 01	OP	31102	N	SQN	1 N N Y N 2 NA NA NO NA		OECP	GREEN TAG IS NO LONGER REQUIRED AT THE CLEAN TOOL ROOM	3.2 311.02-6

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 HP FACILITIES, CLOTHING & PROTECTIVE EQUIPMENT

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 - 311 REV. SECTION/ISSUE
NRS-85-004	01	OP 31106	N	SQN	1 Y Y Y Y 2 NO NO NO NO		OECP	C-ZONE CLOTHES ARE NOT BEING PATCHED BY THE LAUNDRY	3.6 311.06-10
OO -85-005-01101 T50263		IH 60400	S	WBN	1 N N Y Y 2 NA NA NO NO		QTC	CI STATED THAT TVA DUMPED RADIOACTIVE MATERIAL (WATER), CARRIED IN TANKER TRUCKS FROM SEQUOYAH, IN ONE OF THE FIELDS ON THE OTHER SIDE OF WATTS BAR PROJECT. THIS OCCURRED ABOUT THREE YEARS AGO. CI HAS NO ADDITIONAL DETAILS. CONSTRUCTION DEPARTMENT CONCERN.	3.2 311.02-1
	02	OP 31102	S	WBN	1 N N Y Y 2 NA NA SS SS				
RII-85-A-0064	01	OP 31104	N	SQN	1 N N Y N 2 NA NA SR NA		NRC	THIS ALLEGATION EXPRESSED CONCERN ABOUT THE SEQUOYAH HEALTH PHYSICS PROGRAM. THE ESSENCES OF THE CONCERNS ARE PROVIDED BELOW:1. TVA DOES NOT HAVE THE ABILITY TO RUN AN HP OPERATION. 2. AN INDIVIDUAL LOST A RADIOACTIVE SOURCE AT THE SITE AND NEVER REPORTED THE LOSS TO MANAGEMENT. 3. THE LOCATION OF RADIATION MONITORS ARE NOT AS INDICATED ON THE ASIL-3 PROCEDURE. 4. SMEARS ARE TAKEN INTO THE HEALTH PHYSICS OFFICE TO COUNT AND ARE THEN THROWN INTO THE TRASH. 5. THE SMEAR COUNTING AREA IN THE HP (See Attached K-Form for continnation of concern	3.4 311.04-9
SQN-85-001-00101		OP 31106	N	SQN	1 N N Y N 2 NA NA NO NA		NSRS	DURING OUTAGES SOME PERSONNEL IN AN AREA HAVE BEEN REQUIRED TO WEAR FACE MASKS WHILE OTHERS IN THE SAME AREA HAVE NOT. AT TIMES HP DIDN'T WEAR ONE. LOWER CONTAINMENT, MAY 1985 TIMEFRAME.	3.6 311.06-4

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

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

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 - 311 REV. 1 SECTION/ISSUE
SQP-86-009-00101 T50273	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA		QTC	AN INCIDENT AT SEQUOYAH, WHICH RESULTED IN EMPLOYEES BEING RADIOACTIVELY CONTAMINATED, COULD HAVE BEEN PREVENTED, AND REFLECTS MANAGEMENT'S ATTITUDE TOWARD RADIATION SAFETY AND PERSONAL SAFETY OF THE EMPLOYEES. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. NO FURTHER INFORMATION MAY BE RELEASED. NUCLEAR POWER DEPARTMENT CONCERN.	3.4 311.04-2
SQP-86-009-00201 T50273	OP	31104	N	SQN	1 N N Y N 2 NA NA NO NA		QTC	THE TRANSFER OF RESPONSIBILITY FOR HEALTH PHYSICS FROM MUSCLE SHOALS TO SEQUOYAH PLACES THE INDIVIDUAL RESPONSIBLE FOR HEALTH PHYSICS IN A POSITION WHERE MUCH PRESSURE FROM PLANT MANAGEMENT CAN BE EXERTED, AND HAS CAUSED COMPROMISES OF PREVIOUSLY ESTABLISHED HEALTH PHYSICS POLICY REGARDING PERSONNEL ACCESS DURING UNIT OPERATION. NUCLEAR POWER DEPARTMENT CONCERN. CI HAS NO FURTHER INFORMATION	3.4 311.04-6
WBN-0065	01	OP	31105	N	WBN	1 N N Y Y 2 NA NA SR SR		OECP	THE TIME REQUIRED TO CALIBRATE OR REPAIR 1-LI-77-125,126,410,411, WHICH ARE LOCATED IN THE RACEWAY ON UNIT 1 IS A POTENTIAL ALARA CONCERN	3.5 311.05-3
WBN-0186	01	OP	31105	N	WBN	1 N N N Y 2 NA NA NA SR		OECP	BARRICADES SHOULD BE INSTALLED TO PREVENT UNRESTRICTED ACCESS INTO REGENTLY ROOM VIA CRANE WALL PENETRATIONS TO RCS LOOP PENETRATIONS INTO REACTOR WALL. THESE AREAS WILL BE HIGH RADIATION AREAS - POSSIBLY >1 R/HR AREAS.	3.5 311.05-4
WBN-0291	01	OP	30105	S	WBN	1 N N N Y 2 NA NA NA SR		OECP	POTENTIAL "UPTAKE" OF RADIOACTIVE SUBSTANCES DUE TO SIMILAR FITTINGS BEING USED FOR AIR, WATER & CONTAMINATED DRAIN CONNECTION.	3.7 311.07-4
	02	OP	31107	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

ATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 RADIOACTIVE EFFLUENTS/UNCONTROLLED AREAS

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. SECTION CAT - OP SUBCAT - 311 REV./ SECTION/ISSUE
WBN-0292	01	31107	N	WBN	1 N N N Y 2 NA NA NA SR		OECP	AIR QUALITY CHECKS SHOULD BE MORE RE PRESENTATIVE. SHOULD CHECK 6 ALTERN ATING LOCATIONS QUARTERLY.	3.7 311.07-2
WBN-0294	01	31105	N	WBN	1 N N N Y 2 NA NA NA SR		OECP	UNRESTRICTED ACCESS TO HIGH RADIATIO N AREAS (DURING OPERATION & OUTAGES) - RCS LEG PENETRATIONS FROM IPCW TO RX VESSEL - NEED TO PROVIDE BARRICA DE RESTRICTING ACCESS.	3.5 311.05-4
WBN-225	01	30501	S	WBN	1 N N N Y 2 NA NA NA SR		OECP	NEED SCAFFOLDS BUILT TO GAIN ACCESS TO VALVES ON SIS ACCUMULATORS. THES E VALVES ARE DIFFICULT TO GET TO WHE N INDIVIDUAL IS DRESSED OUT. CI REC OMMENDS RELOCATING VALVES TO DECREAS E SAFETY HAZARD AND REDUCE RADIATION EXPOSURE (ALARA)	3.5 311.05-5
	02	31105	S	WBN	1 N N N Y 2 NA NA NA SR				
WI -85-038-00101	OP	31104	N	WBN	1 N N Y Y 2 NA NA SR SR		QTC	WATTS BAR: THE PRACTICE OF PERSONS E NTERING THE LOWER CONTAINMENT AREA O F THE REACTOR CONTAINMENT FOR NON-EM ERGENCY REPAIRS; WHILE THE REACTOR I S OPERATING, SHOULD BE RE-EVALUATED. RECENT STUDIES INDICATE THE BIOLOG ICAL EFFECTS OF PERSONNEL EXPOSURE T O NEUTRON FLUX ARE MORE SERIOUS THAN PREVIOUSLY BELIEVED. THIS PRACTICE IS IN EFFECT AT SEQUOYAH AND RESULT ED IN AN ACCIDENT AROUND 1983/1984 A ND IS PLANNED TO BE IMPLEMENTED AT W ATTS BAR.	3.4 311.04-6

'CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

ATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 EXPOSURE LIMITS AND RECORDS

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. SECTION : CAT - OP SUBCAT - 311 REV.1 SECTION/ISSUE
III -85-047-00201 T50118	OP	31103	N	NBN	1 N N N Y 2 NA NA NA NO		QTC	OTHER TVA NUCLEAR PLANTS USE A HEALTH PHYSICS SIGN IN/OUT SHEET FOR EVERYONE, WHICH HANGS AT THE ENTRANCE OF HOT (RADIOACTIVE) WORK AREAS. AT WBNP, THE WORKERS ARE PROVIDED WITH CARDS WHICH WILL ACCOMPLISH THE SAME TASK. THE CARDS HOWEVER, GET DOG-EARRED, STAINED AND LOST BY BEING CARRIED BY THE EMPLOYEES. CI FEELS WBNP SHOULD USE THE EXISTING SYSTEM OF OTHER TVA PLANTS. CI HAS NO ADDITIONAL INFORMATION. NUC PWR CONCERN, UNIT #1	3.3 311.03-6
XX -85-002-00101 T50003	OP	31103	N	BFN	1 Y N N N 2 NO NA NA NA	XX-85-002-001	QTC	PROCEDURES AT BROWN'S FERRY NOT BEING FOLLOWED BY MANAGEMENT. SPECIFICALLY, PROCEDURES - STANDARD PRACTICE 5.5 AND RCI-1 WHICH STATE "ALL EMPLOYEES WITHIN A SECTION RECEIVE APPROXIMATELY THE SAME EXPOSURE DOSE." WORKERS IN RADIOLOGICALLY CONTROLLED AREAS ARE NOT RECEIVING APPROXIMATE SAME DOSAGES. ONE WORKER HAS RECEIVED HIGH DOSAGE WITHIN SPECIFIED LIMITS WHILE OTHER WORKERS WITH THE SAME JOB TITLE HAVE RECEIVED NO.DOSE.	3.3 311.03-5
XX -85-005-00101	OP	31102	N	SQN	1 N N Y N 2 NA NA SR NA		QTC	SEQUOYAH PLANT; CONTAMINATED WATER DUMPED INTO RIVER (REF IN-85-049)	3.2 311.02-1
XX -85-007-00101 T50086	OP	31103	N	SQN	1 N N Y Y 2 NA NA NO NO	XX-85-007-001	QTC	QUESTION DAILY LIMITS OF ACCEPTABLE RADIATION EXPOSURE AT SEQUOYAH AND WONDERS IF THEY WILL BE SAME HERE AT WATTS BAR? TVA DOES NOT HAVE DAILY DOSAGE LIMITS; IT HAS QUARTERLY AND YEARLY DOSAGE LIMITS. THERE WERE NUMEROUS CASES OF OVER EXPOSURE ABOUT 2-3 YEARS AGO. WHEN OVER-EXPOSURED, EMPLOYEE WILL BE LAID OFF. THIS IS THE CORRECTIVE ACTION TVA USES FOR OVER-EXPOSURE AT SEQUOYAH. CI HAS NO FURTHER INFORMATION	3.3 311.03-1

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

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 - 311 REV./ SECTION/ISSUI
XX -85-009-00201 T50193	IH	60200	S	SQN	1 N N Y N 2 NA NA NO NA	I-85-513-SQN	QTC	SEQUOYAH: THERE IS NO REGARD FOR PERSONAL SAFETY AT OPERATING PLANTS. MANAGEMENT (KNOWN) DIRECTED THAT THE OLDEST EMPLOYEES BE ASSIGNED TO "HOT" WORK IN ORDER FOR THEM TO REACH THEIR RADIATION EXPOSURE LEVELS FIRST. A SUPERVISOR (KNOWN) MADE THE STATEMENT THAT "OLDER FOLKS WON'T BE LONG AROUND". DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. CONSTRUCTION DEPT. CONCERN. CI HAS NO FURTHER INFORMATION.	3.4 311.04-2
02	OP	31104	S	SQN	1 N N Y N 2 NA NA SR NA				
XX -85-015-00101 T50078	OP	31104	N	SQN	1 N N Y Y 2 NA NA SR SR	XX-85-015-001	QTC	SEQUOYAH: THE PRACTICE OF PERSONNEL ENTERING THE LOWER CONTAINMENT AREA OF THE REACTOR CONTAINMENT FOR NON-EMERGENCY REPAIRS WHILE THE REACTOR IS OPERATING SHOULD BE RE-EVALUATED SINCE RECENT STUDIES INDICATE THE BIOLOGICAL EFFECTS OF PERSONNEL EXPOSURE TO NEUTRON FLUX ARE MORE SERIOUS THAN PREVIOUSLY BELIEVED. THIS PRACTICE CAUSED AN ACCIDENT IN THE INCORE INSTRUMENT PROBE ROOM AT SEQUOYAH IN 1984 AND IS STILL CONTINUED. C/I HAS NO FURTHER INFORMATION.	3.4 311.04-6
XX -85-024-00101 T50208	OP	31101	N	SQN	1 N N Y N 2 NA NA SR NA		QTC	SEQUOYAH: HEALTH PHYSICS PERSONNEL NOT AWARE OF PROTECTIVE EQUIPMENT REQUIRED FOR WORK AREA. EXAMPLE: HP AT ENTRANCE TO RADIATION AREA INFORMED CRAFT THAT PARTICULATE MASKS WERE NOT REQUIRED. WHILE WORKING, HP TOLD CRAFT TO STOP WORK AND LEAVE AREA BECAUSE THEY DID NOT HAVE PARTICULATE MASKS. THIS HAPPENED IN 1983 AND 1984. NUCLEAR POWER CONCERN. UNITS 1 & 2.	3.1 311.01-1

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

CATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

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. SECTION : CAT - OP SUBCAT - 311 REV.1 SECTION/ISSUE
XX -85-025-00101 T50028	OP	31104	N	BLN	1 N 2 NA	Y NO	N NA	N NA	XX-85-025-001	QTC	BELLEFONTE: INADEQUATE UPPER MANAGEMENT SUPPORT PROVIDED THE HEALTH PHYSICS DEPT. TO ENFORCE AN EFFECTIVE RADIOLOGICAL SAFETY PROGRAM. NO DISCIPLINARY ACTION IS TAKEN WHEN EMPLOYEES INTENTIONALLY BY-PASS MONITORS.	3.4 311.04-2
XX -85-026-00101 T50028	OP	31104	N	SQN	1 N 2 NA	N NA	Y SS	N NA	XX-85-026-001	QTC	SEQUOYAH: INADEQUATE UPPER MANAGEMENT SUPPORT PROVIDED THE HEALTH PHYSICS DEPT. TO ENFORCE AN EFFECTIVE RADIOLOGICAL SAFETY PROGRAM. NO DISCIPLINARY ACTION IS TAKEN WHEN EMPLOYEES INTENTIONALLY BY-PASS MONITORS.	3.4 311.04-2
XX -85-028-X0201 T50148	IH	60300	S	SQN	1 N 2 NA	N NA	Y NO	N NA	I-85-514-SQN	QTC	SEQUOYAH- RADIATION WORK PERMIT 02-2-00214 (SIGN-IN SHEET) CONTAINS FALSIFIED SIGNATURES. NO FOLLOWUP REQUIRED	3.4 311.04-7
02	OP	31104	S	SQN	1 N 2 NA	N NA	Y NO	N NA				
XX -85-028-X0301 T50148	IH	60400	S	SQN	1 N 2 NA	N NA	Y NO	N NA	I-85-514-SQN	QTC	SEQUOYAH- RADIATION WORK PERMITS ARE NOT BEING COMPLETED PER PROCEDURE REQUIREMENTS. RADIATION WORK PERMIT 02-2-00214 IS AN EXAMPLE. NO FOLLOW UP REQUIRED	3.4 311.04-7
02	OP	31104	S	SQN	1 Y 2 NO	Y NO	Y NO	Y NO				
XX -85-028-00101 T50036	OP	31103	N	SQN	1 N 2 NA	N NA	Y SR	N NA	XX-85-028-001	QTC	WHILE AT ANOTHER TVA FACILITY INDIVIDUAL WAS EXPOSED TO THE MAXIMUM AMOUNT OF RADIATION. RWP WAS ADJUSTED BY HEALTH PHYSICS TO REFLECT AN INCREASE IN RADIATION ALLOWANCE. (NAME AND DETAILS KNOWN BY QTC)	3.3 311.03-2

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY
ATEGORY: OP PLANT OPER. SUPPORT
SUBCATEGORY: 311 HP FACILITIES, CLOTHING & PROTECTIVE EQUIPMENT

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 - 311 REV./ SECTION/ISSU
XX -85-036-00101 T50007	OP	31106	N	SQN	1 Y Y Y Y 2 NO NO NO NO		QTC	THIS CONCERN RELATES TO SEQUOYAH, BU T MAY NOW BE, OR MAY BECOME, A CONCE RN AT WATTS BAR: WHOEVER ORDERS "C-ZONE" GLOVES (REUSEABLE GLOVES FOR P ROTECTING WORKERS FROM PARTICULAR RA DIATION SOURCES) DOES NOT ORDER ENOU GH SMALL SIZES. LARGE GLOVES MUST B E MADE TO FIT BY EXTENSIVE TAPE WRAP PING, BUT THEY STILL DON'T FIT. THI S IS AN OSHA TYPE SAFETY PROBLEM FOR PERSONS WHO MUST CLIMB OR WHO HANDL E CERTAIN TOOLS THAT REQUIRE A SURE GRIP. THIS IS A MUCH MORE SERIOUS/C OMMON PROBLEM FOR THE WOMEN WHO	3.6 311.06-5
XX -85-048-00301 T50073	OP	31103	N	SQN	1 N N Y N 2 NA NA SR NA	XX-85-048-003	QTC	AT SEQUOYAH, C/I WAS EXPOSED TO RADI ATION DURING X-RAY OF PIPE WELD. SI NCE NEITHER TLD'S NOR OTHER TYPES OF DOSIMETERS WERE REQUIRED TO BE WORN DURING THIS TIME PERIOD, 1978-EARLY 1979, C/I IS CONCERNED OVER DOSAGES C/I, OR ANY OTHER EMPLOYEES THERE M AY HAVE RECEIVED DURING R T OF PIPE WELDS. NO FOLLOW-UP REQUIRED.	3.3 311.03-3
XX -85-052-00101 T50153	OP	30108	S	SQN	1 N N Y Y 2 NA NA SR SR	I-85-558-SQN	QTC	SEQUOYAH-MANWAY DOOR AT THE BOTTOM O F STEAM GENERATOR TAKES APPROX. 20 MINUTES TO OPEN AND 3-4 HOURS TO CLO SE DUE TO COMPLICATED PROCESS NECESS ITATED BY POOR DESIGN. IF A COWEALO NG SLIPS, IT IS MOST LIKELY THAT PER SONNEL WOULD BE PINNED BETWEEN THE S WING-ARM AND HAND RAIL. THERE ARE 5 REMS/HOUR ESCAPING WHILE THIS DOOR IS OPEN. A WAY TO OPEN/CLOSE THIS D OOR MUST BE FOUND THAT WOULD TAKE ON LY 20 MINUTES TOTAL. UNITS 1 AND 2. CI HAS NO FURTHER INFORMATION. NO FOLLOWUP REQUIRED.	3.5 311.05-2
02	OP	31105	S	SQN	1 N N Y Y 2 NA NA SR SR				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

ATEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 311 HP FACILITIES, CLOTHING & PROTECTIVE EQUIPMENT

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. SECTION CAT - OP SUBCAT - 311 REV. 1 SECTION/ISSUE
XX -85-055-00101 T50091	OP	31106	N	SQN	1 Y N Y Y 2 NO NA NO NO	IN-85-055-001	QTC	SELF READING POCKET DOSIMETERS ARE C OLLECTED IN A METAL BOX AT THE ENTRY PORTAL IN THE TURBINE BUILDING. BY THROWING DOSIMETERS IN A BOX THEY C OULD BE KNOCKED OFF SCALE.	3.6 311.06-3
XX -85-063-00101 T50175	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA	I-85-513-SQN	QTC	SEQUOYAH OPERATORS AND HEALTH PHYSIC S: FAILURE TO KNOW AND VERIFY THE C ONTENTS OF SYSTEM. EXAMPLE: HEALTH PHYSICS MAY GO AHEAD TO OPEN A LINE IN TURBINE BUILDING, UNIT 2, SAYING EVERYTHING WAS O.K. AND CLEAN. AFT ER OPENING THE LINE, THE NEXT NIGHT, THE ENTIRE AREA WAS ROPED OFF FOR C ONTAMINATION. THIS OCCURRED IN JAN/ FEB 84. C/I HAS NO FURTHER INFORMAT ION. NUC. POWER CONCERN.	3.4 311.04-8
XX -85-066-00101 T50134	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA	XX-85-066-001	QTC	SEQUOYAH - 3 YEARS AGO, HEALTH PHYSI CS AT SEQUOYAH WAS NOTIFIED OF HIGHE R THAN EXPECTED RADIATION LEVELS IN THE REACTOR BUILDING. WHEN NOTIFIED BY TELEPHONE, HP PERSONNEL SPECULAT ED ON THE REASONS FOR THE HIGH RADIA TION LEVEL. AND DID NOT RESPOND IMME DIATELY TO INVESTIGATE. CI FEELS TH AT WASTING TIME SPECULATING ON CAUSE AND NOT RESPONDING IMMEDIATELY IS A CONCERN FOR SAFETY. NUCLEAR POWER DEPT CONCERN. CI HAS NO FURTHER IN FORMATION. NO FOLLOW UP REQUIRED	3.4 311.04-5
XX -85-084-00101 T50181	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA	I-85-806-SQN	QTC	QUESTIONABLE PRACTICES BY HEALTH PHY SICS @ SEQUOYAH IN 1982 LEAD TO POSS IBLE OVER EXPOSURE. H.P. WOULD RESPO ND TO RADIATION ALARMS AND UNPLUG UN ITS. DETAILS KNOWN TO QTC, WITHHELD DUE TO CONFIDENTIALITY. CONST. DEP T. CONCERN. C/I HAS NO FURTHER INFO RMATION.	3.4 311.04-5

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY

ATEGORY: OP PLANT OPER. SUPPORT SUBCATEGORY: 311 HP POLICY, PRACTICES AND MANAGEMENT CONTROL

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 - 311 REV. 1 SECTION/ISSU
XX -85-098-00201 T50152	OP	31104	N	SQN	1 N N Y N 2 NA NA SR NA	I-85-615-SQN	QTC	SEQUOYAH - RADIATION AREAS ARE NOT MONITORED OFTEN ENOUGH. NUCLEAR POWER CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOWUP REQUIRED.	3.4 311.04-4
XX -85-101-00301 T50162	OP	31102	N	SQN	1 N Y Y Y 2 NA SR SR SR	I-85-543-SQN	QTC	SEQUOYAH 1980, THERE HAS AN UNKNOWN QUANTITY OF RADIOACTIVE WATER SPILLED INTO THE UNCONTROLLED DRAIN SYSTEM DUE TO A VALVE ON A WATER SAMPLING STATION IN THE TURBINE BUILDING BEING LEFT OPEN. CONSTRUCTION DEPT CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOWUP REQUIRED.	3.2 211.02-2
XX -85-101-00401 T50162	OP	31106	N	SQN	1 Y N Y Y 2 SR NA SR SR	I-85-652-SQN	QTC	SEQUOYAH - CI EXPRESSED THAT INSUFFICIENT ATTENTION TO DETAIL IS GIVEN IN REGARDS TO MINIMIZING RADIATION EXPOSURE. DUE TO THE POLICY OF REFUSING OUTER GLOVES IN RADIATION AREAS, CI HAS OBSERVED USED GLOVES, AVAILABLE FOR REUSE, WHICH WERE COONTAMINATED TO A LEVEL 5 TIMES THAT OF THE AREA IN WHICH THE EMPLOYEE WAS WORKING. CONSTRUCTION DEPT CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOWUP REQUIRED.	3.6 311.06-6
XX -85-102-00901 T50172	OP	31101	N	BFN	1 Y N Y Y 2 SR NA SR SR		QTC	BROWN'S FERRY: THE PERMANENT PLANT HEALTH PHYSICS PEOPLE ARE POORLY TRAINED. CI DOES NOT FEEL THE PRESENT HP STAFF HAS AN ADEQUATE KNOWLEDGE OF WORKING IN RADIATED AREAS. NUCLEAR POWER DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOW UP REQUIRED.	3.1 311.01-1
XX -85-102-01201 T50172	OP	31101	N	SQN	1 N N Y N 2 NA NA SR NA	I-85-734-SQN	QTC	SEQUOYAH: THE PERMANENT PLANT HEALTH PHYSICS PERSONNEL ARE POORLY TRAINED. CI DOES NOT FEEL THE PRESENT HP STAFF HAS AN ADEQUATE KNOWLEDGE OF WORKING IN RADIATED AREAS. NUCLEAR POWER DEPT. CONCERN. CI HAS NO ADDITIONAL INFORMATION. NO FOLLOW UP REQUIRED.	3.1 311.01-1

72 CONCERNS FOR CATEGORY OP SUBCATEGORY 311

ATTACHMENT B

HEALTH PHYSICS

Listing of Concerns by Element/Issue

The Health Physics Subcategory (31100) is comprised of 72 concerns grouped into 7 elements addressing a total of 42 issues.

Element 311.01 - Health Physics Staff Training

Issue 311.01-1 - HP Personnel Lack an Adequate Working Knowledge

XX-85-024-001
XX-85-102-009
XX-85-102-012

Element 311.02 - Radioactive Material Control

Issue 311.02-1 - Improper Dumping of Contaminated Material

IN-85-049-002
IN-85-049-004
IN-85-720-002
IN-86-287-001
00-85-005-011
XX-85-005-001

Issue 311.02-2 - Radioactive Spill Into Uncontrolled Drain System

XX-85-101-003

Issue 311.02-3 - Radioactive Material in Uncontrolled Area

EX-85-091-002
JAM-86-001

Issue 311.02-4 - Safeguarding Contaminated Material

EX-85-091-001

Issue 311.02-5 - Contaminated Fire Hoses

BFP-85-001-001

Issue 311.02-6 - Green Tag Requirement

MRS-85-003

ATTACHMENT B (continued)

Element 311.03 - Exposure Limits and Records

Issue 311.03-1 - Daily Radiation Exposure Limits

IN-85-301-006
XX-85-007-001

Issue 311.03-2 - Changing Exposure Allowances on RWPs

XX-85-028-001

Issue 311.03-3 - Exposure During Radiographic Operations

XX-85-048-003

Issue 311.03-4 - Omission of Exposure Data

BFN-85-017-001

Issue 311.03-5 - Workers Not Receiving Similar Exposures

XX-85-002-001

Issue 311.03-6 - Use of Dosimetry Cards

IN-85-991-002
IN-86-025-001
WI-85-047-002

Element 311.04 - HP Policy, Practices, and Management Control

Issue 311.04-1 - Authority to Enforce HP Procedures

IN-85-499-003

Issue 311.04-2 - Management's Attitude Toward Radiological Control

SQP-86-009-001
XX-85-025-001
XX-85-026-001
XX-85-009-002
BFN-85-019-002
BFN-85-020-001

Issue 311.04-3 - Policy on Hair Length and Beards

EX-85-117-003
IN-85-642-002

ATTACHMENT B (continued)

Issue 311.04-4 - Radiological Controls, Surveys, Decontamination, and Emergency Procedures

XX-85-098-002
IN-85-219-001
I-86-238-SQN
JLH-86-003
JMA-85-001

Issue 311.04-5 - HP Response to Radiation/Contamination Alarms

XX-85-084-001
XX-85-066-001

Issue 311.04-6 - Lower Containment Entries

WI-85-038-001
XX-85-015-001
SQP-86-009-002

Issue 311.04-7 - Improperly Completed RWP Timesheets

XX-85-028-X02
XX-85-028-X03

Issue 311.04-8 - Inadequate Knowledge of System Contents

XX-85-063-001

Issue 311.04-9 - Adequacy of SQN HP Program (Miscellaneous)

RII-85-A-0064

Element 311.05 - ALARA

Issue 311.05-1 - Winning ALARA Suggestions Not Implemented

BFN-85-002-001

Issue 311.05-2 - Hazards Associated With Manway Doors

IN-85-869-001
XX-85-052-001

Issue 311.05-3 - Time Required to Repair/Recalibrate Instrumentation

IN-86-044-001
WBN-0065

ATTACHMENT B (continued)

Issue 311.05-4 - Unrestricted Access to High Radiation Areas

WBN-0186
WBN-0294

Issue 311.05-5 - Safety Hazards Associated With Access to Valve

WBN-225

Issue 311.05-6 - ALARA Program

Not Applicable

Element 311.06 - HP Facilities, Clothing, and Protective Equipment

Issue 311.06-1 - Leave Site Without Monitoring

HLA-85-001

Issue 311.06-2 - Lack of Portal Monitors at Plant Exits

MRS-85-002

Issue 311.06-3 - Method of Collecting Self-Reading Dosimeters

IN-85-142-002
XX-85-055-001

Issue 311.06-4 - Use of Face Masks

SQN-85-001-001

Issue 311.06-5 - Unavailability of Small-Sized Gloves

XX-85-036-001

Issue 311.06-6 - Reuse of Outer Gloves

XX-85-101-004

Issue 311.06-7 - Post Accident Sampling Room

IN-85-092-001

Issue 311.06-8 - Unavailability of C-zone Clothing

I-86-235-SQN

ATTACHMENT B (continued)

Issue 311.06-9 - Location of TLD Badge Racks

IN-86-105-001

Issue 311.06-10 - Unrepaired C-zone Clothing

MRS-85-004

Element 311.07 - Radioactive Effluents/Uncontrolled Areas

Issue 311.07-1 - Inadequate Provisions and Documentation to Protect Personnel From Radiation Between Units

IN-85-114-001
IN-85-463-009
IN-85-499-002

Issue 311.07-2 - Unrepresentative Air Quality Checks

WBN-0292

Issue 311.07-3 - Impact on Environment/Public

IN-85-126-001

Issue 311.07-4 - Uptake of Radioactive Substances Due to Similar Fittings

WBN-0291

ATTACHMENT C

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

Sections 3, 4, and 5 discussed the specific findings for each of the element evaluations and provided a collective significance and root causes for those findings. This attachment presents the independent review and analysis done on the specific element-level findings to identify overall root causes at the subcategory level as presented in Section 5.0.

For Element 311.01, Health Physics Staff Training, the potential for negative findings at the subcategory level was exhibited by the following symptom - procedural noncompliance. The symptom appeared in the evaluations for WBN and BFN. As this symptom was tested for root causes, the appropriate root causes and applicable plant sites were judged to be as follows:

a) Inadequate communication between functional groups (POTC and site, POTC and Office Training Committee) (WBN,BFN)

b) Error in judgement by qualified individuals (not submitting training evaluations to Office Training Committee) (WBN, BFN)

c) Inadequate prerequisites defined to ensure satisfactory completion of task (WBN,BFN)

These root causes and symptoms are also associated with the other TVA sites due to the involvement of the POTC and Office Training Committee.

For Element 311.03, Exposure Limits and Records, there was a potential for a negative finding at the subcategory level exhibited by the following symptom--inadequate management accountability (RWP timesheet records). This symptom was identified for SQN. As this symptom was tested for root causes, the appropriate root causes and applicable plant sites were judged to be as follows:

a) Personnel performed task knowingly in violation of procedure/process (SQN)

b) Failed to take appropriate action to preclude recurrences (SQN)

c) Inadequate controls for review of results to ensure compliance with commitments (SQN)

ATTACHMENT D, (Cont'd.)

For Element 311.05, ALARA, there were potential negative findings at the subcategory level exhibited by the following symptoms: (a) inadequate initial design (ALARA consideration), (b) QA audits to Reg. Guide 8.8 at SQN, and (c) failure to comply with commitments (ALARA time commitments). The first symptom was identified for WBN, and the last two were identified for SQN. As these symptoms were tested for root causes, the appropriate root causes and applicable plant sites were judged to be as follows:

a) Lack of understanding regulatory requirements or commitments (WBN)

b) Procedures incomplete or failed to incorporate all technical requirements (WBN and SQN)

c) Inadequate acceptance criteria defined to ensure satisfactory task completion (no quantitative acceptance criteria; no design checklist item for ALARA) (WBN)

d) Insufficient time to perform task (SQN)

e) Inadequate controls for review of results to ensure compliance with commitments (SQN)

f) Error in judgment by qualified individual (audits) (SQN)

g) Inadequate prerequisites defined to ensure satisfactory completion of task (QA audit task) (SQN)

h) Lack of accessibility to documentation (what is committed to and how it is implemented) (SQN)

For Element 311.07, Radioactive Effluents/Uncontrolled Areas, the potential for negative findings at the subcategory level was exhibited by the following symptom - inadequate design control. The symptom appeared only in the evaluations for WBN. As this symptom was tested for root causes, the appropriate root causes were judged to be as follows:

a) Procedures incomplete or failed to incorporate all technical requirements (WBN)

b) Inadequate acceptance criteria defined to ensure satisfactory task completion (WBN)

No analyses for root cause were required in the remaining elements of the subcategory because no symptoms of problems were readily apparent.

ATTACHMENT D, (Cont'd.)

The analysis of the symptoms and root causes of the subcategory 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. 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.

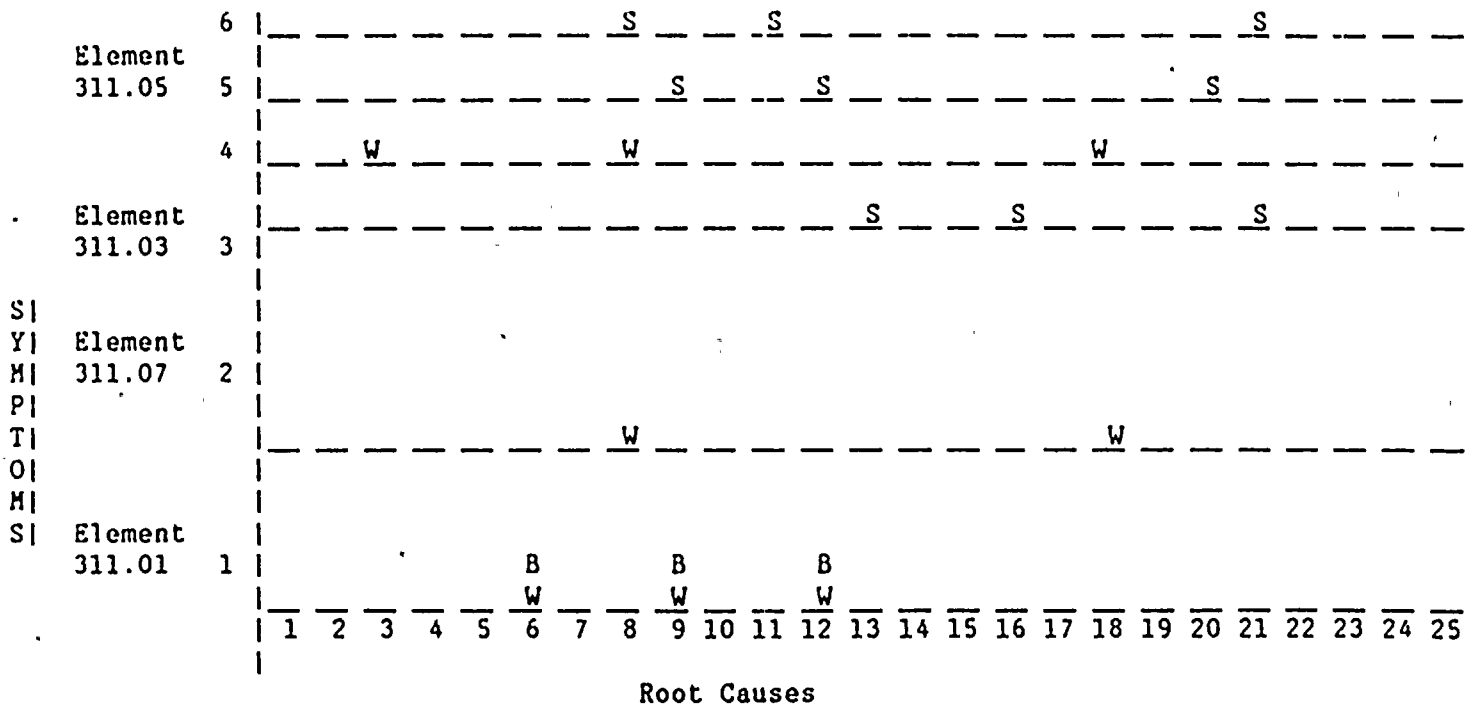
Several observations can be made in studying these attachments. It can be seen in Attachments E and F that WBN and BFN share one symptom dealing with procedural noncompliance. Two symptoms were found specifically for WBN--inadequate initial design with respect to ALARA considerations and inadequate design control dealing with breathing air manifold hookups. Three symptoms were identified for SQN: inadequate management accountability with RWP timesheet records, QA audits to Reg. Guide 8.8, and failure to comply with commitments in regard to meeting ALARA time requirements. In Attachments E and G, there were three root causes that occurred at WBN, SQN, and BFN: (a) procedures incomplete or failed to incorporate all technical requirements, (b) error in judgment by qualified individual, and (c) inadequate prerequisites defined to ensure satisfactory completion of task.

ATTACHMENT E
SYMPTOMS VS ROOT CAUSES
SUBCATEGORY 311

Symptoms

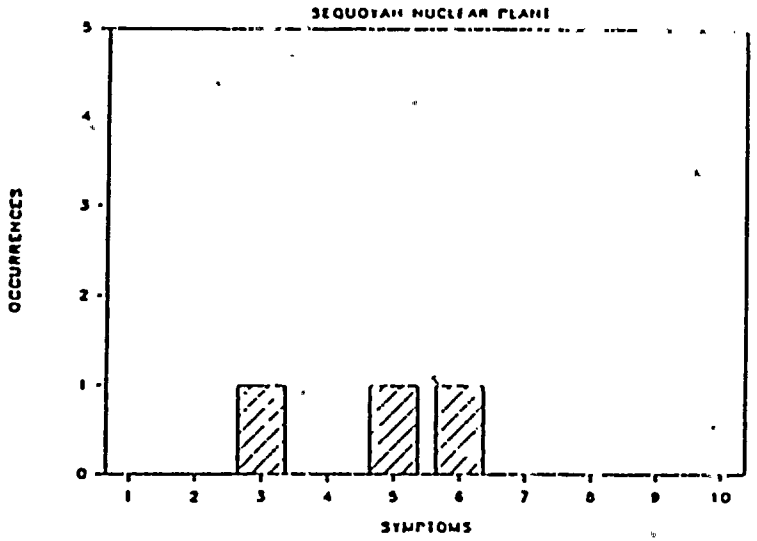
1. Procedural noncompliance.
2. Inadequate design control (breathing air manifolds hookups)
3. Inadequate management accountability (RWP timesheet records)
4. Inadequate initial design (ALARA consideration)
5. QA audits to Reg. Guide 8.8 at SQN
6. Failure to comply with commitments (ALARA time commitments)

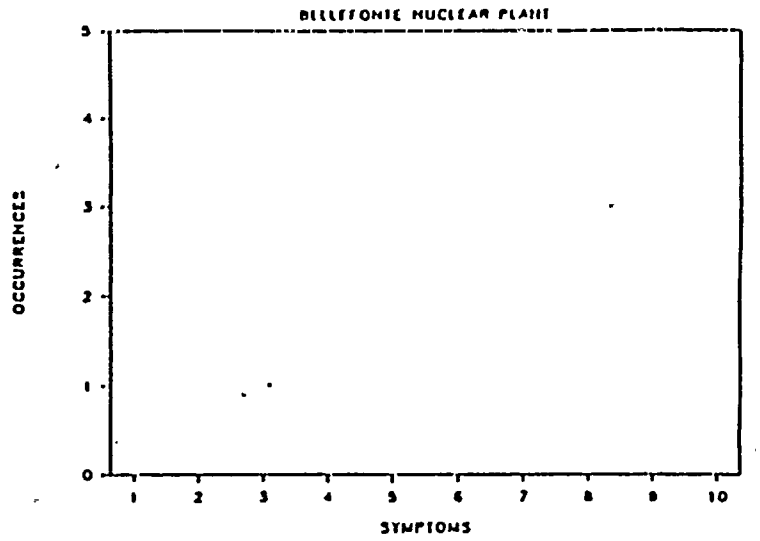
KEY: W = WBN
S = SQN
B = BFN
L = BLN

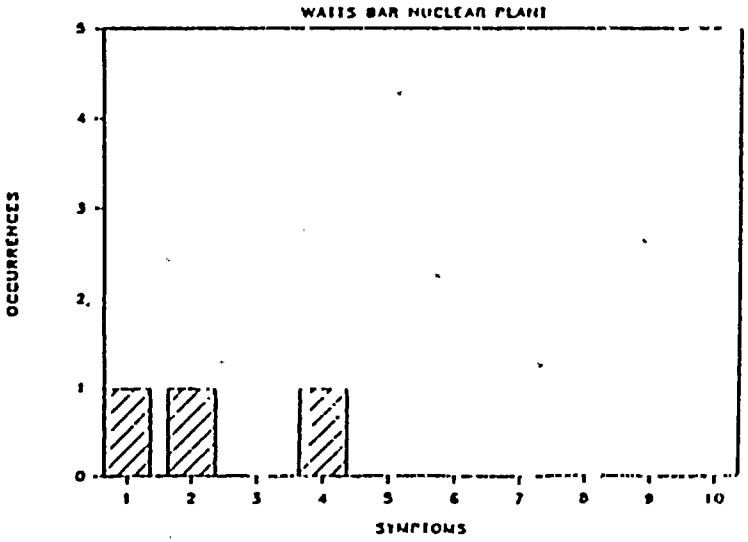


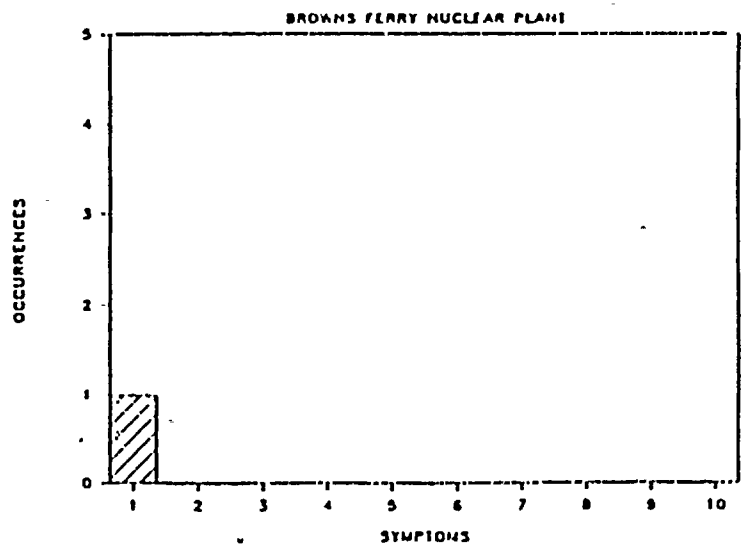
OCCURRENCES VS. SYMPTOMS

SUBCAT 311





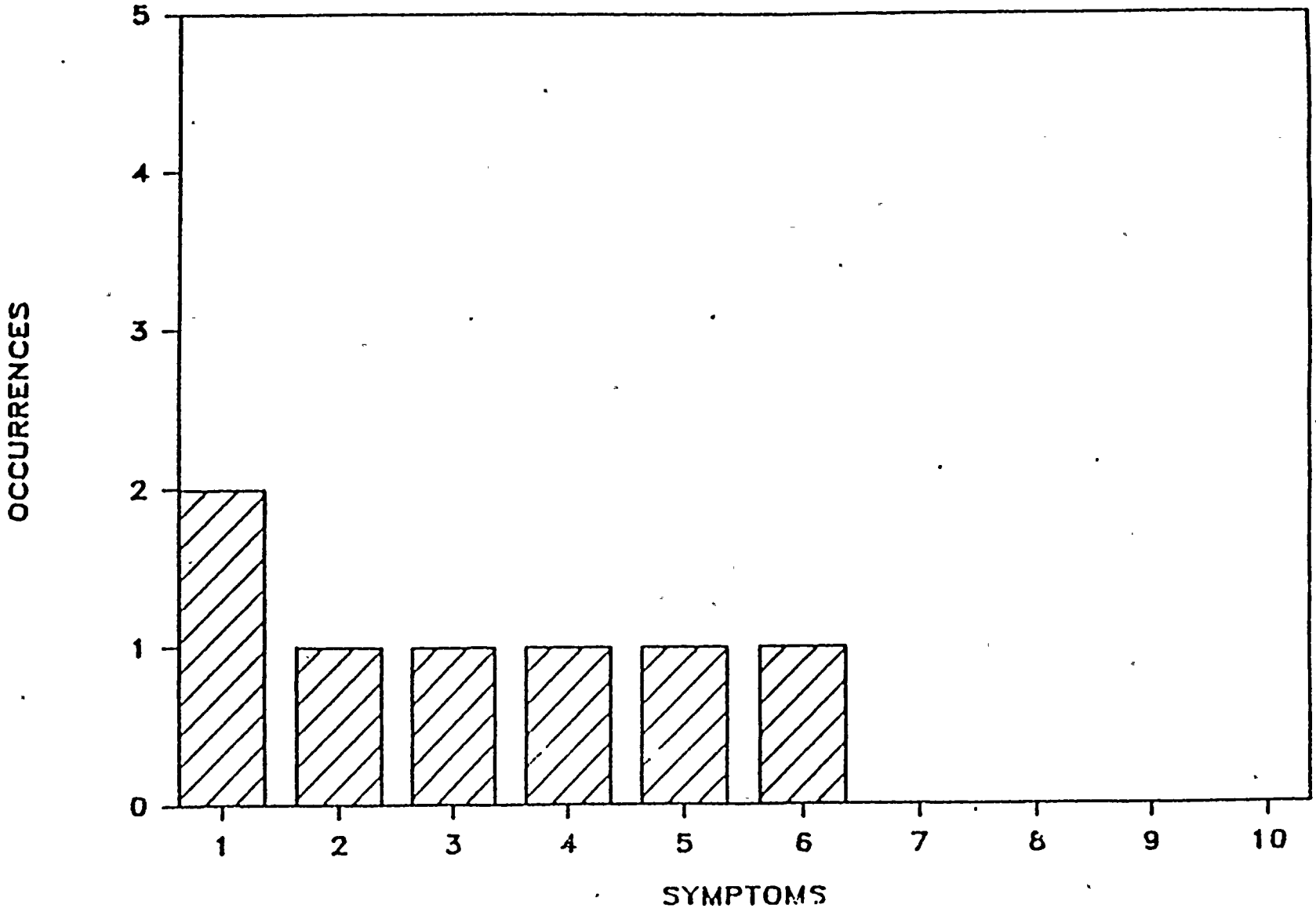




ATTACHMENT F
PAGE 1 of 2

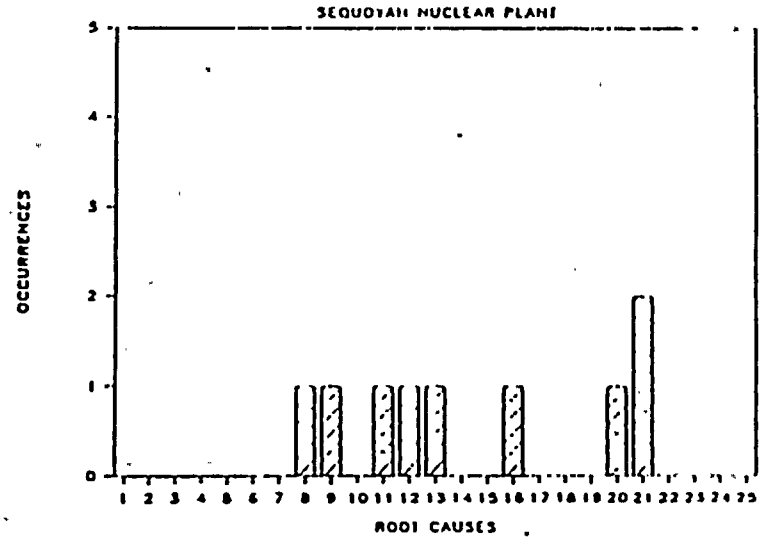
OCCURRENCES VS. SYMPTOMS

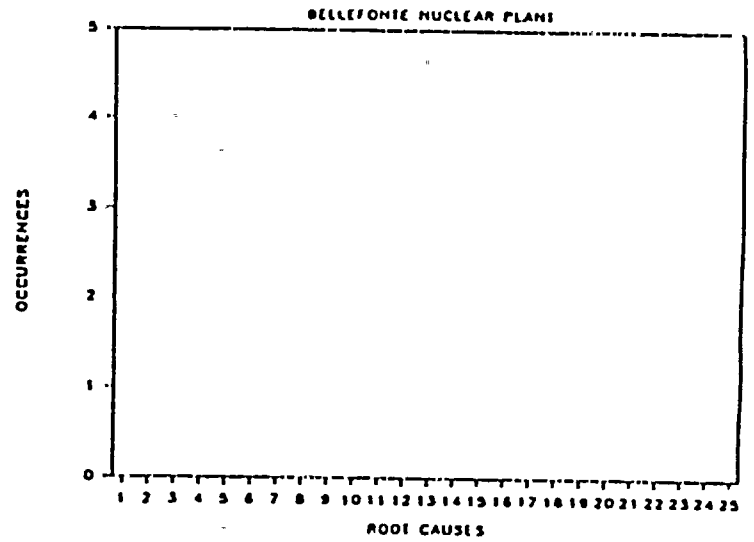
SUBCAT 311

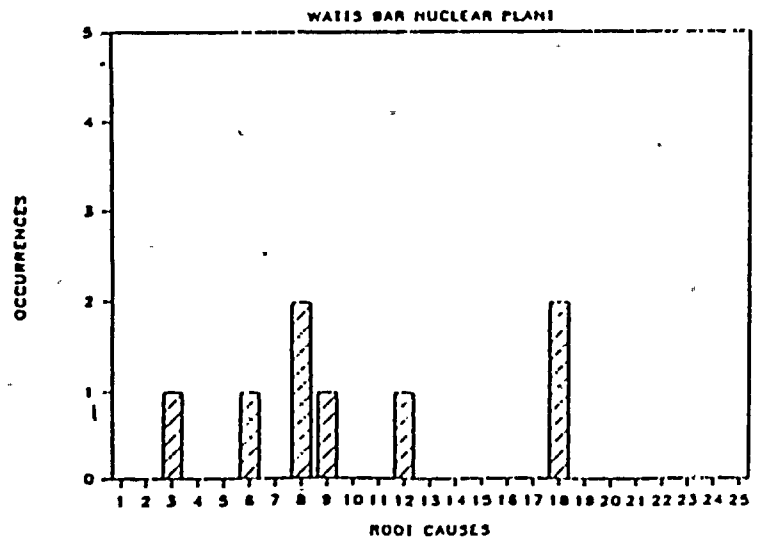


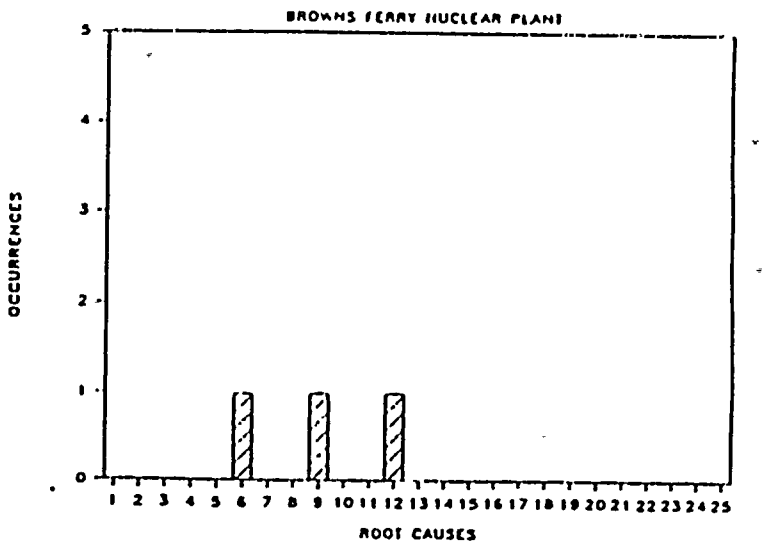
OCCURRENCES VS. ROOT CAUSES

SUBCAT 311



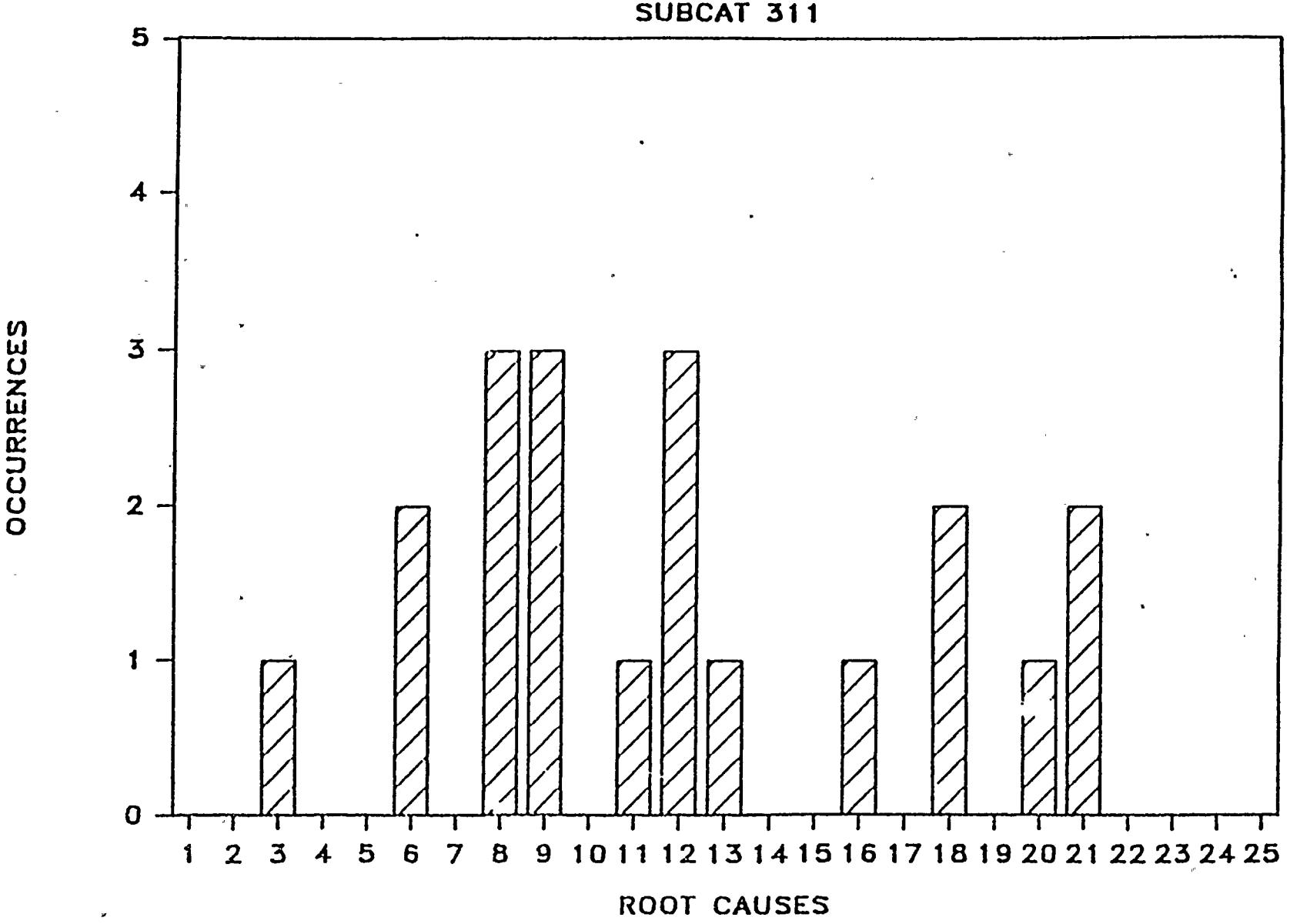






ATTACHMENT G
PAGE 1 of 2

OCCURRENCES VS. ROOT CAUSES



ATTACHMENT H

CORRECTIVE ACTION TRACKING DOCUMENTS (CATDs)

CATD Number	Corrective Action Plan Received/Approved
31100-WBN-01	Yes
31101-WBN-01	Yes
31101-SQN-01	Yes
31101-NPS-01	Yes
31103-SQN-01	Yes
31104-SQN-01	Yes
31105-WBN-01	Yes
31105-WBN-02	Yes
31105-WBN-03	Yes
31105-WBN-04	Yes
31105-WBN-05	Yes
31105-WBN-06	Yes
31105-SQN-01	Yes
31105-SQN-02	Yes
31105-SQN-03	Yes
31105-SQN-04	Yes
31105-BFN-01	Yes
31105-BFN-02	Yes
31106-SQN-01	Yes
31107-WBN-01	Yes

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No.: 311.00-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31100-WBN-01 (IAR 1-OP311) 4. INITIATION DATE 01/27/87
5. RESPONSIBLE ORGANIZATION: WBN Site Director
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR WBNP - FSAR page 12.1-4 paragraph 4 starts in the middle of a thought; i.e., the first part (paragraphs 1-3) are disjoint to the other paragraphs on the page. There appears to be a section of text missing specifically paragraph #4 discusses, "These data" of which only #4 is given on the page.

☐ ATTACHMENTS

7. PREPARED BY: NAME Walt Stradl DATE: 01/27/87
8. CONCURRENCE: CEG-H [signature] DATE: 1/27/87
9. APPROVAL: ECTG PROGRAM MGR. _____ DATE: _____

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: The individual resolution of immediate action for 1-00[illegible] will be accomplished by Final Safety Analysis Report (FSAR) revision which will be submitted to the Nuclear Regulatory Commission (NRC) by March 16, 1987. Numerous inaccuracies in the Watts Bar FSAR have been documented under Significant Condition Report (SCR) GEN NEB 8602 and will be generically resolved by a comprehensive FSAR verification plan. The objective of the FSAR verification is both an updating to achieve accuracy and the development of an interface with the change control programs for design and operations. This will provide for the maintenance of FSAR accuracy. That plan is part of the Design Baseline and Licensing Verification Program which is clearly identified on the Watts Bar Interrated Schedule and is a prerequisite to fuel loading.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: T20 861217-963 DATE: _____
12. CONCURRENCE: CEG-H: _____ DATE: _____
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

THIS ITEM COMPLETED 2/10/88

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.: 311.01-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31101-WBN-01 4. INITIATION DATE 1-30-87
5. RESPONSIBLE ORGANIZATION: HP WBN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR Biannual feedback questionnaire supplied by POTC in accordance with NTB Standard Practice TCT-12 has not been returned by Watts Bar Health Physics Department. This CATD replaces IAN 6-OP311 issued 6-25-86.

☒ ATTACHMENTS

7. PREPARED BY: NAME Mike Murphy DATE: 1-30-87
8. CONCURRENCE: CEG-H [signature] DATE: 1-30-87
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 1-30-87

THIS ITEM COMPLETED DATE: 9-1-88

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: See memo T41 870311 876 Concurrence with [illegible] a review of TCT-12 of October 27, 1986 this review determined that the evaluation of training [illegible] was not deleted. The evaluation method [illegible] revised which deleted the feedback form [illegible] the requirement for a Training Evaluation Report [illegible] limits evaluation to those other trainees are assigned to.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [signature] DATE: 2/10/87
12. CONCURRENCE: CEG-H: [signature] DATE: 2/13/87
SRP: ______ DATE: ______
______ DATE: ______
______ DATE: ______
______ DATE: ______
ECTG PROGRAM MGR: ______ DATE: ______

VERIFICATION AND CLOSEOUT

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

______ SIGNATURE ______ TITLE ______ DATE

0673T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.01-SQN-Revision 2

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31101-SQN-01 4. INITIATION DATE 10-31-86
5. RESPONSIBLE ORGANIZATION: POTC
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR Deficiencies were identified in the resolution of supervisor feedback questionnaires. The resolution did not address the in-plant phase of training or impact to retraining requirements:

☒ ATTACHMENTS

7. PREPARED BY: NAME M. W. Murphy DATE: 10-31-86
8. CONCURRENCE: CEG-H Thomas F. Hutto DATE: 10/31/86
9. APPROVAL: ECTG PROGRAM MGR. [illegible] DATE:

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEE CAP TRANSMITTED BY MEMORANDUM SSB 891120 802

THIS ITEM COMPLETED
DATE: 12-9-88

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: W. R. Rogers DATE: 11-21-86
12. CONCURRENCE: CEG-H: Thomas F. Hutto for WRL DATE: 12/7/86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

1312T

ECSP Corrective Action Tracking Document (CATD)

INITIATION

Applicable ECSP Report No.: 311.01-NPS

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31101-NPS-01
4. INITIATION DATE November 24, 1986
5. RESPONSIBLE ORGANIZATION: POTC
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR A comparison of the requirements of E&T TSIL-3 and 6 to PMP 0202.12 revealed no deficiencies. However, in the review of the implementation of the above requirements, it was found that personnel hired as fully qualified by ANSI-18.1 bypass the basic phase of training, and this bypass is not reviewed or approved by the Office Training Committee as required by PMP 0202.12

☒ ATTACHMENTS

7. PREPARED BY: NAME Mike Murphy DATE: 11-25-86
8. CONCURRENCE: CEG-H J. Hunt for WRL DATE: 1-16-87
9. APPROVAL: ECTG PROGRAM MGR. DWBrunot for DATE: 1-27-87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE ATTACHED MEMO FOR DAP file

Verbal concurrence with T. Hunt in meeting with D. Warren 3-11-87 SW

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: DATE: 3-12-87
12. CONCURRENCE: CEG-H: DATE: 3-12-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

2748T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.03 SQN Revision 0

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 311.03-SQN-01 4. INITIATION DATE 10-10-86
5. RESPONSIBLE ORGANIZATION:
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR QA Record requirements for RWP timesheets is not clear. That should be covered in GET.

☐ ATTACHMENTS

7. PREPARED BY: NAME T. W. White DATE: 10-10-86
8. CONCURRENCE: CEG-H W.R. [illegible] DATE: 10-14-86
9. APPROVAL: ECTG PROGRAM MGR DATE:

THIS ITEM COMPLETED DATE: 10-20-87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Proposed corrective action is acceptable as written.

CAP received from report reviews.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR. S03 860905 802 DATE: 09/09/86
12. CONCURRENCE: CEG-H: W.R. Lagy DATE: 10/14/86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

2054T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.04 SQN and 311.03 SQN

1. Immediate Corrective Action Required: ☐ Yes ☐ No
2. Stop Work Recommended: ☐ Yes ☐ No
3. CATD No. 31104 SQN 01 4. INITIATION DATE 10-17-86
5. RESPONSIBLE ORGANIZATION: SQN
6. PROBLEM DESCRIPTION: ☐ QR ☐ NQR 1) RIR do not come to the attention of HP supervisors or SQN operations management. 2) RWP are not being handled as a QA document by personnel in the field.

☑ ATTACHMENTS

7. PREPARED BY: NAME Tom Huth DATE: 10-17-86
8. CONCURRENCE: CEG-H [signature] DATE: 10-20-86
9. APPROVAL: ECTG PROGRAM MGR DATE:

THIS ITEM COMPLETED 8-12-88 DATE

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: XX-86-028-X03: Pertinent Procedures have been revised to reflect the current status of determining/classifying RWP timesheets as QA or non-QA: however, all RWP-time sheets are retained as lifetime records.

XX-8-5-026-001: Recommendation to distribute RIR summaries to HP staff has been incorporated (first communications mailed for review 9/29/86) and will be issued each quarter. In the future the summary sheet will be mailed to the plant manager as a possible agenda item for his weekly meeting.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: SO3 861007 804 DATE: 10-14-86
12. CONCURRENCE: CEG-H: [signature] DATE: 10-20-86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

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.: 311.05-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31105-WBN-01 4. INITIATION DATE 01-22-87
5. RESPONSIBLE ORGANIZATION: Modifications Engineer Superv., Section C
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR This CATD was initiated to track the closure of ECN 6115 to modify the SG platforms.

☒ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 01-22-87
8. CONCURRENCE: CEG-H [signature] DATE: 2/3/87
9. APPROVAL: ECTG PROGRAM MGR. _____ DATE: _____

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Closure of ECN 6115 will adequately address the concern in ECSP Report Number 311.05-WBN.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: TRACKING ONLY DATE: 2/3/87
12. CONCURRENCE: CEG-H: [signature] DATE: 2/3/87
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

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: 311.05-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31105-WBN-02 4. INITIATION DATE 01-22-87
5. RESPONSIBLE ORGANIZATION: ALARA/HP Section Superintendent - WBN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR
Panel O-L-14 will be moved from a potentially high radiation area to the outside corridor panel O-L-316, an area of low radiation. Please provide the current status and the schedule and tracking document for implementing this corrective action.

☒ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 01-22-87
8. CONCURRENCE: CEG-H r/k - Thomas J. Kee Jr WBL DATE: 2/3/87
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 2/4/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [signature] DATE: 2-11-87
12. CONCURRENCE: CEG-H: [signature] DATE: 2-20-87
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

2310T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.05-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31105-WBN-03 4. INITIATION DATE 01-22-87
5. RESPONSIBLE ORGANIZATION: Modifications Engineer Supv. Section B
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR
   This CATD was initiated to track the closure of ECN 6005, which will provide newer, more reliable equipment in order to reduce man-hours and radiation exposure during calibration or maintenance.

☒ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 01-22-87
8. CONCURRENCE: CEG-H MWM - for F Huth DATE: 2/3/87
9. APPROVAL: ECTG PROGRAM MGR. _____ DATE: _____

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Closure of ECN 6005 will adequately address the concern in ECSP Report Number 311.05-WBN.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR TRACKING ONLY DATE: 2/3/87
12. CONCURRENCE: CEG-H: J Thomas for F Huth DATE: 2/3/87
    SRP: _____ DATE: _____
    _____ DATE: _____
    _____ DATE: _____
    _____ DATE: _____
    ECTG PROGRAM MGR: _____ DATE: _____

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: 311.05-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31105-WBN-04 4. INITIATION DATE 01-22-87
5. RESPONSIBLE ORGANIZATION: ALARA/HP Section Superintendent - WBN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR
Please provide the current status and the schedule and tracking document for installing T-bar barricades on the return air ducts for the regenerative heat exchangers in unit 1 at WBN.

☒ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 01-22-87
8. CONCURRENCE: CEG-H for Thomas J. Hurst-Wood DATE: 2/3/87
9. APPROVAL: ECTG PROGRAM MGR. for D. L. Williams DATE: 2/4/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: for D. L. Williams DATE: 2/19/87
12. CONCURRENCE: CEG-H: O. K. Earp DATE: 2-20-87
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

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: 311.05-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. OP 31105-WBN-05 4. INITIATION DATE 01-22-87
5. RESPONSIBLE ORGANIZATION: DNE, Knoxville
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR
   A new interfacing of SIS accumulator instrumentation being designed by Westinghouse will reduce safety hazards, save man-hours, and reduce exposure as described in WB-DCR 633. This CATD was initiated to track the closure of DCR 633.

☒ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 01-22-87
8. CONCURRENCE: CEG-H MHM for J Thomas F. Huth DATE: 2/3/87
9. APPROVAL: ECTG PROGRAM MGR. _____ DATE: _____

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Closure of DCR 633 will adequately address the concern in ECSP Report Number 311.05-WBN.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: Tracking only DATE: 2/3/87
12. CONCURRENCE: CEG-H: for J Thomas F Huth DATE: 2/3/87
    SRP: _____ DATE: _____
    _____ DATE: _____
    _____ DATE: _____
    _____ DATE: _____
    ECTG PROGRAM MGR: _____ DATE: _____

VERIFICATION AND CLOSEOUT

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

SIGNATURE	TITLE	DATE

2310T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.05-WBN

1. Immediate Corrective Action Required: ☐ Yes ☑ No
2. Stop Work Recommended: ☐ Yes ☑ No
3. CATD No. OP 31105-WBN-06 4. INITIATION DATE 01-22-87
5. RESPONSIBLE ORGANIZATION: Health Physics Section
6. PROBLEM DESCRIPTION: ☐ QR ☑ NQR This CATD was initiated to track the closure of the disposition of each deficiency in the ALARA walkdown (CCTS No. NCO-85-0257-009).

☑ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 01-22-87
8. CONCURRENCE: CEG-H NWM for Thomas F Hurtt DATE: 2/3/87
9. APPROVAL: ECTG PROGRAM MGR. _____ DATE: _____

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: Closure of NRC Deviation 390/85-33-01 and CCTS No. NCO-85-0257-009 will adequately address the concern in ECSP Report Number 311.05-WBN.

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR.: TRACKING ONLY DATE: 2/3/87
12. CONCURRENCE: CEG-H: Thomas F Hurtt DATE: 2/3/87
    SRP: _____ DATE: _____
    _____ DATE: _____
    _____ DATE: _____
    _____ DATE: _____
    ECTG PROGRAM MGR: _____ DATE: _____

VERIFICATION AND CLOSEOUT

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

SIGNATURE	TITLE	DATE

2310T

ECSP Corrective Action Tracking Document (CATD)

INITIATION — Applicable ECSP Report No: 311.05 SQN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31105 SQN 01 4. INITIATION DATE 10-17-86
5. RESPONSIBLE ORGANIZATION: Health Physics - SQN
6. PROBLEM DESCRIPTION: ☐ QR ■ NQR Based on NQA&E Branch Report QSS-A-86-0022-D02, the ALARA suggestion program is not being implemented in accordance with Standard Practice SQA-145. The RPP and the referenced Standard Practice require that incentives and encouragement for employees to participate in the suggestion program be provided. NRC reports also indicated weaknesses in the employees suggestion program (50-327/86-04, 50-328/86-04, 50-328/86-36, and 50-328/86-36).

☐ ATTACHMENTS

7. PREPARED BY: NAME Brenda R. Southerland DATE: 10-17-86
8. CONCURRENCE: CEG-H W.P.R... DATE: 10-21-86
9. APPROVAL: ECTG PROGRAM MGR ... DATE: 10-23-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEG MEMORANDUM

510 861113 842 / 503 861128 810

THIS ITEM COMPLETED
DATE 2-4-88

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: H.B. Rankin for ... DATE: 11-24-86
12. CONCURRENCE: CEG-H: Thomas F. Hoots for ... DATE: 12/4/86
SRP: ... DATE: ...
... DATE: ...
... DATE: ...
... DATE: ...
ECTG PROGRAM MGR: ... DATE: ...

VERIFICATION AND CLOSEOUT

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

SIGNATURE	TITLE	DATE

2110T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.05 SQN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31105 SQN 02 4. INITIATION DATE 10-17-86
5. RESPONSIBLE ORGANIZATION: Health Physics – SQN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR Based on NQA&E Branch Report QSS-A-86-0022-D03, the annual ALARA reports are not submitted, as required by the RPB within 90 days to the Manager of Nuclear Power. SQN was late in providing reports in 1983, 1984, and 1985.

☐ ATTACHMENTS

7. PREPARED BY: NAME Brenda R. Southerland DATE: 10-17-86
8. CONCURRENCE: CEG-H W.R. [illegible] DATE: 10-21-86
9. APPROVAL: ECTG PROGRAM MGR. [illegible] DATE: 10-23-86

THIS ITEM COMPLETED DATE: 3-4-88

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEE MEMORANDUM
S10 861117 842 / S03 861128 810

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: H. R. Ronald / [illegible] DATE: 11-2[illegible]
12. CONCURRENCE: CEG-H: Thomas F. [illegible] / [illegible] DATE: 12/4/86
SRP: ______ DATE: ______
______ DATE: ______
______ DATE: ______
______ DATE: ______
ECTG PROGRAM MGR: ______ DATE: ______

VERIFICATION AND CLOSEOUT

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

SIGNATURE	TITLE	DATE

2110T

Revision 2

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.05 SQN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31105 SQN 03 4. INITIATION DATE 10-17-86
5. RESPONSIBLE ORGANIZATION: Health Physics - SQN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR Based on NQA&E Report QSS-A-86-0022-D04, the ALARA program preplanning report requirements do not adequately address Regulation Guide 8.8 requirements for decontamination auxiliary lighting pre-job briefing, and post-job review. NRC reports also indicates weakness in the SQN ALARA committee reviews of pre and post job assessments. (Reports 50-327/86-04, 50-328/86-04, 50-327/86-36, and 50-328/86-36)

☐ ATTACHMENTS

7. PREPARED BY: NAME Brenda R. Southerland DATE: 10-17-86
8. CONCURRENCE: CEG-H W.R. Lagen DATE: 10-21-86
9. APPROVAL: ECTG PROGRAM MGR. [illegible] DATE: 10-23-86

THIS ITEM COMPLETED DATE: 3-4-88

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEE MEMORANDUM

5.10 861112 247 603 861128 510

JFH 12/4/86

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: K.B. Rankin for DATE: 11-24-86
12. CONCURRENCE: CEG-H: J Kamm F. Hunter for WRL DATE: 12/4/86
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

2110T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.05 SQN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31105 SQN 04 4. INITIATION DATE 10-17-86
5. RESPONSIBLE ORGANIZATION: Health Physics - SQN
6. PROBLEM DESCRIPTION: ☐ QR ■ NQR Based on the NQA&E Branch Report QSS-A-86-0022-DOS, radiological safety-related activities documentation is not maintained in accordance with American Nuclear Insurer (ANI) requirements. SQN procedures state that RWP's with no air data and all ALARA reports have a one year retention period. This is contrary to ANI requirements which require lifetime retention of radiological safety-related documentation. NQA&E interprets the RWP's with no air data and ALARA reports as radiological safety-related documents. ☐ ATTACHMENTS
7. PREPARED BY: NAME Brenda R. Southerland DATE: 10-17-86
8. CONCURRENCE: CEG-H W. R. [illegible] DATE: 10-21-86
9. APPROVAL: ECTG PROGRAM MGR [illegible] DATE: 10-23-86

THIS ITEM COMPLETED
DATE: 3-4-88

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: SEE MEMORANDUM S03 [illegible] 842 / S03 561128 510

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: [illegible] DATE: 11-24-86
12. CONCURRENCE: CEG-H: Thomas F. [illegible] - for [illegible] DATE: 12/4/86
SRP: DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

2110T

ECSP Corrective Action Tracking Document (CATD)

INITIATION Applicable ECSP Report No: 311.05-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31105-BFN-001 4. INITIATION DATE 10-24-86
5. RESPONSIBLE ORGANIZATION: Health Physics - ALARA
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR A winning ALARA suggestion became a long-term open item with no action taken. No formalized ALARA suggestion tracking system was in place to identify the status of this suggestion in a timely fashion. The ALARA Department should investigate implementing an official formalized ALARA suggestion tracking program. This program should provide a method of ensuring the proper evaluations and analysis of the suggestions are conducted.

☒ ATTACHMENTS

7. PREPARED BY: NAME Mark Zachary DATE: 10-08-86
8. CONCURRENCE: CEG-H [illegible] DATE: 10-21-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 11-5-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: A computerized tracking system has been developed to identify the status of each ALARA suggestion. However, procedure development and personnel training will be completed by the end of January 1987. Existing ALARA suggestion information will be loaded into the program by the end of March 1987. The new ALARA suggestion tracking system will be fully operational by April 1, 1987. RIMS R33 861204 830

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: R33 861204 830 DATE: 12/15/86
12. CONCURRENCE: CEG-H: Thomas F. Hutton for WRL DATE: 2/7/87
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

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: 311.05-BFN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31105-BFN-002 4. INITIATION DATE 10/24/86
5. RESPONSIBLE ORGANIZATION: Electrical Maintenance
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR The Electrical Maintenance Department did not respond to four written ALARA transmittals and their correspondance logs show no record of receiving the transmittals. The Electrical Maintenance Department should review their process of receiving and acknowledging incoming correspondances to preclude further incidents of the type addressed in this report.

☒ ATTACHMENTS

7. PREPARED BY: NAME Mark Zachary DATE: 10-08-86
8. CONCURRENCE: CEG-H W.K. Sorrell DATE: 10-29-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 11-5-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:
1. Elec Tech Section responded to the one ALARA suggestion identified as requiring a response.
2. Elec Tech Section has already implemented a tracking system for items requiring responses. Items requiring response are given an assignment number, assignment date, due date, and description (which includes references). This information along with initials of the responsible engineer are entered into computer program tracking log. A printout is generated each month. The printout is reviewed and updated throughout the month by the section supervisor.

RNR 12/17/86

See Attachment ☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: R33 861218 842 DATE: —
12. CONCURRENCE: CEG-H: W.K. Sorrell DATE: 4-6-87
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

CORRECTIVE ACTION COMPLETED 4-8-87

VERIFICATION AND CLOSEOUT

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

SIGNATURE TITLE DATE

DEC 17 1986

CATD No. 31105-BFN-002

CORRECTIVE ACTION (cont.)

10. PROPOSED CORRECTIVE ACTION PLAN:

3. Refer to memorandum from T. E. Kiwler to A. W. Sorrell dated November 24, 1986, "Browns Ferry Nuclear Plant - ALARA Suggestion for Relocating Drywell Coolers Air Purge Blowdown Valve - CATD No. 31105-BFN-002" (B35 861124 892).

THIS ITEM COMPLETED
DATE: 12-1-87

ECSP Corrective Action Tracking Document (CATD)

JRH 11/26/86

INITIATION Applicable ECSP Report No: 311.06-SQN Rev 1

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 31106-SQN-001 4. INITIATION DATE 10-17-86
5. RESPONSIBLE ORGANIZATION: Health Physics - SQN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR SQN Plant should evaluate a means to reduce the number of damaged C-Zone clothing articles issued for reuse. Large numbers of unrepaired coveralls found in the inspection performed by a ECTG evaluator indicated that the plant is not devoting enough attention to ensure its proper maintenance and serviceability.

☐ ATTACHMENTS

7. PREPARED BY: NAME Brenda Southerland DATE: 10-17-86
8. CONCURRENCE: CEG-H W.R. Lagergren DATE: 10-21-86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 10-23-86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

SEE MEMO S73 861187 936 AND ASSOCIATED CAP

THIS ITEM COMPLETED DATE 3-4-88

☐ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR. [signature] DATE: 11/15/86
12. CONCURRENCE: CEG-H: W.R. Lagergren DATE: 11/19/86
SRP: [signature] DATE:
DATE:
DATE:
DATE:
ECTG PROGRAM MGR: DATE:

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: 311.07-WBN

1. Immediate Corrective Action Required: ☐ Yes ☒ No
2. Stop Work Recommended: ☐ Yes ☒ No
3. CATD No. 311.07-WBN-01 4. INITIATION DATE 12/19/86
5. RESPONSIBLE ORGANIZATION: Health Physics - WBN
6. PROBLEM DESCRIPTION: ☐ QR ☒ NQR

Possibility of using contaminated hoses for connecting MSA Breathing Air Manifolds to Service Air. Please provide the current status and completion date for revising procedures RP-TSU-19 and RCI-4 which should include requirements for HP certification of manifold installation before use, a hold order requirement on Service Air valves being used for breathing air manifolds, and designated air lines for hookup. The air lines will be controlled by HP. Fittings on the hookup lines and manifold would be unique within the plant. In addition, a meter, controlled by HP, would be required for hookup to the Service Air System.

THIS ITEM COMPLETED 2/20/87

☒ ATTACHMENTS

7. PREPARED BY: NAME J. M. Richards DATE: 12/10/86
8. CONCURRENCE: CEG-H Thomas F. Hutto for WRL DATE: 12/19/86
9. APPROVAL: ECTG PROGRAM MGR. [signature] DATE: 12/19/86

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:

See Attached

☒ ATTACHMENTS

11. PROPOSED BY: DIRECTOR/MGR: Walter A. Dodd DATE: 2/10/87
12. CONCURRENCE: CEG-H: Thomas F Hutto for WRL DATE: 2/14/87
SRP: _____ DATE: _____
_____ DATE: _____
_____ DATE: _____
_____ DATE: _____
ECTG PROGRAM MGR: _____ DATE: _____

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 311.01

WBN	SQN
M. W. Murphy	D. L. Lovett E. Minga
BFN	**BLN**
M. W. Murphy	N/A

Element 311.02

WBN	SQN	
D. C. Hall	W. R. Strodl B. R. Southerland D. C. Hall	R1
BFN	**BLN**	
E. Minga	E. Minga	

Element 311.03

WBN	SQN
J. M. Richards	D. C. Hall
BFN	**BLN**
E. Minga	N/A

Element 311.04

WBN	SQN
B. R. Southerland	D. C. Hall B. R. Southerland
BFN	T. L. Reese R. L. Huskin
W. R. Strodl J. M. Richards	W. R. Strodl D. L. Lovett
BLN	
E. Minga	

Element 311.05

WBN	SQN
J. M. Richards	D. L. Lovett D. C. Hall B. R. Southerland
BFN	**BLN**
M. Zachary	N/A

R1

Element 311.06

WBN	SQN
E. Minga B. R. Southerland	D. C. Hall
BFN	**BLN**
M. Zachary E. Minga	E. Minga

Element 311.07

WBN	SQN
J. M. Richards	N/A
BFN	**BLN**
N/A	N/A