

TVA EMPLOYEE CONCERNS
SPECIAL PROGRAM

REPORT NUMBER: SWEC-SQN-34

REPORT TYPE: Sequoyah Nuclear Plant Element

REVISION NUMBER: 0

TITLE: Radiation Safety

REASON FOR REVISION: N/A

SWEC SUMMARY STATEMENT: The items in this report were identified by the Nuclear Regulatory Commission (NRC) and were included in the Stone & Webster Engineering Corporation (SWEC) systematic analysis. All items evaluated within this report were verified to be adequately addressed and were closed by the NRC.

PREPARATION

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TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT
EMPLOYEE CONCERNS TASK GROUP
OTHER SITES
CEG

Element Title: Radiation Safety

SWEC Concerns: A02 850624 003-001
-002
-003

Source Document: NRC Inspection Report 327, 328/85-20

Report Number: SWEC-SQN-34

Evaluator:	<u>John Knightly</u> J. J. Knightly	<u>9/8/86</u> Date
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I. INTRODUCTION

During the time period May 20-24, 1985, the Nuclear Regulatory Commission (NRC) conducted a routine, unannounced Sequoyah Nuclear Plant (SQN) site inspection in several areas of radiation safety. During this inspection, NRC identified three radiation safety violations (327/85-20-01, -02, and -03) which were addressed as issues in the Stone and Webster Engineering Company (SWEC) systematic analysis. These issues are as follows:

- A. (A02 850624 003-001) Recurring badge/dosimeter violations
- B. (A02 850624 003-002) Use of outdated isotopic scaling factors
- C. (A02 850624 003-003) Unlabeled hot material containers

These three SWEC issues are included in this report as sections (1), (2), and (3).

II. SWEC ISSUES

A. A02 850624 003-001 Recurring Badge/Dosimetry Violations

1. Background

The NRC inspector observed 17 percent of personnel failing to properly display their thermoluminescent dosimeter (TLD) badges and dosimeters. This was contrary to SQN procedure RCI-3, Revision 17, Personnel Monitoring, and was a repetition of previously identified violations in September 1984.

2. Corrective Actions Taken

Corrective actions undertaken by Sequoyah Nuclear Plant (SQN) (reference 2) included (1) a survey of dosimetry practices with discrepancy notices issued as needed to responsible supervisors for individuals failing to comply with RCI-3 requirements, (2) a review and revision for clarity of health physics procedures, (3) preparation of an employee handbook prescribing proper wearing of dosimetry, (4) temporary assignment of health physics technicians to the dosimetry storage rack to ensure personnel compliance with RCI-3, and (5) posting of signs illustrating proper wearing of dosimetry.

3. Verification Methodology

The SWEC concern identified for Employee Concerns Task Group (ECTG) verification was stated as follows:

<u>RIMS Number</u>	<u>Issue</u>	<u>RIMS Item</u>
A02 850624 003	ID of a recurrent violation forces the NRC to consider it significant. Inadequate training and lack of first-line supervision, and badge/dosimeter violations.	RIMS-001

A review was conducted of SQN compliance licensing files for internal and external correspondence, the applicable procedure RCI-3 (reference 3), documentation pertaining to previously identified violations 327/84-21-01 and 328/84-22-01 issued September 1984, and NRC inspection reports concerned with SQN badge/dosimetry (reference 1). This documentation review in addition to informal interviews held with SQN compliance engineers formed the basis for this verification activity.

4. Verification Analysis

ECTG review determined that the SQN corrective actions were completed and that the NRC item was adequately resolved. Supervisory involvement was aided by the survey of dosimetry practices with discrepancy reports issued to responsible supervisors. Training was aided by (1) issuance of the handbook describing proper dosimetry practices, (2) assignment of HP technicians to the dosimetry storage rack to instruct personnel, and (3) display of posters illustrating the proper placement of dosimetry. This item was closed by NRC in Reports 327, 328/86-04.

5. Completion Status

Based on the SQN corrective actions, compliance with requirements, and NRC closure of the item, this SWEC item is closed.

B. A02 850624 003-002, Use of Outdated Isotopic Scaling Factors

1. Background

The NRC inspection (reference 1) determined that SQN Technical Instruction (TI)-61 (reference 4) stipulated the use of generic scaling factors which caused nonconservative inferences to be made in determinations of waste stream nuclide concentrations. The scaling factors had the potential for causing incorrect classifications of radioactive waste being transferred to disposal facilities. The inspector determined that no waste shipments had been incorrectly classified, but that corrections to the scaling factors were needed to avert such a situation.

2. Corrective Actions Taken

SQN revised TI-61 to include new scaling factors for six different waste streams, and reasserted the plant commitment to make all shipments of active waste in accordance with requirements (reference 2).

3. Verification Methodology

The SWEC concern identified for ECTG verification was stated as follows:

<u>RIMS Number</u>	<u>Issue</u>	<u>RIMS Item</u>
A02 850624 003	Failure to maintain current SQ isotopic scaling factors based on either SQ or contractor analysis resulted in the use of outdated scaling factors.	RIMS-002

A review was conducted of SQN compliance licensing files for internal and external correspondence, NRC inspection reports, and procedures related to this issue. This documentation review and verification of the revisions to SQN TI-61 formed the basis for this verification activity.

4. Verification Analysis

ECTG review of the documents identified above determined that the NRC item was adequately resolved. New scaling factors have been added to the Technical Instruction. This item was closed by NRC in Reports 327, 328/86-04.

5. Completion Status

Based on the SQN corrective actions, compliance with requirements, and NRC closure of the item, no further action is needed. This item is closed.

C. A02 850624 003-003, Unlabeled Hot Material Containers

1. Background

The NRC inspection at SQN (reference 1) identified numerous containers of licensed materials which were not labeled with their radioactive contents. These labels were important for the handling of the material and as cautionary information to individuals for avoiding or minimizing exposures.

2. Corrective Actions Taken

Corrective actions undertaken by SQN included (1) labeling of the noncomplying containers, (2) discussions of the matter at daily plant meetings to ensure management awareness, (3) a training seminar for health physics (HP) technicians, (4) procedural revision for clarity, (5) periodic surveys by HP to confirm compliance, and (6) issuance of an employee handbook with instructions for proper disposition of radioactive material.

3. Verification Methodology

The SWEC concern identified for ECTG verification was stated as follows:

<u>RIMS Number</u>	<u>Issue</u>	<u>RIMS Item</u>
A02 850624 003	Failure to have all radioactive material containers properly labeled.	RIMS-003

A review was conducted of SQN compliance licensing files for internal and external correspondence, NRC inspection reports, and applicable HP procedures concerning the labeling of the radioactive material containers (reference 4). This documentation review plus interviews with SQN HP personnel formed the basis for this verification activity.

4. Verification Analysis

Based on the ECTG verification activities, it was determined that this NRC item was adequately resolved. The SQN corrective actions were examined by NRC on January 21-30, 1986, found acceptable, and closed by NRC in Inspection Reports 50-327, 328/86-04.

5. Completion Status

Based on the SQN labeling practices, HP training, procedural adequacy, handbook issuance, sign postage, and NRC closure, the SQN implementation is assessed to be progressing satisfactorily. This item is closed.

III. REFERENCES

1. NRC Inspection Reports 50-327, 328/85-20 dated June 20, 1985, from R. D. Walker to H. G. Parris, and follow-up memorandum, NRC Inspection Reports 50-327, 328/85-20 dated July 29, 1985 and May 1, 1986 [SQN CATS 85273].
2. TVA memorandum, "Sequoyah Nuclear Plant Units 1 and 2 - NRC - OIE Region II Inspection Report 50-327/85-20 and 50-328/85-20 - Response to Violations," dated July 19, 1985, from J. A. Domer to J. N. Grace, and follow-up memorandum, "Sequoyah Nuclear Plant Units 1 and 2 - NRC - OIE Region II Inspection Report 50-327/85-20 and 50-328/85-20 - Response to Violations," dated October 30, 1986 and April 4, 1986
3. SQN Procedure RCI-3, Personnel Monitoring, Revision 17
4. SQN Technical Instruction (TI)-61, Waste Classification and Scaling Factors, November 1, 1985