

TENNESSEE VALLEY AUTHORITY

NUCLEAR SAFETY REVIEW STAFF

NSRS INVESTIGATION REPORT NO. I-85-460-NPS

EMPLOYEE CONCERN: XX-85-062-001

SUBJECT: DRAWING CONTROL AT OFFSITE LOCATIONS AND DRAWING MANAGEMENT SYSTEM ACCURACY

DATES OF INVESTIGATION: OCTOBER 2-20, 1985

LEAD INVESTIGATOR: R. E. McClure 3/6/86
R. E. MCCLURE DATE

INVESTIGATOR: L. E. Brock for 3/6/86
W. R. SIMONDS DATE

REVIEWED BY: J. C. Catlin Sr 3/6/86
J. C. CATLIN DATE

APPROVED BY: W. D. Stevens 3/7/86
W. D. STEVENS DATE

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I. BACKGROUND

A Nuclear Safety Review Staff (NSRS) investigation was conducted to determine the validity of an expressed employee concern as received by the Quality Technology Company (QTC)/Employee Response Team (ERT). The concern of record as summarized on Employee Concern Assignment Request form from QTC and identified as XX-85-062-001 stated:

Browns Ferry, Bellefonte, Sequoyah - CI has been unofficially informed that the latest drawings on all TVA nuclear power plant sites are not, in the majority of instances, the latest drawings at offsite TVA administrative offices/departments, including a computer printout that does not reflect the current drawing revision. This can, and does, cause design, modification, and/or repair problems.

II. SCOPE

- A. The scope of this investigation is defined by the concern of record which entails determining the validity of this concern, management recognition of the problem, and corrective actions being evaluated.
- B. The NSRS reviewed documents and interviewed cognizant personnel to determine if offsite locations did have the current drawing revision and if the Drawing Management System (DMS) reflected the current information.

III. SUMMARY OF FINDINGS

A. Requirements and Commitments

- 1. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings"; Criterion VI, "Document Control"
- 2. EN DES-EP 4.19, "Drawing Management System Users Manual"
- 3. Nuclear Quality Assurance Manual (NQAM), Part V, Section 2.4 (ID-QAP 2.4), "Control of Modifications," dated July 10, 1985 and Section 6.1 (ID-QAP 6.1), "Configuration Drawing Control," dated December 31, 1984
- 4. NQAM, Part III, Section 1.1, "Document Control," dated March 21, 1985

B. Findings

1. There have been frequent cases over the years of offsite document control centers not having the latest drawings and the drawing information system in place at the time not reflecting the latest revision at the site. This has been true both for "as-constructed" and "as-designed" drawings and for both TVA and vendors. The DMS was implemented in December 1983 to provide online access for drawing information and is now the sole drawing information system used by P&E (Nuclear). However, documentation (Ref. 9) was reviewed stating that all the drawings used in design, operation, and maintenance are not in the DMS. The DMS data base is being expanded throughout P&E to enhance data integrity.
2. Review of DCC logs, workplan generated changes to drawings, and the DMS show that several months are often required for a typical drawing change to be processed.
3. Significant Condition Report (SCR) SCR GENIMS8501 was initiated on August 20, 1985, concerning data entry into the DMS not taking place in a timely manner. This SCR documents a large scale, corporate-wide problem that has been addressed with resources, goals, and reporting.
4. TVA has recognized this problem and has taken action as evidenced by the following:
 - a. A configuration management program was established June 13, 1985, by J. A. Coffey, Site Director, Browns Ferry Nuclear Plant (BFN), as part of the P&E Configuration Control Task Force (CCTF).
 - b. "DMS Overview II" memorandum dated July 15, 1985, from Michael L. Scalf, Chairman, DMS Subtask Group to R. D. Guthrey, Chairman, P&E Configuration Control Task Force, summarizes current activities and reflects that each nuclear plant has at least one representative on the group.
 - c. Communication between the CCTF and the DCC in Chattanooga has taken place to determine possible improvements.
 - d. Quality Notice NQAM Part V, Section 2.4, entitled "Design Change Control System Using Design Change Supplements," was issued on September 9, 1985, to implement a pilot design change control system at BFN.
 - e. Regulatory Performance Improvement Plan (RPIP) action item No. 11.25 to "correct weaknesses in document control system" has been identified, and corrective action is being taken.

5. After reviewing several workplan drawing changes and interviewing responsible employees, it was evident that there is not a universal understanding of how TVA is maintaining configuration control via the DMS. Many employees do not recognize the need for a DMS (and timely update to it) or the need to maintain current drawings at offsite locations.
6. Management appears to be unaware of general configuration management systems, such as described in reference 15.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

The employee concern is substantiated for the following reasons:

1. The DMS has been less effective than it should be because:
 - a. The DMS base has never been fully defined and loaded.
 - b. Neither management nor employees have a universal understanding of what configuration control means and how it is to be implemented via the DMS.
 - c. Management failed to put in place audit and feedback mechanisms on the sites to evaluate the DMS.
 - d. A large time cycle in the drawing update process at the sites has resulted in out-of-configuration drawings in offsite document control centers.
2. TVA has recognized that the existing DMS is in need of improvement. A task force has been established to address and resolve these problems, and significant progress has been documented (Refs. 9 and 13).

B. Recommendations

1. I-85-460-NPS-01, Prevent Recurrence

Implement the corrective action and the actions required to prevent recurrence of significant condition report SCR GENIMS8501 as outlined below:

- a. Establish appropriate instructions within OE to:
 - (1) Define specifically which documents are to be entered into DMS.

- (2) Establish all mandatory data elements to be entered.
 - (3) Standardize exact procedure of data entry.
 - (4) Provide schedule guidelines.
- b. Classify all drawings in DMS into three categories, each with the following percent initial allowable data entry error rate:
- (1) critical 0%
 - (2) primary 1%
 - (3) other 5%
- c. Nuclear projects ensure that appropriate management emphasis, procedures, resources, and training are in place to maintain the data performance identified above. [P2]
2. I-85-460-NPS-02, SON, BFN, WBN, and BLN Site Management Action

Establish an expedited process and distribution system to handle drawing changes and updating of the DMS. Delegate to the site QA unit the responsibility of auditing DMS site changes, tracking results, trending performance, and reporting on these parameters. [P2]

DOCUMENTS REVIEWED IN INVESTIGATION I-85-460-NPS
AND REFERENCES

1. TVA memorandum from T. Chapman to N. Beasley, "Documentation Problems Identified in Configuration Control Task Force Meeting Notes of March 6, 1985" (B45 850603 200)
2. TVA memorandum from R. Guthrey to J. Anderson dated May 3, 1985, "Request for DMS QC and Information Systems Analysis Service" (L00 850507 513)
3. TVA memorandum from M. Scalf to G. O'Dell dated October 18, 1985, "Request for DMS Adjunct Support" (no RIMS/MEDS number)
4. Operational Quality Assurance Manual - Drawing Control dated November 2, 1984
5. ID-QAP 2.4, "Control of Modifications," Rev. 7/10/85
6. NQAM Part V, Section 2.4, "Design Change Supplements," Rev. 7/10/85
7. SCRGENIMS 8501 dated August 20, 1985 (B04 850820 001)
8. Regulatory Performance Improvement Plan - Action Item 11.25
9. TVA memorandum from M. Scalf to R Guthrey dated March 12, 1985, "DMS Overview" (B04 850312 400)
10. TVA memorandum from R. Guthrey to Those listed dated October 9, 1984, "Configuration Control Task Force - Subtask Groups" (OEN 841011 011)
11. TVA memorandum from R. Wright to Design Services Files dated January 31, 1985, "BFN - Office of Power Engineering Configuration Control Task Force" (QMS 850225 202)
12. TVA memorandum from R. Cantrell to D. Bowen dated November 21, 1984, "DMS - Engineering Projects Responsibilities" (IMS 841121 002)
13. NSRS draft report R-85-11-NPS
14. TVA memorandum from M. Scalf to R. Guthrey dated September 30, 1985, "DMS Activities Report" (no RIMS/MEDS number)
15. DOE Directive 4700-Draft dated 2-20-85, Chapter 3, Section C "Configuration Management"

UNITED STATES GOVERNMENT

Memorandum

QA

TENNESSEE VALLEY AUTHORITY

TO: C. C. Mason, Deputy Manager of Nuclear Power, LP6N37A-C

FROM: K. W. Whitt, Director of Nuclear Safety Review Staff, E3A8 C-K

DATE: MAR 10 1986

SUBJECT: NUCLEAR SAFETY REVIEW STAFF INVESTIGATION REPORT TRANSMITTAL

Transmitted herein is NSRS Report No. I-85-460-NPS

Subject DRAWING CONTROL AT OFFSITE LOCATIONS

AND DRAWING MANAGEMENT SYSTEM ACCURACY

Concern No. XX-85-062-001

and associated prioritized recommendations for your action/disposition.

It is requested that you respond to this report and the attached two Priority 2 [P2] recommendations by May 9, 1986. Should you have any questions, please contact W. D. Stevens at telephone 6231-K

Recommend Reportability Determination: Yes No

[Handwritten signature]
Director, NSRS/Designee

WDS:GDM

Attachment

cc (Attachment):

- H. L. Abercrombie, SQN
- W. C. Bibb, BFN
- W. T. Cottle, WBN
- James P. Darling, BLN
- R. P. Denise, LP6N40A-C
- G. B. Kirk, SQN
- D. R. Nichols, E10A14 C-K
- QTC/ERT, Watts Bar Nuclear Plant
- Eric Sliger, LP6N48A-C
- J. H. Sullivan, SQN

WATTS BAR NUCLEAR PLANT SITE DIRECTOR'S OFFICE			
	Note	Action	Reply
Asst. Mgr.			
Asst. Mgr.			
SS Mgr.			
SS Mgr.			
SA			
Personnel			
Finance			
Compliance			
Int. Office			
ATTN: ATMS			
STP			



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