UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-259/90-36, 50-260/90-36, and 50-296/90-36

Licensee: Tennessee Valley Authority
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1101 Market Street
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Docket Nos.: 50-259, 50-260 and 50-296 License Nos.: DPR-33, DPR-52, and DPR-68

Facility Name: Browns Ferry 1, 2, and 3

Inspection Conducted: November 5-9, 1990

Inspector: R. Moore 11/26/90 Date Signed

Team Members: R. Wright
C. Rapp

Accompanying Personnel: F. Jape - November 7-9, 1990

Approved by: F. Jape, Chief 11/26/90 Date Signed
Engineering Assessment Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the areas of corrective action program and procurement practices.

Results:

In the areas inspected, violations or deviations were not identified. The corrective action program was found to be adequate and working well. Concerns identified in previous NRC inspection (50-259, 260, 296/90-20) were addressed by the licensee and resolved.

Browns Ferry procurement program and implementation was adequate based on a sample review of current Unit 2 procurement activities.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

P. Carier, Site Licensing
W. Clothier, PEG Engineer
*M. Coston, Site Quality Manager, Materials and Receiving
J. Davidson, Nuclear Stores Manager
D. Hicks, Materials and Procurement Manager
S. Holm, Mechanical - Civil Supervisor, PEG
R. Hyde, PEG Lead Engineer
S. Holm, Mechanical - Civil Supervisor, PEG
*L. Jones, Manager, Special Projects and Support
L. Lemon, PEG, Contractor Engineer
*B. McKinney, Manager Technical Support
*D. Miller, SQ Supervisor
*B. Morris, Corrective Action Coordinator
*L. Myers, Plant Manager
G. Peterson, PEG Engineer
*C. Reed, Procurement Manager
*J. Wallace, Site Licensing
J. Watson, Procedure Writer, PEG
O. Zeringue, Site Director

Other licensee employees contacted during this inspection included engineers, technicians, and administrative personnel.

NRC Resident Inspectors

*E. Christnot
*C. Patterson
*B. Beardon
*K. Ivey

*Attended exit interview

2. Corrective Action Program (92720)

The corrective action program was reviewed to verify that NRC concerns were resolved prior to Unit 2 restart. The program was previously reviewed in June 1990, (NRC Inspection Report Number 50-259,260,296/90-20) and assessed as effective in resolving identified deficiencies. This inspection reviewed corrective action performance from June 1990 to November 1990. Aspects of the corrective action process reviewed

included; corrective action completion and closure, closure of conditions adverse to quality reports (CAQRs) that required little or no action, management involvement, site quality involvement, and licensee actions to address concerns identified in the previous NRC inspection. Overall the corrective action program continued to be effective in correction of identified deficiencies. This assessment was based on the corrective action process currently in use at Browns Ferry. It was noted the licensee anticipates standardizing the program sometime after restart of Unit 2. This review provides no assumptions or projections regarding corrective action process effectiveness following the anticipated program change.

Site quality overview was assessed via review of audits and monitoring reports performed since June 1990. Audit Report BFA 90021, Correction of Deficiencies reviewed plant performance related to the CAQR and CAQ/ACP processing of identified deficiencies. The evaluation of plant and management review committee performance was objective and demonstrated SQ commitment to maintaining an effective corrective action process. Audit findings included; inappropriate CAQR closures, trending and timeliness of Incident Investigation Reports, and administrative documentation errors. Audit findings were appropriately documented and entered into the corrective action process. The audit was issued October 22, 1990; therefore, the elapsed time had not been sufficient for development of corrective action.

Monitoring reports are limited scope reviews of specific programatic aspects of plant activities. The following monitoring reports related to the corrective action process were reviewed.

QBF-M-90-289	Radiological Incident Reports
QBF-M-90-1473	Work Order (maintenance)
QBF-M-90-1492	Inspection Reports and COTS (QC)
QBF-M-90-1486	Test Deficiencies
QBF-M-90-1500	Receipt Inspection Reports
QBF-M-90-0495	Closure of CAQR
QBF-M-90-0457	CAQRs Applicable to SPOC Process
QBF-R-90-0506	Closure of CAQR - BFP880746
QBF-R-90-0529	Security Degradation Determinations
QBF-R-90-0499	Disposition of CAQR 900116
QBF-M-90-0579	Disposition of CAQR BFP 900320
QBF-M-90-0599	Receipt Inspection Reports
QBF-M-90-0598	Disposition of CAQR BFP 900136

Monitoring reports reviewed the adequacy of corrective action, determination of CAQR applicability by line organizations, timeliness, and administrative closure. This evaluation activity was objective and in combination with audits, provided the licensee an adequate basis for assessment of the corrective action program.

Closure and invalidation activity since June 1990 was generally adequate. The following CAQR closures were reviewed.

BFP890720	BF890219	BFP871060
BFP890123	BFP880703	BFP870319
BFP890392	BFP880442	BFP880826
BFP890287905P	BFP890379D02	BFA900025005
BFA900066	BFP900102	BFP890810
BFP890792		

The CAQRs were appropriately addressed and resolved. Areas which could be strengthened included operability determinations and initial scoping of the identified problems. SQ had previously identified these areas for increased attention. Corrective action was to include the Operations staff in operability determinations, especially for determinations involving operating modes 1, 2 and 3 and the safety/nonsafety equipment interfaces. CAQRs BFP900066, 890123, 880703, and 871060 were revised to include additional examples of an identified problem. For example, seven cracked angle plates on torus supports were identified at different times and were added to an existing CAQR. Eventually a broad scope evaluation of torus supports was initiated. These CAQR revisions, to include additional examples of previously identified deficiencies, indicate that the initial generic reviews for CAQRs could be improved.

Closure of CAQRs by invalidation and transfer to CAQ/ACPs was generally adequate. Administrative deficiencies were identified; however, the identified problems were adequately resolved. A total of 87 CAQRs were processed in this manner, 36 transferred to ACPs and 46 invalidated. BFP900333 regarding a bypassed QC hold point for a weld removal area was transferred to an inappropriate ACP. The ACP was not a designated CAQ/ACP as required by the Corrective Action Program procedure SDSP 3.13, Revision 9. The actual hardware issue for this CAQR was not safety significant. BFP 9003344 was invalidated based on required actions which were not assigned to an ACP. The CAQR addressed an inadequate site procedure which resulted in a missed NDE examination on a support. The invalidation stated "the condition can be corrected by reworking the support and performing the required NDE." The practice of specifying corrective actions on the invalidation form is questionable because there is no feedback mechanism following CAQR invalidation to verify actions were completed. In this example the work was completed due to the associated work plan remaining open. Overall the invalidation and transfers were adequate. The examples discussed were of minor safety significance individually. Review of SQ monitoring activity and discussions with SQ staff indicated this program aspect was adequately monitored.

A specific example of inappropriate CAQR closure was identified related to CAQRs BFP890147 and BFQ900116. The CAQRs addressed replacement of safety related circuit breakers and a field change to CAD system solenoid valves.

The Site Quality Manager authorized closure of these CAQRs prior to completion of the designated corrective actions. This action directly conflicted with the licensee corrective action program requirements as indicated by SDSP 3.13. This authorization was granted despite a closure rejection previously issued by the SQ staff. In discussion with the SQ manager regarding this inappropriate closure authorization he indicated he was knowledgeable of the CAQR issues and status at the time and decided closure was acceptable. It was notable that the authorization occurred on a weekend, the time period was near the end of the fiscal year, and the licensee had previously established goals regarding open CAQRs. The significance of this issue was limited due to licensee identification of the issues and recognition that this was a unique occurrence. The SQ staff initiated a PRD which is a lower tier CAQ process to identify this deficiency. This action will assure the identified CAQRs are adequately tracked and closed. No similar inappropriate closure authorizations were identified, therefore this occurrence appeared unique. A trend of deliberate program circumvention would have negatively impacted the quality of the corrective action program; however, this single example did not demonstrate a programatic or process weakness.

Overall, the corrective action process has continued to be effective in resolving identified problems at Browns Ferry. Contributors to program effectiveness were the cross organizational MRC and the close monitoring by SQ. A review of MRC minutes from June to October 1990 indicated that the amount of management involvement has decreased due to the fact that fewer CAQs are required to be reviewed by the MRC. The process continued to function adequately with less high level management involvement. The cross organizational review was an important program aspect. SQ monitoring activity was evident in all aspects of the corrective action program and demonstrated an uncompromising investigative function.

The corrective action program presently in use will remain through Unit 2 restart. Changes to the process, Revisions 8, 9, and 10 of SDSP 3.13, since June 1990 have been minor.

3. Procurement (38701, 38703)

The purpose of this inspection was to ascertain that BF is implementing a QA program which ensures procurement activities for safety related items/services and currently procured CG components/piece parts is in accordance with regulatory requirements, licensee commitments, and industry guides and standards.

The inspector met in conference with the various managers and supervisors involved in the procurement cycle which included, Nuclear Stores, PEG, Procurement, Purchasing, and QA. At this meeting the BF procurement process was described in detail to the inspector and any questions he had regarding the procurement scenario were satisfactorily answered. These discussions and review of procedures SDSP-16.9, Rev. 4, Technical Evaluation for Procurement of Materials and Services; and SDSP-16.2,

Rev. 2, Procurement of Material, Components, Spare Parts, and Services (under revision) disclosed that BF's procurement program is generally patterned after Sequoyah Nuclear Plant's program which was previously inspected by Region II (Report No. 50-327,328/90-02) and found acceptable.

The inspector selected the following sampling of recent Appendix B, EQ, licensee upgrades, and CG item procurement and dedication packages to review and assess their adequacy for specifying proper technical and QA requirements, testing, vendor documentation, dedication attributes, and acceptance criteria for the procured items.

QA Level	Contract No. /Report No.	Description
I	90NJC-82218C	Carbon Steel, 45° Elbows
I	90NLF-44862B/RD-139969	Electrical Insulation Sleeving
I	M9004575B	Rosemont Transmitters (10 CFR 50.49)
IS	89NLC-44914B/RD-137300	Rebuild GE Circuit Breakers
IS	89NLG-75294A	Repair/Refurbish Temperature Switches
II	91NJG-82408C	Pressure Controller Parts
II	91NJL-82465C	Cartridge Fuses
II	SWE8908355	Pump Parts, Upgraded to QA Level II by Dedication
II	Technical Report 90-5694	Copper Elbows and Tubing Upgrade
II	M9100760	Terminal Lugs and Splices

One discrepancy involving Contract 91 NJG-82408C was identified concerning an inadequate TVA source inspection of the parts manufacturer. Contrary to contract requirements the source inspection conducted by TVA on October 24, 1990 did not verify the manufacturer's conformance to process and materials of construction. The current proposed licensing basis for restart of Unit 2 may allow deferral of evaluation of safety-related replacement items installed in safety-related application for other than 10 CFR 50.49 systems until after the restart of Unit 2. Therefore, the subject discrepancy was identified as IFI 50-260/90-36-01, Inadequate Vendor Source Inspection. (See NUREG 1232 Volume 3, Suppplment 2). This discrepancy has been identified as PRD BFP900375 by the licensee who has been asked to determine the acceptability of these Pressure Controller Parts for their safety-related application and to review this source inspection deficiency for potential generic implications.

The inspector conducted a walk-through inspection of the newly constructed MPC complex which is unique in that it houses the entire BF procurement organization under one roof. The MPC building is well laid out in that it contains the main nuclear stores warehouse and stores personnel, PEG, purchasing, procurement document control, and QA/QC personnel which enhances good communications.

The inspector had discussions and queried several PEG personnel concerning procurement packages they were currently working on and questioned them on some of the above listed completed procurement packages, asking them to reverify some aspects of the packages. The inspector found these engineers to be responsive, and knowledgeable of the procurement process and their responsibilities.

The inspector examined the MPC warehouse and was impressed with its cleanliness, its spacious modern facilities, and the identification and storage of materials stored therein. The inspector talked to and observed stores personnel receiving and issuing materials and identified no significant problems. Discussion with and observation of QC receipt inspection personnel revealed they appeared to be adequately staffed and knowledgeable of their duties. Onsite QA testing capability of critical characteristics is generally limited to material hardness testing and dimensional checks since BF depends primarily on audits and source surveillances of CG suppliers at the present time.

The inspector has concluded from this broad based performance oriented procurement inspection that BF has a continually improving, viable, and workable procurement program currently in place that has been adequately implemented for the recent safety-related Unit 2 procurements examined. The centralization of all procurement activities under one roof (new MPC Complex) appears to greatly enhance the complex organizational interfaces required and is a definite asset to the program.

4. Action on Previous Inspection Findings (92701, 92702)

a. (Closed) IFI 50-259,260,296/90-20-01, Completion of Action Identified to Safety STD 3.1.10, Trend Analysis

This item involved four Administrative Control Procedures used to process conditions adverse to quality which did not contain adequate trend analysis requirements. The following ACPs were addressed.

(1) SDSP 7.6 Maintenance Management System
(2) SDSP 9.1 Processing Drawing Deficiencies
(3) PMI 17.1 Conduct of Testing
(4) SDSP 27.6 Engineering Evaluation Request

Review of draft revisions for ACPs (1) and (2) above identified the inclusion of trend analysis requirements. ACPS (3) and (4) were deleted from the designated CAQ/ACP list in SDSP 3.13, Corrective Action, Revision 10. These actions adequately addressed this issue. This IFI is closed.

b. (Closed) IFI 50-259,260, 296/90-20-02, Site Quality Corrective Action Program Overview

SQ overview of the corrective action program did not include overview of the following program aspects.

(1) CAQR - CAQ/ACP determinations by the plant staff.

(2) Verification of corrective action activity by plant.

Review of Audit Report BFA 90021 and SQ monitoring reports performed between June and October 1990, demonstrate these program aspects were appropriately monitored by SQ. This IFI is closed.

5. Exit Interview

The inspection scope and results were summarized on November 9, 1990, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

6. Acronyms and Initialisms

ACP	Administrative Control Procedure
BF	Browns Ferry
CAQ	Condition Adverse to Quality
CAQR	Condition Adverse to Quality Report
CAD	Containment Atmosphere Dilution
CG	Commercial Grade
COTS	Corrected on the Spot
EQ	Equipment Qualification
MPC	Materials and Procurement Complex
MRC	Management Review Committee
NDE	Non-Destructive Examination
PEG	Procurement Engineering Group
PRD	Problem Report Document
SDSP	Site Director Standard Procedure
SQ	Site Quality