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February 11, 1987
Fort St. Vrain
Unit No. 1
P-87059

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Docket No. 50-267

SUBJECT: NRC Review of the Public
Service Company of
Colorado Performance
Enhancement Program,
Finding 4-10

REFERENCES: 1) PSC Letter, Gahm to
Heitner, dated
07/23/86 (P-86480)
2) NRC Letter, Heitner
to Williams, dated
12/02/86 (G-86623)
3) Telecon (C-87-0006)
Heitner/Allenspach
to Holmes/Fuller,
01/09/87

Gentlemen:

In Reference 2), the Nuclear Regulatory Commission (NRC) requested additional information which would clearly demonstrate that operating personnel, under the direction of the Shift Supervisor, are actively involved in assuring the functional acceptability of equipment being returned to service. The following response is hereby submitted as an expansion of the material submitted in Reference 1) and as further discussed in Reference 3).

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The functional acceptability of equipment is checked prior to being returned to service at Fort St. Vrain. The requisite checks are initiated, performed and documented in accordance with station administrative procedures. These procedures include: Level 1 Administrative Procedures (G, P, and Q Procedures), Station Manager Administrative Procedures (SMAP's), and Nuclear Production Administrative Procedures (NPAP's). Activities which require the removal of equipment from service will accomplish the removal, the activity, the required testing and the return to service via established written instructions. Established written instructions and governing procedures must receive consideration and approval by Plant Management and the Plant Operations Review Committee (PORC) prior to being used at Fort St. Vrain.

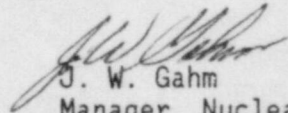
The majority of activities which serve to verify the functional acceptability of equipment being returned to service are performed by the Operations Department or the Instrumentation & Controls (I&C) group. If verification activities are performed by a department other than Operations, those activities are accomplished via controls which require Operations involvement. Operations is involved in initiation, review and final approval of the activities and the acceptance criteria used to determine functional acceptability.

Equipment may be removed from service for one of four reasons: surveillance testing, plant maintenance, modification installation or special testing. Each of these four areas are expanded in detail in the attached material.

February 11, 1987

Should you have any further questions, please contact
Mr. M. H. Holmes, (303) 480-6960.

Sincerely,



J. W. Gahm
Manager, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

JWG:DLW/djc

Attachment

cc: Kenneth L. Heitner, Project Manager
Standardization and Special
Projects Director

Regional Administrator, Region IV
Attn: Mr. J. E. Gagliardo, Chief
Reactor Projects Branch

Robert Farrell
Senior Resident Inspector
Fort St. Vrain

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SURVEILLANCE TESTING

The administrative controls established in SMAP-1, "Technical Specification Surveillance Testing Program" and SMAP-2, "Non-Technical Specification Surveillance Testing Program," provide assurance that equipment which is removed from service for testing purposes will be returned to service by established procedures and that the functional acceptability of equipment will be checked prior to being returned to service.

If equipment is removed from service for the purpose of accomplishing surveillance testing requirements, a specific procedure, or surveillance test, will be used. The procedure itself incorporates steps which return the tested or test implementing equipment to service. The test procedure also includes steps which have the purpose of verifying the functional acceptability of that equipment.

NPAP-4, "Surveillance Procedure Preparation," provides requirements and guidelines for preparing Technical Specification and Non-Technical Specification Surveillance Procedures. NPAP-4 has provisions for the following: documenting and recording test data and results, recording "As Found" and "As Left" conditions, listing of all components inspected or tested by the procedure, steps which ensure that systems are returned to an operable status, and steps for re-aligning equipment or other actions required to return a channel/instrument to service. Specific consideration is given to those actions necessary to ensure that a channel has been returned to service. All surveillances have requirements for notifying the Shift Supervisor (and Control Room personnel when systems are affected) of test performance. Shift Supervisor approval must be obtained prior to beginning a test and he must be notified of test completion and results. All surveillance tests receive Management and PORC consideration and approval prior to being issued.

Recent enhancements to NPAP-4 include provisions which will require that return to service steps will be followed by independent verification. Independent verification steps must be performed by a different individual than the test conductor. Surveillance tests are being revised to incorporate this requirement as part of the surveillance rewrite program.

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Written procedures are maintained on an on-going basis through the implementation of NPAP-8, "Procedure Reviews." This program establishes methods for scheduling and reviewing all procedures, including surveillance tests. A requisite review is performed for all new procedures, all permanently revised procedures and for all procedures on a periodic basis as determined by other station administrative controls. The review process requires the completion of checklists. These checklists include verification that post-maintenance testing requirements have been identified, and provide reasonable assurance that the equipment or components are capable of performing their safety functions.

The performance of approximately 30 to 35 percent of the surveillance tests at Fort St. Vrain are the direct responsibility of the Operations Department. An additional 40 to 45 percent are performed by the I&C group with the coordination and approval of Operations. Remaining tests are accomplished by personnel with specific areas of expertise such as Health Physics. These surveillances are also performed with the coordination and approval of the Operations Department.

PLANT MAINTENANCE

The administrative controls established in P-2, "Equipment Clearances and Operation Deviations," and P-7, "Station Service Request Processing," provide assurance that the Shift Supervisor and Operations personnel are involved in the initiation, development, review, and final approval of maintenance activities. The requirements of P-2 and P-7 apply to all corrective maintenance (CM), all preventative maintenance (PM) and all predictive maintenance (PDM). P-7 includes provisions for identifying, implementing, and documenting post-maintenance test activities for each maintenance item. As maintenance activities are processed, specific individuals are assigned the responsibility of assessing the scope of work to be performed, determining post-maintenance testing requirements, and notifying the appropriate department of test requirements. Equipment clearance requirements for maintenance activities are governed by Administrative Procedure P-2. P-2 has provisions which coordinate clearance activities, maintenance activities, post-maintenance testing and the return to service activities which occur for each maintenance item.

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The Shift Supervisor is responsible for supervising and administering clearances requested of Operations. He is also responsible for authorizing the initiation of testing required to demonstrate the functional acceptability of equipment following maintenance. The Shift Supervisor must acknowledge test results and be responsible for returning equipment to service following work.

A Scheduling Engineer or Technician is responsible for notifying appropriate departments of potential test requirements following maintenance.

Operations personnel are responsible for removing equipment clearances for testing, and performing the tests or assisting in the performance of test activities. Operations personnel are responsible for returning equipment to service as well as independent verification of system line-ups.

The Post-Maintenance Test coordinator is responsible for developing and administering post-maintenance tests in accordance with SMAP-23, "Post-Maintenance Testing Implementation." SMAP-23 provides a means for developing the specific written instructions which are used to verify equipment functional acceptability prior to returning it to service. Clearances on equipment may not be returned to service after maintenance or considered to be functionally acceptable until the testing required by SMAP-23 has been completed.

Existing Technical Specification or Non-Technical Specification Surveillances may be used as post-maintenance tests where applicable. Generally, surveillances are used where system operability must be established. These tests are administered as described previously. Post-Maintenance Testing Instruction Sheets (PMT's) are used when maintenance is performed on specific equipment items at the component level. Included in SMAP-23 are guidelines for preparation of PMT's and test determination logic. Using either surveillance tests or PMT's requires that Operations be notified of test initiation, conclusion and results. SMAP-23 has received review and approval by Plant Management and PORC. General-use PMT's have been developed for routine maintenance including most PM and PDM activities. Such PMT's are incorporated into SMAP-23 via a permanent Procedure Deviation Report (PDR). If testing requirements are determined to be necessary which do not exist as a general-use PMT or a surveillance test, then a temporary PDR is prepared to SMAP-23 to accommodate the required testing on a one-time, one-use basis. All PDR's must receive consideration and approval by Plant Management and PORC.

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A completed PMT, including acceptance by the Shift Supervisor, must be attached to every completed Station Service Request (SSR) unless the SSR clearly identifies that no PMT was required.

The Post-Maintenance Test coordinator is a member of the I&C Engineering staff. This person is responsible for reviewing all SSR's for appropriate PMT requirements.

PMT's are performed in most cases by workmen from the I&C group with the approval and assistance of the Operations Department. A workman or post-maintenance test performer is responsible for obtaining Shift Supervisor approval to begin the test. He is also responsible for performing the PMT, reviewing unacceptable test results to determine cause, initiating additional corrective action if necessary, and obtaining the Shift Supervisor's concurrence upon PMT completion.

MODIFICATION INSTALLATION

The functional acceptability of equipment being returned to service following design change modification is established in accordance with Administrative Procedure G-9, "Controlled Work Procedures." G-9 includes requirements that work-specific Functional Tests (FT's) and Cold Checkout Tests (CCT's) be prepared for design change activities when appropriate. The Operations staff is involved in the process of developing and approving all FT's and CCT's. Actual field work for design change modifications is accomplished and documented by the completion of a Controlled Work Procedure (CWP). CWP's with corresponding CCT's and FT's are reviewed and approved by the plant Work Review Committee (WRC). Members of the Operations staff are assigned to the WRC and must review and approve the CWP package prior to its implementation. All CWP packages must also receive consideration and approval by Plant Management and PORC.

CCT's and FT's are performed either by plant electricians or members of the I&C group with the coordination and approval of Operations. Shift Supervisor approval must be obtained prior to beginning FT's or CCT's. The Shift Supervisor must be informed of test completion, test results, and his signature obtained on the CCT, FT and CWP. The CWP coordinates and documents the activities involved in removing equipment from service, hanging clearances, returning clearances to accommodate testing, returning clearances following testing and verifying that the system/equipment has been returned to service.

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SPECIAL TESTING

Special Tests (T-Tests) are used to perform a failure analysis to determine the cause of a failure, to determine the extent of performance deterioration of in-service equipment or components, and for data collection/analysis. T-Test preparation and implementation is in accordance with Administrative Procedure Q-11, "Test Control." T-Tests are performed by either the Operations Department or the I&C group with the coordination and approval of Operations. Q-11 and all T-Tests must receive the consideration and approval of Plant Management and PORC. The Shift Supervisor's approval must be obtained prior to beginning a T-Test. The Shift Supervisor must be informed of test results and acknowledge test completion by signing the test form.