

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-267/88-18

Operating License: DPR-34

Docket: 50-267

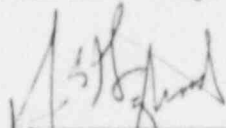
Licensee: Public Service Company of Colorado (PSC)

Facility Name: Fort St. Vrain (FSV)

Inspection At: Platteville, Colorado

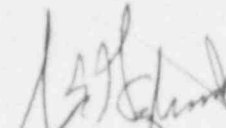
Inspection Conducted: August 29 through September 2, 1988

Inspector:

  
G. A. Pick, Reactor Inspector, Operational  
Programs Section, Division of Reactor Safety

9/29/88  
Date

Approved:

  
J. E. Gagliardo, Chief, Operational Programs  
Section, Division of Reactor Safety

9/29/88  
Date

Inspection Summary

Inspection Conducted August 29 through September 2, 1988 (Report 50-267/88-18)

Areas Inspected: Routine, unannounced inspection of licensed operator training, nonlicensed staff training, and review of general employee training.

Results: Within the three areas inspected, no violations or deviations were identified.

DETAILS1. Persons ContactedPSC

- \*F. J. Borst, Nuclear Training Manager
- \*M. H. Holmes, Nuclear Licensing Manager
- \*C. Fuller, Manager, Nuclear Production
- \*M. J. Ferris, Quality Assurance Operating Manager
- \*P. F. Tomlinson, Manager, Quality Assurance (QA)
- \*L. R. Sutton, Supervisor, QA Auditing
- \*J. M. Gramling, Supervisor, Nuclear Licensing Operations
- \*N. Snyder, Maintenance Department Manager
- \*J. Eggelroten, Technical Projects Manager
- \*R. O. Hooper, Nuclear Training Administration Supervisor
- \*R. Rivera, Nuclear Systems Training Supervisor
- \*G. Krojewski, QA Operations

NRC

- R. E. Farrell, Senior Resident Inspector, FSV
- \*P. W. Michaud, Resident Inspector, FSV

Other persons contacted included administrative personnel, engineers, managers, and instructors.

\*Denotes those present at exit interview on September 2, 1988.

2. Followup on Previous Inspection Findings

(Closed) Open Item (267/8727-01): Backlog of Training Development Requests for Determination of Applicability - As identified in Inspection Report 50-267/87-27, there was a backlog of training development requests (TDR). Review of the TDR log revealed that there were training requests dated from early 1986, which had not been dispositioned. The backlog of TDRs indicated that industry operating experience, significant operating experience reports (SOER), licensee event reports (LERs), NRC information notices (IN), and other industry experience reports, had not been reviewed for applicability to lesson plans or disapproved. If it had been covered in a lesson plan or evaluated and determined not to apply to FSV, the TDR was disapproved.

During this inspection, the NRC inspector determined that Training Operations Procedure (TOP)-3, Issue 2, "Training Development Requests," had been implemented after the deficiencies were identified by this open item. The licensee began reducing their backlog of training requests awaiting disposition. As of June 30, 1988, the licensee had identified approximately 600 TDRs awaiting disposition. At the time of this inspection, the licensee had approximately 58 TDRs awaiting disposition.

Based on the licensee's plans to have all overdue training requests dispositioned by December 31, 1988, the NRC inspector determined this portion of the issue resolved.

The second part of this open item was a concern that a change to the TDR process may be required to aid in removing the backlogged TDRs. The licensee changed the training request process by a memorandum dated March 31, 1988. The memorandum (PSS-88-1070) implemented TOP-3, "Training Development Requests." The procedure reduced the number of training requests placed into the system by providing an up-front review of potential TDR material. Procedure NPAP-1, "Fort St. Vrain Nuclear Generating Station Operation Information Assessment Group (OIAG) Charter," had been revised to require the training department to disposition OIAG recommendations on training issues and any other TDRs within 90 days of receipt by the training department. All TDRs generated on or after March 31, 1988, were affected. Memorandum PSS-88-1070 was the mechanism, which had required disposition of all training requests by the end of 1988. This item is considered closed.

(Closed) Unresolved Item (267/8727-03) Technical Manager Training Program Development - During an NRC inspection dated October 5-9, 1987, it was identified that a technical manager training program had not been developed by the commitment date of August 31, 1987. The need for this program had been self-identified by licensee QA Audit TRQL-87-02, "Training and Qualification of Plant Staff Personnel to ANSI N18.1-1971 and Regulatory Guide 1.8." The audit report had been issued on March 20, 1987, with the original corrective action to be completed by July 22, 1987. The NRC inspection report identified that the commitment date for implementation of the corrective action had been moved to December 31, 1987.

During this inspection, the NRC inspector determined that a training procedure TP-TM, Issue 1, "Training Procedure - Technical Staff and Manager," had been established on December 3, 1987. Review of TP-TM, Issue 1, indicated that the program had been adequately defined. The technical manager training program had been INPO accredited on June 23, 1988. This item is considered closed.

(Open) Open Item (267/8727-02) Use of Waivers for Training Requirements and Followup of QA Training Audit Activities - NRC Inspection Report 50-267/87-27 identified that the licensee did not appear to have adequate controls over the waiver process in the following areas: (1) If an individual demonstrated proficiency in a subject area, waivers were being granted based on the recommendation of an individual who had observed conduct of applicable job performance measure, but who was not certified as an on-the-job training instructor; (2) Waivers were being granted because of lesson plans that had not been developed or presented; equipment out-of-service for an extended period of time were not being tracked to determine if the waiver could be withdrawn and the training requirement completed. The licensee was undergoing a major reorganization of the training department and was reviewing the training program to determine what changes should be made.

The licensee had committed to audit the process of waiving training during their January 1988 QA audit of the training organization as identified by licensee commitment number QDC-130.

During this inspection, the NRC inspector reviewed the results of QA Audit TRQL-88-01 conducted January 13-27, 1988. The licensee's audit team had identified only one waiver, which had been processed in accordance with Training Administrative Procedure (TAP)-7, "Training Program Implementation," Attachment 7A. This provided little objective evidence of the use of the waiver program as defined in TAP-7 and each area's training procedure (e.g. electrical maintenance, mechanical maintenance, chemistry, etc.). The QA department planned to review the training department's use of waivers during the January 1989 audit of training activities. Additionally, the effectiveness of the training department's implementation of Phase I activities and the adequacy of Phase I program implementing procedures will be evaluated. Phase I activities included those programs required by ANSI N18.1-1971. Phase II activities included those programs being developed for certification/qualification of licensee personnel which did not have qualification requirements specified in ANSI N-18.1-1971.

The NRC inspector received a commitment from the licensee regarding deadlines for the implementation of all ANSI N18.1-1971 required programs (Phase I programs) and for the development and implementation of Phase II programs. The licensee committed to have Phase I activities implemented by November 30, 1988, and Phase II programs developed and implemented by December 31, 1989. This item remains open pending future inspection by the NRC of QA audits of training department activities, use of waivers to relieve training requirements on an individual basis, and compliance with the above commitments.

### 3. Licensed Operator Training and Training Department Activities (41701)

Selected aspects of the licensed operator requalification training program were reviewed to verify compliance with the licensee's NRC approved requalification program. The training department activities reviewed included the training development request process, especially the feedback of operating experience and General Employee Training (GET). Procedures utilized during this inspection are listed in Attachment 1.

#### a. Licensed Operator Training

During review of the licensed operator training program area, Training Procedure TP-LR, Issue 3, "Training Procedure - Licensed Operator Requalification," dated March 29, 1988, was utilized by the inspector. The NRC inspector compared TP-LR, Issue 3 to the licensee's NRC approved requalification training program. The documents were in agreement. The NRC inspector also reviewed the "Annual Licensed Operator Requalification Training Review" memorandum (PPC-88-1947), dated June 23, 1988. The memorandum and the requalification test scores attached to the memorandum, indicated

weaknesses in reactor theory and thermodynamics. The NRC inspector verified, through review of the 1988-1989 requalification schedule, that these subjects were scheduled to be covered during the second requalification rotation as specified in the memorandum. The second rotation was scheduled from October 24 to December 2, 1988.

The total number of hours spent by licensed individuals in the classroom, on the mockup, and for self-study during the 1987 to 1988 requalification year are summarized below:

	<u>Hours</u>
Class Room	144
Plant Mockup	36
Self-Study	70
Exam	10
Total	<u>260</u>

This resulted in the following breakdown of a licensed operators' time: 55 percent classroom, 14 percent mockup, 27 percent self-study, and 4 percent examinations.

From discussions with training department personnel, the NRC inspector determined that operating experience reports, such as LERs, INPO SOERs, INPO SERs, NRC Information Notices, and plant modifications, which impact operations, will be covered in operations seminars in an effort to disseminate the information to the operators quickly. The requirement for and description of seminars was provided in Procedure G-7, Issue 20, "FSV Project Personnel Training and Qualification Programs," Section 4.11. These seminars were presented as group discussions with the instructor discussing important aspects of the event report or plant modification and how it affects the operation of the facility. Operation seminars were scheduled for approximately 4 hours on Fridays of each requalification week.

b. Training Program Activities

This area was inspected to determine the effectiveness of selected training program administrative controls being implemented by the licensee.

The NRC inspector reviewed the lesson plans listed in Attachment 2 for agreement with the facilities lesson plan format requirements and technical content. The format of the lesson plans agreed with the requirements specified in TOP-2, "Lesson Plan Development and Approval." Additionally, the NRC inspector compared the lesson plans for general employee training for all topics, other than health physics, to the topics required to be taught according to Training Program Administrative Manual (TPAM) Procedure GET, Issue 27, "General Employee Training Program." Each topic required to be

taught by TPAM GET was being covered and had a specific lesson plan. Each lesson plan stated the objectives, covered the material required and provided a summary. The NRC inspector had attended a GET training session in July 1988. The material covered in the lesson plans was in agreement with the subject matter presented to the inspector. The GET training program description had requirements for annual GET training, guidance on conducting training, and the division between Category I, II, and III training.

The other major area reviewed involved the licensee's process for incorporating operating experience into their individual training programs, especially licensed operator training. Procedure G-7, Issue 20, "FSV Project Personnel Training and Qualifications Programs," Step 3.15 stated that operating experience training was to be incorporated into training materials in accordance with TOP-2. Procedure NPAP-1, Issue 5, "Fort St. Vrain Nuclear Generating Station Operation Information Assessment Group Charter," described the program for review of industry and in-house operating experience reports for applicability to the plant and to ensure that this information was routed to the appropriate departments. Procedure TOP-2 described the type of information required to be incorporated in the lesson plans and/or operating experience seminars. As previously discussed, the TDR program was prescribed by TOP-3. The review of operating information with potential impact on the facility to determine whether to implement a training request was prescribed by TAP-8, Issue 2, "Evaluation," Step 4.3.3. The NRC inspector reviewed the handout material utilized in the informal training department briefing on the training development request process.

As described above through various procedures, a program for the review of operating experience by the training department for impact of FSV was implemented. Paragraph 2 of this report described the progress which had been made on decreasing the backlog of TDRs. The NRC inspector identified, during this review of the TDRs, 49 training requests dated from October 1985 to January 1988, which required action to be taken; however, these TDRs had not been assigned to any lesson plan nor had a resolution been proposed. The NRC inspector expressed his concern over this situation because training requests, without any action assignment, have the opportunity to be "lost in the shuffle" and not get resolved. The licensee was requested to provide a resolution to this situation. The licensee stated that by October 31, 1988, the training department would evaluate each of these TDRs to determine whether they were still applicable to FSV. Additionally, by November 30, 1988, the TDRs, which required action, would be assigned a completion date for development of a lesson plan or assigned to an existing lesson plan.



The above deadlines of October 31, 1988, and November 30, 1988, were committed to and proposed by the licensee. This will be an open item (267/8818-01) awaiting verification by the NRC that the activities had been conducted.

The NRC inspector found that QA department's review of the TDR process implementation, which occurred concurrent with the NRC inspectors review, had identified 5 of 80 TDRs that had exceeded the 90-day requirement for disposition of TDRs within the training department. This statistic indicated an improvement in the training departments disposition of training requests. Upon identification of the 5 TDRs outside the 90-day limit, the training department promptly began corrective action.

No violations or deviations were identified in the review of this program area.

#### 4. Nonlicensed Staff Training (41400)

The nonlicensed staff training programs were reviewed to determine that the programs were developed. The seven training programs listed below received INPO accreditation on June 23, 1988.

- technical advisor
- instrumentation and control technician
- electrical maintenance personnel
- mechanical maintenance personnel
- radiological protection personnel
- chemistry technicians
- onsite technical staff and managers

Each of the above programs were implemented by the training department using training procedures. Selected training procedures listed in Attachment 1 were reviewed. Selected training procedures were scanned to verify that they were similar to the electrical maintenance training procedure in format and requirements. The procedures were reviewed to determine if responsibilities, experience, education, instructor qualifications, waiver requirements, length of the course, course description, evaluation, and documentation were included. The training procedures reviewed included: instrument and control technicians, mechanical maintenance, reactor operators, and senior reactor operators.

During inspection of this area, the NRC inspector reviewed correspondence between NRC headquarters and the licensee. The correspondence concerned the resolution of training issues for special senior reactor operators (SSLOs/fuel handlers). Procedure TP-SSLO, Issue 2, "Training Procedure - Special Senior Licensed Operator (Fuel Handler)," described the requirements for training of licensed individuals for handling fuel. The NRC staff was concerned, as expressed in a January 13, 1988, letter, about the responsibilities and training of SROs in tasks performed by SSLOs. The licensee

committed in an April 14, 1988, memorandum to add the required explicit references to SRO and SSLO responsibilities. At the time of this inspection, approximately 4 months later, the NRC inspector asked to see the new fuel handling procedure manual (FHPM) with the required responsibilities defined. The licensee had not made the required modifications; however, the licensee committed to have the responsibilities defined in the FHPM by September 30, 1988. This is an open item (267/8818-02) awaiting verification by the NRC of the licensee's corrective actions.

The NRC inspector had requested to see documentation to confirm that some form of corrective measures had been taken in response to the findings of the Operational Safety Team Inspection (OSTI) conducted in May 1988. The findings indicated that procedural inadequacies existed and maintenance activities may need to be changed. At this time, the OSTI inspection report had not been issued. The licensee provided to the NRC inspector, "Controlled Work Instructions," which included detailed diagrams of a thermocouple well. The NRC inspector determined that "shop talks" had been conducted to inform the maintenance technicians of the inspection findings; however, these discussions had not been documented. The licensee indicated that a more formal training session, in the form of a seminar, will be conducted after the OSTI report was received onsite. The NRC inspector requested to see the implementing procedure, and the licensee provided the Procedure G-24, Issue 1, "Operating Experience Reviews," which was in draft form.

The NRC inspector was concerned that findings, as presented by the OSTI, had not been covered by training sessions. The training should have included management's policies or adherence to procedures and what to do when procedures were determined to be inadequate. This is an open item (267/8818-03) until a subsequent NRC inspection verifies how seminars are used to disseminate important information to employees.

Discussions were held with the licensee regarding the need for both a proposed and as-taught training schedule. The NRC inspector indicated that deviations, such as deleted material with alternate courses scheduled, should be justified. The reasoning was that a scheduled course was important and deletion of that "needed" course should be explained. This is an open item (267/8818-04) awaiting a subsequent NRC inspection to determine the licensee's corrective measures.

No violations or deviations were identified in the review of this program area.

##### 5. Exit Interview

The inspection scope and findings were summarized with those individuals identified in paragraph 1. The information provided to and reviewed by the NRC inspector was not identified as proprietary by the licensee.



ATTACHMENT 1

The following documents were utilized by the NRC inspector during this inspection.

G-7, Issue 20, "FSV Project Personnel Training and Qualification Programs,"  
June 22, 1988

G-24, Issue 1, "Operating Experience Reviews," Draft

NPAP-1, Issue 5, "Fort St. Vrain Nuclear Generating Station Operation  
Information Assessment Group Charter," April 19, 1988

TPAM GET, Issue 27, "General Employee Training Program," January 10, 1986

TPAM Procedure Training, Issue 2, "Procedures Training Program," March 11, 1985

TAP-1, Issue 1, "Training Organization and Responsibilities," December 3, 1987

TAP-2, Issue 2, "Instructor Development and Qualification," June 22, 1988

TAP-3, Issue 1, "Training Support," December 3, 1987

TAP-7, Issue 2, "Training Program Implementation," June 22, 1988

TAP-8, Issue 2, "Evaluation," June 22, 1988

TOP-2, Issue 2, "Lesson Plan Development and Approval," June 22, 1988

TOP-3, Issue 2, "Training Development Requests," June 22, 1988

TOP-4, Issue 1, "On-the-Job Training," June 22, 1988

TP-EM, Issue 1, "Training Procedure - Electrical Maintenance," February 12,  
1987

TP-ST, Issue 1, "Systems Training," Draft

TP-LR, Issue 3, "Training Procedure - Licensed Operator Requalification,"  
March 29, 1988

TP-SSLO, Issue 2, "Training Procedure - Special Senior Licensed Operator  
(Fuel Handler)," June 21, 1988

TP-TI, Issue 3, "Training Procedure - Training Instructor," December 3, 1987

TP-TM, Issue 1, "Training Procedure - Technical Staff and Manager,"  
December 3, 1987

## ATTACHMENT 2

The lesson plans listed below were reviewed for format and technical content. The lesson plans designated "GE" were general employee training lesson plans.

<u>Lesson Plan Number</u>	<u>Subject</u>
AT 034.03	FSV Clearance and Operation Deviation Procedures
AT 105.01	Valve Operation and Valve Position Indicators
EM 011.01	Limiterque MOV Maintenance
EM 012.00	Rotork MOV Maintenance
RO 112.02	Overall Plant Control System
SO 006.00	Equipment Clearances and Operations Deviation Reports (ODR)
GE 003.02	Public Service Policy on Drugs and Alcohol
GE 004.02	Fire, Injuries and Notifications
GE 005.03	Security
GE 006.01	Plant Administration
GE 007.01	Site Description
GE 008.00	High Temperature Gas Cooled Reactor Concept
GE 009.01	Quality Assurance
GE 011.02	Radiological Emergency Response Plan
GE 012.05	Plant and Personnel Safety
GE 020.03	Site Emergency Response

## LETTERS

- G-87185 Fort St. Vrain - Licensed Operator Requalification Program, June 4, 1987
- G-88008 Fort St. Vrain - Initial and Requalification Training Program for Special Senior Licensed Operators, January 13, 1988
- G-88110 Meeting Summary With Public Service Company of Colorado to Discuss SRO-SSLO Training, April 14, 1988
- G-88217 Resolution of Training Issues for Senior Reactor Operators in Fuel Handling at Fort St. Vrain.