

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Report No. 50-267/82-14

Docket No. 50-267

Licensee: Public Service Company of Colorado
P. O. Box 840
Denver, Colorado 80201

Facility Name: Fort St. Vrain Nuclear Generating Station

Inspection at: Fort St. Vrain Site, Platteville, Colorado

Inspection Conducted: June 1-4, 1982

Inspector: Charles A. Hackney
Charles A. Hackney, Emergency Preparedness Analyst

8/10/82
Date

Accompanying Personnel: G. L. Madsen
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Approved by: John T. Collins
John T. Collins, Regional Administrator, Region IV

8/11/82
Date

Summary

Inspection Conducted During Period of June 1-4, 1982
(Report No. 50-267/82-14)

Areas Inspected: This routine, announced inspection of the Fort St. Vrain Nuclear Generating Station involved 290 inspection hours which includes onsite inspector hours for the emergency exercise and coordinated meetings with the licensee, the Federal Emergency Management Agency, State, and local agencies.

Results: No violations or deviations were identified. Six open items are discussed in Section 7.

DETAILS1. Persons ContactedLicensee Personnel

F. J. Borst, Radiation Protection Manager
L. M. McBride, Technical/Administrative Services Manager
D. W. Warembourg, Manager, Nuclear Production
W. Franklin, Shift Supervisor
O. R. Lee, Vice President, Electric Production
A. L. Kitzman, Clerical Supervisor
J. W. Gahm, QA Manager
T. Schleiger, HP Supervisor
E. Hill, Station Manager

2. Other Organizations

N. P. Alley, Federal Emergency Management Agency

3. Scope of Inspection

The purpose of this inspection was to observe the licensee's onsite emergency organization, emergency response facilities, and the licensee's interface with other emergency response organizations pursuant to 10 CFR 50, Appendix E.

4. Entrance Interview

The entrance interview was conducted on June 1, 1982.

5. Exit Interview

The inspection scope and findings were summarized on June 4, 1982.

6. Licensee Action on Previous Inspection Findings

Not Inspected.

7. Open and Unresolved Items Identified During This Inspection

Six open items were identified during this inspection.

a. These items are considered open (82-14-01) pending:

- (1) Development and implementation of procedure and checklist to adequately inform the Technical Support Center (TSC) of the Exclusion Area Boundary (EAB) and site property accountability status (Section 12).

- (2) Development and implementation of a mechanism to adequately determine accountability of all personnel within the FSV protected area, upon initiation of and during an accident, e.g., contractor personnel, station personnel, and other miscellaneous personnel (Section 12).
- b. These items are considered open (82-14-02) pending:
- (1) Acquisition of a complete offsite radiological monitoring kit, e.g., 1E-7 radioiodine detection capability, sector maps, procedures, flash lights, batteries, compass, paper, pencils, hand-held calculator, check sources, anti-c's, SCBA, etc. (Section 13).
 - (2) Acquisition of a dedicated/controlled vehicle suitable for offroad use (4-wheel drive) and equipped to operate emergency radiological equipment (Section 13).
 - (3) Development and implementation of offsite monitoring procedures (Section 13).
 - (4) A performed and documented offsite monitoring drill which exercises those areas expected to be encountered during an incident with an offsite radiological release (Section 13).
 - (5) Internal agreement for priority use of radio, or acquiring a dedicated radio channel for emergency use at FSV (Section 13).
- c. These items are considered open (82-14-03) pending:
- (1) Providing continuous radiological air monitoring for the TSC environment (Section 15).
 - (2) Providing status boards to reflect radiological parameters and plant status for the TSC (Section 15).
 - (3) Resolution of telephone communication problems in the TSC. (Section 15).
- d. This item is considered open (82-14-04) pending:
- Installation of a sufficient number of telephones to accommodate the media personnel (Section 17).
- e. This item is considered open (82-14-05) pending:
- Development and implementation of procedures for the Data Logger System (Section 14).

- f. This item is considered open (82-14-06) pending:

Conducting a search and rescue exercise for an injured and contaminated (simulated) person who will be treated at the hospital. The RIV office is to be notified 2 weeks prior to conducting this exercise (Section 18).

8. Violations

No violations were identified during the exercise.

9. Personnel Control Center (PCC)

The inspectors noted that the Personnel Control Center (PCC) appeared to be well organized. There were status boards indicating personnel responsibilities, e.g., personnel accounting, health physics, and security.

Emergency equipment and supplies, including potassium iodide, were available. The scenario included a "contaminated" person coming to the PCC. The person was detected by the PCC monitoring team.

The PCC personnel had difficulty communicating with the TSC when the radiological air monitoring system was operating in the TSC.

10. Inplant Radiological Monitoring

The health physics personnel reported to their assembly area in the lunch room for accountability. The inspectors noted that the HP personnel were briefed prior to departure for their monitoring activities and that they referenced their emergency procedures. Routine dose rate surveys, swipes, smears and radiological air samples were taken during the first 3 hours of the exercise. Sample locations and hazards were discussed and personnel familiarity with the radiological monitoring equipment was noted by the inspectors.

11. Control Room

The control room had extra operations personnel to participate in the exercise, since the reactor was operating. The inspector noted that the reactor operators' initial actions were to confirm instrument readings and to evaluate possible sources of the radioactivity. The HP personnel were dispatched to take confirmatory radiological samples and to assist in determining the origin of the radioactive source and the magnitude of the source.

Personnel were briefed in the control room concerning the plant status and were informed that the emergency action level had been increased from Notification of Unusual Event to the Alert status. The basis for this discussion was a "nonisolatable leak." However, Table 4.1-3 specifies that this event would require a Site Area Emergency.

The Emergency Notification System telephone became inoperable at the beginning of the exercise. The NRC was notified of the exercise from the control room (of the exercise) via commercial telephone.

The control room personnel could have taken corrective action and terminated the exercise, if the Emergency Coordinator had not requested that the operators go along with the scenario.

12. Accountability

The inspectors determined that site personnel assembled for accountability at, or in, the following areas: the control room, turbine deck, lunch room, Control Alarm Station (CAS), Secondary Alarm Station (SAS), visitors center, and the Personnel Control Center (PCC). Residents living on FSV property are notified via telephone or the tone alert radio system. However, accountability is required since the residents are on FSV site property.

Those persons that were assembled on the turbine deck and in the lunch room were accounted for within 20 minutes. Other personnel assembled at the PCC and started accounting for all arriving personnel, accountability was initiated for residents living on the site property. The inspectors determined that all residents living on the FSV site property were not contacted via telephone and that a driver was simulated as being dispatched to determine accountability. Simulation of accountability does not demonstrate the capability to adequately perform accountability of all persons within the site property area. Verification of accountability, or the inability to adequately account for all persons within the exclusion area boundary and the site property boundary, must be relayed to the TSC.

The inspectors determined that the onsite accountability may have been indirectly achieved; however, the licensee may not know at a given time exactly how many people are onsite. Persons going into the protected area received a badge; however, they were not logged in, nor were they logged out upon leaving the protected area. Only persons going into and exiting the vital areas are accounted for via computer.

These items are considered open (82-14-01) pending:

- a. Development and implementation of procedure and checklist to adequately inform the Technical Support Center (TSC) of the Exclusion Area Boundary (EAB) and site property accountability status.
- b. Development and implementation of a mechanism to adequately determine accountability of all personnel within the FSV protected area, upon initiation of and during an accident, e.g., contractor personnel, station personnel, and other miscellaneous personnel.

13. Offsite Radiological Monitoring

The inspectors determined that there are not any dedicated offsite radiological monitoring kits which can be dispatched with the offsite radiological monitoring teams.

The monitoring teams dispatched from the protected area brought radiological monitoring equipment with them to the PCC. There may be cases where the monitors will be dispatched from the PCC without having access to the health physics office, e.g., called in during the off-normal shift. The inspectors noted that the electric generator, which is the power source for the radiological air samplers, is stored in the security office and must be retrieved from security prior to departure. Further, it was determined that there are no dedicated 4-wheel drive vehicles, equipped with DC to AC converters, available for offsite monitoring. The vehicles used for this exercise did not have any protective covers on the truckbed to protect equipment during inclement weather conditions. The offsite monitoring teams did not have sufficient air sampling filters; equipment to detect radioiodine in the field to $1E-7$ micro Ci/cc; or procedures for offsite monitoring. The inspectors noted that the offsite monitoring teams were provided with a slide rule; however, they could not use a slide rule and had to get a small electronic computer to perform field calculations. It should be noted that the licensee had purchased new radiological monitoring equipment to detect $1E-7$ micro Ci/cc of radioiodine in the field; however, the equipment was not calibrated and cleared for use during the exercise.

The inspectors noted that radio communications with the base station were very poor due to other PSC employees talking on the radio and cutting in on the field monitoring team conversations.

During an incident there will be more radio transmissions than perhaps during an exercise; therefore, provision must be made to eliminate other company radio traffic.

The inspectors noted that the offsite monitoring teams were not well trained and preliminary actions indicated that they had not been given actual drills for their monitoring task, e.g., the assigned driver could not wear his glasses with the respirator; the gasoline generator made talking over radio difficult; and radio conversations were almost impossible with a SCBA mask on the face.

These items are considered open (82-14-02) pending:

- a. Acquisition of a complete offsite radiological monitoring kit, e.g., $1E-7$ radioiodine detection capability, sector maps, procedures, flash lights, batteries, compass, paper, pencils, hand held calculator, check sources, anti-c's, SCBA, etc.

- b. Acquisition of a dedicated/controlled vehicle suitable for offroad use (4-wheel drive) and equipped to operate emergency radiological equipment.
- c. Development and implementation of offsite monitoring procedures.
- d. A performed and documented offsite monitoring drill, which exercises those areas expected to be encountered during an incident with an offsite radiological release.
- e. Internal agreement for priority use of radio, or acquiring a dedicated radio channel for emergency use at FSV.

14. Dose Assessment

The inspectors determined that the Data Logger System used for initial dose assessment is not referenced in the FSV emergency procedures and that there are no written procedures for its use in the FSV emergency procedures.

The FSV dose assessment equipment is the latest state of the art and the dose assessment personnel were very efficient in getting their information and passing this information to the Emergency Coordinator. The inspectors noted that the dose assessment person in the TSC had difficulty in talking over the telephone, writing down the information, getting the information into the Data Logger, and communicating with the Forward Command Post (FCP). The dose assessment person should have a communicator to assist in handling the myriad of information. Further, it was noted that the dose assessment room was very small and provided insufficient space to operate efficiently for extended periods of time.

The inspectors noted that, once the State was given the dose assessment information, there was generally a considerable time lag before the State could confirm the FSV data.

The inspectors noted that certain reactor operation functions can be observed from the computer; however, this prevents the dose assessment personnel from getting their data and performing their dose assessment function.

This item is considered open (82-14-05) pending:

- - Development and implementation of procedures for the Data Logger System.

15. Technical Support Center (TSC)

The Technical Support Center is located approximately 2 minutes' walking distance from the control room. The inspectors determined that the TSC contains a separate HVAC system and is equipped with HEPA and charcoal filters for use during emergencies.

The TSC contains P&ID's, technical specifications, emergency plans and procedures, telephones, and radiological monitoring equipment. The inspectors noted that the radiological air monitor was operated for approximately 1-2 minute intervals during the exercise. Further, it was determined that the noise created by the radiological air monitor created a problem for the TSC personnel while conversing on the telephones.

The inspectors noted the absence of status boards, sector maps, and a release plume data display.

The TSC Director and his staff were crowded into one area which created a logistics problem for answering the telephones, and some telephones did not work.

Further, it was noted that the telephones did not have lights to indicate which telephones were ringing; this created confusion when several telephones rang at one time.

The TSC technical support personnel were expeditious in assisting the TSC Director and assisted the control room personnel in problem solving.

The inspectors noted that the TSC Director assigned duty functions immediately upon taking control of the TSC; however, there were no updates of events once the accident scenario started. The TSC Director did have visual contact with the control room via remote TV.

These items are considered open (82-14-03) pending:

- a. Providing continuous radiological air monitoring for the TSC environment.
- b. Providing status boards to reflect radiological parameters and plant status for the TSC.
- c. Resolution of telephone communication problems in the TSC.

16. Forward Command Post (FCP)

The Forward Command Post (FCP) is located in Fort Lupton, Colorado. The FCP has adequate facilities for the FSV, State, and NRC response teams.

The Emergency Coordinator took command of the FCP and coordinated with the State emergency personnel throughout the exercise. The TSC technical personnel interfaced with the Emergency Coordinator and were available for technical advice throughout the exercise. There were maps and status boards available, however, the status board was not kept up to date. The inspectors noted that dose information from the TSC was continuous, however, there appeared to be quite a time lag for the State dose assessment personnel to confirm the FSV data.

The inspectors determined that, at approximately 9:00 a.m., the State made a request for the radio station to activate the Public Notification System (PNS). It appeared that a very limited number of people were aware that the request had been made. Further, it was determined that the FSV emergency personnel were not aware of the State's decision to activate the system. Due to a specific request to read the message (from the station manager to the radio announcer) and no specific request to activate the tone-alert, only the message was read. There was confusion from the licensee and some State people in the FCP as to whether or not the tone-alert system had been activated. The inspectors determined that a later request was made to the State, by the licensee, to activate the PNS, and the system functioned as required. The licensee was requested to investigate the cause of the tone-alert system not being activated. Further, the licensee was requested to initiate a program to confirm that the alert and message were received after the station activated the system. Since the exercise, the licensee has met with the State and radio station personnel to develop a procedure for notification and verification after the request for activating the PNS.

The inspectors noted that the FCP was orderly and that the security personnel maintained the "authorized personnel only" in the FCP during the exercise.

17. Public Affairs

The inspectors were at the Fort Lupton FCP prior to the beginning of the exercise. The inspector noted that the office personnel at the Fort Lupton station were not aware of the exercise and were not notified when the exercise started. It should be noted that the FSV plan does not indicate that the Fort Lupton personnel were to be notified.

The FSV Public Affairs personnel arrived at the FCP and prepared to coordinate their news releases in an efficient manner. The staffing appeared adequate. The Public Affairs personnel performed their duties with minimum confusion.

The inspectors noted that the church was not available, as stated in their emergency plan. This was also noted in the previous emergency exercise. Further, it was noted that the bank basement was used in both annual exercises, since the designated church was not available.

The inspectors observed the State and licensee media personnel in the Emergency Operations Facility (EOF) at Golden, Colorado. There, the media relations personnel were efficient and coordinated with the State. Both the State and the licensee had spokespersons that communicated with the news media and had news summaries for distribution to the news media following each briefing. The inspector determined that there were not enough telephones available for media personnel.

This item is considered open (82-14-04) pending:

- - Installation of a sufficient number of telephones to accommodate the media personnel.

18. First Aid, Search and Rescue

The first aid, search and rescue exercise was not conducted during this exercise. Therefore, the FSV personnel and the hospital did not demonstrate their capability to handle injured and contaminated personnel.

This item is considered open (82-14-06) pending:

- - Conducting a search and rescue exercise for an injured and contaminated (simulated) person who will be treated at the hospital. The RIV office is to be notified 2 weeks prior to conducting this exercise.

19. Summary

During this exercise, the NRC inspectors concluded that the FSV emergency response organization demonstrated the capability to protect the health and safety of the public.