

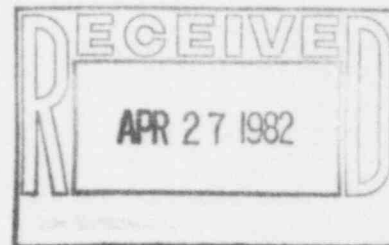


Public Service Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

April 22, 1982
Fort St. Vrain
Unit No. 1
P-82111

Mr. John T. Collins, Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
Office of Inspection and Enforcement
611 Ryan Plaza Drive; Suite 1000
Arlington, Texas 76011



SUBJECT: Fort St. Vrain Unit No. 1
Radiological Emergency Exercise

Dear Mr. Collins:

In accordance with your letter of January 14, 1982, we are transmitting herewith, the detailed description of the 1982 exercise scenario and anticipated flow of events.

The 1982 Annual Exercise of the Fort St. Vrain Radiological Emergency Response Plan (RERP) has been scheduled for June 3, 1982. The description of exercise scope and objectives have been submitted by letter dated March 12, 1982.

Enclosed for your information are copies of the Narrative Summary and Planned Sequence of events for the 1982 Annual Exercise. Questions relative to the exercise scenario per se should be directed to Mr. L. M. McBride at (303) 785-2224.

As is usually the case we have had some difficulty developing a scenario over a time frame that will permit full participation of all parties, and we have therefore had to purposely delay events that would normally be detected in the control room in a much faster time frame. In other words, depending on operator action the exercise could be terminated before we reached our objective. In this respect, we request that you consider this situation in your evaluation of the scenario as well as your evaluation of the exercise.

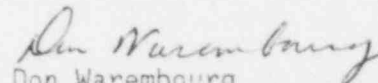
Questions with regard to scheduling can be answered by Mr. William Martin, State of Colorado, Division of Disaster Emergency Services. Mr. Martin can be reached at (303) 279-2511.

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With reference to your most recent letter of April 16, 1982, we have not as yet developed any observer cards or any other specific information for the exercise. As we progress toward finalizing the exercise materials we will forward any pertinent information to you.

Sincerely,


Don Warembourg
Manager, Nuclear Production

DW/l sb

Enclosures

cc: Brian K. Grimes
Robert A. Clark

FSV RADIOLOGICAL EMERGENCY PREPAREDNESS ANNUAL EXERCISE

FOSAVEX 82-Narrative Summary

The exercise will be based upon a non-isolable leak in a reheat section on loop 2. This initiating event, when the determination is made that the leak is "non-isolable", would result in classification as a SITE AREA EMERGENCY, as described in Table 4.1-3, item 2, of the Fort St. Vrain RERP. The initial conditions at the time the leak occurs will be routine operation at 70% reactor power. The determination that the leak is "non-isolable" will result from evaluation of a leakage path past valve HV-22132 to the main condenser. This valve will have been identified as leaking from alarm I-13A,5-8; LOOP 2 RHT STM TO CONDENSER VALVE LEAK. This alarm will be designated as "on" in a list of activated alarms given to control room operators prior to the onset of the initiating event.

The flow of exercise events is intended to be such that the initiating event will be the detection of a small amount of activity in secondary coolant at the Steam Jet Air Ejector. Approximately 10 minutes later, Reactor Building Ventilation radioactivity levels will increase, indicating offsite release. At this time, it is anticipated that personnel will be summoned to their emergency stations by the plant radiological alarm, and that a declaration of a NOTIFICATION OF UNUSUAL EVENT emergency class will follow shortly thereafter. At $t = 30$ minutes, the west reactor operator will be informed that the indication for Loop 1 Hot Reheat radiation monitor has begun to move upscale, and is currently reading approximately 200 cpm. The Loop 2 Hot Reheat radiation monitor is reading background (this monitor, under routine conditions, is set to monitor the steam generator interspace on loop 2, and, until monitoring is switched to the loop 2 Hot Reheat Header, will read background). At $t = 40$ minutes, the Reactor Building Ventilation monitor alarms on both RT-7324 1 & 2. The offsite release calculations will indicate that the event has reached the magnitude of an ALERT emergency classification, as the effluent release rate for noble gases is somewhat greater than 10 times the Technical Specification release rate limits. Release rates will rise only slightly over the next 45 minutes, until, at $t = 85$ minutes, the situation begins to deteriorate rapidly.

At $t = 85$ minutes elapsed time from the initiating event, the indications on the Steam Jet Air Ejector radiation monitor will take a rapid rise. The rate of increase on the Loop 1 Hot Reheat radiation monitor will not be appreciable. If the operator switches the loop 2 reheat monitor to monitor the Hot Reheat Header from the loop 2 Steam Generator interspace, this monitor will indicate upscale, with about a 10 minute lag behind the Steam Jet Air Ejector monitor (otherwise, the monitor will indicate background whenever it is monitoring the Steam Generator interspace). The offsite radiological release rate will increase somewhat at this time also. It is anticipated, that with indications of a large primary to secondary leak occurring, the Control Room will make the decision to shutdown the affected loop, if they have not already done so, based upon previous indications. If the operator shuts down loop 1, based upon the loop 1 Hot Reheat Header radiation monitor leakage, no appreciable change in radiation leakage or effluent rates will be noted. If the operator selects loop 2 for isolation based upon that loop's radiation indications, simultaneously with the loop shutdown, radiation readings will take a rapid swing upward again. Subsequent investigations of the leakage path will eventually lead to the conclusion that the leak is non-isolable due to the leakage past HV-22132 into the condenser. This determination should result in the declaration of a SITE AREA EMERGENCY. Shortly thereafter, a depressurization of the PCRV will begin. The depressurization will last for approximately 3 hours, with a steadily decreasing offsite radiological release rate continuing over the entire period. After the depressurization of the PCRV is completed, the radiation readings will return to normal levels, and the termination of the exercise will be declared.

Planned Sequence of Events for FOSAVEX 82 Scenario:

At approximately time $t = -10$ minutes, the operators in the control room will be given a list of alarms that are to be presumed to be up on the various annunciator panel windows. This list will include alarm I-13A,5-8; LOOP 2 RHT STM TO CONDENSER LEAK. There will be a sufficient number of alarms listed on this alarm sheet for systems that are both related and unrelated to the exercise scenario that it will not be readily apparent to operators prior to the onset of the exercise initiation that this particular alarm will serve to identify the leakage path.

At time $t = 0$ minutes, the following window on the annunciator panels will come on;

I-05B;5-6 --- AIR EJECTOR ACTIVITY HIGH (RAH-31193)

At the time this alarm window comes up, RI-31193 on I-05 is reading approximately 600 cpm.

At time $t = 10$ minutes, the operator is informed that the indication on RT-7324,1 is currently reading upscale at approximately 10K cpm, and that RT-7324,2 is currently reading approximately 300 cpm. The indications for RT-7325, 1 & 2 and RT-73437, 1 & 2 are remaining at background.

During the the time span from $t = 10$ minutes to approximately $t = 30$ minutes, the activity indications from RT-31193, and RT-7324, 1 & 2 will increase at a very gradual rate, until at $t = 30$ minutes, the operator is informed that the loop 1 Hot Reheat Header Monitor has begun to rise slightly. At that time, the following radiation values are noted;

RT-31193	reading	2.00E+03 cpm;
RT-2263	reading	2.00E+02 cpm;
RT-2264	reading	background, (4.00E+02 cpm, if on HRH);
RT-7324,1	reading	3.00E+04 cpm;
RT-7324,2	reading	1.50E+03 cpm;
RT-73437,1	reading	3.50E+02 cpm.
RT-73437,2	reading	background;

At $t = 40$ minutes, the Reactor Building Ventilation noble gas monitors (RT-7324 1 & 2) alarm with the following indications noted on other radiation detectors;

RT-31193	reading	2.00E+03 cpm;
RT-2263	reading	2.00E+02 cpm;
RT-2264	reading	background, (1.50E+03 cpm, if on HRH);
RT-7324,1	reading	1.55E+06 cpm;
RT-7324,2	reading	4.35E+04 cpm;
RT-73437,1	reading	3.50E+02 cpm.
RT-73437,2	reading	7.00E+02 cpm;

Other radiological monitors remain at, or near, their background values.

Sometime after time $t = 85$ minutes, the radiation readings on the various effluent and radiation process monitors will begin to increase again to the following values;

RT-31193	reading	$3.00\text{E}+03$	cpm;
RT-2263	reading	$3.00\text{E}+02$	cpm;
RT-2264	reading	background,	($2.00\text{E}+03$ cpm, if on HRH);
RT-7324,1	reading	offscale high;	
RT-7324,2	reading	$6.25\text{E}+05$	cpm;
RT-73437,1	reading	$9.20\text{E}+03$	cpm.
RT-73437,2	reading	$1.00\text{E}+03$	cpm;

If the decision is made to shutdown loop 1, instead of the leaking loop 2, no significant change in radiation readings on the radiation effluent or radiation process effluent monitors will be noted. Sometime after loop 2 shutdown occurs, resulting in vastly increased radiation leakage rates, it will be determined that the leak is non-isolable. At that point, a SITE AREA EMERGENCY emergency classification will be declared. At that point in time, it would be determined that the best way to terminate the release is to depressurize the PCRV. From the time that decision is made, the exercise will last for approximately three more hours, as radiation levels begin to drop to background values. During the depressurization, it is anticipated that field teams will be assessing offsite radiological consequences.

Once radiation levels have decreased to background, and the PCRV has been depressurized, the exercise will be declared terminated.

DWW

STATE OF COLORADO

Department of Military Affairs
DIVISION OF DISASTER EMERGENCY SERVICES
Camp George West
Golden, Colorado 80401
Phone (303) 279-2511

PPC - 80-0547



Richard D. Lamm
Governor

Brig. Gen. John L. France
The Adjutant General

John P. Byrne
Director

17 March 1982

Mr. N. Paul Alley, Chairman
Regional Assistance Committee
FEMA Region VIII
Denver Federal Center, Building 710
Denver, Colorado 80225

Dear Mr. Alley:

In accordance with the guidance provided in Guidance Memorandum 17, Radiological Emergency Preparedness Division, the enclosed purpose, date, scope and objectives are submitted for the 1982 Fort St. Vrain Radiological Emergency Response Plan Exercise, named FOSAVEX 82.

Don Warembourg, Nuclear Production Manager, Public Service Company of Colorado is submitting an identical document to the Nuclear Regulatory Commission.

Since the guidance suggests the scenario be submitted within 30 days following this submission and development of the scenario depends on the scope and objectives of the exercise, early concurrence with the scope and objectives would be appreciated.

Sincerely,

William S. Martin
Radiological Defense Officer

WSM:gcc

Encl.

Fort St. Vrain Exercise - 1982

FOSAVEX - 82

Purpose:

The purpose of "FOSAVEX-82" is to test the Radiological Response Plans and implementing procedures during a joint exercise of the Licensee and the State of Colorado.

Date:

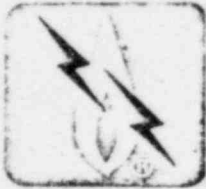
FOSAVEX - 82 has been tentatively scheduled as a one-day exercise on June 3, 1982.

Scope:

1. The exercise will be preannounced joint participation exercise between the Licensee and the State.
2. The exercise is planned to develop from an initiating event and ultimately develop to a "Site Emergency". During the exercise, actual meteorological conditions will be utilized with the exception of wind direction. Because of various planning logistics, predetermined wind directions will be utilized.
3. Local government will be encouraged to participate to the extent necessary to exercise their local plans.
4. In conjunction with this drill the recently installed EWA will be exercised and to a limited extent the EBS system will be activated to test implementing procedures.
5. All Command Posts and emergency response facilities will be activated and will participate in the exercise to the extent necessary to demonstrate implementation of the procedures. (i.e., with the exception of key emergency response personnel all other personnel will return to normal work duties after the initiation of the emergency).

Objectives:

1. Demonstrate that response organizations can alert and notify emergency response personnel.
2. Demonstrate that Emergency Response Facilities (i.e., Technical Support Center, Personnel Control Center, Forward Command Post, Executive Command Post, and the State EOC) can be staffed in timely fashion.
3. Demonstrate that the telecommunications systems can be manned and operated in a timely manner and that the systems are adequate to handle the anticipated traffic during site emergency conditions.
4. Demonstrate that the incident assessment staff can perform the assigned tasks related to assessment and that timely decisions can be made concerning incident category and appropriate response for the resultant category. (Additional emphasis will be placed on field assesment.
5. Demonstrate that implementation procedures have been established for early warning system, NOAA Weather Radio, METS, and the EBS System.
6. Demonstrate the capability to prepare coordinated public information materials at both the State EOC and the Forward Command Post based on the information available during the course of the exercise.
7. Demonstrate that plant operations and support personnel respond to the emergency situation utilizing emergency procedures to mitigate the consequences of the incident.



Public Service Company of Colorado

16805 WCR 19 1/2, Platteville, Colorado 80651

March 12, 1982
Fort St. Vrain
Unit #1
P-82074

Mr. John T. Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Dr., Suite 1000
Arlington, TX 76011

SUBJECT: Fort St. Vrain Unit No. 1
Radiological Emergency Exercise

Dear Mr. Collins:

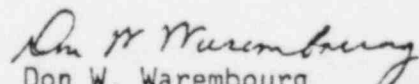
In accordance with your letter of January 14, 1982, we are transmitting herewith the scope and objectives of our 1982 radiological emergency exercise. As indicated the exercise has been tentatively scheduled for June 3, 1982. The exercise will be a joint participation exercise between the Licensee and the State. The attachment represents the scope and objectives planned for the exercise jointly by the State and PSC.

Should we experience any unforeseen difficulties in the tentative scheduled date or in the scope we will keep you informed.

It is our understanding that the State will be submitting this same information to FEMA.

We will be developing our detailed scenario to reflect the scope and objectives and assuming that we receive your comments on the scope and objectives within fifteen (15) days, we will be forwarding the scenario to you by April 19, 1982.

Very truly yours,


Don W. Warembourg
Manager, Nuclear Production
Fort St. Vrain Nuclear
Generating Station

DWW/skd

DUPE

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Attachments

cc: Brian K. Grimes
Robert A. Clark

Fort St. Vrain Exercise - 1982

FOSAVEX - 82

Purpose:

The purpose of "FOSAVEX-82" is to test the Radiological Response Plans and implementing procedures during a joint exercise of the Licensee and the State of Colorado.

Date:

FOSAVEX - 82 has been tentatively scheduled as a one-day exercise on June 3, 1982.

Scope:

1. The exercise will be preannounced joint participation exercise between the Licensee and the State.
2. The exercise is planned to develop from an initiating event and ultimately develop to a "Site Emergency". During the exercise, actual meteorological conditions will be utilized with the exception of wind direction. Because of various planning logistics, predetermined wind directions will be utilized.
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