Public Service Company of Colorado

November 18, 1980
Fort St. Vrain
Unit No. 1
P-80404

Mr. Karl V. Seyfrit
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

SUBJECT: Inspection 80-13

REFERENCE: P-80392

Dear Mr. Seyfrit:

As indicated in the above referenced letter the following is our response to significant appraisal findings resulting from the subject inspection.

A. RADIATION PROTECTION MANAGER

NRC Finding:

The Radiation Protection Manager position in the Station organizational structure does not appear to be sufficiently independent of Station divisions whose prime responsibility is continuity or improvement of Station operability, as recommended in NRC Regulatory Guide 8.8 (Section 1.1).

PSC Response:

As indicated in P-80392 we have assigned the duties of Radiation Protection Manager (RPM) to the Technical Services Department. Your comment concerning independence of the Radiation Protection Manager is difficult for us to understand. We purposely reorganized the Radiation Protection Manager position reporting lines to remove this position from the functional lines of authority under the Operations Manager to provide a reporting line of authority to the Manager, Nuclear Production, which would be independent of plant operatoins. Your inference that the Technical Services Department has responsibility for improvement of station operability is correct, but that responsibility is primarily devoted to independent review and analysis of plant operations and equipment not only to improve station reliability but also to improve administrative controls and

procedures to ensure compliance with regulations and provisions of the license. In this respect the function of the Radiation Protection Manager and the duties and responsibilities of that position go hand in hand with the objectives of the Technical Services Department. The station policy for the Radiation Protection Manager is clearly delineated in the attached memo, PP-80-1386, dated November 6, 1980.

The Technical Services Supervisor reports directly to the Manager of Nuclear Production with the same level of reporting authority as the Operations Manager or the Administrative Services Manager, and the Radiation Protection Manager position is by no means subordinate to the Health Physics Supervisor who is reporting through the operations chain. We feel the Radiation Protection Manager has more than adequate authority and independence within the organization to meet the intent of Regulatory Guide 8.8.

B. PERSONNEL SELECTION AND QUALIFICATION CRITERIA

NRC Finding:

Personnel selection and qualification criteria have not been established in written procedures to assure that appointments to the health physics staff and Radiation Protection Manager position will meet the requirements of Technical Specification AC 7.1.1, which references ANSI N18.1-1971 and NRC Regulatory Guide 1.8 (Section 2.1).

PSC Response:

There must have been some misunderstanding concerning our commitment to ANSI 18.1. We are most certainly committed to the guidance of ANSI 18.1, and both the Health Physics Supervisor and the Radiation Protection Manager are thoroughly familiar with that commitment. As indicated in your inspection report we do at times hire new employees that are not qualified at the time of hiring to meet ANSI 18.1 guidance. In the Health Physics Department we have no starting or training position such as junior technician or technician in training, and because of the union aspects we must start new employees at the technician level. It has always been our policy, however, that newly hired personnel be assigned to work under the direction of qualified personnel until adequate training and experience can be provided to meet the ANSI 18.1 guidance. You are correct that this policy is only

inferred and is not specifically defined in a separate written document. Given that the policy is defined by Technical Specifications we have never felt it necessary to repeat the requirements of the Technical Specifications in a separate policy document. It is really no different than any other Technical Specification requirement, and we do not issue separate policy statements for various LCO or other Technical Specification requirements.

There apparently is some inconsistency between the Training Department requirements and the Health Physics Department requirements in training and qualifications of Health Physics Technicians and ANSI 18.1 guidance. The Departments are presently evaluating this matter to eliminate any inconsistencies. Necessary procedures and controls will be revised to ensure consistency in training requirements and to ensure that training and experience meet ANSI 18.1 guidance. It is anticipated that these procedural revisions will be complete by February 13, 1981.

C. INTERNAL EXPOSURE CONTROL PROCEDURES

NRC Finding:

Internal exposure control procedures have not been established to assess the results of direct and indirect bioassay measurements in terms of intake limits specified in 10CFR20.103 and internal dosimetry guidance available in ANSI N343-1978, "Internal dosimetry for mixed fission and activation products." In addition, Station procedures do not fully implement the requirements of 10CFR20.203(d)(1)(ii) and 10CFR20.103 in regard to defining an airborne radioactivity area ensuring consideration of engineering controls for such areas, defining the 40 MPC-hour control measure and evaluating exposures which exceed this control measure to assure against recurrence (Section 3.2).

PSC Response:

HPP-2, "Bioassay Procedure," will be amended to relate the results of urinalysis and whole body counting to 10CFR20.103 intake limits. Although the above intake limits are based on the 1959 ICRP Committee 2 Report, an evaluation of more recent internal dosimetry methodology as contained in ANSI N343-1978, "Internal

dosimetry for mixed fission and activation products," and elsewhere will be performed in order to ensure that state-of-the-art dosimetry is performed at Fort St. Vrain.

An in-depth review of HPP-9, "Establishing and Posting Controlled Areas," and HPP-16, "Full Face Respirator, Self Contained Breathing Apparatus, and Half Mask Respirator," along with other Fort St. Vrain policies and procedures will be performed to insure full implementation of the requirements of 10CFR20.203 and 10CFR20.103. Specific areas to be addressed will include definition of airborne radioactivity areas, engineering controls, and the establishment of 40 and 520 MPC-hour control limits, along with an exposure evaluation program for exposures exceeding the 40 MPC-hour control limit.

It is felt that the above review and implementation program will be completed by February 1, 1981.

With reference to the consideration for program improvement outlined in Section 3.2.4 of the inspection report we will be evaluating these considerations. It should be recognized, however, that almost all of these considerations involve additional equipment and/or facilities which, if implemented, would be long term items. Specifically, we will be expanding the urinalysis and bioassay program for beta emitters (Item 2) in early 1981. Likewise we plan to provide an on site whole body counting capability (Item 3) prior to mid-1981. Depending on facilities that may or may not become available as a result of the TMI-2 action plans we may have an improved facility available for cleaning, disinfecting, and drying of respiratory protection equipment (Item 5) by late 1981. Various alternatives are being evaluated concerning a quantitative fit program and annual medical reviews (Items 1 and 4, respectively). With reference to the latter we feel that our present program of allowing personnel to wear the equipment and perform with the equipment during qualification fitting is more adequate proof of the individual's capability to wear the equipment than is a medical examination. Any personnel who express a concern or a problem with wearing the equipment either physically or psychologically is refered for medical examination.

D. AIRBORNE SAMPLING PROGRAM

NRC Finding:

The survey program for measurement and evaluation of airborne radioactivity is deficient in procedures, equipment and materials. Particularly in sampling and analysis for noble gases and iodine in the reactor building, and sampling and evaluation of airborne alpha emitters. In addition, the survey program for monitoring and control of personnel contamination is not in accordance with elements of good health physics practice (Section 3.3.1).

PSC Response:

The equipment that has been proposed for the 1981 budget, plus some additional equipment we have determined necessary will be purchased and should provide all that is required for airborne monitoring equipment. Also, a detailed review of procedures is in progress to determine the actual changes necessary in this area of our airborne monitoring program.

Specific equipment that we intend to purchase is as follows:

1. *Three (3) Continuous air monitors with monitoring capabilities for particulate, iodine, and noble gas located at strategic areas in the Reactor Building.

2. *Two (2) Additional portable air samplers with sampling capability for iodine.

3. *Two (2) Portable Air Monitors with monitoring capabilities for noble gas.

4. *One (1) Proportional Counter with capabilities to determine alpha and beta activity accurately.

*Quantities of instruments to be purchased are subject to change based on results of TMI-2 actions.

We anticipate that this equipment will be operational approximately 2 months after delivery. Our preliminary review of procedures indicates a need for more detail to provide clear cut guidance for sampling, analysis, and follow-up actions. We

anticipate these improvements will be implemented prior to making the equipment operational. We also intend to improve technician training in this area. Again, we intend to order this equipment early in 1981 consistent with the 1981 budget. We cannot, at this time, estimate vendor delivery time.

We take exception to the following items addressed in your appraisal findings in this area.

1. 3.3.1.3

It is noted that the alpha and beta counting standards, which are used to determine counter efficiencies, are not of the same matrix as the samples being counted. We would like to point out that this method of standard/sample comparison has been in use at this facility for the past eight years and has been used successfully in the Environmental Protection Agency laboratory cross-check program for air filters. We do not feel any change in this area is necessary.

We would also like clarification of the comment concerning air sampling for short-lived nuclides such as 88Rb and 138Cs. Our opinion is that a longer sampling period would more closely define an equilibrium. In the case of 88Rb it would take approximately 100 miutes to reach a 99% equilibrium value. Longer sampling periods (10 minutes or more) would more accurately define the acivity levels. However, since the Radiochemistry Laboratory only reports observed activity at sample isolation, a decay correction would have to be applied to obtain activity values at "MID COLLECTION TIME."

We would also like to point out that the predominant noble gas in the PCRV would <u>not</u> be 133Xe during reactor operation. In fact, 133Xe would constitute less than 10% of the total noble gaseous activity during power operations. At 68% power, the ratios were as follows (6-16-80, at 0907 hours):

85Krm	10.1%
87Kr	23.6%
88Kr	19.0%
89Kr	.4%
133Xe	7.7%
135Xem	4.6%
135Xe	21.2%
137Xe	1.0%
138Xe	12.4%

2. Survey Program for Monitoring and Control of Personnel Contamination

   Instrumentation of more suitable sensitivity will be provided to replace the existing portal monitors at the reactor bulding control point exits. In addition, there is currently plans for the installation of personnel monitoring equipment at the exit of the protected area. Installation and implementation of this instrumentation is expected to be completed by the fall of 1981.

   Procedures have been reviewed and will be changed to specify acceptable levels of personnel contamination and required locations of personnel monitoring instrumentation.

With reference to the consideration for program improvements outlined in Section 3.3.1.5 our response outlined above and the response to Item E below should resolve Items 1 and 3. We are planning to conduct a neutron energy spectrum analysis to evaluate the neutron dosimetry program as soon as plant conditions permit and necessary contractural arrangements can be made.

E. PORTABLE AND SEMI-FIXED RADIATION PROTECTION INSTRUMENTS

NRC Findings:

Portable and semi-fixed radiation protection instrumentation available for use at the Station are deficient in numbers and/or implementation of proper calibration and operational check procedures, such as recommended in ANSI N323-1978 (Section 3.3.2).

PSC Response:

As in our response to Item D, instrumentation budgeted for 1981, plus additional instruments we have determined necessary will be purchased and should provide us with sufficient quantities for our program.

Specific equipment we intend to purchase is as follows:

1. *Eight (8) Friskers.

2. *Six (6) Dose rate instruments, four of which will be capable of measuring high range beta dose rates.

3. *Two (2) high range instruments which will be capable of measuring 1E+4 R/hour as stated in the TMI Lessons Learned and ANSI N320.

*Quantities are subject to change pending final resolution of TMI-2 Action Plan.

We anticipate this equipment will be operational approximately two (2) months after delivery. Equipment will be placed on order in early 1981 consistent with the 1981 budget, but we cannot at this time determine an estimated delivery time from the vendor.

Acceptance Testing Calibration, Response Checks, and Maintenance - We will review the regulations and standards to determine the specific areas requiring improvement. Review and implementation will be completed consistent with placing the equipment into operation.

Other considerations and recommendations contained in the inspection report will be evaluated in our attempt to improve the overall program. We will be happy to discuss the results of these evaluations in future inspections.

Very truly yours,

Don Warembourg

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

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FORM 850 22 0058 INTER-DEPARTMENT MEMO – PUBLIC SERVICE COMPANY OF COLORADO

DATE November 6, 1980 FP-[illegible]-1304

TO Mr. J. W. Gahm, Technical Services Supervisor Fort St. Vrain Station
DEPARTMENT OR DIVISION

FROM Mr. D. W. Warembourg, Manager, Nuclear Production Fort St. Vrain Station
DEPARTMENT OR DIVISION

ATTN. Mr. Ted Borst, Senior Plant Engineer

SUBJ. RADIATION PROTECTION MANAGER

Effective immediately the position of Radiation Protection Manager, Fort St. Vrain, is jointly assigned to yourself and Mr. Borst.

You will complement Mr. Borst's expertise with your applied radiation experience, and will be responsible for keeping me informed of conditions with regard to radiation protection.

Please note that the function of RPM is totally independent of the operations chain and is intended to act as an independent check on the actions of the operations chain. Any situation that is cause for concern should be brought to my attention immediately so that I can initiate action.

D. W. Warembourg
Don W. Warembourg

DWW/dkm

cc: F. Mathie
T. Schleiger
E. Hill