



Public Service Company of Colorado

October 11, 1979
Fort St. Vrain
Unit No. 1
P-79234

Mr. Steven A. Varga, Acting Assistant Director
for Light Water Reactors
Division of Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docket No. 50-267

Subject: Fort St. Vrain Environmental
Monitoring Programs

Gentlemen:

The environmental radiation surveillance program for the Fort St. Vrain Station was developed and is being conducted by Colorado State University under a contract from PSC. The program was based upon a study begun in July, 1967 and the collection of samples for the preoperational monitoring program was initiated in March, 1969. Implementation of the current extensive level of sampling and analysis of environmental media was begun in 1972. The program has been conducted at this level to the present time.

Fort St. Vrain Technical Specification SR 5.9.1 - Environmental Radiation, Surveillance Requirements, requires sampling and analysis of environmental media to be conducted in accordance with Action Level 3 of Table 5.9-1 during the first three years of plant operation. Following the first three years of operation, sample collection and analysis are to be conducted in accordance with the three Action Level Guides of Table 5.9-1 and Table 5.9-2, based upon the concentrations or exposures for unrestricted areas and the general population resulting from plant gaseous and liquid effluents released during the previous calendar quarter.

The Fort St. Vrain Station achieved power operation, as defined in the Technical Specifications, on July 4, 1976. As stated above, the environmental radiation surveillance program has been conducted continuously at Action Level 3 since a date considerably prior to July 4, 1976. Therefore, the requirement to conduct the program at Action Level 3 during the first three years of plant operation has been satisfied, and PSC will institute, on January 1, 1980, the three Action Level Guides based upon effluent releases during the previous calendar quarter in accordance with Specification SR 5.9.1.

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As a result of the AEC review of the Environmental Report for the Fort St. Vrain Station, the Division of Reactor Licensing requested, in their letter dated February 17, 1972, that PSC submit a plan for a comprehensive ecological study of the Fort St. Vrain site and environs, including a statement of scope, range, biota and time schedule. The document titled, "Additional Information Regarding Applicant's Ecological Study", dated May, 1972 (copy enclosed), in which PSC presented in detail the plan for continuing the ecological studies, was submitted in response to the Commission's request.

The document describes the three-phase approach utilized in the development of a continuing ecological monitoring program. Phase I, conducted from March 1 to May 1, 1972, provided for initial ecological reconnaissance and development of preliminary plans for the execution of Phases II and III. Phase II was conducted over the period May 1, 1972 to May 1, 1973 to provide a dynamic base line ecological inventory. During Phase II, based on the information obtained during the first two phases, the detailed design and specific plan for the initial Phase III Monitoring Program were developed. The schedule outlined in the May, 1972 document indicates that the initial segment of Phase III is to commence with plant start-up and last for a period of one year, at which time the results are to be reviewed to determine the features to be studied beyond the first year and the intensity of monitoring.

Fort St. Vrain Technical Specification SR NR 2.1, Ecological Monitoring - Surveillance Requirement, was based on this May, 1972 plan for continuing ecological studies at the Fort St. Vrain Station. The section titled, "Basis for Specification SR NR 2.1", references the May, 1972 plan by name and states that "This Technical Specification provides for conduct of the ecological monitoring phase of the study [Phase III] essentially as outlined in the reference document." Phase III is specifically indicated as the subject of the Technical Specification Surveillance Requirement NR 2.1 and is scheduled to commence with plant start-up.

Specification SR NR 2.1 requires that an ecological monitoring program be conducted in the vicinity of the plant for at least five years following commercial operation. For the purposes of Specification SR NR 2.1, a meaningful commercial operating date for the Fort St. Vrain plant is difficult to define. The original plant contracts envisioned a two to three month startup period followed by a 72 hour full power demonstration run which defined the start of commercial operation. Actual plant startup experience does not facilitate the application of this definition. The Facility Operating License was issued December 21, 1973, and the plant achieved initial criticality in early 1974. The plant first generated electricity in 1976, and since 1977 the plant has been operated at power levels up to 70% of the design rating. Although presently designated a commercial operating facility, it is not likely that the plant will operate at full power in the near future. Therefore, the use of a commercial operating date as a milestone from which to measure the duration of continuing ecological monitoring at Fort St. Vrain is inappropriate. Furthermore, based upon (1) the schedule indicated in the May, 1972 document, "Additional Information Regarding Applicant's

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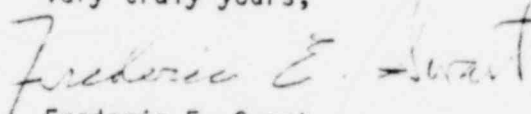
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Ecological Study"; (2) the Technical Specification reference to this document as the basis for Specification NR SR 2.1; and (3) the statement that Phase III will commence with plant start-up, it is apparent that the intent of Specification NR SR 2.1 is to require that a monitoring program be conducted for at least five years following plant start-up.

A report titled, "Proposed Ecological Monitoring Plan", dated March 1, 1973, was prepared by Thorne Ecological Institute under the Phase II task to develop a detailed design and plan for the Phase III monitoring program. The report states, "For practical reasons the suggested [Phase III] monitoring plan will be initiated May 1, 1973, because from this date forward, it is anticipated that plant testing activities could not be included with the inventory [Phase II] period of 'normal' environmental conditions. Also, with the date of the nuclear plant 'going on line' somewhat indefinite, it was felt that the environmental monitoring plan should be in a routine operation status to provide lead-in information." The ecological monitoring program has been conducted continuously at this intense initial level of activity from May 1, 1973 to the present. According to the ecological monitoring program Progress Report for the period January 1 - June 30, 1979, "To date, no discernable nor harmful measurable effects on the environment have become evident from operation of the Nuclear Station." PSC does not anticipate that operation of Fort St. Vrain will result in any harmful measurable effects on the environment in the future.

Since the ecological monitoring program has been conducted continuously at the initial Phase III level since May 1, 1973, it is PSC's position that the original intent of Specification NR SR 2.1 to require ecological monitoring for a period of at least five years following start-up has been met. In as much as the PSC ecological monitoring program has detected no environmentally detrimental effects attributable to Fort St. Vrain operation during the last six years, PSC plans to discontinue all ecological sampling and investigations at the Fort St. Vrain plant as of December 31, 1979 and issue a final ecological monitoring program report.

Very truly yours,



Frederic E. Swart
Nuclear Project Manager

FES/RAP:pa

Enclosure

cc: Director, U.S. Fish & Wildlife Service
Director, Region VI, U.S. Fish & Wildlife Service
Colorado Division of Wildlife

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