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Fort St. Vrain  
Unit No. 1  
P-92274

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

ATTN: Dr. Seymour H. Weiss, Director  
Non-Power Reactor, Decommissioning and  
Environmental Project Directorate

DOCKET NO: 50-267

SUBJECT: Status of Preparations for Decommissioning

Dear Dr. Weiss:

This letter is being submitted in response to the Nuclear Regulatory Commission's (NRC's) request made at the July 16th meeting at Fort St. Vrain (FSV) to identify FSV decommissioning plan changes. While significant changes to the overall plan for decommissioning have not occurred, decommissioning preparations have been underway consistent with the Proposed Decommissioning Plan.

The attachment to this letter summarizes the current status of these decommissioning preparations. The actual status of the plant at the initiation of decommissioning activities will be dependent on the timing of the NRC's issuance of the Decommissioning Order.

Should you have any questions regarding this letter, please contact Mr. M. H. Holmes at (303) 620-1701.

Sincerely,

Donald W. Warembourg  
Manager, Nuclear Operations

DWW/JRJ:dh  
Attachment

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cc: Regional Administrator  
Region IV

Mr. J. B. Baird  
Senior Resident Inspector  
Fort St. Vrain

Mr. Robert M. Quillin, Director  
Radiation Control Division  
Colorado Department of Health

Status of Preparations for Decommissioning

The purpose of this Attachment is to summarize the status of preparations for decommissioning at the FSV Nuclear Station. Section 1.5.2 of the Proposed Decommissioning Plan (PDP) states:

"Prior to the initiation of actual decommissioning activities, PSC may complete the removal of numerous components from the PCRV, including the helium circulators, control rod drive and orifice assemblies (CRDOAs), metal clad reflector blocks (MCRBs) and the region constraint devices (RCDs)."

Since the completion of defueling on June 10, 1992, significant progress has been made in preparing for actual decommissioning, as described in subsequent paragraphs. The changes that have been made to the FSV facility in these preparations have been evaluated and determined to meet the following criteria from Section 4.0 of the NRC's Safety Evaluation to the FSV Possession Only License (NRC letter, Erickson to Crawford, dated May 21, 1991; G-91106):

"The NRC staff has determined that this license amendment to a POL allows the licensee to make changes to the facility provided that (1) changes comply with the requirements of 10 CFR 50.59 (that is, no Technical Specification Change or unreviewed safety question for the defueled status of the facility), (2) the change does not foreclose the options or materially affect the cost of decommissioning, and (3) the change does not involve major structural changes to radioactive components of the facility (although the licensee may proceed with some activities such as decontamination, minor component disassembly, and shipment and storage of spent fuel if these activities are permitted by the licensee and 10 CFR 50.59)."

The following paragraphs provide a general status of progress made in preparing for the decommissioning of FSV.

### Control Rod Drive and Orifice Assemblies (CRDOAs)

CRDOAs were removed from the core during defueling, since control rods were unnecessary to control reactivity in defueled regions filled with boronated defueling elements and orifice valves were not needed to control helium flow through these regions. All CRDOAs have been shipped off site for processing, and all the control rods have been shipped off site to a low level waste (LLW) disposal facility.

### Helium Circulator Removal

The Loop 1 helium circulators were removed from the PCRV prior to defueling. The Loop 2 helium circulators were recently removed from the PCRV, following completion of defueling on June 10, 1992. All helium circulators have been shipped off site to a low level waste disposal facility.

### Removal of Components from the Core Area

The region constraint devices (RCDs) were removed from the top of the core during defueling, and approximately one-half have been shipped off site to a low level waste disposal facility, while the remainder are in equipment storage wells awaiting shipment in the near future. Approximately 50 metal clad reflector blocks (MCRBs), which comprised the top layer of the core, have been removed from the core area and are being stored in the fuel storage wells. The remaining MCRBs (about 285) will be removed from the core area as the removal of core components with the Fuel Handling Machine (FHM) progresses.

The FHM is currently being used to remove hexagonal graphite reflector elements, defueling elements and MCRBs from the core area, as described in Section 2.3.3.8.1 of the PDP. Core area components are being removed in several layers. The blocks in the upper half of a region are removed, then the FHM is transferred to a different region, until hexagonal components in the entire upper half of the core area have been removed. Next the FHM will remove all hexagonal components in the lower portion of the core area, down to the hastelloy can blocks. Finally, the FHM will remove the hastelloy can blocks and bottom transition elements.

The defueling elements and hexagonal graphite reflector elements are being transferred from the FHM into the Regeneration Pit, onto the same conveyor assembly that was used to load defueling elements into the FHM during core defueling. This conveyor then transports the elements to either end of the Regeneration Pit, where they are loaded into Low Specific Activity (LSA) containers, which can then be shipped off site. Out of a total of approximately 3100 hexagonal components that can be removed from the core area with the FHM (not including the MCRBs), about 5% have been removed to date.

#### PCR/V Prestressing Tendon Detensioning and Removal

Section 2.3.3.5 of the PDP describes plans for detensioning selected PCR/V tendons, and removal of some of these, to permit PCR/V concrete cutting operations. Currently, PCR/V top cross-head tendons and some of the circumferential tendons in the top head area are being detensioned. Some of the detensioned tendons are being removed from the PCR/V. Selected tendon tubes are being plugged to prevent the spread of contamination during future PCR/V concrete cutting operations, as discussed in PDP Section 2.3.3.6.1. This task is progressing in accordance with the PDP description.

#### PCR/V Liner Cooling System

Reactor vessel and fuel storage well liner cooling is not necessary since all nuclear fuel has been removed from the FSV Reactor Building. Work is in progress on System 46, the PCR/V liner cooling system, to cut and remove piping whose location interferes with PCR/V prestressing tendon detensioning and removal or with the installation of scaffolding. PCR/V liner cooling tubes that supplied the PCR/V top head liner have been cut and plugged to prevent diamond wire cutting slurry from spreading contamination through System 46, as described in PDP Section 2.3.3.6.1. Contamination will be produced by diamond wire cutting of activated concrete located at the lower end of the PCR/V top head during actual decommissioning. In addition, radiological characterization of System 46 will require the cutting of a substantial number of PCR/V liner cooling tubes to obtain samples for analysis of contamination levels, as described in PDP Section 2.3.4.8, and some of this work is expected to take place during the decommissioning preparation period.

### Radiological Characterization

In addition to the radiological characterization of System 46, noted above, characterization work is being performed on numerous systems throughout the Reactor Building. This is consistent with Section 3.1.6.3 of the PDP, which indicates that the FSV radiological site characterization program will be ongoing and the results of this program will be used for "radioactive waste management, assessing potential hazards during the decontamination and decommissioning work, for determining safety controls, and accurately scheduling the decommissioning activities."

### Asbestos Removal

Asbestos insulation has been completely removed from the piping in the area under the PCRV ("snubber deck"), as described in PDP Section 2.3.3.3.1. Preparations are being made to begin removal of asbestos insulation from System 23, the helium purification system, and from System 61, the decontamination system, to enable piping and components in these systems to be dismantled at a later time. Removal of asbestos from System 23 and System 61 should be completed by mid-October, 1992.

The asbestos is being removed by a licensed vendor. To date, none of the asbestos has been contaminated. The asbestos that has been removed is being shipped off site to a licensed facility.

### Preparation for Removal of Steam Generator Secondary Modules

Some of the main, hot reheat and cold reheat piping in the area of the snubber deck will be cut, as described in PDP Section 2.3.3.3.1, to facilitate removal of the steam generator secondary modules, which will be lowered into the area below the PCRV. In addition, some of the electrical cables and conduit in this area, which could interfere with secondary module removal, will be removed.