

DEC 7 1983

MEMORANDUM FOR: Gus C. Lainas, Assistant Director
for Operating Reactors
Division of Licensing

FROM: William V. Johnston, Assistant Director
Materials, Chemical & Environmental Technology
Division of Engineering

SUBJECT: REGION IV REQUEST FOR TECHNICAL ASSISTANCE CLARIFICATION
OF APPENDIX R TO 10 CFR 50 APPLICABILITY TO FORT ST. VRAIN
(50-267) (TAC #52647-TIA 83-105)

By memorandum dated November 2, 1983, (J. E. Gagliardo to D. G. Eisenhut), Region IV requested technical assistance regarding the applicability of Appendix R to 10 CFR 50 to Fort St. Vrain. The region posed two questions. Our response is enclosed.

In responding to these questions, we are reviewing the performance goals for Ft. St. Vrain's Alternate Shutdown Cooling Method. The results of this review will be forwarded within the next month.

William V. Johnston, Assistant Director
Materials, Chemical & Environmental
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Division of Engineering

Enclosure: As stated

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- | | |
|----------------|-------------------------|
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| D. Eisenhut | T. Conlon, Region II |
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FORT ST. VRAIN
CLARIFICATION OF APPENDIX R TO 10 CFR 50
APPLICABILITY TO FORT ST. VRAIN (50-267).

Chronology

As a result of the 1975 audit, which revealed deficiencies in cable routing at the plant, PSCo and NRC reached an agreement to implement additional fire protection modifications. These modifications included the installation of additional fire detectors, fire suppression systems, a fire retardant coating on combustible cable insulation and an alternate cooling method (ACM) for the three room control complex and cable concentration areas. This work was to be completed in three stages.

In our SER of June 18, 1976, in conjunction with Amendment No. 14 to Facility Operating License No. DPR-34, we reviewed the Stage 1 modifications and found them acceptable.

In our SER of October 28, 1977, in conjunction with Amendment No. 18 to DPR-34, we reviewed the Stage 2 modifications and concluded that the fire protection requirements for Stage 2 operation had been satisfactorily completed. We indicated that approval for Stage 3 operation would necessitate that PSCo develop an acceptable plan for "substantial conformance" with NRC fire protection guidelines, which may include Appendix A to NRC Branch Technical Position 9.5-1.

In our letter to the licensee dated February 10, 1978, we requested that PSCo compare the fire protection program for the balance of plant, i.e., all areas other than the three room complex and cable concentration locations, to the guidelines in Appendix A to BTP APCS 9.5-1.

The licensee transmitted this comparison by letter dated October 13, 1978.

In our SER of June 6, 1979, in conjunction with Amendment No. 21 to DPR-34, we summarized the fire protection modifications which would be implemented in conjunction with Stage 3 operation. With the exception of the establishment of a plant fire brigade and training program, these modifications pertained to fire protection for the three room complex and cable concentration areas. These modifications were found to follow the applicable guidelines of Appendix A to BTP 9.5-1. Based on:

- (1) The satisfactory resolution of all fire protection concerns with the level of fire safety in the critical three room complex and cable concentration area;
- (2) The ability to achieve safe shutdown, via the ACM, if a fire occurred in the plant;
- (3) The availability of a trained plant fire brigade; and
- (4) Our in-house audit of the licensee's Appendix A comparison;

we did not deem it necessary to mandate additional fire protection modifications for continued plant operation.

In our final SER of August 19, 1980, which reported on revisions to the fire protection technical specifications, we stated that this review "closes out the last remaining open item in the fire protection program review of Fort St. Vrain".

Because the resolution of our principal fire protection concerns with Fort St. Vrain were documented in the previously referenced SERs, we did not document the results of our audit of the licensee's Appendix A comparison.

On May 23, 1980, the Commission issued a Memorandum and Order (CL1-80-21) which states that, "The combination of the guidance contained in Appendix A to BTP ASB 9.5-1 and the requirements set forth in this Rule (150.48 and its Appendix R) define the essential elements for an acceptable fire protection program at nuclear power plants docketed for Construction Permit prior to July 1, 1976, for demonstration of compliance with General Design Criterion 3 of Appendix A to 10 CFR 50".

On November 19, 1980, 150.48 Fire Protection and Appendix P was published in the Federal Register. 150.48 sets forth the applicability of Appendix R as follows:

"(b) Appendix R to this part establishes fire protection features required to satisfy Criterion 3 of Appendix A to this part with respect to certain generic issues for nuclear power plants licensed to operate prior to January 1, 1979. Except for the requirements of Section III.G, III.J, and III.O, the provisions of Appendix R to this part shall not be applicable to nuclear power plants licensed to operate prior to January 1, 1979, to the extent that fire protection features proposed or implemented by the licensee have been accepted by the NRC staff as satisfying the provisions of Appendix A to Branch Technical Position BTP APCS 9.5-1 reflected in staff fire protection safety evaluation reports issued prior to the effective date of this rule, or to the extent that fire protection features were accepted by the staff in comprehensive fire protection safety evaluation reports issued before Appendix A to Branch Technical Position BTP APCS 9.5-1 was published in August 1976. With respect to all other fire protection features covered in Appendix R, all nuclear power plants licensed to operate prior to January 1, 1979 shall satisfy the applicable requirements of Appendix R to this part, including specifically the requirements of Sections III.G, III.J, and III.O".

NRC letter to all power reactor licensees from D. G. Eisenhut, dated November 24, 1980, alerted licensees to the issue of revised Section 10, CFR 50.48 and a new Appendix R to 10 CFR 50, to become effective February 17, 1981. This letter provides some clarification as to applicability:

"The provisions of Appendix R that are applicable to the fire protection features of your facility can be divided into two categories. The first category consists of those provisions of the Appendix that are required to be backfit in their entirety by the new rule, regardless of whether or not alternatives in the specific requirements of these sections have been previously approved by the NRC staff. Those requirements are set forth in Sections III.G, Fire Protection of Safe Shutdown Capability;...."

The second category referred to involved any "open" items from previous NRC staff fire protection reviews as reflected in a staff fire protection safety evaluation report. Enclosure 2 to the letter provided a list of these items for each specific plant. Enclosure 2 for the PSV letter said: "No outstanding fire protection issues on Fort St. Vrain."

Licenses letter to NRC, serial P-81181, dated July 2, 1981, stated that:

"Public Service Company of Colorado has reviewed Appendix R to 10 CFR 50 for applicability to the fire protection facilities at Fort St. Vrain. We find that Fort St. Vrain is in compliance with the provisions set forth in Appendix R."

Following a special inspection of Fort St. Vrain for compliance with Section III.G of Appendix R to 10 CFR 50, Region IV, by memorandum dated November 2, 1983, requested clarification of two questions. Our response is as follows:

1. What is the status of the fire protection Safety Evaluation Report for Fort St. Vrain and/or evaluation of compliance with Branch Technical Position 9.5-1?

The fire protection guidelines in Appendix A to BTP APCS 9.5-1 were specifically developed for light water reactors. Because Fort St. Vrain is a gas cooled reactor, several sections of the guidelines could not be applied directly. To resolve many of the fire protection issues concerning safe shutdown, the licensee proposed a dedicated shutdown system for which acceptance criteria were developed and the impact of this system on the overall fire program was considered in our review.

At the time that Appendix R was prepared, the evaluation of the fire protection program at Fort St. Vrain for compliance with Appendix R to BTP APCS 9.5-1 was deemed complete. Therefore, none of the 15 specific requirements in Section III of Appendix R were written to resolve contested issues on Fort St. Vrain. Although, the specific requirements in Section III were not developed for contested issues on Fort St. Vrain, CL1-80-21 and 150.48 established that these requirements must be met or an equivalent alternative must be approved under the exemption process.

As stated previously, the documentation of our review is contained in the Safety Evaluation Reports attached to amendments to the operating license:

- (1) Amendment No. 14 dated June 18, 1976
- (2) Amendment No. 18 dated October 28, 1977
- (3) Amendment No. 21 dated June 6, 1979

Because these SERs may not address the specific requirements of Section III of Appendix R, acceptable alternatives to those requirements may not be specifically approved. However, the licensee has stated that Fort St. Vrain is in compliance with the provisions set forth in Appendix R, therefore, any issues raised by the lack of documentation of the staff audit of the fire protection program is moot.

If routine fire protection inspections identify deviations which were not approved, each deviation has to be evaluated against the specific requirements of Section III. Lack of documentation of contested issues or approved alternatives implies approval of deviations identified in the licensee's documents. However, this implied approval does not negate the Commission requirement to reexamine all plants for compliance with Sections III.G, III.J and III.O.

2. How do the requirements of Section III.G. and III.L of Appendix R to 10 CFR 50 pertain to Fort St. Vrain?

As stated previously, the Commission directed the backfit of Section III.G to all nuclear power plants. The Commission gave no specific exemption to Fort St. Vrain, therefore, Section III.G of Appendix R to 10 CFR 50 pertains directly to Fort St. Vrain in the same way it pertains to all other nuclear power plants.

Section III.G.3 requires an alternative or dedicated shutdown capability be provided for certain conditions outlined in Sections III.G.3.a and III.G.3.b. The minimum requirements for this shutdown capability are set forth in Section III.L. The performance goals for this shutdown capability were set forth, in part, in terms of damage to the multiple fission product barriers and process variables limits that are applicable to BWRs and PWRs. Therefore, these performance goals cannot be applied to a GCR such as Fort St. Vrain.

Our review of the performance goals for the Alternate Shutdown Cooling Method (ASCM) provided at Fort St. Vrain is ongoing. We will report later on whether these previously approved performance goals for the ASCM should be modified.