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OSCAR R. LEE
VICE PRESIDENT

November 16, 1984
Fort St. Vrain
Unit No. 1
P-84488

Regional Administrator
Region IV
Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Attn: Mr. E. H. Johnson

DOCKET NO. 50-267

SUBJECT: Revision 2 to the FSV Updated FSAR

REFERENCE: NRC Letter dated October 15, 1984
(G-84394)

Dear Mr. Johnson:

This letter is in response to your letter dated October 15, 1984 concerning your review of Revision 2 to the Fort St. Vrain Updated FSAR, which was submitted to the NRC on July 20, 1984. Our responses to your comments are enclosed in the attachment to this letter.

Your review alluded to a "number of instances" in which the revision is not in compliance with 10CFR50.71(e)(5), specifically concerning change indicators. Besides the specific changes without change indicators discussed in the attachment to this letter, the only changes, not identified by change indicators, that PSC is aware of were associated with the reformatting of chemical, nuclide and exponential symbols into a format useable in our computer system, and the correction of spelling and grammatical errors. Examples of the reformatting changes are: 1) I^{131} is now I-131 and, 2) 5×10^{5} is now 5E+05. In future FSAR submittals, all changes will be identified with a change indicator, regardless of how insignificant the change may be.

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If you have any questions regarding the content of these responses please contact Mr. M. H. Holmes at (303) 571-8409.

Very truly yours,

O. R. Lee, Vice President
Electric Production

ORL/JMH:pa

Attachment

1. NRC Comment

Cover letter, "none of the changes to the Tables or Figures have change indicators."

PSC Response

It has been the practice of PSC since the first submittal to identify changes to tables when appropriate. There are several tables with change indicators (e.g. Tables 7.1-2, 8.2-9, 11.2-3, 12.1-1, etc.). The majority of the tables do not have change indicators because no changes were made. These tables were simply reformatted to be entered into our computer system. Beginning with Revision 3, all changes to tables and figures will have change indicators.

2. NRC Comment

Section 1.2.2.2 "The acceptability of Building 10 and the walk-through structure are presently under NRC review."

PSC Response

PSC acknowledges the NRC comment.

3. NRC Comment

Section 2.2 "The site size shows an increase from 2238 to 2798 acres. Review of Revision 2 of Figure 2.1-4 indicates additional property bordered by County Roads 34, 17, and 36 and the old boundary. Was this land recently purchased?"

PSC Response

The additional acreage was purchased by PSC in September of 1977.

4. NRC Comment

Section 3.4 "Reference 13 does not agree with the discussion on page 3.4-2".

PSC Response

Section 3.4 identifies Amendment 40 to the Facility Operating License and incorrectly references P-84001 dated January 3, 1984 concerning "Summation of Fuel Rod Surveillance Report". Amendment 40 (G-84072) will be added to the References for Section 3.4 in Revision 3 to the Updated FSAR which will be

submitted to the NRC by July 22, 1985.

5. NRC Comment

Section 3.8.1.1.2 "The acceptability of the monitoring and reporting of the drive mechanism's temperature are presently under NRC review."

PSC Response

PSC acknowledges the NRC comment.

6. NRC Comment

Section 4.3.4 "The change indicates that a condensate pump without the emergency water booster pump is adequate to feed the steam generators. This change should be explained and justified."

PSC Response

Section 4.3.4 was revised to be consistent with other portions of the FSAR. Section 14.4.2.1, "Cooling with One Water-Turbine Driven Circulator Driven by Unboosted Condensate or Boosted Firewater," states that if all three feedpumps were inoperable, "... adequate cooling could be obtained by driving the circulator water-turbine with one or more condensate pumps". The referenced condensate pump(s) not only supply water to a helium circulator water turbine, but also to the steam generator. This is stated in the third paragraph, "It was assumed in this analysis that condensate was used to supply the steam generator as well as the circulator water turbine." The condensate pump(s) in this analysis are not used in conjunction with an emergency water booster pump. All of these analyses assume the PCRV is pressurized.

7. NRC Comment

Section 6.8.2.2 "The rupture disk pressures are still in disagreement with Figure 6.8-2."

PSC Response

Section 6.8.2.2 identifies the burst pressures as being "812 psig and 832 psig with a setpoint tolerance of +1%". Figure 6.8-2 identifies the setpoints as 820 psig and 840 psig, respectively. The setpoints identified in Figure 6.8-2 are the maximum permissible burst pressures of the rupture disks. The fact the setpoints in Figure 6.8-2 are the maximum permissible burst

pressures will be clarified in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

8. NRC Comment

Table 7.1-5 "Although not a change, explain what is meant by "140% flow scram."

PSC Response

This statement was added to the Original FSAR per Amendment 15 to the FSAR. It is misleading and should actually read "140% power scram". This correction will be made in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

9. NRC Comment

Section 7.3.5.2 "Item 8. Why were instrument Nos. 7325-1 and -2 changed to 73437-1 and -2?"

PSC Response

RT-73437-1 and RT-73437-2 were installed by design modification CN-810 as a result of the release from the reactor building exhaust stack on January 23, 1978 (Reportable Occurrence 78-03, P-78076). Exhaust stack monitors RT-7325-1 and RT-7325-2 do not have the capability to discriminate noble gases from iodine. As a result, these monitors indicate abnormally high exhaust stack activity levels. RT-73437-1 and RT-73437-2 are able to discriminate between noble gases and iodine, and are utilized to perform essentially the same function as RT-7325-1 and RT-7325-2. FSAR Section 7.3.5.2 items 2, 3 and 4 provide further information concerning RT-7325-1, RT-7325-2, and RT-73437-1 and RT-73437-2, respectively.

10. NRC Comment

Section 7.4.3 "The acceptability of the changes to the Instrument Power System are presently under NRC review."

PSC Response

PSC acknowledges the NRC comment.

11. NRC Comment

Section 8.2.2 "The acceptability of the current limiting reactors (8.2.2.2) and the Instrument Power System (8.2.2.3) are presently

under NRC review."

PSC Response

PSC acknowledges the NRC comment.

12. NRC Comment

Section 8.2.3.4 "The change indicates that the batteries have a capacity of at least the old value without stating the actual battery ratings. All of the changes to the DC power system are presently under NRC review."

PSC Response

The original batteries were replaced with new larger capacity batteries of similar physical dimensions to accommodate the existing battery racks. The design capacity requirement of 832 amp hours is met and exceeded with these new batteries. PSC acknowledges that the DC power system is presently under NRC review.

13. NRC Comment

Section 8.2.5.3.2 "The acceptability of the implemented degraded grid protection system is presently under NRC review."

PSC Response

PSC acknowledges the NRC comment.

14. NRC Comment

Section 9.12.2.3 "A new paragraph discusses a deluge system to protect the essential 4160/480 VAC load center transformers. Although the acceptability of the modifications to these transformers are presently under NRC review, please explain their safety classification."

"Why is the Halon concentration maintained at a minimum of 3% for 4 hours in all areas except Building 10 where it is $\geq$5% for 20 minutes?"

PSC Response

Although the three 480 VAC load centers supplied by the transformers in question are safety related, the 4160-480V transformers are not. The word "essential" was added in error

and will be removed in Revision 3 to the updated FSAR which will be submitted to the NRC by July 22, 1985.

The Three Room Control Complex Halon fire suppression systems are designed to totally flood a protected room with a 5% concentration of Halon 1301 and to maintain a minimum 3% concentration for at least 4 hours. This duration was specified based upon the congested cable areas and the close proximity of redundant cables and equipment in the Three Room Control Complex. Building 10 has minimal combustibles and no congested cable areas. Therefore, a shorter Halon maintenance time is acceptable for Building 10. The Halon concentrations in the Three Room Control Complex and in Building 10 are in accordance with NFPA Standard No. 12A. The NRC's evaluation of the Three Room Control Complex Halon 1301 suppression system and acceptance of the Halon 1301 concentrations and time duration are documented in the SER for Amendment 18 to the FSV Facility Operating License dated October 28, 1977.

15. NRC Comment

Section 9.12.3.3 "Why was the fire hose length decreased from 100 feet to 50 feet?"

"Are two fire detectors required to operate to actuate the Building 10 Halon system?"

PSC Response

FSAR Section 9.12.3.3 previously stated (Updated FSAR, Revision 1) "Each hose station is equipped with a 100-foot length of hose and an adjustable fog pattern electrical safe type nozzle." Since the standard length for purchasing fire hose is 50 feet, this sentence was revised in Revision 2 of the Updated FSAR to say "Each hose station is equipped with one or more preconnected 50 foot or longer lengths of hose and an adjustable fog pattern electrical safe type nozzle." PSC has a commitment to have 100 feet of hose at each fire hose station. Therefore the Revision 2 wording, which implies that only 50 feet of hose at a fire hose station is permissible, will be corrected in Revision 3 of the Updated FSAR to indicate that each hose station has at least 100 feet of hose in 50 feet, or longer, lengths.

Within Building 10, all rooms protected with Halon suppression have two independent zones of detection. A minimum of two detectors, one in each zone, is required to activate the Halon Suppression System.

16. NRC Comment

Section 9.12.5.3 "The NRC action referred to in Reference 6 was to state that an inadequate application had been submitted; therefore, NRC action is complete on the exemption requests."

PSC Response

PSC acknowledges the NRC comment. Conformance by PSC, to 10CFR50, Appendix R is presently under evaluation (see PSC letter dated August 17, 1984 (P-84281); O.R. Lee to E.H. Johnson). This section will be revised in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

17. NRC Comment

Section 10.1 "What was changed in this section?"

PSC Response

No text changes were made. Figure 10.1-1 was revised to correctly identify the Emergency Water Booster Pumps, and the page headings were changed from "FSAR UPDATE" to "UPDATED FSAR".

18. NRC Comment

Section 11.1.1 "Two new paragraphs were added but not identified by the required change indicator."

PSC Response

PSC acknowledges the inadvertent omission of change indicators. This new information was added to describe 10CFR50 requirements specifically as they are covered by the Offsite Dose Calculation Manual (ODCM) and federal directives per Amendment 37 to the Facility Operating License (G-83429).

19. NRC Comment

Section 11.2.2.5 "This section indicates that access and egress for the Control Room is through the Turbine Building and the walk-through structure to Building 10. This later route is not allowable and will require prior NRC approval."

PSC Response

This information was incorrectly added since there is no access or egress from the control room to Building 10. The walk-thru structure allows access from the Building 10 equipment room to

the 480V Switchgear Room and the Building 10 computer rooms to the Auxiliary Electric Equipment Room. A walk-thru structure exists on the same level as the Control Room, however, access and egress from the Control Room to Building 10 is not provided (FSAR Section 1.2.2.2). This section will be revised in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

20. NRC Comment

Section 12.1.4 "The discussions of key personnel will require revision due to recent reorganizations. These personnel and title changes should be formally described to the NRC."

PSC Response

A Technical Specification change to Section 7 is presently being drafted to reflect the current organization. The discussions of these key personnel in section 12 will be revised and formally described to the NRC in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

21. NRC Comment

Section 12.3.5 "The statement on page 12.3-13, that CDH retains overall responsibility for offsite incident assessment is misleading. PSC is the licensee and is, therefore, the responsible party."

PSC Response

The Colorado Department of Health (CDH) does retain responsibility for offsite incident assessment. PSC informed the NRC that CDH was responsible for offsite radiological monitoring in our letter dated February 26, 1982 (P-82056; Warembourg to Collins) and the NRC acknowledged this transfer of responsibility by NRC letter dated March 18, 1982 (G-82078; Collins to Lee) which states, "Correct the RERP and EPIPs and provide the capability to perform offsite radiological surveys by PSC teams throughout the entire 5 mile EPZ until that responsibility is assumed by the state." In addition, RERP-State, Annex D.III.B.1 states that CDH has "Overall responsibility for incident assessment." RERP-State, Annex I.III.B.2.a, Annex W.7.a and Annex DD.III.C.1 all support this statement.

22. NRC Comment

Section 14.5 "Reference 8 is a letter from Wagner to Lee, not Wagner to Warembourg. The same comment is true for A.4, Reference 9 and A.16, Reference 16."

PSC Response

PSC acknowledges the NRC comment. These three references will be corrected in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

23. NRC Comment

Appendix A.7.4.3 "As emphasized in NRC letters dated January 31, 1979, and February 28, 1983, any modifications to the fuel element PIE program must be reviewed and approved by the NRC. We continue to maintain the position that PSC is required to perform various, committed-to, PIE regardless of the availability of DOE funding. Therefore, statements indicating otherwise are not correct."

PSC Response

PSC acknowledges that modifications to the fuel element PIE program must be reviewed and approved by the NRC. However, the existing commitments are contingent upon the availability of DOE funding. Any change in the availability of DOE funding is sufficient reason for PSC to approach the NRC requesting a change in scope for the fuel PIE surveillance program. While certain portions of this program assure the validity of safety analyses related to the fuel, other portions provide research data which have no bearing on FSV fuel safety features. In past instances when DOE funding of the fuel PIE surveillance program could not be justified, the expenditure of PSC funds for the full scope program could not be justified either, even for NRC safety reasons.

24. NRC Comment

Appendix A.13 "Since the original FSAR is usually not available for review together with the UFSAR, the appropriateness of references to Figures in the original FSAR in lieu of providing them in the UFSAR should be reevaluated."

PSC Response

These figures were left out of the Updated FSAR because the original photographs could not be located. Xerox reproductions

of these figures will be added in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.

25. NRC Comment

Criterion C.11 "A note stating that changes (which are not described) to the Control room ventilation system alter the system operation, as described in the preceding discussion, appears to make the verification of conformance with GDC 11 of little value. Where are these changes described and how were they approved?"

PSC Response

The Criterion 11 Discussion (paragraph 4) states "In the event of danger of high-level of radioactivity detected by the reactor building ventilation system gas activity monitor, the turbine building roof ventilators would be shut down automatically to prevent intake of airborne activity. At this time, the control room ventilation system would commence operation through a recirculation loop. After a period of time (which would be dependent upon the number of occupants in the control room), control room make-up air would be taken from a central location in the turbine building and passed through a pre-filter and a particulate filter to remove airborne contaminants."

The above description is not totally correct since there is no delay in establishing the source of makeup air to the control room. Upon detection of high levels of radioactivity by the reactor building ventilation gas activity monitor the control room ventilation system dampers are automatically positioned for recirculation with minimum makeup. Isolation dampers on the control room emergency filter fan are automatically opened. This automatic makeup feature enables a differential pressure control system to maintain a positive pressure in the control room with respect to turbine building pressure, ensuring any leakage will be clean filtered air out of the control room and not potentially radioactive air from the turbine building into the control room. The automatic makeup feature provides a greater margin of safety than manual makeup described in the Criterion 11 discussion. Both the automatic makeup actually in effect and the manual makeup described in the Criterion 11 discussion meet Criterion 11 requirements as stated in the FSAR.

A proposed Control Room HVAC design with a manual makeup feature was described in the original FSAR. The original design incorporated the existing automatic makeup feature. The FSV Control Room HVAC system has had the automatic makeup feature since its installation. The Criterion 11 discussion which refers

to manual makeup is incorrect. The automatic makeup feature of the emergency control room HVAC system has never been modified. In Revision 2 of the Updated FSAR, PSC added Note 1 to correct this discrepancy. Note 1 refers to Updated FSAR Sections 7.4.1, 10.2.7.2 and 11.2.2.6 which correctly describe the automatic makeup feature. (These sections were also incorrect in the past, describing a manual makeup feature which never existed, but were revised in Revision 1 to the Updated FSAR to correctly identify the automatic makeup feature.)

PSC will revise Note 1 of Criterion 11 to describe the automatic makeup feature, thus clarifying the error in the Criterion 11 discussion.

PSC's policy is not to change the Discussion for the Criteria in Appendix C of the Updated FSAR since these provide historical information on how the "General Design Criteria for Nuclear Power Plant Construction Permits," issued by the AEC on July 10, 1967 for public comment, were met by the original design of FSV. As stated in the Note in the introduction to Appendix C, "any information which changes the description of how FSV complies with the AEC Criteria discussed in this Appendix will be added as a note to the applicable criterion."

PSC has initiated Change Notice No. 1931 to perform an evaluation of the as-built Control Room HVAC system makeup feature which differs from the descriptions of the makeup feature originally in the FSAR. This will include a safety evaluation in accordance with 10CFR50.59.

26. NRC Comment

Criterion C.24 "The implemented modifications to the Instrument Power System are presently under NRC review to ensure compliance with GDC24 and other NRC directives."

PSC Response

PSC acknowledges the NRC comment.

27. NRC Comment

Criterion C.70 "The Note incorrectly refers to Amendment 27; the correct reference is Amendment 37."

PSC Response

This typographical error will be corrected in Revision 3 to the Updated FSAR which will be submitted to the NRC by July 22, 1985.