

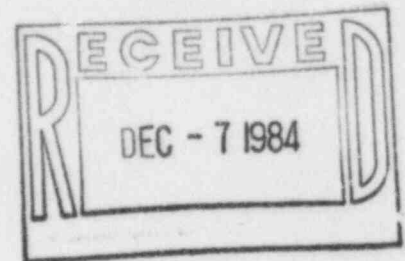


Public Service Company of Colorado

November 30, 1984
Fort St. Vrain
Unit No. 1
P-84510

Regional Administrator
Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive
Arlington, Texas 76011

Attn: Mr. E. H. Johnson



SUBJECT: Technical Specification Revisions
to ELCO 8.1.2, ESR 8.1.2 and ELCO 8.1.3

- REFERENCES: 1.) NRC Letter dated August 31, 1984
(G-84329)
- 2.) PSC Letter from Gahm to Collins
dated September 27, 1984 (P-84387)

Dear Mr. Johnson:

In Reference 2, Public Service Company of Colorado (PSC) states a revision to ELCO 8.1.3 will be made to delineate the type of activity monitoring which will be utilized during liquid effluent releases from the reactor building sump, and that this revision will be submitted by November 30, 1984.

This change has been prepared and is ready for submittal to the NRC, but since its preparation, ELCO 8.1.2 and ESR 8.1.2 have been found to require similar changes. Therefore, PSC will submit the proposed revision to ELCO 8.1.2, ESR 8.1.2 and ELCO 8.1.3 by December 31, 1984. Additional time is required to route ELCO 8.1.2 and ESR 8.1.2 through the approval process.

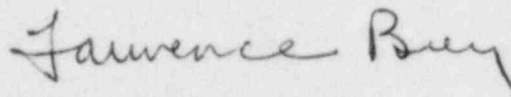
Attached is a background summary of the proposed revisions. Included in this summary are descriptions of the July 19 and 20, 1984 incident, current technical specification requirements, and preventative measures being taken to preclude future incidents of this nature.

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If you have any questions or comments on this matter, please contact Mr. M. H. Holmes at (303) 571-8409.

Very truly yours,

A handwritten signature in cursive script that reads "Lawrence Brey".

H. L. Brey,
Executive Staff Assistant
Electric Production

SBH/scm

Attachment

ELCO 8.1.2, ESR 8.1.2 and ELCO 8.1.3 REVISION SUMMARY

Introduction

During a greater than 10 gallon per minute (gpm) release from the Reactor Building Sump on July 19 and 20, 1984, the 10CFR20 limit on unknown radionuclides was exceeded. The release was continuously monitored by two gamma activity monitors, which, on high gamma activity, would have terminated the release automatically. However, since the radionuclide was a beta emitter, the release was not automatically terminated.

Source(s) of Beta Emitter

The source of the beta emitter (sulfur 35) is identical to the source of the tritium also found in the Reactor Building Sump. The source of the activity in this incident has been identified as the Helium Regeneration Compressor. During maintenance on this piece of equipment, contaminated water was sent down the floor drain below the compressor to, as then believed, the Liquid Waste System. However, this drain actually went directly to the Reactor Building Sump.

Present Release Methods

ELCO 8.1.3 provides for effluent releases directly from the Reactor Building Sump. For releases from this sump, the flow from the Reactor Building Sump must be less than 10 gpm when operated in the automatic mode. At flow rates greater than 10 gpm, two grab samples shall be taken and analyzed prior to beginning the discharge. During the release, the pump outlet shall be continuously sampled, and an analysis of the sample shall be performed as soon as practical. Daily samples from the Reactor Building Sump are taken and analyzed if the continuous sampler is inoperable, and this daily sample is how the beta emitter was discovered. No release from the Liquid Waste System may take place during a Reactor Building Sump release, and releases from the Reactor Building Sump shall be continuously monitored by two gamma activity monitors and their associated recorder.

Should one or both of the gamma activity monitors become inoperable, releases may continue provided grab samples are taken every 12 hours and analyzed for gamma emitters, I-131 and tritium. The associated recorder may be inoperable during releases provided the count rate of each operable activity monitor is recorded at least once per 4 hours.

ELCO 8.1.2 provides for releases from the Liquid Waste System, during which the same gamma activity monitors are used.

Activity Monitors

Gamma

Currently, the activity monitors referenced in ELCO 8.1.2, ESR 8.1.2 and ELCO 8.1.3 do not identify the activity monitored. These monitors are gamma activity monitors, and the revision of this section will clarify this.

Beta

Public Service Company of Colorado (PSC) has conducted an extensive search for an on-line beta activity monitor, and has determined that no such instrumentation exists.

Prevention of Future Incidents

The existing requirements for releases from the Reactor Building Sump will remain in effect. Additional projects underway to minimize the possibility of recurrence of such a release include:

- 1) The floor drains from the Regeneration Pump pit will be rerouted from the Reactor Building Sump to the Liquid Waste System. This will be done under a change notice. Currently, these drains are mechanically plugged.
- 2) There is currently a project underway to map all the drains in the Reactor Building from their origin to their termination.
- 3) The known sources of beta emitters throughout the Reactor Building will be identified, and then compared with the drain map to insure all known sources of beta emitters go directly to the Liquid Waste System. Should any beta emitter sources not be properly routed, design changes shall be initiated to correct this situation.

Conclusion

This revision of ELCO 8.1.2, ESR 8.1.2 and ELCO 8.1.3 does not alter the method in which the system has been operated in the past. It clarifies the type of monitors which are used to monitor liquid releases from the Reactor Building Sump. There should be no recurrence of this type of incident when the drain mapping and rerouting programs are complete.