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ACCESSION NBR: 9502240029 DOC. DATE: 95/02/16 NOTARIZED: NO DOCKET # 05000305
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SUBJECT: Provides more detailed info on current level of activity occurring in area of early considerations for contingency plans for longer term storage.

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February 16, 1995

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

Gentlemen:

Docket 50-305  
 Operating License DPR-43  
 Kewaunee Nuclear Power Plant  
Supplemental Information for Inspection Report 94-017

Reference: 1) Letter from M. J. Farber to C. A. Schrock dated January 27, 1995

Attached to reference 1, Wisconsin Public Service Corporation (WPSC) received Inspection Report 94-017. In Section 5.a(3) Low Level Radioactive Waste Storage, the storage capacity at the station was estimated to be approximately three years. It also identified that no formal design changes or assessments are underway to provide for additional storage. In the inspection report, the inspector cautioned WPSC management that early considerations for contingency plans for longer term storage would be prudent. WPSC recognizes that audits by their nature are limited in both scope and in the amount of information that can be reviewed. Therefore, this letter is intended to provide more detailed information on the current level of activity that has been occurring in this area.

**BACKGROUND**

KNPP management has been considering contingency plans for the storage of low level radioactive waste (LLRW) for many years. In March 1990 the "Radioactive Waste Facilities Study for the WPSC KNPP" was issued. This report documents the conceptual designs and cost estimates for several radioactive waste storage options. Among these options were: 1) the construction of a new radioactive waste storage building; and 2) the modifications required to provide for additional in-plant storage of spent resins in the plant drumming area of the auxiliary building. Although option 1 was not pursued, option 2 is in the design review stage.

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In March 1992 design change request (DCR) 2561 became operational. The design change removed the old 55 gallon drum compactor and installed a new 50 cubic foot box compactor. The new box compactor has demonstrated the capability of reducing the stored volume of dry active waste (DAW) by approximately 50% though increased compaction density.

In May 1992, a WPSC task team was established to examine additional options available for the management of low level radioactive waste generated by the Kewaunee Nuclear Power Plant. This task team was also charged with developing a plan for pursuit of each option.

The conclusions of this task team are summarized in the "Report of the Low Level Radioactive Waste Task Team", March 1993. Several of these conclusions were:

- Kewaunee has made considerable strides, through procedural changes and facility modifications, to reduce its volume of waste production. This effort allows flexibility in planning in that time constraints are significantly extended.
- Interim storage of dry active waste (DAW) can be accommodated within the existing structures of the plant for up to ten years with some architectural modifications.

As part of the task team efforts, engineering support request (ESR) 92-166 was written in September 1992 to evaluate use of an existing area of the auxiliary building for long term storage of compacted radioactive waste. Preliminary engineering was completed on this ESR and concluded this was a viable storage location. However, due to dramatic reductions in the volume of LLRW being generated, the priority of this ESR has been lowered.

The report also identified several options for the storage of resins within the plant structure. The task team discussed the options identified in the March 1990 report. The team concluded that the most feasible option and the one most likely to have the least impact on plant operations would be temporary storage of the high integrity containers (HICs) in the radioactive waste drumming area. Purchase of on-site storage containers has been included as a contingency budget item since 1992.

Finally, the task team agreed that in the short term we would go after the root of the issue by aggressively trying to further reduce the volume of LLRW generated on site. Therefore, in 1994 the Radioactive Waste Elimination and Management Team was formed. This team identified two strategies for KNPP, Phase 1 would identify ways to reduce the volume of LLRW generated on site and Phase 2 would evaluate additional storage needs.

## PHASE 1 SHORT TERM ACTIONS TO REDUCE VOLUME GENERATED

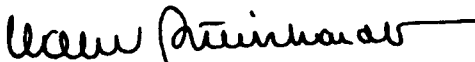
In Phase 1 the team initiated a proactive program to reduce the volume of LLRW generated on site. The team began by evaluating our current handling of LLRW and ways to further reduce the generated volume. This effort to date has resulted in over 40 different ideas being identified for reducing LLRW volumes. Approximately 12 ideas have already been implemented and the others are being evaluated. As a result of our efforts, only 100 ft<sup>3</sup> of DAW has been generated since July 1994. There are no spent resins on site and only 70 ft<sup>3</sup> of filters are currently in storage. The KNPP currently has available over 400 ft<sup>3</sup> of storage space for spent resin (320 ft<sup>3</sup> in the spent resin storage tank and 140 ft<sup>3</sup> in a resin HIC.) In an internal memo dated August 4, 1994, a schedule for resin replacement was identified; only 300 ft<sup>3</sup> of spent resin is projected to be generated in the years 1994 - 1997. As previously mentioned, the purchase of shielded storage containers for resin HIC's is a currently budgeted option should immediate storage become necessary. Therefore, the development of detailed contingency plans for long range spent resin storage is being deferred until Phase 2.

## PHASE 2 LONG RANGE PLANS

This phase is to evaluate where, how much and when additional space for storage of LLRW will be needed at KNPP. Factors to be considered include projected KNPP generation rates, the progress of the Midwest Compact disposal facility, storage requirements for the facility and storage costs.

Finally, WPSC believes it has had a very successful program for managing LLRW. Furthermore, we believe our two phase approach to future LLRW management, reducing volume generated and then evaluating if additional storage space will be required will build upon our successful past program.

Sincerely,



for C.A. Schrock  
Manager - Nuclear Engineering

DJM

cc - US NRC - Region III  
Senior Resident Inspector, US NRC