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50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylva 05000388
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SUBJECT: Describes changes to low level radwaste holding facility to extend storage of waste from 4 to 5 yrs.Operation of existing facility,as modified to account for high activity waste currently generated,meets regulatory requirements.

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AUG 0 3 1992

Director of Nuclear Reactor Regulation
Attention: Mr. C. L. Miller, Project Director
Project Directorate I-2
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
LOW LEVEL RADWASTE HOLDING FACILITY
PLA-3809 FILE R41-2

Docket Nos. 50-387
and 50-388

Dear Mr. Miller:

PP&L is taking this opportunity to notify the NRC of changes which are being made to the Low Level Radwaste Holding Facility (LLRWHF) located at the Susquehanna SES. We have completed a 10CFR50.59 safety evaluation of the changes to the waste generated and the LLRWHF and have concluded that no unreviewed safety question exists. However, because of the sensitivity and significance of interim low level radioactive waste storage, we have chosen to inform you of the important differences between the description referenced in the FSAR and the current storage strategy. These differences include changes to the waste source term, waste form and waste storage configuration. This evaluation also extended the storage of waste from four to five years.

WASTE SOURCE TERM/FORM

The original waste source term was calculated using the design basis activity spectra given in the FSAR for Condensate Demineralizer (CD) and Reactor Water Cleanup (RWCU) waste. No actual radwaste activity data, specific to SSES operations, was available. Based on this source term, the total estimated activity to be stored in the facility in a four year period was approximately 11,700 curies (decay corrected).

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The current evaluation utilizes actual waste source term data obtained from the 1990 and 1991 calendar years as reported in the Semi-Annual Effluent and Waste Disposal Reports as a basis. The revised source term has been expanded to include RWCU, CD, ultrasonic resin cleaning (URC), liquid radwaste (LRW) filter media, sump sludge, cartridge filters, and dry active waste (DAW) types. Using information obtained from these reports, the total estimated curie activity for five years of storage is approximately 61,600 Ci (decay corrected). Dose calculations using the updated source term were performed for routine operations and postulated accidents. These calculations concluded that applicable regulatory requirements were achieved.

The waste form for storage in the LLRWHF, as currently identified in the FSAR, specifies that wastes, except for DAW, will be in a cement solidified form. The current method of processing radwaste at Susquehanna consists primarily of dewatering. This dewatering process meets the solidification criteria of NUREG 0800, BTP ETSB 11-3 and is therefore considered as a "solidified" waste form for LLRWHF storage purposes.

WASTE STORAGE

Waste storage in the LLRWHF will be modified from that described in the FSAR. The reason for these changes are: the higher activity waste (see waste source term) and the use of polyethylene high integrity containers (poly-HICs) for dewatered "solidified" wastes. With the increase in dose due to higher activity waste and fire protection concerns associated with poly-HICs an alternative storage configuration was developed.

The waste containers as described in the FSAR were steel liners. Because poly-HICs substantially increase waste stability and are preferred by disposal facilities, Susquehanna now uses these type containers for disposal. However, one concern with poly-HICs is that they will burn during a high temperature fire. Since this postulated accident is unacceptable, extensive fire protection modifications would have been required to utilize the existing storage configuration.

A second storage concern is associated with the higher waste source term. Originally, the total estimated activity to be stored in the facility in a four year period was approximately 11,700 curies (decay corrected). With the higher activity wastes being generated by Susquehanna, significant waste configuration controls for dose and ALARA purposes would be required to use the facility as described in the FSAR.

Because of the concerns noted above, PP&L will be utilizing individual concrete storage modules in conjunction with existing LLRWHF shielding. This configuration allows for optimum shielding for dose reduction while eliminating the possibility of a poly-HIC fire.

DAW will be processed for volume reduction, then stored as described in the FSAR.

ACCIDENT ANALYSIS

Using the above noted storage configuration, the worst case accident (DAW fire) remains as described in the FSAR. Although the new calculated doses are greater than those originally calculated they remain within the bounding criteria determined by the NRC in the safety evaluation for the 10CFR30 license. No additional accidents or malfunctions of a different type than previously evaluated were identified.

FSAR UPDATE

The LLRWHF description is incorporated into the FSAR by reference to the 10CFR30 license application that was submitted on September 23, 1982. The revisions to the waste source term, waste form and storage configuration as identified in the safety evaluation will be incorporated into the next revision to the FSAR presently scheduled to be submitted by July 17, 1993. This FSAR revision will also include a complete technical description of the facility and the environmental and accident assessments.

CONCLUSION

In conclusion, PP&L has evaluated the LLRWHF in accordance with existing NRC guidance on low level radwaste storage using the 10CFR50.59 process. This evaluation concluded that operation of the existing facility, as modified to account for higher activity waste currently generated by the Susquehanna SES, is within existing regulatory requirements and does not adversely affect the public health and safety. PP&L will also continue to dispose of low level radwaste as long as disposal facilities are available. Finally, if it becomes necessary to store waste for greater than five years, PP&L will perform additional reviews to assure that we will remain within regulatory requirements and that the health and safety of the public will not be jeopardized.

Please contact Mr. R.D. Kichline at 215-774-7916 if you have any question concerning this letter or the LLRWHF.

Very truly yours,

H. W. Keiser

cc: NRC Document Control Desk (original)
NRC Region I
Mr. G. S. Barber, NRC Sr. Resident Inspector
Mr. J. J. Raleigh, NRC Project Manager