



May 19, 1982  
NRC/THI-82-032

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Docket No. 50-320

Mr. John J. Barton  
Acting Director, THI-2  
GPU Nuclear Corporation  
P.O. Box 480  
Middletown, PA 17057

Dear Mr. Barton:

**Subject: Shipment of Submerged Demineralizer System Waste Vessels**

**Reference: Letter from J.J. Barton to L.H. Barrett, same subject, dated May 14, 1982.**

The THIPO staff has reviewed your proposed plan for shipping Submerged Demineralizer System (SDS) waste vessels offsite to a DOE facility. The referenced letter indicates that prior to each waste shipment the SDS vessel and shipping cask will be prepared in accordance with NRC approved procedures pursuant to Technical Specification 6.8, and also in compliance with the Certificate of Compliance (C.O.C. No. 9152/B) for the CHS 1-13C II shipping container.

We understand that there are significant variations in the loadings and composition of the wastes in the SDS vessels. As a result, each vessel will be subject to individual analysis and tests including verification of curie loadings, gas analysis, dose rate surveys and related information to demonstrate compliance with applicable NRC and DOT regulations and the Certificate of Compliance for the use of the shipping container. NRC will review the above information and inspect each shipping container on an individual basis prior to actual shipment.

Based on your referenced letter, we recognize that there are two general classifications of SDS waste vessels; those vessels which have lower radiolytic gas generation rates and require gas inerting prior to shipment, and those SDS vessels which require special passification design features to limit radiolytic gas buildup (e.g., hydrogen recombiners). Because the inerted vessel shipments will be demonstrated by gas measurements to be non-combustible over a period of twice the expected shipment period, we agree that an acceptable safety margin exists. However, since further hardware development and acceptance testing is not yet completed, we are deferring approval of SDS shipments which require special passification systems.

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Mr. John J. Barton

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We approve, subject to individual shipment information packages with supporting data, the shipping of inerted SDS vessels which do not require special passification systems. We will take appropriate action on the remaining SDS shipments once we receive additional information on special passification systems.

Additionally, we recognize that DOE will take possession of the waste material at the site boundary and be the designated shipper. The TMIPO staff will complete a radiological survey verification and provide this information to DOE.

Lake H. Barrett  
Deputy Program Director  
THI Program Office

cc: See Service Distribution List

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