

SNUPPS

Standardized Nuclear Unit  
Power Plant System

5 Choke Cherry Road  
Rockville, Maryland 20850  
(301) 869-8010



Nicholas A. Petrick  
Executive Director

March 27, 1981

SLNRC 81-19 FILE: 0541  
SUBJ: SNUPPS FSAR - NRC Request  
for Additional Information

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

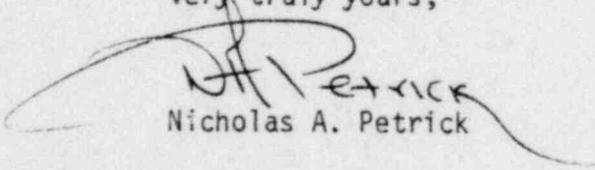
Docket Nos.: STN 50-482, STN 50-483, STN 50-486

Reference: NRC (Tedesco) letter to J. K. Bryan and G. L. Koester,  
dated February 12, 1981, Same subject

Dear Mr. Denton:

The referenced letter requested additional information regarding the  
SNUPPS FSAR. The enclosure to this letter provides the requested  
information and will be incorporated into the next revision to the FSAR.

Very truly yours,

  
Nicholas A. Petrick

RLS/srz

Enclosure

cc: J. K. Bryan UE  
G. L. Koester KGE  
D. T. McPhee KCPL  
T. Vandell NRC/Wolf Creek Site  
W. Hansen NRC/Callaway Site

8001  
s  
1/1

8104020 378

A

## 360.1 EFFLUENT TREATMENT

360.1 (11.4) Table 11.4-3 (sheet 2) of the SNUPPS FSAR indicates that the estimated annual volume of dry and compacted waste is based upon Table 2-49 of WASH-1258. The estimated volume was 3,380 ft<sup>3</sup>. Page 11.4-8 of the SNUPPS FSAR states that the filled drums are sealed and moved to the dry waste storage area in the radwaste building, where they are stored until they are shipped offsite. Figure 1.2-3 of the SNUPPS FSAR shows that the storage area has a storage capacity of 722 drums, if stacked three high, and 1055 drums, if stacked five high. Data made available since the publication of WASH-1258 have made that document inappropriate for waste projections. The dry waste volumes estimated by WASH-1258 are much lower than those being generated at operating reactors. NRC staff calculations, which are based on data from semi-annual effluent reports, show that the volume of dry wastes generated are independent of reactor size and amount to approximately 10,000 ft<sup>3</sup> (compacted) annually, which is a factor of three greater than the estimates presented in the SNUPPS FSAR. Also, the growing uncertainty of the availability of burial space has made the availability of adequate storage space at the reactor facility an important issue.

Based upon the material presented above, provide information verifying that the storage space at Callaway will be sufficient to handle the storage of drummed waste in accordance with the requirements of Branch Technical Position, ETSB 11-3 (Rev. 1), item III (Waste Storage).

RESPONSE

SNUPPS is in the process of revising solid radwaste storage facilities to provide capacity for onsite temporary storage of drummed solid wastes resulting from up to 5 years of plant operation. The revisions comprise the following:

- a. Both storage areas in the radwaste building are being converted to store drummed solidified wastes requiring radiation shielding. With reference to Table 11.4-3 of the SNUPPS FSAR, these primary wastes will normally consist of:
  - Spent resins, primary
  - Evaporator bottoms, primary
  - Filter cartridges, primary

## SNUPPS

It is estimated that these wastes will total 227 drums per year. Based on the storage capacities, shown in Figure 1.2-3 of the SNUPPS FSAR, of 395 and 1,055 drums in the two storage areas there is capacity for up to 5 years of primary drummed solid wastes, with approximately 20 percent margin to allow for quantities in excess of those expected.

- b. Drummed solid wastes not requiring radiation shielding are to be stored on each site in a warehouse-type building (pre-engineered steel building with concrete slab floor) located inside a security area. The specific location of this building and the specific size at each site have not yet been determined. With reference to Table 11.4-3 of the SNUPPS FSAR, these secondary wastes will normally consist of:

- Spent resins, secondary
- Evaporator bottoms, secondary
- Filter cartridges, secondary
- Reverse osmosis concentrates
- Dry and compacted wastes
- Chemical wastes

It is estimated that the first five categories listed above will total 683 drums per year. SNUPPS concurs that dry and compacted wastes will probably exceed the quantity given in Table 11.4-3. This quantity will be increased to 1,330 drums per year, which is equivalent to 10,000 ft<sup>3</sup> (compacted) per year. Thus secondary wastes are estimated to total 2,013 drums annually. A 10,000 ft<sup>2</sup> building will provide capacity for up to 5 years of secondary drummed solid wastes, with approximately 10 percent margin to allow for quantities in excess of those expected.

These changes will be included in an FSAR revision that will be submitted in the near future.

SNUPPS

360.2 Page 11.4-12 of the SNUPPS FSAR discusses shielded  
(11.4) storage areas for "high-level" solidified radwaste  
and "low-level" solid radwaste. The term "high-level"  
is inappropriate and should be revised. "High-level"  
generally refers to reprocessing wastes resulting  
from the first cycle of solvent extraction. More  
recently, use of the term has been extended to cover  
spent reactor fuel. See 10 CFR Part 50, Appendix F,  
item 2.

RESPONSE

As stated in the response to NRC Question 360.1, SNUPPS is  
preparing an FSAR revision on solid radwaste storage. The  
terms "high-level" and "low-level" will be eliminated and  
replaced by primary and secondary, respectively, to differ-  
entiate drummed solid wastes that require radiation shielding  
from those that do not.