

September 8, 1982

Mr. Steve DeGroot
Stock Equipment Company
16490 Chillicothe Road
Chagrin Falls, Ohio 44022

Dear Mr. DeGroot:

Subject: Request For Additional Information Number 1 On SRS-001 (NP)

We are currently reviewing Stock Equipment Company licensing topical report SRS-001-NP entitled "Solid Radwaste System" dated March 1979.

The initial review reveals the need for the additional information indicated in the enclosure.

This information is necessary to continue the review - its expeditious submittal will, therefore, be to Stock Equipment Company's advantage. Please advise us, as soon as possible, of your planned submittal date to permit us to develop a review schedule.

Sincerely,

Original Signed By:

Cecil O. Thomas, Acting Chief
Standardization and Special
Projects Branch
Division of Licensing

Enclosure:
As stated

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DATE	9/5/82	9/8/82					

STOCK EQUIPMENT COMPANY SOLID RADWASTE
TOPICAL REPORT QUESTIONS

SRS-001 (NP)

1. Provide the processing capacity of the Stock Equipment Solidification System and compare it with the expected total wet waste input to the system for both PWRs and BWRs with a rating of 3400 Mwt during normal operation including anticipated operational occurrences. The expected solidified solid radwaste generation rates at light-water-reactors based on operating data taken from the reactor licensee's semi-annual effluent release reports through 1980 are as follows (normalized to a power level of 3400 Mwt):
 - (1) Plant with deep bed resin condensate demineralizers
 - BWR: 42,900 ft³/yr
 - PWR: 18,800 ft³/yr
 - (2) Plant with powdered resin precoat condensate filter/demineralizers
 - BWR: 19,300 ft³/yr
 - PWR: 15,900 ft³/yr
2. Provide tables showing how the system complies with the applicable criteria of Regulatory Guide 1.143, Rev. 1, October 1979, "Design Guidance for Radioactive Waste Management Systems, Structures and Components Installed in Light-Water-Cooled Nuclear Power Plants", and Branch Technical Position, ETSB 11-3, Rev. 2, July 1981, "Design Guidance for Solid Radioactive Waste Management Systems Installed in Light-Water-Cooled Nuclear Power Plants". Specifically, state whether your shield walls

of structures that house Stock Equipment Solidification System components are designed to the seismic criteria given in Regulatory Position 5 of this regulatory guide to a height sufficient to contain the maximum slurry inventory expected to be in the components.

3. In Section IV(B), you list the factors affecting solidification of wet wastes by Stock Equipment. The Process Control Program should identify the boundary conditions for the process parameters you have listed. Describe the boundary conditions for the process parameters for each different type of wet wastes. In Subsection IV-B(6), you state that pH is neither measured nor adjusted in the Stock Equipment. Do you require purchaser to provide pH measurement as well as adjustment?
4. Describe how your system design reflects consideration of the following design features intended to maintain occupational radiation exposures ALARA:
 - a. minimizing the length of piping runs,
 - b. avoiding low points and dead legs in piping, and
 - c. using larger diameter piping to minimize plugging.
5. In Section I, you provide a Stock Equipment customer list. Provide an updated customer list including actual or expected operational dates.

6. In Section VI, Subsection G, you state that overall system operation at Public Service Electric & Gas Company was limited due to problems with equipment extraneous to that of the Stock system. State the problems you have experienced and how you rectified them.

7. Section III, A, page III-3, 2nd paragraph
 - a. Explain how the proper slurry/evaporator ratio is determined prior to double-filling.
 - b. Describe the effects on curing of mixing of two types of wastes.
 - c. Describe to what extent mixing of different wastes can cause gas generation and what the effects are.
 - d. Discuss the procedures to be used in the event of misfeeding that may result in premature solidification and/or extended curing time.

8. Section III, A, page III-3, last paragraph

Describe the process control parameters that will assure the processed waste will solidify within the optimum cure time.

9. Page III-5, Top paragraph

Can the compactor be used more than once for a single drum load? That is, if the first load does not fill it, can more waste be added? If yes, is this considered a normal operating procedure?

10. Section III, B, page III-6, 1st paragraph

Describe the procedures to be used if the final weight is in error in comparing to the pretested formula weight.

11. Page III-7

Is the mixing mode a continuous rotation of the drum, or an oscillation? If it is an oscillation, is it a full 180 degrees?

12. Page III-8, 9

Do the rad monitors at the decanting tank and on the load-out scale have a process or alarm function? If they have a process function, describe it. If they are only for operational information, does the process control program establish setpoints or readings which cause operator actions? If so, describe them and the operator actions.

13. Section IV, B, 6, page IV-4, 1st paragraph

Describe the procedure should swelling occur in the solidification process.

14. Page IV-2, 2

Is only a single type of cement used at a given plant or are there cases where the nature of the waste stream requires different types for different wastes? If the latter occurs, how does the process control program assure the correct type of cement is used? Will more than one type of cement be on-site if the test sample indicates a specific type of cement is required to solidify a special batch of slurry?

15. Section IV, D, 1, page IV-8, 1st paragraph

Describe the procedure used to determine the type of cement and the specific quantity needed for drumming if the waste stream chemistry changes due to unexpected occurrence.

16. 4-13, 11, Solidification Verification

It is stated in this section that to assure compliance with solidification criteria sampling and testing may be required. Does this mean that sampling and solidification testing is not part of the S-E-Co process control program but is left up to the utility to do as they see fit?

What provision is there for determining that there is no free standing water in a drum after solidification and that solidification is complete? Does the Operating and Maintenance manual give recommended sampling/verification methods and schedules if performed?

What are the procedures if the drummed waste does not meet acceptance criteria? Describe the acceptance criteria.

17. Section IV, D, 9, page IV-12, 2nd paragraph

Describe the measures used to re-establish the solidification process if the radwaste is contaminated with materials not already included in the process control program. Would this be performed by the utility in consultation with S-E-Co, or by the utility alone?

18. Section V, 6(A), Page V-17

In the event of power failure to the grab jaws on the bridge crane, will the jaws stay closed and continue to hold a drum? Explain.

19. General

Throughout the topical report the term "pretested formulas" is used. Is this pretesting done by S-E-Co or the utility? If done by S-E-Co, is it done on utility request when a changed waste stream is to be solidified, or is it done once and for all by S-E-Co to cover the entire range of expected waste stream? Describe who does the pretesting, the procedure used, and the criteria for deciding upon when new pretesting is required.

20. Comment

It is not clear from the topical report where the division of responsibilities between S-E-Co and the utility in the process control program lies. This should be clearly defined in the topical report. The S-E-Co should include recommended procedures in the PCP that address such things as pretesting solidification formulation procedures for unexpected waste streams, for sampling and sample solidification verification, sampling schedules and verification or inspection for final product solidification. That is, S-E-Co should provide guidance to the utility in the PCP in those areas that are the utility's responsibilities but that can affect the solidification product. If the above already exist in other documentation, they should be included as part of the topical report.