

SSES-FSAR

QUESTION 321.1

Provide the design and operating pressures of the steam jet air ejectors in the main condenser evacuation system.

RESPONSE:

The response is provided in revised Subsection 10.4.2.2.

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QUESTION 321.2

In addition to the information provided in FSAR Subsection 11.2.1, provide a table listing tanks outside reactor containment which contain potentially radioactive liquids. The table should include tanks both inside and outside plant buildings and should not be restricted to radwaste system components. For each tank, indicate the provisions incorporated to Monitor tank levels, to annunciate potential overflow conditions, and to collect and process liquids in the event of an overflow. Acceptable provisions are given in Branch Technical position - ETSB 11-1 (Rev. 1).

RESPONSE:

This information is provided in revised Subsection 11.2.1.

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QUESTION 321.3

Provide an analysis with respect to each position in the Branch Technical Position, ETSB No. 11-2, "Design, Testing and Maintenance Criteria for Normal Ventilation Exhaust System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Reactor Plants," for each atmosphere cleanup system designed to collect airborne radioactive materials during normal plant operation including anticipated operational occurrences. Only the items of noncompliance need be listed with the justification for noncompliance.

RESPONSE:

Table 9.4-1 has been revised to include this information.

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Question 321.4

Provide the storage capacity of the solid waste management system for packaged solid waste in terms of the maximum number of 200 ft or 50 ft containers and 55 gal. drums that can be accommodated at one time.

RESPONSE:

This information is provided in revised Subsections 11.4.2.2 and 11.4.2.3.

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QUESTION 321.5

In accordance with the Branch Technical Position, ETSB 11-3, "Design Guidance for Solid Radioactive Waste Management Systems Installed in Light-Water-Cooled Nuclear Power Reactor Plants," discuss the provisions for assuring that all liquids will be combined into the solid matrix after processing is complete. Indicate the steps to be taken if solidification is not complete.

RESPONSE:

This information is provided in revised Subsection 11.4.2.2.

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QUESTION 321.6

Your response to Question 321.5 on the solidification process control program and the parameters to be considered for the solidification of waste is not adequate. In accordance with BTP-ETSB 11-3, provide more detail concerning the process control program including the following:

- (1) Data concerning the expected waste types to be processed. The process control program should be based on tests performed with simulated waste formulations based on the expected inputs. You should discuss how the process control program considers the chemical constituents of the waste stream, the pH of the waste stream, boric acid content, solids content of the waste, concentration and type of radwaste, curing time, etc.
- (2) Data concerning the solidification agents (cement + silicate) to waste ratios to be used. The process control program should consider the correct ratios for the various input types and contaminant levels.
- (3) Data concerning the effects of various contaminants on the solidification process.

Specifically, address oil and detergent content in wastes, lab chemicals, and non-depleted ion-exchange resins.

- (4) Discuss the experimental procedures to be used in your process control program. Discuss sampling of the waste input to the Solid Radwaste System as it relates to your process control program to assure a satisfactory solidified product. Where will the waste be sampled? Discuss how the results of the process control program will be analyzed and used as operational considerations.
- (5) We are not familiar with the material, "Safety Set." Provide a product description, including the chemical or physical method of solidifying surface liquid during expected process conditions.

RESPONSE:

- 1) The solidification system supplier, UNC United Nuclear Industries has prepared a topical report which addresses the waste formulation process control program requirements and process chemistry requirements of the system. This proprietary report has been submitted

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under a separate cover (PLA-691 dated March 25, 1981). The Process Control Program (PCP) is to be incorporated as an appendix to the Radiation Effluent Technical Specifications. The expected quantities of wastes are given in Tables 11.4-1 and 11.4-2 of the FSAR.

- 2) The formulation ranges of solidification agents required to achieve dry solidification of the various waste materials are described in the UNC topical report. Refer to subsection 11.4.2.2 and Table 11.4-8 for a discussion of the formulation established during shop testing. Refer also to the PCP.
- 3) The acceptable level of various contaminants which can be satisfactorily processed in the solidification system is discussed in the UNC topical report. SSES is designed with oil interceptors in all drain sumps where oil is expected (Reference Section 9.3.3). In addition, any adverse effects of nominal oil contamination will be detected during the solid radwaste system preoperational testing.
- (4) Refer to the PCP (attached to the Radiological Effluent Technical Specifications) for a discussion of solid radwaste system process controls.

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QUESTION 321.7

Your response to Question 321.6, items 1-4, on the Process Control Program (PCP) for Solidification is not acceptable, since the United Nuclear Industries (UNI) topical report has not been reviewed and approved by NRC staff as an acceptable reference. You should submit a PCP. The PCP may be extracted from or based on information contained in the draft UNI topical report. Your response to item 5 is acceptable.

RESPONSE:

The Process Control Program (PCP) for Solidification has been (PLA-692 dated March 25, 1981) submitted as part of the Radiological Effluent Technical Specifications. The proprietary UNC topical report was submitted under a separate cover (PLA-691 dated March 25, 1981).