



Aerojet
Energy Conversion
Company

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13 September 1985
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Mr. Cecil O. Thomas
Chief, Standardization and Special
Projects Branch
Division of Licensing
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Additional Information on Topical Report
No. AECC-3-P(NP)

- Reference:
- (a) Request No. 1 for Additional Information on
AECC-3-P(NP), dated 2 August 1985, C. O. Thomas
to R. E. Jones
 - (b) AECC Topical Report No. AECC-2-NP,
Amendment No. 1, dated 1 October 1982,
"Radioactive Waste Volume Reduction System"
 - (c) AECC Topical Report No. AECC-2-NP,
Amendment No. 2, dated 10 August 1984,
"Radioactive Waste Volume Reduction System"

Dear Mr. Thomas:

Your request for additional information in the Reference (a) letter had eight (8) questions enclosed. Those questions have been reviewed by the Aerojet Energy Conversion Company and answers for some of the questions are enclosed.

AECC is now actively engaged in the start-up of the Byron nuclear station Volume Reduction (VR) System which references Topical Report No. AECC-2-P(NP), the acceptance test demonstration of the Mobile Volume Reduction System which references Topical Report No. AECC-4A, and the check-out prior to acceptance test of the Oconee nuclear station VR system which references the subject Topical Report No. AECC-3-P(NP). These concurrent activities have resulted in reduced manpower availability to immediately complete the answers to the subject questions.

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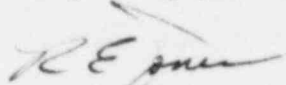
Mr. C. O. Thomas

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We have targeted completion of the answers to these questions by the end of October 1985. An amendment, No. 1, to Topical Report AECC-3-P(NP) will be issued when all of the eight questions are answered fully.

Very truly yours,



R. E. Jones
Product Manager

Enclosure:

- (1) Partial Answers to Request No. 1 for
Additional Information on AECC-3-P(NP)



PARTIAL ANSWERS TO REQUEST NO. 1 FOR ADDITIONAL INFORMATION
ON AECC-3-P(NP)

QUESTION 1. Identify NPC questions and answers for Topical Report No. AECC-2-P(NP) that are fully or partially applicable to Topical Report No. AECC-3-P(NP). Where questions and answers are not applicable or are partially applicable, explain and provide complete answers regarding Topical Report No. AECC-3-P(NP). Reference to appropriate contents of the NRC Safety Evaluation Report on Topical Report No. AECC-2-P(NP) should be made to clarify how questions and answers that are not fully applicable to Topical Report No. AECC-3-P(NP) would convey alternative or additional safety evaluation considerations for Topical Report No. AECC-3-P(NP).

ANSWER The answers to questions to Topical Report No. AECC-2-P(NP) were provided in two published amendments. In Amendment No. 1 there were forty (40) questions, numbered 1 through 40, identified by the NRC Effluent Treatment Systems Branch and five (5) questions, numbered 331.1 through 331.5, identified by the NRC Radiological Assessment Branch. In Amendment No. 2 there were forty-three (43) questions, numbered 41 through 83. AECC has reviewed all of these questions and answers and classified them for applicability to Topical Report No. AECC-3-P(NP) based on the following three judgements:

- 1) Answers provided are directly applicable to Topical Report No. AECC-3-P(NP).

Those answers within this category are Nos. 2, 4, 5, 6, 9, 11, 15, 17, 19, 21, 27, 28, 29, 31, 34, 38, 39, 331.2, 331.4, 331.5, 42, 43, 44, 45, 46, 50, 51, 52, 53, 54, 57, 58, 59, 62, 63, 65, 66, 67, 68, 69, 70, 71, 73, 78, 79, 81, 82, and 83.

- 2) Answers provided are essentially applicable to Topical Report No. AECC-3-P(NP), with minor modifications due to the addition of resin burning capability or process changes such as air cooling of the incinerator and elimination of exhaust gas recirculation.

Those answers under this category are Nos. 7, 8, 10, 13, 20, 25, 26, 30, 32, 33, 35, 37, 41, 48, 49, 56, 61, 64, 72, 74, 75, 76, and 77.

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(3) Answers requiring a major revision or deletion.

Those answers under this category are Nos. 1, 3, 12, 14, 16, 18, 23, 24, 36, 40, 331.1, 331.3, 47, 55, 60, and 80.

AECC is in the process of generating the answers to questions under categories (2) and (3).

QUESTION 2. Describe the extent to which the VR system environment design criteria, system design criteria, and component design criteria and qualification testing for the Gas Filter Assembly conform to the guidance or intent of the guidance of Regulatory Guide (RG) 1.140. Describe the extent to which AECC recommended maintenance, in-place testing criteria, and laboratory testing criteria for activated carbon for the Gas Filter Assembly conform to the guidance or intent of the guidance of RG 1.140. Provide sufficient description of the Gas Filter Assembly to enable decontamination factors to be assigned in accordance with RG 1.140.

ANSWER AECC is in the process of generating an answer to this question.

QUESTION 3. Provide an estimate of the 10 CFR Part 61 classification of the VR system waste products for BWRs and PWRs. Provide an estimate of the extent to which these waste products, after solidification, will meet the waste form (stability) requirements of 10 CFR Part 61.

ANSWER AECC is in the process of generating an answer to this question.

QUESTION 4. Provide approximate estimates of the effective hold-up times within the VR system for airborne effluents from evaporator concentrates and from spent resins processing after introduction to the system, and for radioactive iodine in VR system condensate and leakage sent to the plant radwaste system.

ANSWER AECC is in the process of generating an answer to this question.

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QUESTION 5. Clarify whether the storage hopper and other "optional" components are within the scope of the topical report.

ANSWER The only "optional" components not within the scope of Topical Report AECC-3-P(NP) are the Product Storage Hopper (H-1) and the Product Screw Conveyor (R-4). These components were deleted from the VR system by design change. The H-1 hopper was deleted when the responsibility for product handling was transferred from the AECC scope of supply to the Stock Equipment Company scope of supply. The R-4 screw conveyor was deleted to provide a more reliable pneumatic transfer method of bed product transfer.

QUESTION 6. Justify your reasoning for deleting the spray ports from the gas/solids separator (S-1) and the product storage hopper (H-1) in the System 3 volume reduction system.

ANSWER The Product Storage Hopper (H-1) has been eliminated from the AECC scope of supply and the Gas/Solids Separator (S-1) does contain a single spray nozzle for decontamination. The S-1 Gas/Solids Separator for the VR systems, defined by Topical Report AECC-3-P(NP), is a different design than the unit defined by Topical Report AECC-2-P(NP) to provide more efficient particulate collection. The subject design S-1 Gas/Solids Separator has a single gas inlet and outlet and, therefore, requires only a single decontamination nozzle. The unit defined in Topical Report AECC-2 had two (2) gas inlets.

QUESTION 7. Since the product conveyor (R-4) will be used to convey the radioactive waste to the packaging system, describe how you plan to decontaminate this component should the conveyor require maintenance.

ANSWER The Product Screw Conveyor (R-4) has been eliminated from the VR system design and replaced with a pneumatic product transfer system. The pneumatic system is simply pipelines containing a full ported low point drain system for decontamination.

QUESTION 8. The component designation for the contaminated oil skid and the decontamination skid are reversed in Section 6.2, part h and i of Topical Report No. AECC-3-P. The designation should be SS-3 for the contaminated oil slid and SS-4 for the decontamination slid.

ANSWER The nomenclature for the skids were incorrectly labeled.