

Docket Nos.: STN 50-454/STN 50-455  
STN 50-456/STN 50-457

JUL 19 1984

Mr. Dennis L. Farrar  
Director of Licensing  
Commonwealth Edison Company  
Post Office Box 767  
Chicago, Illinois 60690


Dear Mr. Farrar:

Subject: Request for Additional Information - Byron/Braidwood  
Volume Reduction System

Enclosed is a request for additional information that we need to complete our review of the Byron/Braidwood Volume Reduction System (Outstanding Item 15 in the Byron Safety Evaluation Report). Although NRC approval of this system is not required before fuel load of Byron 1, it is required before the system can be used. Provide your response within 30 days of the date of this letter.

If any further clarification is needed, call L. N. Olshan, the Licensing Project Manager, at (301) 492-7070.

Sincerely,

  
L. N. Olshan, Project Manager  
Licensing Branch No. 1  
Division of Licensing

Enclosure:  
As stated

cc: See next page

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7/17/84	7/17/84	7/17/84

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~~Docket File~~

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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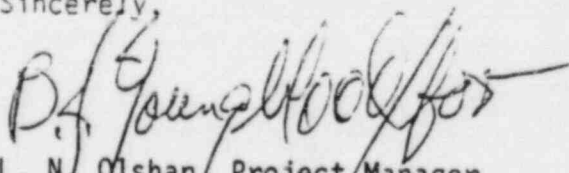
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Division of Licensing

Enclosure:  
As stated

cc: See next page

BYRON/BRAIDWOOD

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ENCLOSURE

QUESTIONS  
ON BYRON/BRAIDWOOD  
"RADIOACTIVE WASTE VOLUME REDUCTION SYSTEM"

1. How will CECo ensure that the quantity of halogenated plastics in the feed to the incinerator is limited to 1% by weight and the heat rate is limited to 700,000 Btu/hr?
2. How will CECo limit the concentration of sulfur to 1000 ppm and chlorides to 5000 ppm in the incoming dry active waste and the sulfur concentration in contaminated oil limited?
3. How is CECo anticipating decontaminating the trash hoppers (H-3A and H-3B)?
4. What type of training has been provided to CECo in preparation of the operation of Volume Reduction (VR) system? Was training provided on a prototype unit, full scale model, or a simulator?
5. Regulatory Position 1.2 of Regulatory Guide 1.143, October 1979, discusses the requirements to prevent uncontrolled releases of liquids. Items discussed include level indicators, alarms, and routing of spills to the liquid radwaste system. Based upon a visit to Byron, neither the design nor the as-built system seemed to comply with these

requirements, e.g., contaminated oil storage tank. The system design and the as-built system at Byron should be modified to comply with this regulatory position, and CECo should review the design and the as-built system to ensure that it conforms to the regulatory position of this regulatory guide.

6. Address the radioactivity associated with contaminated oil which will be incinerated.
  
7. It is the staff's position that decontamination solutions containing organics should not be processed in evaporators unless the plant has a chemical oxygen demand monitor (COD). The reason being that, in the past, the decontamination solutions sent to various radwaste treatment systems have been recycled to reactor water storage tanks. When the organics made it into the reactor, the organics decomposed and played havoc with reactor instrumentation, e.g., incidents at the Brunswick and Hatch plants. CECo should address how they will handle the decontamination solutions associated with the VR system.
  
8. Discuss differences in the Byron/Braidwood VR system design compared to that contained in the AECC-2-P(NP) topical report. Explain the reason for the differences in the design.

9. Your FSAR for Byron/Braidwood discusses the plant's conformance to Regulatory Guides 1.140, 1.143 and 8.8. From some non-conforming items identified in your VR system design, it is not clear whether the conformance addressed in the FSAR included the VR system. Identify those areas of the VR system which do not conform to these regulatory guides.
  
10. Discuss the conformance of the VR system solids product to meet the requirements of 10 CFR Part 61 and the branch technical position papers on waste form and waste classification.
  
11. It would appear that a high level alarm should be included on the contaminated oil storage tank. The high level alarm would prevent potential spills.
  
12. Shouldn't the valve in the vent line from the waste liquid storage tank to the auxiliary building filtered vent header be in the open position and not closed, as shown in sheet 33 of drawing M-48?
  
13. Shouldn't the flow rate to the secondary scrubber and the  $\Delta P$  across the scrubber be part of the instrumentation information available to the VR system operator?

14. Why does a portion of the exhaust flow from the gas/solids separator sent directly to the portion of the scrubber preconcentrator above the mist eliminator?
15. The flush water recovery tank should meet the requirements of Regulatory Guide 1.143. Does this tank meet these requirements?
16. Inlet air filters (OVRO 3M and OVRO 2M) in drawing M-48, sheets 34 and 36 contains no  $\Delta P$  instrumentation to inform the operator that the filter is clogged or that there is no flow or reduced flow. This filter should contain such instrumentation.
17. For what parameter does the metal detector alarm high?
18. What type of instrumentation is contained on the trash shredder filter to indicate that it is plugged?
19. What variable is AERSAL 75C monitoring in the vessel head of the dry waste processor? Is it density?
20. Does an alarm occur on a high or low  $\Delta P$  across the scrubber preconcentrator?



21. Why are there two different density (?) monitoring elements with alarms on the recirculation line from the scrubber/preconcentrator recirculating pipe?
  
22. Why would the material from the bed storage and transfer hopper of the dry waste processor have the contents of its bed transferred to the hopper associated with the fluid bed dryer when these two vessels utilize entirely different bed material for the two processes?
  
23. What parameters are monitored in order to ensure that the gas/solid separator is working correctly?
  
24. It appears that, in portions of the VR system, there is insufficient instrumentation on various components of the system to provide the operator of the VR system adequate details on the status of these components. Some of this is because the instrumentation is monitored locally with no input to the VR system control room. In other cases there is no monitoring at all. Examples where flow indication in the control room would provide useful information include:
  - (a) waste recirculation pump;
  - (b) contaminated oil pump;
  - (c) service air to fluid bed dryer;

- (d) flush water recovery tank pump (no indication of flow at all);
- (e) booster blower (no indication of flow at all).

The filter, OVRO 8F, sheet 34, should contain  $\Delta P$  alarms, high and low. The bed storage and transfer hoppers should contain level indicators, for there is no way to tell the storage capacity of the hopper without looking through the fill port.

Justify this lack of instrumentation in the control room and explain why such instrumentation has been excluded from the VR system control room.

25. There appears to be a significant difference in the instrumentation on the VR system described in AECC-2-P(NP) and the system installed at Byron/Braidwood. It appears that a substantial amount of instrumentation has been deleted at Byron/Braidwood. Please provide a justification for each of these omissions.