



November 8, 2001

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Mr. James E. Kennedy  
Division of Waste Management  
Mail Stop 7J8  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Safety Analysis of Millstone Fuel Rods Potentially Disposed in Either the Barnwell, South Carolina or Hanford Washington Commercial LLRW Disposal Sites. Michael T. Ryan Ph.D., C.H.P.

Dear Mr. Kennedy,

We appreciate the opportunity to provide comments on the subject report through the NRC. Our comments generally apply only to the Barnwell, South Carolina disposal facility. The following are comments.

1. We agree with the findings of the report that the methods used for transportation and disposal of the shipments that potentially contained the fuel rods would not have resulted in any increased risk to the public or to workers at the disposal facility. Also, environmental sampling at the Barnwell facility has not indicated the migration of any radionuclides in the fuel rod inventory and therefore the short-term impacts are anticipated to be manageable.
2. We do not agree with the findings of the report that the fuel rods are an insignificant addition to the existing inventory. In fact, based on information provided to our office by Chem-Nuclear, the increase in the quantities of transuranic radionuclides is not insignificant. The following table provides this information.

Radionuclide	Barnwell Inventory (curies) <sup>1</sup>	Fuel Rod Inventory (curies)	Percent <sup>2</sup>
Pu-238	11.6	0.904	8%
Pu-239	13.0	1.687	13%
Pu-240	2.06	1.182	57%
Pu-241	584	72.0	12%
Pu-242	0.48	0.002	0.4%
Am-241	14.18	6.92	49%
Am-243	0.01	0.002	20%
Cm-244	3.85	0.032	<1%

<sup>1</sup> Activity inventory of all trenches 1971 - 2000 not including fuel rod inventory

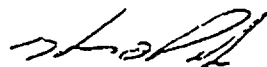
<sup>2</sup> Percent increase to the Barnwell Inventory if the Fuel Rod Inventory is added

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3. Prior to drawing any final conclusions on the impacts of long-term site performance at Barnwell, an analysis should be performed applying the methodology used by Chem-Nuclear Systems, LLC. in the Environmental Radiological Performance Assessment, the performance assessment for the Barnwell site.
4. The report does not address the inadvertent intruder scenario, and does not provide any recommendations on increased intruder protection or recommendation for increased site surveillance.
5. We recognize that the issues of both regulatory jurisdiction and ownership of the fuel rods may impact planning, liability, and financial responsibility for future management of the fuel rods. We recommend that the NRC and Millstone review these jurisdictional and ownership issues and work with South Carolina and Washington to resolve these issues as soon as possible.

If you have any questions concerning these comments, please call me at (803)896-4245.

Very truly yours,



Henry J. Porter  
Assistant Director  
Division of Waste Management  
Bureau of Land and Waste Management

KENNEDY/

Cc: Bill Newberry, B&CB