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August 25, 1982

U. S. Nuclear Regulatory Commission
Region 1
Attn: Mr. J. Roth
631 Park Avenue
King of Prussia, PA 19406

Subj: Inspection No. 70-687/82-05 Report

Gentlemen:

We have reviewed the subject inspection report dated August 3, 1982, and wish to take exception with three specific items in Paragraph 14 entitled "Transuranic Content of Process Waste for Burial". We wish to go on record with the following position.

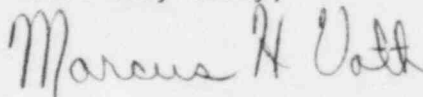
Paragraph 14.c concludes that waste sent for burial contained 9.4 nanocuries per gram of Pu-239 + 240 + 242 based on the minimum waste batch weight of 51 pounds. While our procedures allow for a minimum of 51 pounds of solidified medium, the specific batch which was sampled was solidified to 68 pounds resulting in 7.1 nanocuries per gram rather than 9.4 as reported.

The first conclusion drawn in Paragraph 14.d is "If each transuranic isotope is treated separately the waste does not meet the criteria defined in license condition 32". We do not believe this conclusion is a logical and reasonable derivative of the test results which, as reported in Paragraph 14.c, are of questionable accuracy with respect to Pu-241. We believe the conclusion of the test to be that because of the extremely small concentrations of Pu-241 and the difficulty in making an accurate measurement, the test is inconclusive in demonstrating compliance or non-compliance with the license condition relative to Pu-241 using state-of-the-art measurement techniques. Furthermore, we believe the entire treatment of Pu-241 is rather academic because it has a short half-life and is primarily a beta emitter in contrast to the long lived alpha emitters which constitute the legitimate transuranic concerns.

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The second conclusion of Paragraph 14.d is "The licensee states that there is a verbal agreement with the State of South Carolina and the burial site to treat all Plutonium as Pu-239". While it may be a matter of semantics, we believe that the term verbal agreement misconstrues the situation we described. Our position is that we have discussed our process and procedure in detail with the State of South Carolina and the burial site, including the limitations of analytical techniques for isotopic measurements and the associated inaccuracies. We have stated to them our conclusion that the intent of the license condition is fulfilled by considering only Pu-239 which is the only transuranic isotope present in sufficient quantity to be accurately measured and calculated. We believe that they are expressing sound technical judgement in allowing this approach in that they are requiring demonstrated compliance with the intent of the license but deferring judgement on academic questions.

Yours very truly,



Marcus H. Voth
Manager
Nuclear Operations

MHV:js

cc Mr. Virgil Autry
South Carolina Dept. of Health
and Environmental Conservation

Mr. J. Purvis
Chem Nuclear Systems, Inc.