GENERAL ATOMIC COMPANY
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REGION I
DIR. OF REGULATORY OPERATIONS

In Reply
Refer To: 871-484

October 9, 1974

Mr. L. C. Rouse, Chief
Fuel Fabrication & Reprocessing Branch No. 1
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subject: AEC License No. SNM-871; Docket 70-903

Dear Mr. Rouse:

In Mr. Peter Loysen's letter dated March 11, 1974, GAC requested that the Pawling, New York facility be deleted as an authorized place of use under the subject license. Deletion rather than termination was requested because of the subsequent transfer of authorization of the company's New Haven, Connecticut activities onto that license. Inasmuch as a request for termination of the licensed activities at New Haven has now been made, you should consider the original request as one for deletion or termination, depending upon whichever location you complete action on first.

With regard to soil sampling and analysis at Pawling, you are aware that two sets of measurements were made at different times at 15 separate locations on the site. The first set, made by General Atomic in October 1973, was used in the radiological survey report and showed no detectable Pu-238 and Pu-239. The second set, made by ATCOR in January 1974, was not available for use in the report and showed some positive but anomalous results. The anomalies appeared to be in the 239/238 ratios and more specifically, as was determined later, in the Pu-238 results themselves. With the exception of four selected sample locations and one other individual location, all of the other measurements from both sets were less than 1.0 d/m/gm Pu-239. We consider these other measurements to be reasonable and acceptable. Since no Pu-238 was ever used by itself at Pawling and no reason to suspect isotopic fractionation in soil, we must consider the Pu-238 results to be invalid.

As for the four selected sample locations, the ATCOR samples were reanalyzed by an AEC laboratory and found to be less than 1.0 d/m/gm Pu-239 with typical 239/238 ratios. Additional remeasurements of these locations by New York State Department of Environmental Conservation were found to be less than 1.0 d/m/gm also. Additional measurements of these locations by Regulatory Operations, Region I, were found to range up to 12.2 d/m/gm Pu-239. While we do not necessarily understand the reason for these higher values, we nevertheless decided to remove soil from the areas in question and to remeasure as described in Mr. Loysen's letter of August 12, 1974.

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Resampling was performed on September 5, 1974 in accordance with procedures agreed to by Regulatory Operations, Region I, who monitored the sampling. Several samples of soil were composited for each of three areas located: (a) behind the Plutonium Laboratory Building; (b) below the windows of the E-Spec room; and (c) at a low spot off the paved area southwest of the Engineering Building. Results of the analyses performed on these samples are as follows:

	d/m/gm Dry Soil	
	Pu-238	Pu-239+240
Behind Pu Lab Bldg.	<0.002±.002	0.018±.004
Below E-Spec Windows	<0.002±.002	0.002±.002
Low Spot Off Paving	<0.002±.002	0.006±.002

We believe that these results demonstrate conclusively that the actions taken to further reduce residual contamination below your guidelines were effective and that all regulatory requirements have been met. Your prompt action to terminate SNM-871 will be appreciated.

Very truly yours,

Douglas T. Farney

Douglas T. Farney
Licensing Administrator
General Atomic Company

DTF/lm

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