

August 17, 2000

Mr. James J. Menna, Esquire  
Wiggin & Dana  
One Century Tower  
P.O. Box 1832  
New Haven, Connecticut 06058-1832

SUBJECT: DISPOSAL OF RADIOACTIVE WASTE

Dear Mr. Menna:

Thank you for your letter of July 25, 2000. The technical staff in the Division of Nuclear Materials Safety has reviewed the information you provided. As a result of that review, we have no additional questions and plan no further action in this matter.

Sincerely,

***/RA/***

J. Bradley Fewell  
Regional Counsel

J. Menna  
Wiggin & Dana

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Distribution:

G. Pangburn, DNMS  
F. Costello, DNMS  
J. Kinneman, DNMS  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

May 16, 2000

James J. Menna, Esquire  
Wiggin & Dana  
One Century Tower  
P.O. Box 1832  
New Haven, CT 06508-1832

SUBJECT: POSSESSION AND DISPOSAL OF RADIOACTIVE MATERIAL

Dear Mr. Menna:

Thank you for your letter of April 13, 2000. Unfortunately, it falls somewhat short of providing the information which I requested in our conversation on March 30, 2000, and does not provide us with sufficient information to allow us to appropriately disposition this matter.

Here is my understanding of what has occurred. On December 27, 1999, Pam Henderson, an employee of NRC's Region I office, was advised that four 55-gallon drums of metal shavings from a Connecticut lock manufacturer were turned back from a Connecticut metal recycler due to detected radiation. She was further advised that the lock manufacturer contacted a health physics consultant for assistance and based on his assistance it was determined that the drums contained metal shavings with 15.38 picocuries per gram (pCi/gm) of uranium-238 and 8.8 pCi/gm of thorium-232 and that the drums had radiation levels ranging from 8 to 30 milliroentgen per hour (mR/hr). Ms. Henderson was also informed that there was apparently some confusion on the part of the health physics consultant as to who regulates the material and what were the disposal options.

After some internal discussions at the NRC, it was determined that we needed additional information from you regarding this matter. Ms. Henderson left voicemail messages requesting that you call us to provide additional information to clarify the initial report on December 28, 1999, January 11 and 27, 2000 and we finally reached you on February 10, 2000. At that time, you stated that you were not at liberty to provide additional information. You assured us that the material was being disposed of properly and that your client was looking into where the contaminated metal originated. You assured us that you would pass along our concerns to your client.

Nevertheless, based on the information you provided, we remained concerned that the activities of uranium-238 and thorium-232 do not compare with the levels of radiation being detected. The radiation levels which you reported to us are too high for the activities of uranium and thorium that were provided.

J. Menna  
Wiggin & Dana

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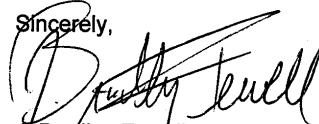
Due to this ongoing concern, I contacted you on March 30, 2000 to request additional information. Among other things, I requested that you provide us with the waste manifest for the transfer of the material to an authorized disposal facility. It was my understanding that, at a minimum, you would provide that information. You responded to my request in a letter dated April 13, 2000. In the letter you stated that you concluded that the contaminated metal had been lawfully possessed. You also stated that the metal had been shipped in accordance with federal and state environmental and transportation regulations to the disposal facility in Barnwell, South Carolina.

While we appreciate your assurances, our original concerns remain. Therefore, we are requesting that you please provide us with the following:

1. A copy of the completed waste manifest for the transfer of the material to the disposal facility in Barnwell, South Carolina.
2. The name of the health physics consultant.
3. Information on the survey instrument used that identified radiation levels of 8 to 30 mR/hour at the surface of the drums containing the contaminated metal.
4. The identity of the entity from which the contaminated metal originated.

Please provide this information within 15 days of the date of this letter or a detailed explanation of why such information cannot be provided. If we do not receive the requested information within 15 days of the date of this letter, we will consider formal action to compel the production of this information. Thank you for your anticipated cooperation in this matter which will better enable us to fulfill our mission of protecting the public health and safety.

Sincerely,



J. Bradley Fewell  
Regional Counsel

J. Menna  
Wiggin & Dana

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Distribution:  
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*Via Fax and First Class Mail*

April 13, 2000

Mr. Bradley L. Fewell  
Regional Counsel  
Nuclear Regulatory Agency  
475 Allendale Road  
King of Prussia, PA 19406

Dear Mr. Fewell:

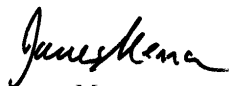
As per our conversation and agreement of March 30, 2000, please note the following.

To ensure proper and legal disposal of certain waste materials, I spoke with Pam Henderson of your office in January of this year to verify that my interpretations of NRC regulations were correct. After, reviewing the Atomic Energy Act of 1954 and, inter alia, 10 C.F.R. §§ 40.4 and 40.22, I concluded that the materials in question were lawfully possessed.

No disposal site exists in the state in which the materials were present. It is my understanding that the materials were shipped, in accordance with federal and state environmental and transportation regulations, to the disposal facility in Barnwell, South Carolina.

It is my opinion that the handling and disposal of the materials in question were done in full compliance with all applicable federal and state statutes and regulations.

Sincerely yours,



James Menna

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*Via Fax and First Class Mail*

July 25, 2000

J. Bradley Fewell, Esq.  
Regional Counsel  
U.S. Nuclear Regulatory Commission, Region 1  
475 Allendale Road  
King of Prussia, PA 19406

Dear Mr. Fewell:

Further to our telephone conversations last week and this morning, this letter responds to your request for additional information as to the equipment used to measure levels of radiation emitted by certain otherwise recyclable material, subject of our previous conversations.

As you know, a health physicist was contracted by our client to evaluate four barrels of buffing waste refused by a metals recycler based on slightly elevated external radiation levels. Relevant portions of the health physicist's report follow:

Four 55-gallon drums had been rejected by the metals recycler. These were labeled "A" through "D." A gamma survey was performed on each of these using a Ludlum Model 19 "MicroR" meter. This is a state-of-the-art instrument containing a 1" by 1" NaI(Tl) crystal. It is an excellent instrument for detecting and quantifying environmental levels of photon (i.e., gamma and x-) radiation and reads out on units of micro roentgens per hour ( $\mu\text{R/h}$ ). Measurements taken are as follows:

Location	Maximum Measurement
Background	8 $\mu\text{R/h}$
Barrel A	8 $\mu\text{R/h}$
Barrel B	22 $\mu\text{R/h}$
Barrel C	28 $\mu\text{R/h}$
Barrel D	30 $\mu\text{R/h}$

The normal range of background radiation in Connecticut is anywhere between 5 and 15  $\mu\text{R/h}$  with this instrument. For comparison, the lowest tier of "regulatory interest" occurs at about 500 to 1000  $\mu\text{R/h}$ . Clearly, however, barrels B through D contain radioactive material easily distinguishable from background.

Barrel D was opened and tested using a "Prospector" made by Oxford Instruments. This device utilizes a 2" x 2" NaI(Tl) detector and is a portable gamma spectrum analyzer. While this is not a laboratory-grade instrument, it is capable of qualitatively identifying specific radioactive isotopes based on their characteristic gamma-ray energies.

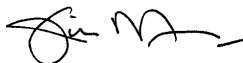
Barrel D was opened and the detector placed directly on the material. A 10-minute count was performed and sufficient peaks identified to determine that the material contained natural thorium and natural uranium. More significantly, it was clear from this qualitative analysis that no man-made isotopes (e.g.,  $^{60}\text{Co}$ ,  $^{137}\text{Cs}$ ) were present.

A sample of the material from Barrel D was taken for laboratory analysis, as was a segment of raw abrasive compound. These were analyzed by . . . (Nuclear Regulatory Agency License # . . . , Connecticut Public Health Laboratory # . . . ) using an intrinsic germanium gamma spectrum analyzer.

The analysis results for sample from barrel D show 15.36 pCi/g  $^{238}\text{U}$  (uranium-238) and 8.824 pCi/g  $^{232}\text{Th}$  (thorium-232). The other isotopes with reported activities are all daughter products of these parent isotopes. . . . [Neither]  $^{137}\text{Cs}$  [n]or  $^{60}\text{Co}$  is present.

I trust that the foregoing will allow you to make a final disposition of this matter.

Sincere regards,



Jim Menna

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