

RTI Inc.

108 LAKE DENMARK ROAD, ROCKAWAY, NJ 07866
(201) 625-8400 • FAX (201) 625-7820

March 1, 1989

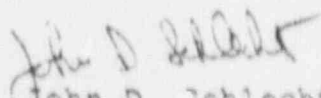
Mr. John White, Chief
Nuclear Materials Safety Section C
United States Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Dear Mr. White:

Enclosed please find the letter which we received from the North Carolina Department of Human Resources regarding the Cs-137 which we have stored in our North Carolina PTI facility. Also enclosed please find the information which we currently have available regarding this material. I am currently attempting to procure the Lockheed Nuclear Products drawing # NTP-0009.

Thank you very much for your efforts regarding this situation. If you would like any additional information please contact myself or Mr. Tass Varaklis.

Sincerely,


John D. Schlecht
Physicist

9101220219 900913
PDR FOIA
JONES90-334 PDR

B/B



North Carolina Department of Human Resources
Division of Facility Services

701 Barbour Drive • Raleigh, N. C. 27603-2008

James G. Martin, Governor
David T. Flaherty, Secretary

I. O. Wilkerson, Jr., Director
Telephone (919)733-4283

February 21, 1989

Mr. Alsn Burgess, Plant Manager
Process Technology, Inc.
P.O. Box 757
Raw River, NC 27258

Dear Mr. Burgess:

This letter is written in concern about the Cesium 137, obtained from North Carolina State University, the facility possessor. In light of the problems experienced in the State of Georgia with the DOE Cesium 137 sources and the age and uncertainty of the sources you possess, the North Carolina Radiation Protection Section and the Nuclear Regulatory Commission are becoming very concerned over the continued presence of the source in the Haw River facility.

One of our concerns is the ability of Process Technology, Inc. to withstand a leaking Cesium 137 source that would contaminate the complete irradiator system and require millions of dollars to decontaminate and dispose of sources of radiation and contaminated material. Since the sources in Georgia came from DOE they have helped with decontamination, clean up, and disposal of radiation sources and equipment. However, the facility has been out of production during this period and so far as I know, don't know if they will ever recover from this incident. In Process Technology, Inc.'s case, the only source of revenue other than its own is the parent company and our concern is can Process Technology, Inc. withstand such a financial burden.

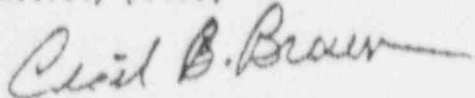
In accordance with the foregoing discussion and Rule .2208 of the North Carolina Regulations for Protection Against Radiation, I am asking you to do the following:

1. Set up a time table to dispose of the Cesium 137 source by transfer to an authorized recipient in accordance with Rule .2516 within 30 days.
2. Provide the Agency with the timetable for disposal.
3. Provide the Agency with any information you may have on the Cesium 137 sources such as manufacturer, manufacture date, model number, chemical form and how the sources were constructed.

Mr. Alan Burgess,
Plant Manager
Page 2

Should you have questions concerning this letter or if I can discuss further our concerns about these sources of radiation, please feel free to contact me.

Sincerely yours,



Cecil B. Brown, Head
Radioactive Materials Branch
Radiation Protection Section

.... CBB/rlr

DESCRIPTION

The ^{137}Cs is contained in 22 source strips, each approximately $1\frac{1}{8}$ " x $\frac{1}{3}$ " x $13\frac{1}{2}$ " in size. The strips contain Cs Cl pellets, doubly encapsulated in stainless steel. The original activity in 1967 was about 4,500 Ci in each strip, for a total inventory of just over 100,000 Ci. As of November 10, 1977, the assay was 79,808 Ci of ^{137}Cs . There is negligible ^{134}Cs left because of its low initial concentration and its short half life of 2.06 yr.

The ^{137}Cs source material will be obtained from Dow Chemical Co., Midland, Michigan. Each source strip has been leak tested at least once a year and will be leak tested again in November or December 1978. A certification that each strip has passed the leak test will be provided with the source material. Present plans are to ship the material with Chemical Nuclear Co. providing a licensed shipping cask, in early December, 1978.

A more detailed description of the ^{137}Cs strips is provided in attachment 1, which was taken from an internal Dow report.

In addition, two ^{60}Co rods, each approximately $\frac{5}{8}$ "D x 12"L, and four ^{60}Co strips, each about $\frac{3}{4}$ " x $\frac{1}{4}$ " x 13", having a total assay of 919 Ci as of November 10, 1977, will also be obtained from Dow Chemical Co. These rods and strips have also been leak tested annually, are doubly encapsulated in stainless steel, and will be certified as having passed a leak test within November or December, 1978.

OCT-25-88 TUE 10:28 P T I N.C.

F.P. 3
1/27/87
1164

GAMMA FACILITY ISOTOPE DATA

Received from Dow Chemical Co.:

Cs-137: 73, 686 Ci as of 6-3-81. (68931 Ci as of 1/27/87)

Dimensions: 13.344" \pm .02, 1.126" \pm .003;
.375" \pm .003

Approximately 4500 \pm 300 Ci per strip

Cs in form of CsCl pellets

Halfarc welded

22 strips

Double encapsulated in 316 LC stainless steel

Drawing: Lockheed Nuclear Products, NTP-0009

John
This is what
info we need
from RTI
Mason

Environmental → RTI

characterization - 12/14/88 Hr.

info needed

- Ambient radiation results ~~survey~~ conducted in the area cuts de the machine room, outside the fence, and where the trenches were? Results needed.
- Where was the 1.8 p Ci/gm Cs 137 sample found? What is the possible cause?
- How ~~was~~ ^{were} the soil samples taken? Stratified samples taken?
- Soil sampling conducted to characterize the material in the trenched area.

remediation - 3/20/89 Hr.

info needed

- The number of sites they are going to remove outside the fence (Hr. says 3, they said 5 during inspection)
- What their plans are for the remaining sites outside the fence line. Including dose evaluation?
- How they plan to remove the stack sources in the RDD pool.
- Inform them that their proposed liner ~~is~~ have to undergo D.I.T. testing, since the work they want to use ~~was~~ ^{was} not tested with that liner.
- their proposal for the area outside the machine room.

B/D

remediation

In response to the 24

1500 p.c/g

- re survey + submit results
- provide estimate the potential for of additional buried waste in the NE corner of the property. Robert + Evaluation of whether material should be removed or left in place + as just in place what the monitoring will be.
- increase comp. date. (3D comp. provide of water)

Time table + plan for removal of sources in R+D pool due 3/23/89
 Characterization due 12/23/88
 Time table for clean-up due 3/23/89.

12/14/87 soil analysis of creek bed
 & interior area

- No indication of lake silt sampling
- No characterization of back lot area.
- No ambient radiation monitoring results.
- Where was the 1.7 pCi/gm Cs-137 sample found? Please advise.
- No indication of how the soil samples are taken (stratified or surf.).

1/89 Itr states highest level was 0.66 pCi/gm, 1 spot @ of the fence, from contain. CRK.

3/10/89 Clean-up plan + time table. (source removal from R+D included)

- EPA's list of areas the 3 lot spots outside the fence (p. 11) have 11 spots above the 5 pCi/gm limit.
- No indication of how to remove the stuck pieces in the R+D pool.

87 1/2 addresses

5/1/89 proposed actions + site surveys

- Area North of Fence: install a fence + post as a "contaminated area". Sample adjacent areas around the fence annually. (surf + at 24")
- Mail room: install a fence + post, annual sampling as above.
- North west corner of lot: same as above.

- - still ^{acceptable} no ambient rad. surveys.
- sketch of 5/1/89 for infusing ~~contaminated~~
- fencing not in accordance

... to assess the extent of possible ...
 ... materials.

INSPECTION DATE	INSPECTION	INSPECTORS	RESULTS	NOTES
Jan. 8-9, 1987	87-01	Oberg & Taylor	Clear	
Jan. 21-22, 1987	87-02	Costello, Kinneman, Miller	Clear	
Feb. 19, 1987	87-03	Friedman & Scovill	Clear	Report
March 19-20, 25, 1987	87-04	Taylor & White	Clear	Report
Apr. 7, 1987	87-07	Miller & White	Clear	
Apr. 14 & 16, 1987	87-05	Miller & Taylor	Clear	ORAU
Apr. 29, 1987	87-08	Miller & Taylor	Clear	
Jun. 5, 1987	87-09	Miller & Taylor	Clear	
Jun. 11-12, 1987	87-10	Jensen, Miller, Taylor	Clear	
Jun. 16-17, 1987	87-11	Taylor & Ullrich	Clear	
Jun. 18, 1987	87-06	Miller & Piccone	Clear	Report
Jun. 23-24, 1987	87-12	Miller & Rajendran	Clear	
July 7, 1987	87-13	Miller & Taylor	Clear	
July 23, 1987	87-14	Miller, White, Bilhorn	Clear	
Aug. 11-12, 1987	87-15	Miller & Taylor	Clear	
Aug. 24, 1987	87-16	Taylor & Bilhorn	Clear	
Sept. 23-24, 1987	87-17	Miller & Taylor	N/C	Report
Oct. 7, 1987	87-18	Taylor & Friedman	Clear	
Jan. 19, 1988	88-01	Miller & Taylor	Clear	Report
April 1988	88-02	Miller	Closeout	(03)
Aug. 1, 1988	88-03	Friedman	Clear	New Sys.
Nov. 2-3, 1988	88-04	Miller, Provencher, Kirkwo	Clear	
March 21&23, 1989	89-01	Taylor	N/C	

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