

AUG 20 09:00

United States Nuclear
Regulatory Commission
Material Licensing Branch
Washington, D.C. 20555

RCA

Attention: J. Bruce Carrico

Dear Mr. Carrico:

August 16, 1985

Re: Control No. 119075

This is in response to your letter dated August 5, 1985 regarding our application dated July 2, 1985 for a by-product material license to possess and distribute radioactive material to persons exempt from licensing pursuant to 10CFR30.14. The following items are keyed to your letter.

1. We are designating Route 202, Somerville, New Jersey 08876, as our mailing address.
2. The activity expected to be present in material received by RCA is:

<u>Radionuclide</u>	<u>Concentration (uCi/gm)</u>
Na-24	2.17×10^{-17}
As-76	1.30×10^{-11}
P-32	1.97×10^{-4}

3. These expected concentrations at the time of receipt by RCA are based upon analysis of representative material with a known elemental composition following irradiation with a known neutron fluence. The analyses were performed using a multichannel analyzer and a Canberra 2201 low background beta counter. These analyses confirm calculations based upon composition, neutron fluence and cross-sections. If material with a different composition is used, similar analyses shall be performed and the radioactivity shall be limited to the radionuclides and concentrations in item 5 of our applications.

4. Our suppliers will screen material for activity using a pancake probe and compare the results of the screening with the results for material for which the activity has been analyzed. The supplier shall be instructed not to ship material exceeding the limits in item 5 of our application.
5. The maximum exposure rate expected from individual items at the surface, 1 centimeter, or 30 centimeters is less than 0.05 mR/hr.
6. Incoming material is screened using a pancake probe and scaler. Material exceeding the limits in item 5 of our application shall be rejected and stored in a secured area for reinspection after 14 days. Accepted material undergoes electrical testing. Defective devices are inked. Wafers are cut into individual devices. The good devices are mounted and assembled into completed product which is packaged and shipped to recipients. Defective devices are disposed of as waste. All operations except screening, shipping, and the handling of defective devices are computer controlled remote operations. Forceps are used to handle incoming material and defective devices. Palm Beach Gardens is a distribution point only.
7. The individual at each facility who will be responsible for insuring the proper receipt, use disposal, and/or transfer, shall be a Process Engineer, a Member of the Technical Staff reporting to the Radiation Safety Officer, who shall perform an annual audit.
8. We shall use the disposal methods described in your letter.

We are adding an additional address to item 3 of our application:

Route 12 East
Fostoria Road
Findlay, Ohio 45850

0310

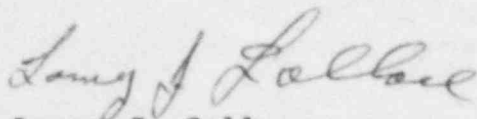
J. Bruce Carrico

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August 16, 1985

Should you have any questions or require additional information, please contact me immediately by telephone at 201/685-6081. If additional information is required, we request that it be incorporated in our license as a condition to expedite the issuing of the license.

Sincerely,



Larry J. Gallace
Division Vice President
Product Assurance and Environmental Engineering

/wk

CONVERSATION RECORD

TIME

2:15am

DATE

8/7/85

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☒ INCOMING☒ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

Fred Dixon

ORGANIZATION (Office, dept., bureau, etc.)

RCA Product Safety

TELEPHONE NO.

(609)
234-7596

SUBJECT

Activated devices incorporated
into electronic products

SUMMARY

-Mr. Dixon called to inform us that his office had discovered that RCA was sending electronic devices to a DOE reactor for irradiation, the deactivated devices were returned to RCA (NO license to possess) and were incorporated into electronic products. The products were then transferred to a military contractor for use in weapon systems. He indicated that RCA had discontinued the transfers and was initiating licensing action. I asked Mr. Dixon to send us a letter, w/c c to RT, which describes the situation, confirms they have discontinued transfer, assess the radiation hazard of the devices, if they currently possess - confirm materials are in secure storage, and describe what RCA will do to resolve the problem and when we can expect an application.

ACTION REQUIRED

- Mr. Dixon agreed to send a letter

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

J. Bruce Carver

DATE

8/7/85

ACTION TAKEN

Dist: Vosen, Basson, Hickey, Kinneman, Miller

SIGNATURE

TITLE

DATE

CONVERSATION RECORD

TIME

DATE

8/21/85

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING☒ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT
WITH YOU

Eli Port

ORGANIZATION (Office, dept., bureau,
etc.)

RSSI

TELEPHONE NO.

(312)
866-7744

SUBJECT

RCA application

SUMMARY

- I called Mr. Port to see if we could establish possession limits for the license. Mr. Port indicated that the wafers weighed 6.3 grams each and RCA anticipated ~~a~~ 25,000 unit inventory. We discussed several alternatives such as 1 millicurie per isotope or a 10 mCi total possession limit. Based upon the inventory level, I decided to restrict possession to the next whole mCi using the maximum concentration.

$$[i.e., (6.3 \text{ g/unit})(25000 \text{ units})(2 \times 10^{-3} \text{ uCi/gm (for Cs-137))}] \\ = 3150 \text{ uCi} \rightarrow 4 \text{ mCi}]$$

- We also discussed the fact that the 8/16 letter only identified 3 isotopes while the application identified 12. Mr. Port said The other isotopes, ^(elements) may be introduced to change electrical properties of the devices.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

J. Bruce Conico

DATE

8/21/85

ACTION TAKEN

SIGNATURE

TITLE

DATE