

UNITED STATES
ATOMIC ENERGY COMMISSION

IN REPLY REFER TO:
IEB:EGW(LIC:31-2050-1)

Oak Ridge, Tennessee
February 18, 1957

National Carbon Company
Experimental Laboratory
National Works
Niagara Falls, New York

Attention: Mr. R. P. Stambaugh, Assistant Plant Manager

Subject: LICENSE NO. [REDACTED]

Dear Mr. Stambaugh:

Enclosed is the subject license issued against your request for [REDACTED] sealed sources.

Our calculations indicate that the radiation levels at 1 foot from the surface of the Density Gammage, with 300 millicuries of Cobalt 60 installed, is slightly higher than our current recommendation of 5 mr/hr at one foot. In this regard, we should like to call your attention to Section 20.102 of Part 20 of the Federal Regulations. If exposure levels in regions near the Gammage are higher than levels indicated in this Section, the area must be considered as a controlled area, and appropriate precautions indicated in Sections 20.201, 20.202, 20.203 taken. For your convenience we are enclosing a copy of Part 20 with appropriate Sections checked in red.

If you have questions, please do not hesitate to contact us.

Very truly yours,

Nathan Bassin
for James W. Hitch, Assistant Chief
Byproduct Licensing Branch
Isotopes Extension
Division of Civilian Application

Enclosure:

1. License No. 31-2050-1
2. Industrial applications w/insts. (1 set)
3. Part 20 (checked)

U. S. ATOMIC ENERGY COMMISSION
BYPRODUCT MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 30, Licensing of Byproduct Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess, transfer and import byproduct material listed below; and to use such byproduct material for the purpose(s) and at the place(s) designated below. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now or hereafter in effect and to any conditions specified below.

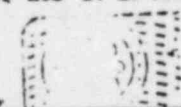
Licensee		3. License number [REDACTED]
1. Name National Carbon Company Experimental Laboratory	2. Address National Works Niagara Falls, New York	4. Expiration date February 28, 1959
		5. Reference No.
6. Byproduct material (element and mass number) A [REDACTED]	7. Chemical and/or physical form Radiochemical Centre sealed source - Model CDC-500 (see page 2)	8. Maximum amount of radioactivity which licensee may possess at any one time 1 source of 500 millicuries
9. Authorized use A. To be used in Isotope Products, Inc. Gammagage Source Castle Model No. 3405 to measure density of carbon. (see page 2)		

CONDITIONS

10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
11. Byproduct materials to be used by, or under the supervision of, George H. Kindig.
12. THIS LICENSE SUPERSEDES AUTHORIZATION NO. 33246 ISSUED TO NATIONAL CARBON COMPANY, 3625 HIGHLAND AVENUE, NIAGARA FALLS, NEW YORK, INSTRUMENT ENGINEERING DEPARTMENT.
13. Except as hereinafter provided the licensee shall comply with provisions of the Atomic Energy Commission's Standards for Protection Against Radiation as published in the Federal Register, January 29, 1957.
14. Licensed material shall be used as sealed sources for purpose stated and sources shall not be opened.
15. Leak testing of source listed in Item A above shall be carried out at intervals of six months and records of the leak test results shall be furnished to the Atomic Energy Commission upon request.
16. Sources are to be distributed on a rental basis with title remaining with the supplier. (see page 2)

For the U. S. Atomic Energy Commission

Date February 18, 1957

by 
Director, Isotopes Extension
Division of Civilian Application
Oak Ridge, Tennessee

BYPRODUCT MATERIAL LICENSE

Supplementary Sheet

License Number [REDACTED]

(continued from page 1)

SECURITY
PROPERTY

6. Byproduct material (element and mass number) 7. Chemical and/or physical form 8. Maximum amount of radioactivity which licensee may possess at any one time

B. [REDACTED] Isotope Products, Inc: sealed source according to Part No. 3 of Dwg. No. 3603 1 source of 300 millicuries

9. Authorized use

B. To be used in Isotope Products, Inc. Gammage Source Castle Model No. 3405 to measure density of carbon.

CONDITIONS

17. Source listed in Item B above shall not be replaced under this license.

SECURITY
PROPERTY

SECURITY
PROPERTY

SECURITY
PROPERTY

For the U. S. Atomic Energy Commission

Date February 18, 1957

[Signature] by

Director, Isotopes Extension
Division of Civilian Application
Oak Ridge, Tennessee

REGISTRATION OF SOURCES OF RADIATION

(See Over For Instructions)



State of New York

Req. No. _____
Date _____

Department of Labor

National Carbon Co., A Div. of

Company Name Union Carbide & Carbon Corp.

Address 3625 Highland Ave., Niagara Falls, N.Y.

2. Confines of Installation National Plant, 3625 Highland Ave., Niagara Falls, N.Y.

1. RADIATION PRODUCING EQUIPMENT (Use Additional Sheets if Necessary)

TYPES OF RADIATION SOURCES	Number		Size or Rating of Each Machine or Unit	Purpose or Use
	Fixed	Mobile		
Industrial X-Rays	1	0	X-Ray Defraction Apparatus 35 KVP - Max. Tube Current 35 MA	Examination of Carbon Structures
Medical or Dental X-Rays	0	0		
Radioactive Static Eliminators	0	0		
Beta Ray Gauge	0	0		
Nuclear Reactors	0	0		
Particle Accelerators	0	0		
High Voltage Equipment	0	0		
Other (Specify)	0	0		

STATE OF NEW YORK DEPARTMENT OF LABOR

REGISTERED

UNDER RULE 38 OF INDUSTRIAL CODE
DIVISION OF INDUSTRIAL HYGIENE

Date: 3/7/56 By: N.A.

4. RADIOACTIVE MATERIALS

TYPES	Number		Sealed	Un-Sealed	Source Strength	Estimated Quantity Used Annually	Average Quantity on Hand	Purpose or Use
	Fixed	Mobile						
Cobalt 60	1		1		1/3 Curie	Expected life of present unit - 5 years	1/3 Curie	Gamma Gauge for thickness determinations

5. Name and Address of Person in Charge of Radiation Protection

F. Hilton, National Carbon Co., 3625 Highland Ave., Niagara Falls, N.Y.

Qualifications 1943 Graduate of North Carolina State College-B.S. Engineering - Works Engineer of National Carbon Co., 3625 Highland Ave., Niagara Falls, N.Y.

Registered Professional Engineer - States of New York, Ohio and West Virginia

2/22/56

Date

Signature of Person in Charge of Radiation Protection

F. Hilton

Radiation

October 23, 1957

Dr. Morris Kleinfeld, Director
Division of Industrial Hygiene
New York State Dept. of Labor
80 Centre Street
New York 13, New York

Dear Dr. Kleinfeld:

Attached you will find two completed copies of Registration of Sources of Radiation Form itemizing radiation equipment and radioactive materials located at the Niagara Falls Works of our Company.

Previous registration [redacted] covered the X-ray diffraction unit, [redacted] source. Since we recently acquired [redacted] we are forwarding the attached forms which include both the previously registered items and the new source.

Very truly yours,

C. W. Bowen

Product and Process Development Laboratory

C. W. Bowen
ERB

Attach.

cc - Mr. W. D. Nichols/Mr. N. M. Albertson
Mr. V. H. Wells
Dr. T. W. Nale/Mr. P. W. McDaniel
Mr. R. M. Bushong/Mr. R. P. Stambaugh
Mr. H. J. Mann,

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL HYGIENE

80 CENTRE STREET
NEW YORK 13, N. Y.

ADDRESS REPLY TO:

November 4, 1957

REFER TO:

Gentlemen:

We have received your radiation source registration form IH-312 and found it satisfactory in all respects.

The original is returned herewith to be retained in your files as evidence of compliance with Rule 38-4 pertaining to registration.

We appreciate your full and prompt cooperation.

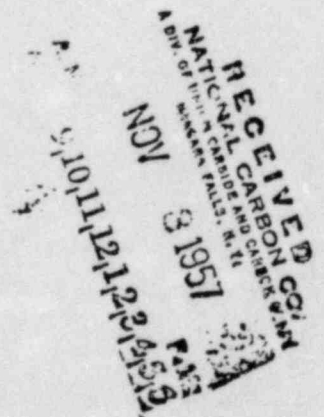
Very truly yours,

Morris Kleinfeld M.D.

Morris Kleinfeld, M.D.
Director

Division of Industrial Hygiene

Enc.



John 11/8

REGISTRATION OF SOURCES OF RADIATION

(See Over For Instructions)

State of New York
Department of Labor

Req. No. 111
Date _____

1. Name National Carbon Company Address National Works, Niagara Falls, N. Y.
2. Confines of Installation Experimental Laboratory

3. RADIATION PRODUCING EQUIPMENT (Use Additional Sheets if Necessary)

TYPES OF RADIATION SOURCES	Number		Size or Rating of Each Machine or Unit	Purpose or Use
	Fixed	Mobile		
Industrial X-Rays	1	0	Industrial X-ray unit-150 KVP-Max. tube current 25 MA X-ray dif. apparatus-35 KVP-Max. tube current 35 MA	Examination of carbon structures
Medical or Dental X-Rays	0	0		
Radioactive Static Eliminators	0	0		
Beta Ray Gauge	2	0	One Isotope Products (Instr. Div.) Inc. 3404 - (5005-3) - 6156 Gamma Gage 1 source 500 mc Ce 137, 1 source 300 mc Cobalt 60	Measuring density of carbon
Nuclear Reactors	0	0		
Particle Accelerators	0	0		
High Voltage Equipment	0	0		
Other (Specify)	0	0		

STATE OF NEW YORK DEPARTMENT OF LABOR

REGISTERED

UNDER RULE 38 OF INDUSTRIAL CODE
DIVISION OF INDUSTRIAL HYGIENE

Date: 11/1/57 By: [Signature]

4. RADIOACTIVE MATERIALS

TYPES	Number		Sealed	Un-Sealed	Source Strength	Estimated Quantity Used Annually	Average Quantity on Hand	Purpose or Use
	Fixed	Mobile						
Cobalt 60	1	0	1	0	1/3 curie	expected life of	1/3 curie	Gamma Gauge for thickness determinations
Cesium 137	1	0	1	0	500 M curies	1/2 life-33 yrs.	500 M curies	Same

5. Name and Address of Person in Charge of Radiation Protection

H. J. Mann, National Carbon Company, 3625 Highland Avenue, Niagara Falls, N. Y.
Qualifications 1937 Graduate - BCE - Rensselaer Polytechnical Institute
Works Engineer of National Carbon Co. at above address.

10/23/57
Date

[Signature]
Signature of Person in Charge of Radiation Protection

Handwritten: Radiation

November 5, 1957

Dr. Morris Kleinfeld, Director
Division of Industrial Hygiene
New York State Department of Labor
80 Centre Street
New York 13, New York

Dear Dr. Kleinfeld:

We recently submitted, in a letter from our Mr. C. W. Bowen to you dated October 23, our registration covering a 150 KV X-ray unit, an X-ray diffraction unit, a cobalt 60 source, and a cesium 137 source.

We now plan to work on an [REDACTED] [REDACTED] pounds of this material at any one time. If this radiation source should be included in our registration, would you please send us a supply of blank forms so we may submit a revised registration.

Very truly yours,

R. L. Mansfield

Product and Process Development Laboratory

R. L. Mansfield
ERB

REVISOR
Mr. N. M. Albertson
Mr. R. W. McDaniel
Mr. R. M. Bushong / Mr. R. P. Stambaugh
Mr. H. J. Mann
Mr. C. W. Bowen

Handwritten initials

11/11

*I understand you
will submit your
copy of the registration
to it and please add 3 million
to it and keep this letter in
your file with it.*

*R.L. Mansfield
11/11/57*

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL HYGIENE

80 CENTRE STREET
NEW YORK 13, N. Y.

ADDRESS REPLY TO:

November 7, 1957

REFER TO:

RMA

Mr. R.L. Mansfield
National Carbon Company
Niagara Falls, N.Y.

Dear Mr. Mansfield:

In response to your letter of November 5th, it will not be necessary to submit a revised registration form. The quantity of uranium oxide you mentioned, equivalent in radioactivity to about 3 million ~~grams~~ has been entered on the registration form you submitted previously. You should make a similar entry on your copy.

Please notify us promptly of any future changes in your installation affecting data on your registration form so we may keep your registration up-to-date.

If I can be of further assistance to you, please do not hesitate to write.

Very truly yours,

Morris Kleinfeld M.D.
Morris Kleinfeld, M.D.
Director

Division of Industrial Hygiene

MK:er

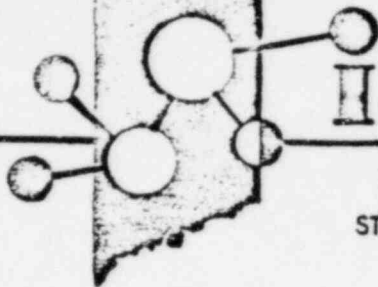
*RMP
11-11*

*Mr. CANOEE
BAF*

*MAKE COPY & ATTACH TO LATEST
REG. RETURN TO CLM*

[Signature]

[Signature]



ISOTOPE PRODUCTS

(INSTRUMENT DIVISION) INC.

STATION "B", P.O. BOX "O" BUFFALO, NEW YORK

Victoria 2488

December 26, 1957

National Carbon Company
Experimental Laboratory
National Works
Niagara Falls, New York

Attention: Mr. T. H. O'Shea

Dear Mr. O'Shea:

Reference your A. E. C. license [REDACTED]
for use of Cobalt 60 in your Isotope Products' density
gage.

We find that in the construction of this
gage a small balancing source of [REDACTED]
used in addition to the Cobalt 60 source.

This should be covered by an addendum to
your current license. We enclose herewith application
forms, partially filled out. (Please note that the
forms have taken account of the effects of our merger
with Curtiss-Wright Corporation, as explained in
accompanying letter.)

Will you complete the forms, mailing two
copies to Isotope Extension, Division of Civilian
Application, Atomic Energy Commission, Post Office
Box E, Oak Ridge, Tennessee. Retain one copy for your
file and mail one completed copy to Curtiss-Wright
Corporation, attention Mr. Gerald Chaill, Sales Dept.,
Industrial Controls Section, Electronics Division,
Carlstadt, New Jersey.

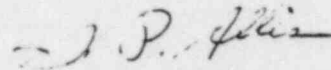
In your letter of transmittal to A. E. C.
please instruct them to mail copy of license addendum
to above.

December 26, 1957

Thank you for your anticipated cooperation in completing this detail and please address reply and future correspondence in this regard to Mr. Cahill.

Sincerely yours,

ISOTOPE PRODUCTS (INSTRUMENT DIVISION) INC.



S. P. Allis,
Purchasing Agent

SPA/mf

Encl.

CC: Mr. Gerald Cahill,
Carlstadt, New Jersey

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail two copies to: U. S. Atomic Energy Commission, P. O. Box E, Oak Ridge, Tenn. Attention: Isotopes Extension, Division of Civilian Application. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the licensee is subject to Title 10, Code of Federal Regulations, Part 20.

<p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.)</p> <p>National Carbon Company Experimental Laboratory National Works Niagara Falls, New York</p>	<p>(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)</p>
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<p>2. DEPARTMENT TO USE BYPRODUCT MATERIAL</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>[REDACTED]</p>
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<p>4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.)</p>	<p>5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)</p>
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<p>6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)</p> <p>[REDACTED]</p>	<p>(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)</p> <p>18 mc Isotope Products drawing #870</p>
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7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)

Balancing source in Isotope Products Gammagage Drawing 3603 for density measurement.
This is in addition to standard gage, license for which we have. Reference Isotope Products' letter of January 14, 1957 under subject heading - "Co60, Tl204, Balanced Type Density Gage,"

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

8. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)	FORMAL COURSE (Circle answer)
a. Principles and practices of radiation protection.....	Instruction in radiation safety procedures provided by Curtiss-Wright Installation Engineers at time of installation.	4 hrs	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
b. Radioactivity measurement standardization and monitoring techniques and instruments.....		4 hrs	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
c. Mathematics and calculations basic to the use and measurement of radioactivity..			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
d. Biological effects of radiation.....			<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No

9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
		See item 8 above		

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm ²)	USE (Monitoring, surveying, measuring)
None					

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No

14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source. Available under C-W service contract

15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved.

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

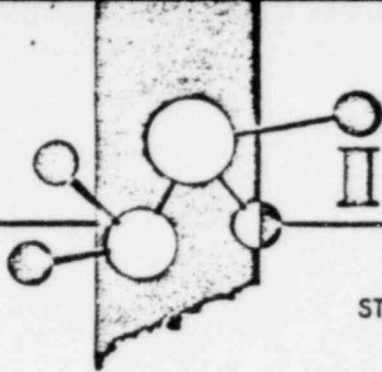
Applicant named in item 1

Date _____

By: _____

Title of certifying official

WARNING.—18 U. S. C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.



isotope PRODUCTS

(INSTRUMENT DIVISION) INC.

STATION "B", P.O. BOX "O" BUFFALO, NEW YORK

Victoria 2488

December 31, 1957

National Carbon Company
Experimental Laboratory
National Works
Niagara Falls, New York

Attention: Mr. T. H. O'Shea

Dear Mr. O'Shea:

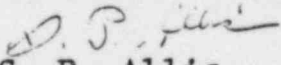
Isotope Products (Instrument Division) Inc. has recently become part of the Electronics Division of Curtiss-Wright Corporation with the following address:

Curtiss-Wright Corporation
Electronics Division
Industrial Controls Section
Carlstadt, New Jersey

We are arranging with the Atomic Energy Commission and the relevant State authorities to have title and responsibility for the radioactive sources transferred to the Curtiss-Wright Corporation, whose radiological officer is Mr. Paul Thees of the above address.

Future correspondence in connection with source licensing, etc. should be directed to the Sales Department, attention of Mr. Gerald Cahill. Source leak testing, etc. will henceforth be carried out by the Curtiss-Wright Corporation - likely, however, by the same personnel who have performed this duty for Isotope Products.

Sincerely yours,


S. P. Allis,
Purchasing Agent
Isotope Products (Instrument
Division) Inc.

SPA/mf

January 3, 1959

United States Atomic Energy Commission
Post Office Box E
Oak Ridge, Tennessee

Attn: Isotopes Division

Gentlemen:

We attach completed form ASC-313 for [REDACTED]
Material [REDACTED] expiring February 28, 1959.

We will appreciate your processing this application leading to
renewal of the license.

Very truly yours,

/s/ H. J. Mann

H. J. Mann
baf

Works Engineer

Attach.

CC: Messrs. P.W. McDaniel
N.M. Albertson

BC: Messrs. E.B. Pilcher - letter only
W.H. Maxon - " "
G.H. Kindig - " "