

Corn Products

a Unit of CPC North America
P.O. Box 7558, 1001 Bedford Avenue, North Kansas City, Mo 64116
(816) 471-8000

CPC
International

Oct. 12, 1982

Nuclear Regulatory Commission
License Management Branch
Division of Fuel Cycle and Material Safety
Washington, D. C. 20555

Subject: Proposed Amendment to License
Number 24-12734-02

Sir:

Attached are various forms and certificates indicating the safe removal of six nuclear sources from our plant. These were returned to Nuclear Research Corp. for disposal.

A copy of our specific license with proposed changes is enclosed. These changes are:

- (1) Removal of six sources
- (2) Addition of one source
- (3) A request for permission for "in house" movement of our source holders.

Factory formal classroom training was completed by both Lew Harper and Floyd Dever. A copy of the training certificate is enclosed.

Thank you,



Lewis E. Harper
Plant Engineer

8610060248 860807
REG3 LIC30
24-12734-02 PDR

LEH:s

An Equal Opportunity Employer

CPC International Inc

CERTIFICATE OF DISPOSITION OF MATERIALS

(All Blocks **MUST BE** Completed)

LICENSEE NAME AND ADDRESS

CPC INTERNATIONAL, INC.
1001 BEDFORD AVENUE
NORTH KANSAS CITY, MISSOURI 64116

LICENSE NUMBER

24-12734-02

LICENSE EXPIRATION DATE

January 31, 1984

The licensee or any individual executing this certificate on behalf of the licensee certify that: (Check and/or complete appropriate item(s) below.)

☐ 1. No materials have been procured by licensee.

☐ 2. All materials procured and/or possessed by licensee under license number shown above, have been transferred to: _____

which has NRC license number: _____

☐ 3. All materials procured and/or possessed by licensee under license number shown above have been transferred to: _____

which has license number: _____ issued by _____

an Agreement State pursuant to Section 274 of the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974.

☒ 4. Materials have been disposed of in the following manner. (Describe specific disposal procedures - if additional space is needed, use reverse side.)

The following six Industrial Nucleonics nuclear sources were removed from service, packed and returned for disposal to:

Nuclear Research Corp

125 Titus Ave.

Warrington, Pa. 18976

U.S. NRC License NO's 37-02401-01/37-02401-04G

This procedure was supervised by Mr. S. E. Brandenburg, An Ohmart Corp. field service engineer.

SOURCE S/N	MODEL	ISOTOPE	ACTIVITY	DATE RECEIVED
CS9078	SH301 S6	Cs-137	50 mCi	8/12/82
CS9079	SH301 S6	Cs-137	50 mCi	8/12/82
CS9080	SH301 S6	Cs-137	50 mCi	8/12/82
CS9084	SH301 S6	Cs-137	50 mCi	8/12/82
CS9085	SH301 S6	Cs-137	50 mCi	8/12/82
CS11025	SH302 S6	Cs-137	200 mCi	8/12/82

PLEASE RETURN TO

U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safety and Safeguards
Washington, D.C. 20555

CERTIFYING OFFICIAL

SIGNATURE

DATE

U. S. NUCLEAR REGULATORY COMMISSION
MATERIALS LICENSE

Page 1 of 3 Page

Amendment No. 02

This Copy Is For Your Files

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-381), and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purposes and at the places designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s); and to import such byproduct and source material. This license shall be deemed to contain the conditions specified in Section 163 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee

In accordance with application dated
July 13, 1978

3. License number 24-12734-02 is amended in
its entirety to read as follows:

4. Expiration date January 31, 1984

5. Reference No.

8. Maximum amount that licensee
may possess at any one time
under this license

6. Byproduct, source, and/or
special nuclear material

7. Chemical and/or physical
form

* A. ~~Cesium 137~~

* A. ~~Sealed sources
(Industrial Nucleonics
Model S-6)~~

* A. ~~5 sources, not to
exceed 50 millicuries
per source~~

* B. ~~Cesium 137~~

* B. ~~Sealed source
(Industrial Nucleonics
Model S-6)~~

* B. ~~1 source, not to
exceed 200 millicuries~~

* A. Cesium 137

* A. Sealed source
(Ohmart A2102)

* A. 2 sources not to
exceed 300 millicuries
each

* B. Cesium 137

* B. Sealed source
(Ohmart A2102)

* B. 1 Source Not To
Exceed 500 millicuries

9. Authorized use

- * A. ~~To be used in Industrial Nucleonics Series SN-100 source holders as part of Model SR-1 measuring heads to measure density of material flowing through pipes.~~
- * B. ~~To be used in Industrial Nucleonics Series SN-100 source holders as part of Model SR-1 measuring heads to measure density of material flowing through pipes.~~
- * A. Contained in Ohmart Model SR-1 source holders for level measurements.
- * B. Contained in Ohmart Model SRI-A source holder to measure density of material flowing through pipes. (Ohmart SO #20300-6088 S/N 73141)

CONTROL NO. 81360

U. S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Supplementary Sheet

CONDITIONS

Page 2 of 3 Pa

License Number 24-12734-0

Docket or
Reference No.

Amendment No. 02

10. Licensed material shall be used only at the licensee's address stated in Item 2 above.
11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."
12. Licensed material shall be used by, or under the supervision of, E. Howey*, L. Harper or F. Dever.
13. A. (1) Each sealed source possessed under this license shall be tested for leakage and/or contamination at intervals not to exceed three years. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
- (2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.
- C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the test with the U. S. Nuclear Regulatory Commission, Region III, Office of Inspection and Enforcement, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, describing the equipment involved, the test results and the corrective action taken.
- D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
14. Sealed sources containing licensed material shall not be opened or removed from their respective source holders by the licensee.

(continued)

15. Installation, initial radiation survey of devices, relocation, maintenance, repair, and removal from service of the devices containing licensed material and installation, replacement, and disposal of sealed sources containing licensed material used in the devices shall be performed only by the manufacturer of the device or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
16. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated July 13, 1978 and letter dated December 13, 1978.
- * 17. Licensee will be specifically authorized to relocate source holders to new locations within the Plant complex to improve or modify process measurements.

* Proposed Changes

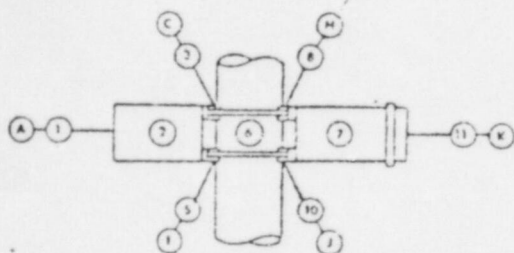
For the U. S. Nuclear Regulatory Commission:

Joseph M. Brown
License Management Branch

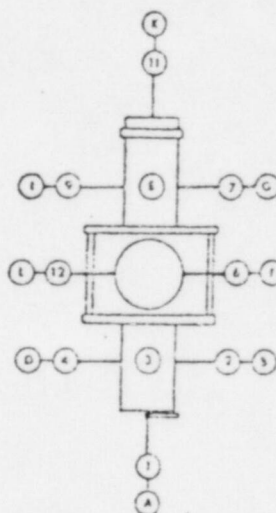
Division of Fuel Cycle and
Material Safety
Washington, D.C. 20555

Date DEC 28 1978

MODEL 3400
S/N # 73141



Side view



Top view

GENERAL INFORMATION

1 Ohmart SO # 20300-6088
Date 8-4 1982

Person doing the survey,
BRANDENBURG

The Source:

Material CS-137

Source Size 500 m.c.

Source Holder Model # SAL-A

The Survey Instrument:

Manufacturer MINIMETER

Model _____

Serial # _____

SOURCE SHUTTER

2

COLUMN 1

COLUMN 2

Reading at the surface

Distance to a reading of 5mR/hr
WHEN SURFACE READING EXCEEDS
5mR/hr

Open

1 1.5
2 1.6
3 2.2
4 1.5
5 2.1
6 2.5
7 1
8 1
9 1
10 1
11 1

A _____
B _____
C _____
D _____
E _____
F _____
G _____
H _____
I _____
J _____
K _____

3

Closed

1 1.5
2 1.5
3 1
4 1
5 1

A _____
B _____
C _____
D _____
E _____

*1 readings are in milliroentgen/hr (mR/hr).

(8) on the drawing, the letter where the meter should be placed at the spot surface to take that reading.

If (1) exceeds 5 enter then move back until the reading drops to 5 mR/hr then record the distance as (2).

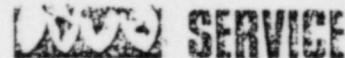
A reading in Column 2 more than 100 mR/hr requires a radiation area sign.

SDFD 7979

CONTROL NO. 81360

Used By
CPC

User (if different from Purchaser)



001 Bedford Ave
N Kansas City Mo.

64116-0258

Field Service Report No.

MACT-08-21131-088

Report Date 8-4-82 Sheet 1 of 1

Shop Order No. MACT-2013R-061088

Radiation Safety Instrument Rep. Visit Purpose Service P.O. AC-84837
Radiation Survey Customer Initial
☒ Yes ☐ No Declined
Radiation Safety Instruction Customer Initial
☒ Yes ☐ No Declined
Wipe Test Customer Initial
☒ Yes ☐ No Declined

Item (Gage Model No.)	Trouble Location	Trouble Disc.	Action taken	Status A B C	Stdz. Volts	Suppression Volts	Calib. Date	Speed	Range/Span
1 113400 Density	25	58	88 X		9.75	1000			.09
2									
3									

Comments: Startup and calibration of one Density gage. setup 2-20 MA and lin. BP. Prepared test accuracy sources for shipment to Nuclear Resources

Date From/To	Travel Start	Stop	Service Start	Stop	Part No.	Qty.	Material Description
7-2	0800	1600					
7-3	0730	0800	0800	1630			
8-3	1630	1700					
8-4	0700	0730	0730	1630			

REG/OVT REG/OVT

Above Travel hrs. does not include return trip hours.



TECHNICAL TRAINING SCHOOLS - INCLUDING RADIATION SAFETY

Ohmart offers a full range of Technical Training Schools. Attendees are given comprehensive, detailed "hands-on" training on all the company's product lines as well as on specialized subjects such as Radiation Safety. Schools are conducted monthly at the Ohmart Cincinnati plant.

However, Customer Technical Training Schools covering maintenance, trouble-shooting, Radiation Safety, etc., may be conducted in the field. For detailed information, call or write our Training Director.

THE OHMART CORPORATION
Worldwide Sales and Service



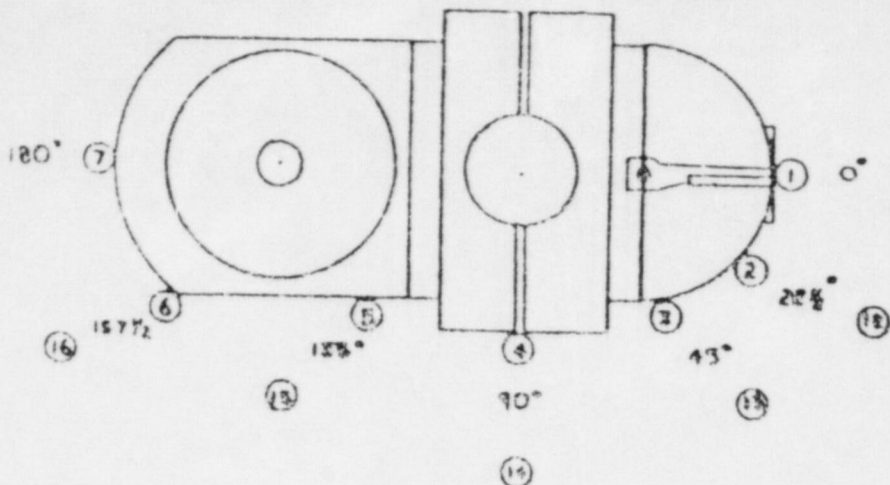
4241 Allendorf Dr., Cincinnati, Ohio 45209 U.S.A.
Telephone: (513) 272-0131 TWX: 810-461-2255

Customer Acknowledgement of Service Hours, Material and F.S. Survey Card

Customer Signature: [Signature] Ohmart Field Service Engineer: [Signature]

50FF-25A

SOURCE MTR CS-132 MC 50 QTY 5
 SOURCE HOLDER TYPE S-6 ACURAY
 PIPE SIZE SCH. OR WALL THICKNESS
 INSULATION



A SOURCE HOLDER OPEN - PIPE: FULL ☐ EMPTY ☐
 SURVEY METER CONTACT(1) DISTANCE FROM SURFACE(2)

1
2
3
4
5
6
7
8
9
10

PREPARE FOR
SHIPMENT

11
12
13
14
15
16
17
18
19
20

B SOURCE HOLDER CLOSED
 SURVEY METER CONTACT(1)

1 1.1
 2 2.2

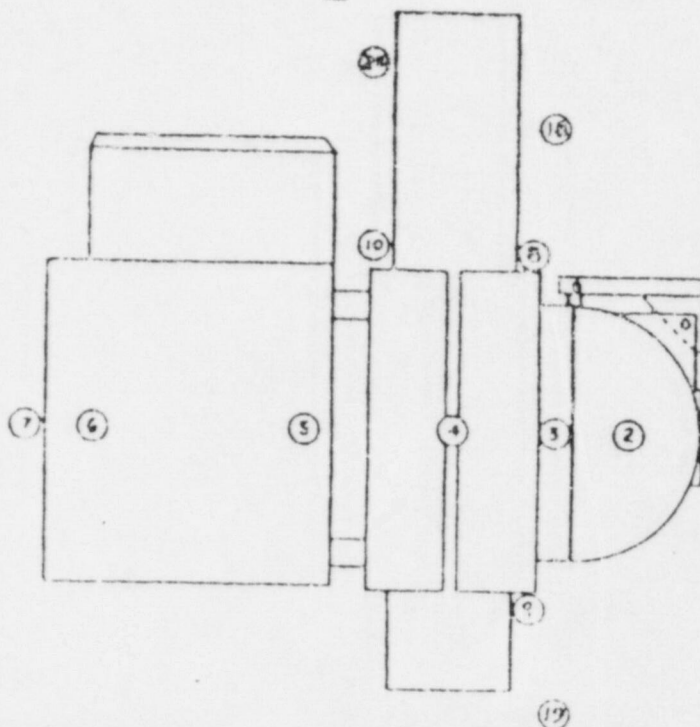
DISTANCE FROM SURFACE(2)
 11

C COMPENSATING CELL
 MATERIAL
 UC

SURFACE MR/HR

DISTANCE TO
5 MR/HR CIRCLE

SURVEY METER
 MFG:
 MODEL:
 SER. NO.



FRONT
 SIDE
 BACK

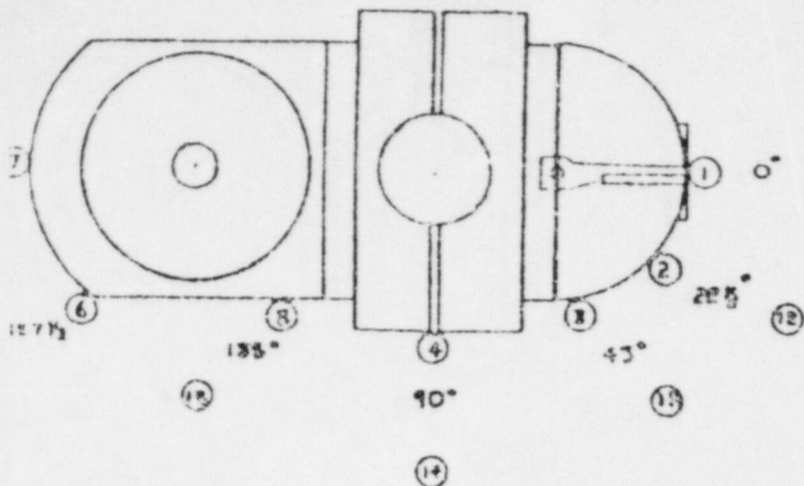
NOTE: (1) ALL READINGS IN MR/HR.
 (2) DISTANCE FROM SURFACE IS IN
 INCHES TO 5 MR/HR POINT IN
 THE DIRECTION INDICATED.

REV. 10-17-61 C.F.M.

THE OHMART CORPORATION CINCINNATI, OHIO	
RADIATION FIELD SURVEY	
WORK: PG / PGV	INVEST: B. D.
DRAWN BY	ENGINEER
DATE	SCALE
DATE	DATE

FORM B-2013

BRANDENBURG



SOURCE MTR CS-132 MC 200

SOURCE HOLDER TYPE _____

PIPE SIZE _____ SCH. OR WALL THICKNESS _____

INSULATION _____

11 A SOURCE HOLDER OPEN - PIPE: FULL ☐ EMPTY ☐

SURVEY METER CONTACT(1) DISTANCE FROM SURFACE(2)

1 _____
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____
9 _____
10 _____

Prep for shipment

11 _____
12 _____
13 _____
14 _____
15 _____
16 _____
17 _____
18 _____
19 _____
20 _____

MODEL
S

B SOURCE HOLDER CLOSED
SURVEY METER CONTACT(1)

1 1.1
2 1.2

DISTANCE FROM SURFACE(2)

11 _____

C COMPENSATING CELL
MATERIAL _____

UC _____

SURFACE MR/HR _____

DISTANCE TO
5 MR/HR CIRCLE

FRONT _____
SIDE _____
BACK _____

SURVEY METER
MFG: _____
MODEL: _____
SER. NO. _____

NOTE: (1) ALL READINGS IN MR/HR.

(2) DISTANCE FROM SURFACE IS IN
INCHES TO 5 MR/HR POINT IN
THE DIRECTION INDICATED.

REV. 10-17-61 C F M

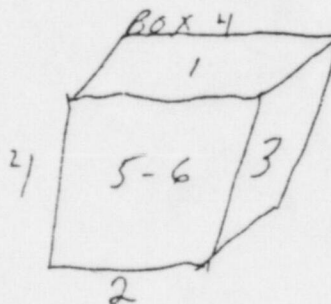
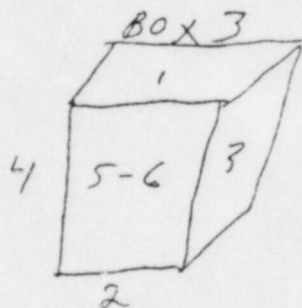
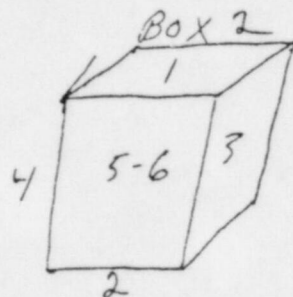
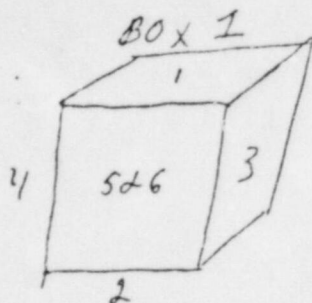
THE OHMART CORPORATION CINCINNATI, OHIO	
RADIATION FIELD SURVEY	
MODEL PG / PGV	OHMART S. S.
DESIGNED BY	ENGINEER
DRAWN BY	
P. E. NO.	SCALE
DATE	TIME

FORM B-2013

BRANDENBURG

CONTROL NO. 81360

RADIATION SURVEY OF SHIPPING CREATES



Readings in MR/HR at 3'

BOX 1	BOX 2	BOX 3	BOX 4
1 .1	1 .1	1 .1	1 .1
2 .1	2 .1	2 .1	2 .1
3 .1	3 .1	3 .1	3 .1
4 .1	4 .1	4 .1	4 .1
5 .1	5 .1	5 .1	5 .1
6 .1	6 .1	6 .1	6 .1

OHMAAT CORP
S. BRANDENBURG

NUCLEAR
RESEARCH
CORPORATION

125 Titus Avenue
Warrington, Pa. 18976
Phone: 215-343-5900

August 18, 1982

Corn Products
A Unit of CPC North America
1001 Bedford Avenue
North Kansas City, MO 64116

Attention: Elsie Iden, Buyer

SUBJECT: RECEIPT OF RADIATION SOURCES
CPC P.O. KC-85166
NRC JOB NO. 60321

Dear Ms. Iden:

This is to acknowledge that Nuclear Research Corporation has received the following sources from CPC, Inc., North Kansas City, Missouri, under U.S. NRC License Nos. 37-02401-01/37-02401-04G.

<u>SOURCE S/N</u>	<u>MODEL</u>	<u>ISOTOPE</u>	<u>ACTIVITY</u>	<u>DATE RECEIVED</u>
CS9078	SH301 S6	Cs-137	50 mCi	8/12/82
CS9079	SH301 S6	Cs-137	50 mCi	8/12/82
CS9080	SH301 S6	Cs-137	50 mCi	8/12/82
CS9084	SH301 S6	Cs-137	50 mCi	8/12/82
CS9085	SH301 S6	Cs-137	50 mCi	8/12/82
CS11025	SH302 S6	Cs-137	200 mCi	8/12/82

Should you need any further information, please do not hesitate to get in touch with us.

Sincerely,

NUCLEAR RESEARCH CORPORATION

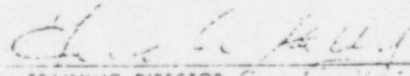
T. W. Schwager

T. W. Schwager
Ass't. Radiation Safety Officer
mg

Certificate of Proficiency

This is to Certify that FLOYD G. DEVER
has satisfactorily completed the Ohmart Training
Course in the U.S. AEC Rules & Regulations,
Radiation Safety and the safe handling of
Radioactive materials as used in
Ohmart nuclear gauges.

Date 5/16/75


TRAINING DIRECTOR G. A. Kelly

THE OHMART CORP.
CINCINNATI, OHIO 45205

CONTROL NO. 81360

Certificate of Proficiency

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Course in the U.S. AEC Rules & Regulations,
Radiation Safety and the safe handling of
Radioactive materials as used in
Ohmart nuclear gauges.

Date 5/16/75


TRAINING DIRECTOR G. A. Kelly

THE OHMART CORP.
CINCINNATI, OHIO 45205