



# JONES & LAUGHLIN STEEL CORPORATION

3 GATEWAY CENTER

PITTSBURGH, PA. 15230

June 28, 1967

Director  
Division of Materials Licensing  
U. S. Atomic Energy Commission  
Washington, D. C. 20545

Dear Sir:

Enclosed is our application of renewal of our current license No. 37-2567-2(F67) dated June 17, 1965, including amendment 1 dated February 15, 1966.

Since the 2.0 curies of Cesium 137 no longer has application in our present gauging system, this radioactive source has been returned to Nuclear-Chicago Corporation on June 27, 1967.

Therefore, all statements, representations, and procedures contained in the previous license applications dated May 21, 1965 and June 19, 1966 are hereby referred to for further details, with the deletions of all references to the one sealed source, 2.0 Curies of Cesium 137.

If further information is desired, please address reply to:

Gerald L. Owens, General Foreman  
Blast Furnace Department  
Jones & Laughlin Steel Corporation  
Aliquippa Works Div.  
Aliquippa, Pa. 375-5551  
TELEPHONE: 412-~~761-8000~~, extension 4706

Very truly yours,

T. B. Duckworth, Superintendent  
Blast Furnace Department



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MATERIAL LICENSE

Supplementary Sheet

License Number 37-02567-02  
(F67)

Amendment No. 1

Jones & Laughlin Steel Corporation  
Aliquippa Works Division  
Aliquippa, Pennsylvania 15001

In accordance with application dated January 19, 1966, License No. 37-02567-02 is hereby amended as follows:

To Add:

<p>6. Byproduct material (element and mass number)</p> <p>B. Americium 241</p>	<p>7. Chemical and/or physical form</p> <p>B. Sealed source (Monsanto Model MS22-NC)</p>	<p>8. Maximum amount of radioactivity which licensee may possess at any one time</p> <p>B. 2 curies.</p>
<p>9. Authorized use</p> <p>B. To be used in a Nuclear-Chicago Model 507 moisture gauge to measure moisture content of coke.</p>		

Conditions 15 and 16 are amended to read:

15. Initial installation and survey, source replacement, and maintenance and repair of source holders containing byproduct material shall be performed only by Nuclear-Chicago Corporation or 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 byproduct material described in Items 6, 7, and 8 of this license in accordance with statements, representations and procedures contained in applications dated May 21, 1965, and January 19, 1966.

For the U. S. Atomic Energy Commission  
Cecil R. Buchanan

Isotopes Branch  
by Division of Materials Licensing  
DIVISION OF LICENSING AND REGULATION  
Washington 25, D. C.

Date WE 12

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**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.

<b>Licensee</b>		
1. Name	Jones & Laughlin Steel Corporation Aliquippa Works Division	3. License number 37-2567-2 (F67)
2. Address	Aliquippa, Pennsylvania  15001	4. Expiration date June 30, 1967
		5. Reference No.
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
A. Cesium 137	A. Sealed source (Nuclear- Chicago 850233 or U. S. Nuclear Type 378)	A. One source not to exceed 2 curies

**9. Authorized use**

A. To be used in Nuclear-Chicago Corporation Model 506 Density Gauge to measure bulk density of coke.

**CONDITIONS**

10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
11. The licensee shall comply with the provisions of Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standards for Protection Against Radiation."
12. Byproduct material shall be used by, or under the supervision of, Gerald L. Owens or G. G. Aromatorio.
13. Sealed sources containing byproduct material shall not be opened or removed from their respective source holders by the licensee.
14. A. Each sealed source containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed source shall be put into use until tested.

(See page 2)

UNITED STATES ATOMIC ENERGY COMMISSION  
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

114122  
Form approved.  
Budget Bureau No. 38-R027

**INSTRUCTIONS.**—Complete Items 1 through 16 if this is an initial application or an application for renewal of a license. Information contained in previous applications filed with the Commission with respect to Items 8 through 15 may be incorporated by reference provided references are clear and specific. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail two copies to: U.S. Atomic Energy Commission, Washington, D.C., 20545, Attention: Isotopes Branch, Division of Materials Licensing. 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.

1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc. Include ZIP Code.)

Jones & Laughlin Steel Corporation  
Aliquippa Works Div.  
Aliquippa, Pa. 15001

(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a). Include ZIP Code.)

Not applicable

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Blast Furnace Department

3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)

Renewal - 37-2567-2

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.)

Gerald L. Owens, General Foreman  
Blast Furnace Dept.  
G. G. Aromatorio, Asst. Supt.  
Blast Furnace Dept.

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.)

Gerald L. Owens, Gen. Foreman  
Blast Furnace Dept.

6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)

Americium 241

(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.)

1 - sealed source 2.0 curies

0.407 grams Americium 241, stainless steel encapsulated as one 2.0 curie.  
AM-BE neutron source.  
(Monsanto Model NS22-NC)

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.)

To be used in Nuclear-Chicago Corporation Qualicon 5072 Bulk Moisture Gage to measure moisture content of coke by reflection.

To be specifically contained within Nuclear-Chicago Model 507 housing.

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## TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM

(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	(As provided by Nuclear-Chicago Corpo. personnel at time of installation)	2-3 days	(Yes) No	Yes (No)
b. Radioactivity measurement standardization and monitoring techniques and instruments		"	(Yes) No	Yes (No)
c. Mathematics and calculations basic to the use and measurement of radioactivity		"	(Yes) No	Yes (No)
d. Biological effects of radiation		"	(Yes) No	Yes (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
Cs <sup>137</sup>	2.0 curies	Jones & Laughlin Steel Corp.	Approx. 1-1/2 yrs.	Moisture Gage
AM <sup>241</sup>	2.0 curies	" " "	" "	" "

## 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 <sup>2</sup> )	USE (Monitoring; surveying; measuring)
None required					

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

None required

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

None required

## INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS IN DUPLICATE

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 See prev. application dated 5-21-65 and 1-19-66

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. See prev. application dated 5-21-65 and 1-19-66

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. See prev. application dated 5-21-65 and 1-19-66

## CERTIFICATE (This item must be completed by applicant) and 1-19-66

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.

JONES &amp; LAUGHLIN STEEL CORP.

Applicant named in item 1

Date June 28, 1967

By:

T. B. Duckworth

Supt. of Blast Furnace Dept.

Title of certifying official

Aliquippa, Pa.

85452

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.