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NRC Form 313 I (12-81) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION	
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i>	
<i>See attached instructions for details.</i> <i>Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.</i>		☒ a. NEW LICENSE	
		☐ b. AMENDMENT TO: LICENSE NUMBER	
		☒ c. RENEWAL OF: LICENSE NUMBER X 37-01258-04	
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> Jones & Laughlin Steel Corporation Pittsburgh Works TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (412) 227-5640		3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION A. A. Mammarelli, Jr. TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (412) 227-5940	
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i> 2709 East Carson Street, Pittsburgh, PA 15203 Attn: J. A. Friedrich		5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> 2709 East Carson Street Pittsburgh, PA 15203	
(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)			
6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL <i>(See Items 16 and 17 for required training and experience of each individual named below)</i>			
FULL NAME		TITLE	
a. D. E. Griener		Unit Manager-By Product Department	
b. J. S. Cogis		Maintenance Engineer-Electrical	
c. W. B. Quinn		Operations Supervisor-Maintenance	
7. RADIATION PROTECTION OFFICER F. A. Palmieri, Operations Supv.-Maint.		Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.	
8. LICENSED MATERIAL			
L I N E NO.	E L E M E N T A M A S S N U M B E R	C H E M I C A L A N D / O R P H Y S I C A L F O R M	N A M E O F M A N U F A C T U R E R A N D M O D E L N U M B E R <i>(If Sealed Source)</i>
	A	B	D
(1)	Cesium 137	Sealed Source	Texas Nuclear Mod. 570-57157C No single source to exceed 1000 millicuries
(2)			
(3)			
(4)			
DESCRIBE USE OF LICENSED MATERIAL E			
(1)	To determine density of coal on conveyor belt.		
(2)			
(3)			
(4)			

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9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	source holder	Texas Nuclear	5176
(2)			
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT A.	MANUFACTURER'S NAME B.	MODEL NUMBER C.	NUMBER AVAILABLE D.	RADIATION DETECTED (alpha, beta, gamma, neutron) E.	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F.
(1)	G-M	Victoreen	493 w/ 493-50 probe	1	Alpha, Beta, Gamma	0 - 0.5 0 - 50
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☒ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

Victoreen Instrument Company or
Applied Health Physics, Bethel Park, PA
Annually

☐ b. CALIBRATED BY APPLICANT

Attach a separate sheet describing method, frequency and standards
used for calibrating instruments.

12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A.	SUPPLIER (Service Company) B.	EXCHANGE FREQUENCY C.
☐ (1) FILM BADGE ☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD) ☐ (3) OTHER (Specify): _____ _____ _____	None Required (see attached)	☐ MONTHLY ☐ QUARTERLY ☐ OTHER (Specify): _____ _____ _____

13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

- ☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

See Attached

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

See Attached

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (if needed), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.

16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
 - a. Principles and practices of radiation protection.
 - b. Radioactivity measurement standardization and monitoring techniques and instruments.
 - c. Mathematics and calculations basic to the use and measurement of radioactivity.
 - d. Biological effects of radiation.

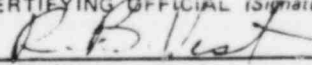
17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, 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.

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.

a. LICENSE FEE REQUIRED <i>(See Section 170.31, 10 CFR 170)</i> \$110.00	b. CERTIFYING OFFICIAL (Signature)  c. NAME (Type or print) R. B. Vest
(1) LICENSE FEE CATEGORY: 3L	d. TITLE General Manager-Coke & By Products
(2) LICENSE FEE ENCLOSED: \$110.00	e. DATE 2/2/84

Attached Sheet - Form NRC 313I (12-81)

Jones & Laughlin Steel Corporation
Pittsburgh Works
2709 East Carson Street
Pittsburgh, PA 15203

Item 12 - Personnel Monitoring Devices

No additional personnel monitoring devices are required due to the presence of this nuclear device. The source holder is designed so that it is unlikely that any person, during normal usage, can receive an exposure in excess of 0.125 Rem per year. The radiation levels at one foot from the nearest accessible surface are less than 5 millirem per hour.

Because of open-beam geometry, the nuclear device and detector are totally surrounded by an expanded, locked metal cage (see enclosed sketch). Radiation levels outside of the metal cage are, at all points, less than 0.2 mr/hr with the exception of a point directly behind the detector. Personnel access at that point is extremely remote and not possible during normal operations.

No persons are normally within three feet of the nuclear device during normal operations.

Item 13 - Facilities and Equipment

Enclosed is a sketch which describes the specific installation of the Texas Nuclear model 5176 nuclear device and detector in accord with manufacturer's recommendations.

Item 14 - Waste Disposal

In the event that the nuclear device is damaged or its use discontinued, the device containing the radioactive material will be returned to the manufacturer or other persons specifically licensed by the Commission or Agreement State to receive the kind and quantity of radioactive material.

Item 15 - Radiation Protection Program

A. Shipment and Receipt

The nuclear device will be shipped from the manufacturer with the shutter mechanism in the locked "closed" position and will remain locked in that

Attached Sheet - Form NRC 313I (12-81)

position at all times until the device is properly installed in its fixed location.

B. Installation

Installation of the nuclear device shall be performed by authorized J&L Steel Corporation personnel under the supervision of authorized Texas Nuclear personnel in accordance with Texas Nuclear installation procedures.

Authorized Texas Nuclear personnel will be in attendance at the time of uncrating, installation, and start up on the system.

Initial radiation surveys and leak testing will be performed by Texas Nuclear authorized personnel at the time of installation.

C. Operating Procedures

Operation of the nuclear device will be in accord with the manufacturer's recommendations contained in the instruction manuals supplied.

D. Access Into The Expanded Metal Cage Enclosure

Personnel access into the expanded metal cage surrounding the nuclear device and detector will be controlled at all times by hasp and lock devices located on the connecting panels of the cage (see enclosed sketch).

Entry into the inside of the cage will be restricted to only authorized personnel for necessary inspections, calibration, and/or maintenance of equipment.

When entry inside the cage is required, a brief radiation survey will be performed by the Radiation Safety Officer or his authorized representative in order to assure that the radiation levels are normal as previously determined. The one panel adjacent to the nuclear device will be unlocked and removed and the shutter mechanism will be placed in the "closed" position in the presence of the Radiation Safety Officer or his authorized representative. The Radiation Safety Officer or his authorized representative will verify that the shutter mechanism is in the "closed" position by conducting a radiation survey before permitting removal of further panels of the cage and before permitting personnel entry into the enclosed area.

The shutter mechanism will remain in the "closed" position until it has been verified by the Radiation Safety Officer or his authorized representative that no personnel remain in the enclosed area. All removable panels of the cage will be replaced and locked except for the panel closest to the nuclear devices. The shutter mechanism will then be placed in the open position by the Radiation Safety Officer or his authorized representative, and the final panel of the cage will be replaced and locked.

Attached Sheet - Form NRC 313I (12-81)

A radiation survey will again be conducted by the Radiation Safety Officer or his authorized representative to assure that the radiation levels outside the expanded metal cage enclosure remain the same as previously determined.

The keys to all the locks on the cage and the nuclear device on-off mechanism will be under the direct control of the Radiation Safety Officer at all times.

E. Maintenance And Repair

Radioactive source replacement and maintenance and repair of the nuclear device will only be performed by Texas Nuclear or other persons specifically authorized by the Commission or an Agreement State to perform such services.

Servicing, maintenance, and repair of equipment other than the nuclear device used as part of the installation will be conducted by Jones & Laughlin Steel Corporation authorized personnel.

F. Relocation And Reinstallation

As required, removal, relocation, and reinstallation of the nuclear device will be performed by authorized Jones & Laughlin Steel Corporation personnel under the supervision of the Radiation Safety Officer (i.e. at such times as necessary for maintenance or repair of the equipment in that area, etc.) in accord with the following procedures:

1. The Radiation Safety Officer or his authorized representative will first conduct a radiation survey to assure normal radiation levels outside the expanded metal cage enclosure.
2. If the radiation levels are normal, the one panel adjacent to the nuclear device will be unlocked and the on-off mechanism will be placed in the "closed" locked position. The Radiation Safety Officer or his authorized representative will verify that the on-off mechanism is in the "closed" locked position by conducting a brief radiation survey.
3. Other locked panels of the cage may then be removed, as required, and the nuclear device removed from its fixed position.
4. The nuclear device with legible caution labels will be removed to a locked, secure storage area, if necessary, until deemed necessary to reinstall it to its fixed location.

The on-off mechanism will remain in the "closed" locked position at all times until it is returned to its fixed location.

Attachment Sheet - Form NRC 313I (12-81)

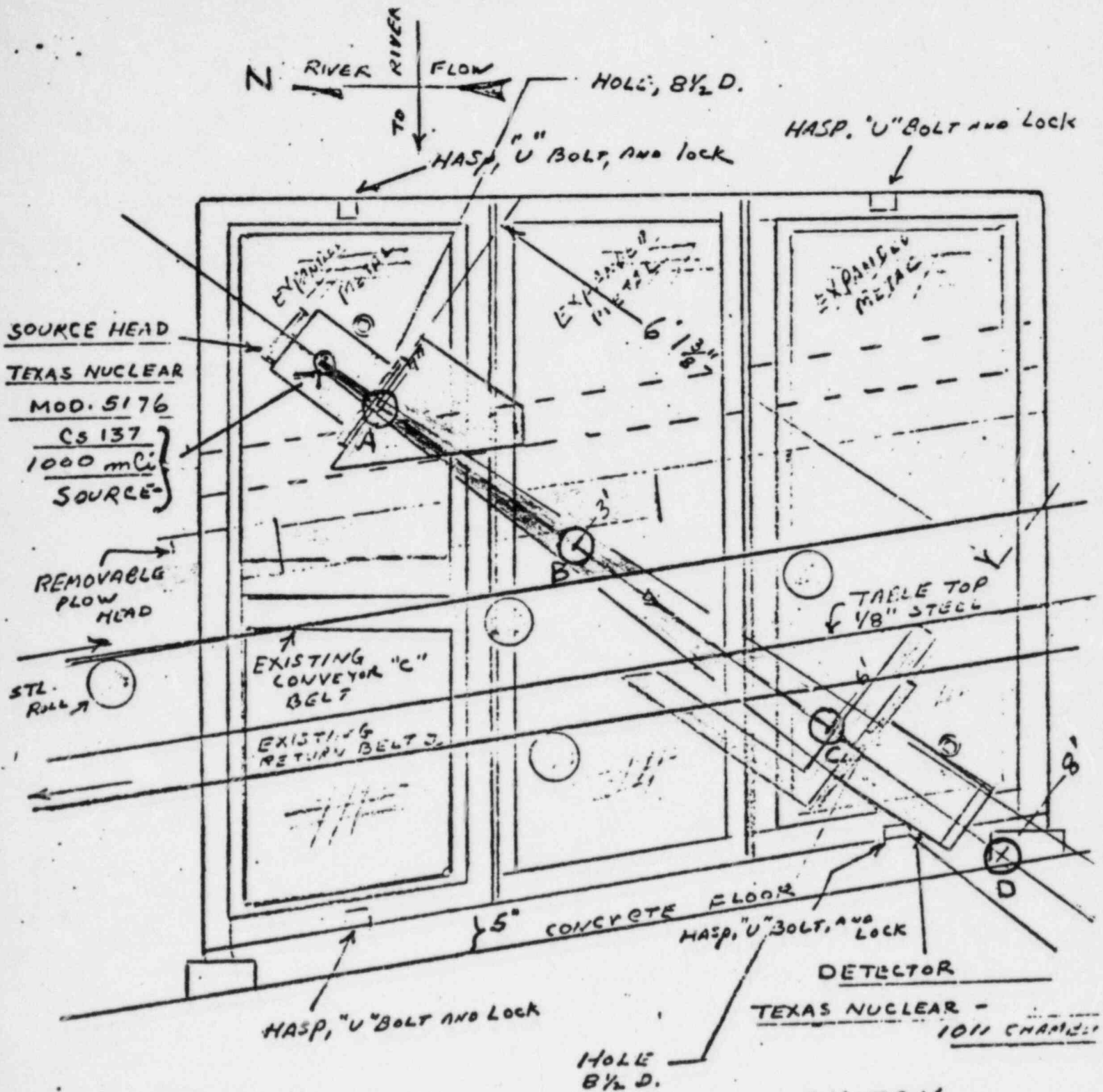
5. After reinstallation of the nuclear device, all panels of the cage except the one nearest to the nuclear device will be replaced and locked.
6. The on-off mechanism will be unlocked and placed in the open position.
7. The remaining panel of the cage will be replaced and locked.
8. A radiation survey again will be performed by the Radiation Safety Officer or his authorized representative to assure that the radiation levels outside the cage are the same as previously determined prior to removal of the nuclear device.

G. Leak Test Procedure

The nuclear device (source holder) will be tested for source integrity at least once every three years by authorized Texas Nuclear personnel or authorized Jones & Laughlin Steel Corporation personnel using Texas Nuclear Corporation mailable leak test kit, QT/1K.

H. Emergency Procedures

In the event of an emergency involving the sealed source or nuclear device, such as physical damage, fire, etc., the on-off mechanism will be placed in the "closed" locked position. The Director of the appropriate NRC Compliance Office will be notified together with the corporate Safety and Environmental Health personnel in order to provide health physics assistance, as necessary. Texas Nuclear will also be notified to provide any additional assistance as deemed necessary.



NOTE:

CALCULATED
 PRIMARY BEAM DIAMETER
 PT. A - - - - 0.5"
 PT. B - - - - 3.7"
 PT. C - - - - 7.0"
 PT. D - - - - 9.0"

SKETCH

JTL STEEL CORP.
 PITTSBURGH WORKS
 BY PRODUCT PLANT
 COAL HANDLING
 42" BELT CONV. "C"
 BULK DENSITY CONTROL

INSTRUCTIONS

1. DEPARTMENT Administrative Division of Plant or Facility under which personnel received supervision regarding use of ionizing radiation source.
2. IONIZING RADIATION Any device or material capable of producing ionizing radiation.
3. TRAINING:
 - A. TYPE OF TRAINING As categorized in the 5 listed groups.
 - B. WHERE TRAINED Organization under which training was received (i.e. university, civil defense, research laboratories, industrial plant, etc.)
 - C. DURATION OF
 - (1) On Job — training received while working with ionizing radiation source(s) under supervision of experienced personnel.

Time — time spent in On Job training, days, weeks, months (i.e. 6 mos. - July 1954 - Dec. 1954).
 - (2) Formal — organized training session or course provided by, or under, supervision of a qualified person(s).
Course

Time — same as above.
4. EXPERIENCE
 - A. EXPERIENCE To include actual working with ionizing radiation sources (as defined above), other than training period(s).
 - B. TYPE OF IONIZING RADIATION To include ALL types of ionizing radiation source(s) as defined above.
 - C. SIZE OR RATING MAX. QUANTITY In terms of max. KVP and MA in the case of radiation producing equipment.
In terms of amounts of radioactive materials (i.e.) millicuries of radioactive isotopes or pounds of natural radioactive materials.
 - D. WHERE EXPERIENCE GAINED Administrative organization under which individual received experience.
 - E. DURATION OF Total time of ACTUAL work with ionizing radiation source, exclusive of training.
 - F. USE OF Actual purpose or use of ionizing radiation source during time experience was gained.

JONES & LAUGHLIN STEEL CORPORATION

Plant Pittsburgh Works

Address 2709 East Carson Street, Pittsburgh, PA 15203



(See Reverse Side for Instructions)

TRAINING AND EXPERIENCE WITH IONIZING RADIATION OF PERSONNEL OF _____

By Product Coke Department
(Department)

Name John N. Cogis

Maintenance Engineer-
Job Title Electrical

Soc. Sec. No. _____

Date 1-27-64

IONIZING RADIATION TRAINING

TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING			
		ON JOB	TIME	FORMAL COURSE	TIME
1. Principles and Practices of Radiation Protection.	None				
2. Radioactivity (Radiation) measurements, standardization, and monitoring techniques and instrumentation.					
3. Mathematics and calculations basic to use and measurement of radioactivity (radiation).					
4. Biological effects of radiation.					
5. In actual use of ionizing radiation Describe source: _____					

IONIZING RADIATION EXPERIENCE

TYPE OF IONIZING RADIATION	SIZE OR RATING OR MAX. QUANTITY	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	USE OF IONIZING RADIATION SOURCE
None				

INSTRUCTIONS

1. DEPARTMENT Administrative Division of Plant or Facility under which personnel received supervision regarding use of ionizing radiation source.
2. IONIZING RADIATION Any device or material capable of producing ionizing radiation.
3. TRAINING:
 - A. TYPE OF TRAINING As categorized in the 5 listed groups.
 - B. WHERE TRAINED Organization under which training was received (i.e. university, civil defense, research laboratories, industrial plant, etc.)
 - C. DURATION OF
 - (1) On Job — training received while working with ionizing radiation source(s) under supervision of experienced personnel.

Time — time spent in On Job training, days, weeks, months (i.e. 6 mos. - July 1954 - Dec. 1954).
 - (2) Formal — organized training session or course provided by, or under, supervision of a qualified person(s).
Course

Time — same as above.
4. EXPERIENCE
 - A. EXPERIENCE To include actual working with ionizing radiation sources (as defined above), other than training period(s).
 - B. TYPE OF IONIZING RADIATION To include ALL types of ionizing radiation source(s) as defined above.
 - C. SIZE OR RATING MAX. QUANTITY In terms of max. KVP and MA in the case of radiation producing equipment.
In terms of amounts of radioactive materials (i.e.) millicuries of radioactive isotopes or pounds of natural radioactive materials.
 - D. WHERE EXPERIENCE GAINED Administrative organization under which individual received experience.
 - E. DURATION OF Total time of ACTUAL work with ionizing radiation source, exclusive of training.
 - F. USE OF Actual purpose or use of ionizing radiation source during time experience was gained.

JONES & LAUGHLIN STEEL CORPORATION

Plant Pittsburgh WorksAddress 2709 East Carson Street, Pittsburgh, PA 15203(See Reverse Side for
Instructions)

EDUCATION AND EXPERIENCE WITH IONIZING RADIATION OF PERSONNEL OF _____

By Product Coke Department
(Department)Name B. F. GrierJob Title Unit Manager

Soc. Sec. No. _____

Date 1-27-

IONIZING RADIATION TRAINING

TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING		
		ON JOB	TIME	FORMAL COURSE
1. Principles and Practices of Radiation Protection.	None			
radioactivity (Radiation) measurements, standardization, and monitoring techniques and instrumentation.				
2. Mathematics and calculations basic to use and measurement of radioactivity (radiation).				
3. Biological effects of radiation.				
4. Actual use of ionizing radiation Describe sources: _____				

IONIZING RADIATION EXPERIENCE

TYPE OF IONIZING RADIATION	SIZE OR RATING OR MAX. QUANTITY	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	USE OF IONIZING RADIATION SOURCE
NONE				

INSTRUCTIONS

1. DEPARTMENT Administrative Division of Plant or Facility under which personnel received supervision regarding use of ionizing radiation source.
2. IONIZING RADIATION Any device or material capable of producing ionizing radiation.
3. TRAINING:
 - A. TYPE OF TRAINING As categorized in the 5 listed groups.
 - B. WHERE TRAINED Organization under which training was received (i.e. university, civil defense, research laboratories, industrial plant, etc.)
 - C. DURATION OF
 - (1) On Job — training received while working with ionizing radiation source(s) under supervision of experienced personnel.

Time — time spent in On Job training, days, weeks, months (i.e. 6 mos. - July 1954 - Dec. 1954).
 - (2) Formal — organized training session or course provided by, or under, supervision of a qualified person(s).
Course

Time — same as above.
4. EXPERIENCE
 - A. EXPERIENCE To include actual working with ionizing radiation sources (as defined above), other than training period(s).
 - B. TYPE OF IONIZING RADIATION To include ALL types of ionizing radiation source(s) as defined above.
 - C. SIZE OR RATING MAX. QUANTITY In terms of max. KVP and MA in the case of radiation producing equipment.
In terms of amounts of radioactive materials (i.e.) millicuries of radioactive isotopes or pounds of natural radioactive materials.
 - D. WHERE EXPERIENCE GAINED Administrative organization under which individual received experience.
 - E. DURATION OF Total time of ACTUAL work with ionizing radiation source, exclusive of training.
 - F. USE OF Actual purpose or use of ionizing radiation source during time experience was gained.



JONES & LARGILLER STEEL CORPORATION

Plant Pittsburgh Works

Address 2709 East Carson Street, Pittsburgh, PA 15203

(See Reverse Side For Instructions)

EDUCATION AND EXPERIENCE WITH IONIZING RADIATION OF PERSONNEL OF

Operations Supervisor-

Name William B. Quinn

Job Title Maintenance

Soc. Sec. No.

By Product Code Department
(Department)

Date 4-27-

IONIZING RADIATION TRAINING

TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING			Total
		ON JOB	TIME	FORMAL COURSE	
1. Principles and Practices of Radiation Protection.	Continuing education - PA State University - "Short Course on Industrial Radiation and Radioisotope Handling", Pittsburgh, PA			Yes	24 hrs. (2-17-70) (9-30-70) (10-7-70)
2. Radioactivity (Radiation) measurements, standardization, and monitoring techniques and instrumentation.				"	
3. Mathematics and calculations basic to use and measurement of radioactivity (radiation).				"	
4. Biological effects of radiation.				"	
5. In actual use of ionizing radiation. Describe source: Co 60, 5 mCi				"	

IONIZING RADIATION EXPERIENCE

TYPE OF IONIZING RADIATION	SIZE OR RATING OR MAX. QUANTITY	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	USE OF IONIZING RADIATION SOURCE
Co-60 147	1000 mCi	JSL Steel, Pittsburgh Works	4-77 to present	Coal density gauge, IR Mod. 517-

INSTRUCTIONS

1. DEPARTMENT Administrative Division of Plant or Facility under which personnel received supervision regarding use of ionizing radiation source.

2. IONIZING RADIATION Any device or material capable of producing ionizing radiation.

3. TRAINING:
 - A. TYPE OF TRAINING As categorized in the 5 listed groups.

 - B. WHERE TRAINED Organization under which training was received (i.e. university, civil defense, research laboratories, industrial plant, etc.)

 - C. DURATION OF
 - (1) On Job — training received while working with ionizing radiation source(s) under supervision of experienced personnel.

Time — time spent in On Job training, days, weeks, months (i.e. 6 mos. - July 1954 - Dec. 1954).
 - (2) Formal — organized training session or course provided by, or under, supervision of a qualified person(s).
Course

Time — same as above.

4. EXPERIENCE
 - A. EXPERIENCE To include actual working with ionizing radiation sources (as defined above), other than training period(s).

 - B. TYPE OF IONIZING RADIATION To include ALL types of ionizing radiation source(s) as defined above.

 - C. SIZE OR RATING MAX. QUANTITY In terms of max. KVP and MA in the case of radiation producing equipment.
In terms of amounts of radioactive materials (i.e.) millicuries of radioactive isotopes or pounds of natural radioactive materials.

 - D. WHERE EXPERIENCE GAINED Administrative organization under which individual received experience.

 - E. DURATION OF Total time of ACTUAL work with ionizing radiation source, exclusive of training.

 - F. USE OF Actual purpose or use of ionizing radiation source during time experience was gained.

Plant Pittsburgh Works

Address 2709 East Carson Street, Pittsburgh, PA 15203

(See Reverse Side for Instructions)

TRAINING AND EXPERIENCE WITH IONIZING RADIATION OF PERSONNEL OF _____ By Product Coke Department (Department)

Operations Supervisor-

Name Frank A. Palmieri

Job Title Maintenance

Soc. Sec. No.

Date 1-25-79

IONIZING RADIATION TRAINING

TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING		FORMAL COURSE	
		ON JOB	TIME		
1. Principles and Practices of Radiation Protection.	Continuing Education - IA State Univ. - "Short Course on Industrial Radiation and Radioisotope Handling", Pittsburgh, PA			Yes	Yes. (1-1-79) (1-2-79) (1-3-79) (1-4-79)
2. Radioactivity (Radiation) measurements, standardization, and monitoring techniques and instrumentation.	"			"	
3. Mathematics and calculations basic to use and measurement of radioactivity (radiation).	"			"	
4. Biological effects of radiation.	"			"	
5. In actual use of ionizing radiation Describe source: CO 60 - 5 mCi	"			"	

IONIZING RADIATION EXPERIENCE

TYPE OF IONIZING RADIATION	SIZE OR RATING OR MAX. QUANTITY	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	USE OF IONIZING RADIATION SOURCE
Cesium 137	1000 mCi	J&L Steel Corp., Pittsburgh Works	4-79 to present	Coal density gauge, TG Mod. 517