Form AEC-313 (2-73) 10 CFR 30

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved Budget Bureau No. 38-R0027

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: Materials Branch, Directorate of 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, and the license fee provisions of Title 10, Code of Federal Regulations, Part 170. The license fee category should be stated in Item 16 and the appropriate fee enclosed. (See Note in Instruction Sheet).

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

United States Steel Corporation
600 Grant Street
Pittsburgh, Pennsylvania 15230

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

United States Steel Corporation
Homestead Works
Homestead, PA 15120

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Carrie Blast Furnace Division
Homestead Works

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

Amendment to existing
license 37-02375-10

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.)*

J. W. St. Vincent - Division Supt.
G. S. Chalmers - Gen. Foreman
Maintenance -
Blast Furnace

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.)*

J. N. Zafris
Plant Engineer

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

CS-137

AM-241-Be

(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.)*

Sealed Sources
2 x 100 millicuries, Texas Nuclear Model 570-57157C.

2 x 200 millicuries, Texas Nuclear Model 570-579103.

Texas Nuclear Source Holder Model No.
CS-137 - Model No. 5176
AM-241-Be - Model No. 5010

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.)*

The source heads are manufactured by Texas Nuclear of Austin, Texas. Information describing this equipment has been supplied by Texas Nuclear to the N.R.C. for a specific license. The source heads will be used in density and moisture measuring systems.

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(Continued on reverse side)

(1)

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	U. S. Steel - Homestead Works	2 days	Yes (No)	(Yes) No
b. Radioactivity measurement standardization and monitoring techniques and instruments	U. S. Steel - Homestead Works	2 days	Yes (No)	(Yes) No
c. Mathematics and calculations basic to the use and measurement of radioactivity	U. S. Steel - Homestead Works	2 days	Yes (No)	(Yes) No
d. Biological effects of radiation	U. S. Steel - Homestead Works	2 days	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
		None		

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)
Victoreen Model 440 Low Energy Survey Meter	One	Alpha Beta Gamma X-Ray	5 RANGES 01-10 MR/HR MINIMUM 0-300 MR/HR MAX.	IMG/CM^2	Surveying
Victoreen Model 488A Fast & Thermal Neutron Flux Meter	One	Neutron	4 RANGES 0-12 MVTH MIN. 0-12000 MVTH - MAXIMUM	.21MG/MM^2	Surveying

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE. Low energy survey meter is self standardizing. Neutron flux meter will be serviced every 3 months by supplier using a standard signal output plusar E.A. router - Stokes Model RSN-127A counter.

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

Film badge service when required is supplied by the Landauer Company, Glenwood, Illinois.

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 Attached.

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 Attached.

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 Attached.

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.

License Fee Category $ 40.00

Fee Enclosed $ 40.00

Date July 23, 1979

United States Steel Corporation
Applicant named in item 1

By: J. D. Zafuse

Plant Engineer - Homestead Works
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.

☆ U.S. GPO: 1973—543-126/515

UNITED STATES STEEL CORPORATION
HOMESTEAD WORKS

U.S.S. Engineering
July 23, 1979

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Addenda for Model 5010 and 5176 moisture gage Carrie Furnace Division - Homestead Works

ITEM 13

Not Applicable

ITEM 14

A wipe test for source radiation at the time of installation will be conducted by the supplier Texas Nuclear. The radiation protective program is the same as described in License 37-02375-18.

ITEM 15

No waste disposal is involved. In the event the gage is damaged or its use discontinued, it shall be returned to Texas Nuclear for disposal.