

NRC Form 313 I  
(12-81)  
10 CFR 30

## U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE  
INDUSTRIAL

1. APPLICATION FOR:  
(Check and/or complete as appropriate)

X a. NEW LICENSE

b. AMENDMENT TO:  
LICENSE NUMBER

c. RENEWAL OF:  
LICENSE NUMBER

See attached instructions for details.

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.

2. APPLICANT'S NAME (Institution, firm, person, etc.)

Boeing Services International, Inc.

TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION  
(412) 675-6116

3. NAME AND TITLE OF PERSON TO BE CONTACTED  
REGARDING THIS APPLICATION

Joseph L. Salinas

TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION  
(412) 675-4631

4. APPLICANT'S MAILING ADDRESS (Include Zip Code)  
(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)

Boeing Services Int'l, Inc.  
Post Office Box 10838  
Pittsburgh, PA 15236 ATTN: Radiation  
Protection Officer

5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED  
(Include Zip Code)

Bldg. 23  
Pittsburgh Research Center  
Cochrans Mill Road  
Pittsburgh, PA 15236

(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  
(See Items 16 and 17 for required training and experience of each individual named below)

FULL NAME

TITLE

a. Henry J. Owoc

Supervisor - Hydraulic Transport Research Facility

b. Raymond W. Vereneck

Instrumentation Technician

c. Wayne A. Himler

Instrumentation Technician

7. RADIATION PROTECTION OFFICER

Lawrence F. Miller

Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15. Senior  
Electrical Engineer - Hydraulic Transport

## 8. LICENSED MATERIAL

Research Facility

L I N E  NO.	ELEMENT AND MASS NUMBER  A	CHEMICAL AND/OR PHYSICAL FORM  B	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source)  C	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME  D
(1)	Cs-137	sealed source	New England Nuclear NER 570	5 ea. - 500 mCi
(2)	Cf-252	sealed source	Amersham CVN 4,5,6,7	12 ea. - 16.1 mCi max.
(3)	Cs-137	sealed source	Amersham CDC 800	12 ea. - 50 mCi max.
(4)	Cs-137	sealed source	New England Nuclear NER 570	3 ea. - 1000 mCi

DESCRIBE USE OF LICENSED MATERIAL  
E

8510300318 850925  
REG1 LIC30  
37-21292-01 PDR

(1) density gaging device on 6" and 12" coal slurry pipeline

(2) density gaging device on 6", 10", 12", and 18" coal slurry pipelines

(3) density gaging device on 6", 10", 12" and 18" coal slurry pipelines

(4) density gaging device on 18" coal slurry pipeline

### 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 housing	Kay-Ray	7050B
(2)	source housing	Amersham	X.1
(3)	source housing	Amersham	X.8
(4)	source housing	Kay-Ray	7050B

### 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)	portable Sun-ray meter	Nuclear Chicago	2597	1	alpha, beta, gamma, x-ray	0-1000 mR/hr. 0-1000 R/hr.
(2)	count rate meter	Ludlum Measurement	15	1	neutron, beta gamma, alpha	0-500,000 C/min.
(3)	Note: Meter in line no. 1 is currently available for use; a purchase request					
(4)	for the meter in line no. 2 has been issued.					

### 11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☒ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

Applied Health Physics, Inc.  
Bethel Park, PA @ 6 month intervals

☐ b. CALIBRATED BY APPLICANT

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

check before each use with 25mC Carbon 14

### 12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A.	SUPPLIER (Service Company) B.	EXCHANGE FREQUENCY C.
<input checked="" type="checkbox"/> (1) FILM BADGE	A purchase request for a subcontract for monthly exchange of combined beta gamma and neutron has been issued.  Radiation Detection Company of Sunnyvale, California is listed as the suggested source.	<input checked="" type="checkbox"/> MONTHLY
<input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)		<input type="checkbox"/> QUARTERLY
<input type="checkbox"/> (3) OTHER (Specify): _____		<input type="checkbox"/> 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. See Attachment A & B
- ☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
- ☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
- ☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

### 14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED N/A- Sources will be returned to manufacturer by source owners (U.S. Bureau of Mines).

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.

-N/A-

# 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. See Attachment C.
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. See Attachment D.
  - 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. See Attachment E.

## 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  
*(See Section 170.31, 10 CFR 170)*

\$110.00

b. CERTIFYING OFFICIAL *(Signature)*

*R.J. Byrd*

c. NAME *(Type or print)*

R.J. Byrd

(1) LICENSE FEE CATEGORY: I

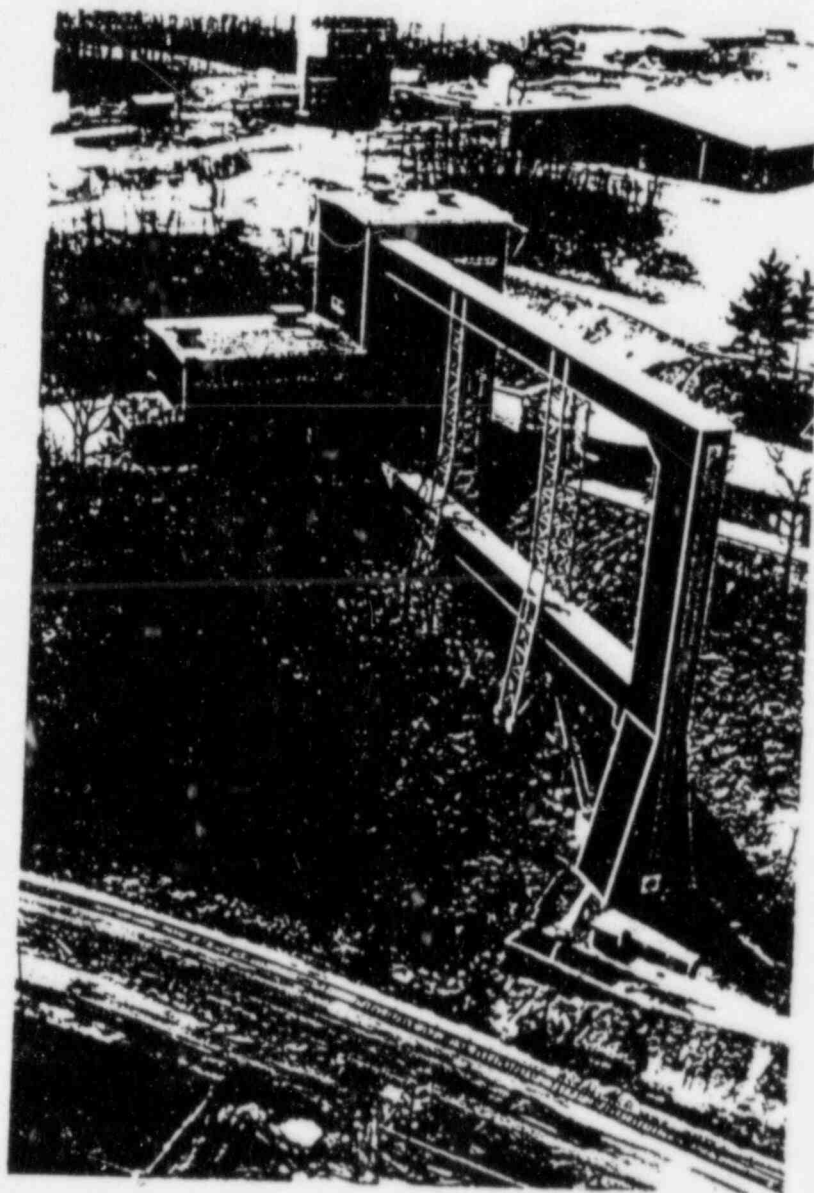
d. TITLE

Project Engineering Manager

(2) LICENSE FEE ENCLOSED: \$110.00

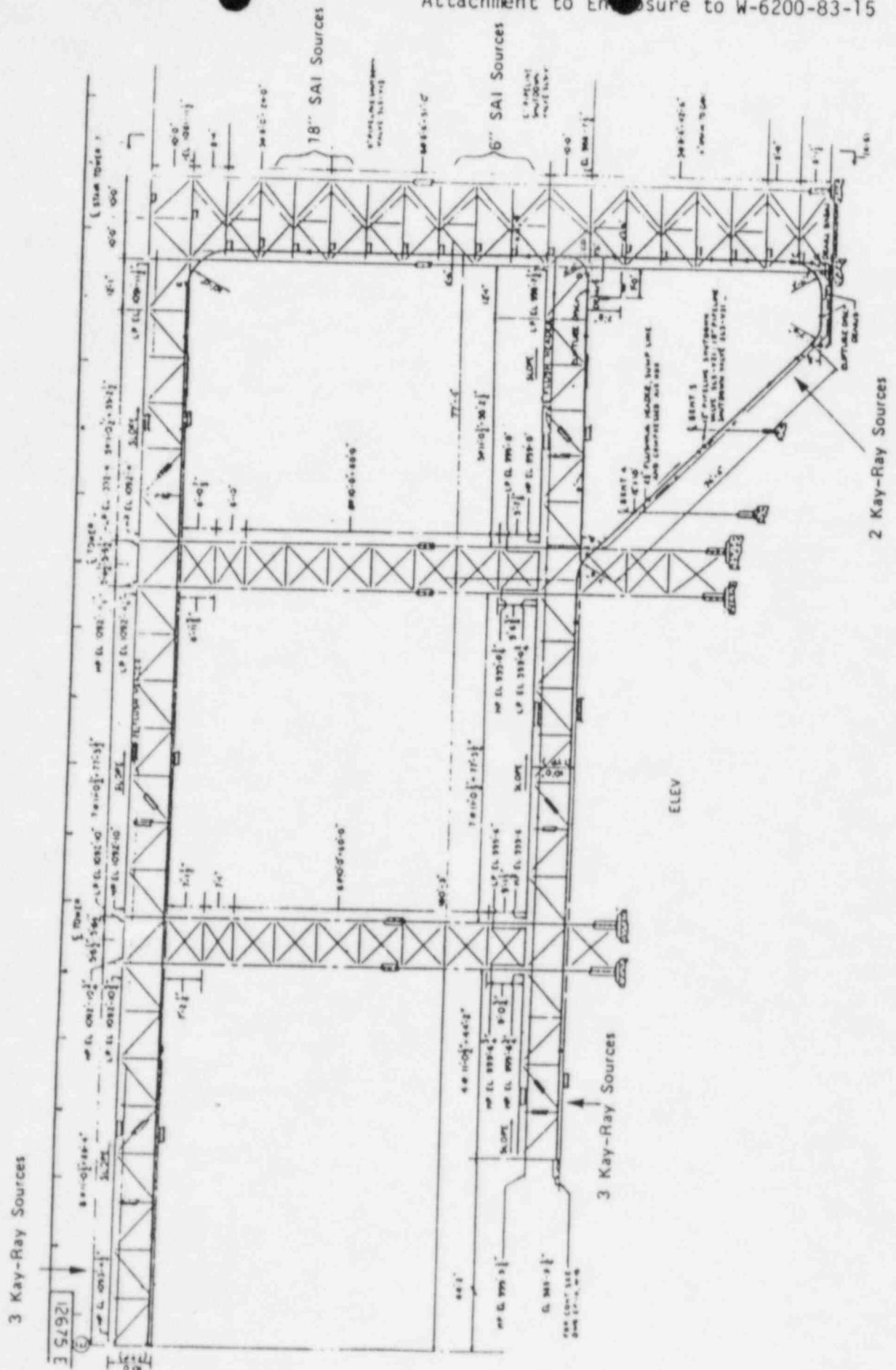
e. DATE

2/17/83



ATTACHMENT A. — Hydraulic Transport Research Facility.

Note: All sources are located in the pipeline gallery.  
Exact locations are given in Attachment B.



ATTACHMENT B. - Pipeline Gallery showing source locations.