FORM NRC-313 I (1-79) 10 CFR 30

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
INDUSTRIAL

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.

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

- X a. NEW LICENSE
- b. AMENDMENT TO: LICENSE NUMBER
- c. RENEWAL OF: LICENSE NUMBER

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

Badische Corporation

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

201-589-1600

3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION

Ivan J. Smith

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

201-589-1600

Applicant 0356
Amount Fee Category #1B 3L.
Type of Fee: application
Date Check Rec'd. 12/7/81
Received By: Brown

4. APPLICANT'S MAILING ADDRESS *(Include Zip Code)*

Badische Corporation
50 Central Ave.
Kearny, N.J. 07032

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

Same as 4

(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.	Ivan J. Smith	Foreman, Radiation Officer
b.	Terry Espiritu	Foreman, Assistant
c.	Joseph Russo	Industrial Hygienist

RECEIVED BY LFMB
Date 12/7/81
Dkt. Dec 10 3 Req'd
By Brown
Orig. To
Action Compl.

7. RADIATION PROTECTION OFFICER

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

LINE 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 ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME (D)
(1)	1) Cs 137	Sealed Sources	General Nuclear Ind. Mod. GNI-VD or	8 Sources, not to exceed 20 millicuries
(2)			Gamma Industries Mod. VD	per source.
(3)	2) Cs 137	Sealed Sources	Gamma Industries	6 Sources, not to
(4)			Mod. VD-HP	exceed 2 millicuries per source.

DESCRIBE USE OF LICENSED MATERIAL
E

(1) Liquid level application. Source installed in a stainless source rod, inserted
(2) into a thermowell in the vessel. Shields permanently mounted on vessels GNI
(3) Mod. CS-20 or CS-30. Drawings submitted with original application.
(4)

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9. STORAGE OF SEALED SOURCES

LINE NO.	A. CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED.	B. NAME OF MANUFACTURER	C. MODEL NUMBER
(1)	Source Shield	General Nuclear Ind.	CS-20, CS-30
(2)	Source Shield	General Nuclear Ind.	CS-20, CS-30
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	A TYPE OF INSTRUMENT	B MANUFACTURER'S NAME	C MODEL NUMBER	D NUMBER AVAILABLE	E RADIATION DETECTED (alpha, beta, gamma, neutron)	F SENSITIVITY RANGE (millirocntgens/hour or counts/minute)
(1)	Survey Meter	W.J. Johnson & Associates	GSM-5	1	GAMMA	0 to 20 MR
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☒ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

Eastern Atomic Lab
Gainsville, Fla. 32601 Bi-annually

☐ b. CALIBRATED BY APPLICANT

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

N.A.

12. PERSONNEL MONITORING DEVICES

A TYPE (Check and/or complete as appropriate.)	B SUPPLIER (Service Company)	C EXCHANGE FREQUENCY
☐ (1) FILM BADGE ☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD) ☒ (3) OTHER (Specify): Dosimeter Model 883	Dosimeter Corporation of Amer. Cincinnati, Ohio 45242	☐ MONTHLY ☐ QUARTERLY ☒ OTHER (Specify): As Required

13. FACILITIES AND EQUIPMENT (Check were appropriate and attach annotated sketch(es) and descript.on(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.

N.A.

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

N.A.

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.

The disposal of sealed sources and devices is performed by the manufacturer, GAMMA Industries, Baton Rouge, La.

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 *(See Section 170.31, 10 CFR 170)* $110.00	b. CERTIFYING OFFICIAL *(Signature)* [signature]
	c. NAME *(Type or print)* Joseph Russo
(1) LICENSE FEE CATEGORY: 170.31 (3) (L)	d. TITLE Industrial Hygienist
(2) LICENSE FEE ENCLOSED: $ $110.00	e. DATE November 17, 1981

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15. Radiation Protection Program

Wipe tests of source rods are sent to Gamma Industries, Baton Rouge, Louisiana for analysis every six months. "Kowipe" wipe test kits are used as per instructions.

When it is necessary for personnel to work in a radiation area, the following rules are applied: depending on where the work is to be performed, the source will be placed in the "off" position or left in the "on" position whichever results in the lowest reading. Readings are taken before work begins using an 0 to 20 MR survey meter. The results of the readings are noted and logged.

Before working on the sources, each employee is assigned a zeroed dosimeter. All employees are monitored with individual dosimeters while work is being performed.

After the required work is finished or at the end of the work day, each dosimeter is checked, and readings are recorded with the employee's name, I.D. number, the date, and the number of hours worked.

When it is necessary to work inside a vessel containing a radioactive source, the source is moved into the "off" position in the lead shield container and locked. The area is then surveyed and monitored as above.

16. & 17. Formal Training in Radiation Safety

a) Ivan Smith, Radiation Officer

Assistant to Radiation Officer, Mr. D. Studwell, from July of 1972 until July of 1975.

Assistant to Radiation Officer, Mr. A. DeRama, from July, 1975 until December of 1975.

Became Radiation Officer in December, 1975 until present, all above time at present site.

Attended 5-day seminar "Principles of Industrial Radiation Protection" at Oklahoma State University Extension Course - Instructor, Howard M. Johnson.

Experienced in the use and handling of the Cesium 137 sources listed in part 8 of form NRC 313-1. Performs wipe tests of sealed sources at six month intervals.

b) Terry Espiritu, Assistant to Ivan Smith, Radiation Officer

1973 to 1979 - Working on radiation under supervision of Radiation Officer, Ivan Smith.

1979 to Present - Became Assistant to Radiation Officer, Ivan Smith.

Attended 5-day seminar, "Principles of Industrial Radiation Protection" at Oklahoma State University Extension Course - Instructor, Howard M. Johnson.

Name Change

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TO: William O. Miller, Chief
License Fee Management Branch
Office of Administration

John E. Glenn, Chief
Nuclear Materials Section B
Division of Engineering and
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: BASF Corporation

Application Dated: 4/11/86

Control No.: 105370

License No.: 29-20523-01

2. FEE ATTACHED

Amount: $60.00

Check No.: 5026

3. COMMENTS

Signed Brenda Platchek

Date 4/22/86

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 3P $60

2. Correct Fee Paid. Application may be processed for:

Amendment \

Renewal

License

Signed B Jackson

Date 4/28/86

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