

UNITED STATES ATOMIC ENERGY COMMISSION
APPLICATION FOR BYPRODUCT MATERIAL LICENSE

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.) Central Foundry Division General Motors Corporation 37 Florence Street Saginaw, MI 48605	(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1(a). Include ZIP Code.) Central Foundry Division General Motors Corporation North Jackson Street Bedford, IN 47421
2. DEPARTMENT TO USE BYPRODUCT MATERIAL Plant Engineering Wastewater Treatment Operation	3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) 21-02392-07 Renewal
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.) Timothy H. Galloway	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.) Timothy H. Galloway

6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.) 1. Cobalt 60 2. Nickel 63	(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. 5 millicuries, Technical Operations, Inc. Model A411, Container Model TO-405 2. Four (4) sealed sources deposited on gold or platinum foil, sealed in detector cells defined by Perkin-Elmer Corp., drawing #009-0282. Foils manufactured and/or installed by: New England Nuclear Corp., Boston, Mass., model NER-002; Nuclear Radiation Dev. Corp., Grand Island, NY, Model N1001. Each single detector cell contains no more than 15 millicuries.
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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.)

1. This source was to be used to calibrate the radiation survey meter.
2. The detector cell containing the nickel 63 foil is used in conjunction with Perkin-Elmer 3920 gas chromatograph with a temperature control mechanism which prevents foil temperatures from exceeding 390 degrees centigrade. The spare detector cell is kept in the shipping container and stored in a locked cabinet.

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21-02392 PDR

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	Gamma Industries	1 week	Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments	Baton Rouge, Louisiana Isotope Radiography Training Program	1 week	Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity		1 week	Yes No	Yes No
d. Biological effects of radiation		1 week	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
Ir-192	100 Ci	Training Program	4 hours	Filming Welds

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 740B	1	Alpha Beta Gamma	0-2500	0.00025" Mylar	Survey
Gamma Industries Model 252-B	1		0-1000		Survey

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

Instruments calibrated by Gamma Industries every three (3) months.

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

No Change

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 No Change

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.

No Change (see attachment)

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.

No Change

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 \$ 170.31 3L

Fee Enclosed \$ \$120.00

Date 10-31-84

Central Foundry Division

General Motors Corporation

Applicant named in item 1

By: William A. Butler (Signature)

William A. Butler

Superintendent Plant Engineering

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.

No. 8 and 9 - Training and Experience

- A. Timothy H. Galloway - Graduated from Indiana University in 1974 with an A.B. degree in Biological Science. Chemical analyst in the Wastewater Treatment Facility.

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TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

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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. No Change

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No. 8 and 9 - Traiping and Experience

- A. Timothy H. Galloway - Graduated from Indiana University in 1974 with an A.B. degree in Biological Science. Chemical analyst in the Wastewater Treatment Facility.

Central Foundry Division
General Motors Corporation

February 4, 1963

Attachment No. 4

WIPE TEST PROCEDURES

1. The nearest accessible surfaces to the sealed source shall be wiped at intervals not to exceed six months.
2. This wipe specimen shall be shipped to:

Industrial Hygiene Department
Personnel Staff, GMC
General Motors Technical Center
Warren, Michigan

Counting will be done on equipment capable of detecting .005 microcuries of removable contamination.

3. Records of these test results shall be kept for inspection by the Commission.
4. Wipe tests will be performed by the following personnel:

John H. Reed
John F. Hrovatich
Paul A. Briedenbach
Milton J. Diamond
Kenneth E. Spray

DUPLICATED
FOR COMPLIANCE