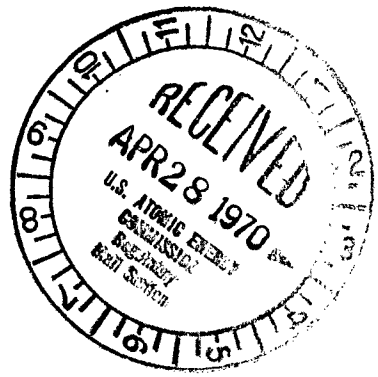
DOCKET NO. 70-58 (
Regulatory File Cy.

MARTIN MARIETTA CORPORATION

DENVER DIVISION

POST OFFICE BOX 179, DENVER, COLORADO 80201 TELEPHONE (303) 794-5211

24 April 1970



Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D.C. 20545

Dear Sir:

Enclosed herewith is completed application and work procedure for a license to permit the decontamination of the nuclear laboratories in building "D" of Martin Marietta Corporation facilities, Middle River, Maryland.

Very truly yours,

MARTIN MARIETTA CORPORATION

Ross G. Macaulay
Director of Contracts
Aerospace Division

Encl.

A1 279

1254

Form AEC-313
8-64
10 CFR 30

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-R027

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 Commisson 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: Isotopes Branch, Division of Materials 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.

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

Martin Marietta Corporation
Baltimore Division
P. O. Box 988
Baltimore, Maryland 21203

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

Martin Boulevard

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Maintenance; and
Personnel Safety (Health Physicist)

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

None

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.)*

E. M. Chenault, Health Physicist
H. W. Keyser, Maintenance Supervisor

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.)*

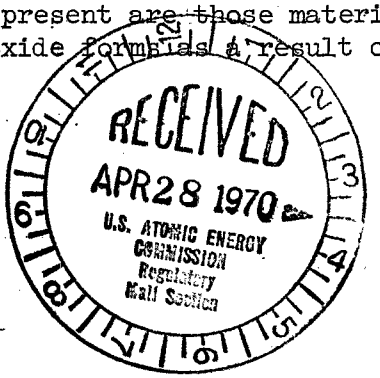
E. M. Chenault

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

Uranium Oxides (U^{235})

(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.)*

Enriched and depleted uranium oxides in residual amounts were found on some work benches. It should be noted that the only radioactive materials present are those materials U^{235} + U^{238} found in residual oxide forms as a result of contamination.



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 residual amount of uranium oxides found throughout the laboratories is a result of contamination. There is no significant amount of byproduct materials present in the laboratories.

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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	Far East Chemical College, Gitu, Japan Chemical, Biological & Radiological	1 yr.	Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments	National Lead Co. of Ohio, a U.S.A.E.C. Contractor, Cincinnati, Ohio	9 yrs.	Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity	U. of Cincinnati, Kettering Lab. Far East Chemical College	6 mos. 1 yrs.	Yes No	Yes No
d. Biological effects of radiation	Ohio Civil Defense Authority Far East Chemical College	1 yr. 1 yr.	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
U^{235}	Classified	National Lead of Ohio, USAEC Contractor	9 yrs.	Research
U^{238}	Classified	" " " "	9 yrs.	Production
Sr^{90}	200 MC	" " " "	3 yrs.	Research
Cs^{137}	100 MC	Martin Marietta Corporation	6 yrs.	Calibration and Research

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)
Gas Proportional Alpha Counters. PAC-3G	2	Alpha	1,000; 10,000 100,000 CPM	0.85 mg per CM^2	Surveying and Measuring
Victoreen 500	1	Beta + Gamma	0.5-500		Monitoring, measuring
Geiger Counter Eberline Instr.	1	Beta + Gamma	0.01-20.0		Surveying

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

Gas proportional counters are calibrated at Eberline Instrument Corporation using Polonium 210. Thorium 230 alpha source used to calibrate instr. before use.

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

See attached. Eberline Instrument Corporation.

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

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.

Martin-Marietta Corp.
Applicant named in item 1

Date 4/28/70

By: [signature]

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. GOVERNMENT PRINTING OFFICE : 1964 O—745-381

DOCKET NO. 70-58

File Cy. 2-24-70

Form AEC-313
8-64
10 CFR 30

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DOCKETED USAEC APR 28 1970 REGULATORY MAIL SECTION DOCKET CLERK

RECEIVED APR 28 1970 U.S. ATOMIC ENERGY COMMISSION Regulatory

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c. Mathematics and calculations basic to the use and measurement of radioactivity	U. of Cincinnati, Kettering Lab. Far East Chemical College	6 mos. 1 yrs.	Yes No	Yes No
d. Biological effects of radiation	Ohio Civil Defense Authority Far East Chemical College	1 yr. 1 yr.	Yes No	Yes No

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