

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR SOURCE MATERIAL LICENSE

Pursuant to the regulations in Title 10, Code of Federal Regulations, Chapter 1, Part 40, application is hereby made for a license to receive, possess, use, transfer, deliver or import into the United States, source material for the activity or activities described:

1. (Check one) ☐ (a) New license ☒ (b) Amendment to License No. <u>SUB-857</u> ☐ (c) Renewal of License No. _____ ☐ (d) Previous License No. _____		2. NAME OF APPLICANT United States Department of the Navy 3. PRINCIPAL BUSINESS ADDRESS Naval Electronic Systems Command Washington, DC 20360	
4. STATE THE ADDRESS(ES) AT WHICH SOURCE MATERIAL WILL BE POSSESSED OR USED See Attachment 1.			
5. NAME OF PERSON TO BE CONTACTED CONCERNING THIS APPLICATION LCDR M. M. ELKINS, USN		6. TELEPHONE NO. OF INDIVIDUAL NAMED IN ITEM 5 (202) 692-7385	
7. DESCRIBE PURPOSE FOR WHICH SOURCE MATERIAL WILL BE USED The source material is used as shielding in the refueling equipment identified in Attachment 2. This equipment is used in the construction and overhaul of Naval Nuclear Powered Ships.			
8. STATE THE TYPE OR TYPES, CHEMICAL FORM OR FORMS, AND QUANTITIES OF SOURCE MATERIAL YOU PROPOSE TO RECEIVE, POSSESS, USE, OR TRANSFER UNDER THE LICENSE			
(a) TYPE	(b) CHEMICAL FORM	(c) PHYSICAL FORM (Including % U or Th.)	(d) MAXIMUM AMOUNT AT ANY ONE TIME (kilograms)
NATURAL URANIUM			
URANIUM DEPLETED IN THE U-235 ISOTOPE	Metal		From 96.3 lbs each to 36,000 lbs each
THORIUM (ISOTOPE)			
(e) MAXIMUM TOTAL QUANTITY OF SOURCE MATERIAL YOU WILL HAVE ON HAND AT ANY TIME (kilograms) No limit.			
9. DESCRIBE THE CHEMICAL, PHYSICAL, METALLURGICAL, OR NUCLEAR PROCESS OR PROCESSES IN WHICH THE SOURCE MATERIAL WILL BE USED, INDICATING THE MAXIMUM AMOUNT OF SOURCE MATERIAL INVOLVED IN EACH PROCESS AT ANY ONE TIME, AND PROVIDING A THOROUGH EVALUATION OF THE POTENTIAL RADIATION HAZARD ASSOCIATED WITH EACH OF THOSE PROCESSES The source material is in the form of fixed shielding permanently sealed in the equipment listed in Attachment 2. No radiological control problems are associated with the use of this depleted uranium.			
10. LIST THE NAMES AND ATTACH A RESUME OF THE TECHNICAL QUALIFICATIONS INCLUDING TRAINING AND EXPERIENCE OF APPLICANT'S SUPERVISORY PERSONNEL AND THE PERSON RESPONSIBLE FOR THE RADIATION SAFETY PROGRAM (OR OF APPLICANT IF AN INDIVIDUAL) This material is under the control of Supervisors of Shipbuilding at civilian shipyards and Commanding Officers of the other locations listed in Attachment 1.			
11. DESCRIBE THE EQUIPMENT AND FACILITIES WHICH WILL BE USED TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE OR PROPERTY AND RELATE THE USE OF THE EQUIPMENT AND FACILITIES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE: (a) RADIATION DETECTION AND MEASUREMENT INSTRUMENTS INCLUDING FILM BADGES, THERMISTORS, COUNTERS, AIR MONITORING, AND OTHER SURVEY EQUIPMENT AS APPROPRIATE. THE DESCRIPTION OF RADIATION DETECTION INSTRUMENTS SHOULD INCLUDE THE INSTRUMENT CHARACTERISTICS SUCH AS TYPE OF RADIATION DETECTED, WINDOW THICKNESS, AND SENSITIVITY OF EACH INSTRUMENT. This equipment meets the requirements of Part 178 of Code of Federal Regulations, Title 49, for Specification 55 shipping containers, and is shipped in compliance with Department of Transportation requirements for carriage by rail, by vessel, and by public highway.			
(b) RADIATION PROTECTION AND CONTROL EQUIPMENT USED IN CALIBRATING INSTRUMENTS LISTED IN (a) ABOVE, INCLUDING AIR SAMPLING EQUIPMENT. (If film badges, specify method of calibrating and processing, or name supplier).			
N/A			

11.3. VENTILATION EQUIPMENT WHICH WILL BE USED IN OPERATIONS WHICH PRODUCE DUST, FUMES, MIST, OR GASES, INCLUDING A FAN, INCLUDING TYPE AND LOCATION OF HOODS AND FILTERS, MINIMUM VELOCITIES MAINTAINED AT HOOD OPENINGS, AND PROCEDURES FOR TESTING SUCH EQUIPMENT.

N/A

12. DESCRIBE PROPOSED PROCEDURES TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE AND PROPERTY AND RELATE THESE PROCEDURES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE: (a) SAFETY FEATURES AND PROCEDURES TO AVOID NONNUCLEAR ACCIDENTS, SUCH AS FIRE, EXPLOSION, ETC., IN SOURCE MATERIAL STORAGE AND PROCESSING AREAS.

See 11(a).

13. EMERGENCY PROCEDURES IN THE EVENT OF ACCIDENTS WHICH MIGHT INVOLVE SOURCE MATERIAL.

N/A

14. DETAILED DESCRIPTION OF RADIATION SURVEY PROGRAM AND PROCEDURES.

N/A

15. WASTE PRODUCTS: If none will be generated, state "None" opposite (a), below. If waste products will be generated, check here ☐ and explain on a supplemental sheet:

(a) Quantity and type of radioactive waste that will be generated.

(b) Detailed procedures for waste disposal.

None

16. IF PRODUCTS FOR DISTRIBUTION TO THE GENERAL PUBLIC UNDER AN EXEMPTION CONTAINED IN 19 CFR 11 ARE TO BE MANUFACTURED, USE A SUPPLEMENTAL SHEET TO FURNISH A DETAILED DESCRIPTION OF THE PRODUCT, INCLUDING:

(a) PERCENT SOURCE MATERIAL IN THE PRODUCT AND ITS LOCATION IN THE PRODUCT.

(b) PHYSICAL DESCRIPTION OF THE PRODUCT INCLUDING CHARACTERISTICS, IF ANY, THAT WILL PREVENT INHALATION OR INGESTION OF SOURCE MATERIAL THAT MIGHT BE SEPARATED FROM THE PRODUCT.

(c) BETA AND BETA PLUS GAMMA RADIATION LEVELS (Specify instrument used, date of calibration and calibration technique used) AT THE SURFACE OF THE PRODUCT AND AT 12 INCHES.

(d) METHOD OF ASSURING THAT SOURCE MATERIAL CANNOT BE DISASSOCIATED FROM THE MANUFACTURED PRODUCT.

CERTIFICATE

(This item must be completed by applicant)

17. 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 40, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

BY:



(Signature)

Dated 6 October 1981

M. M. ELKINS, LCDR USN

(Print or type name)

Head Nucleonics

Naval Electronic Systems Command

WARNING: 18 USC, Section 1001; Act of June 25, 1948; 62 Stat. 749, makes it a criminal offense to make a willfully false statement or representation in any department or agency of the United States or in any matter within its jurisdiction.

6 October 1981

ATTACHMENT 1 TO APPLICATION FOR AMENDMENT OF
SOURCE MATERIAL LICENSE NO. SUB-857

Addresses at which material is located:

Marine Is'and Naval Shipyard
Vallejo, CA 94592

Portsmouth Naval Shipyard
Portsmouth, New Hampshire 03840

Pearl Harbor Naval Shipyard
Oahu, HI 96614

Puget Sound Naval Shipyard
Bremerton, WA 98314

Norfolk Naval Shipyard
Portsmouth, VA 23709

Charleston Naval Shipyard
Charleston, SC 29408

Navy Ships Parts Control Center
Mechanicsburg, PA 17055

Newport News Shipbuilding and Drydock Company
4101 Washington Avenue
Newport News, VA 23607

Electric Boat Division
General Dynamics Corporation
Groton, CT 06340

Ingalls Shipbuilding Division
Litton Systems, Inc.
Pascagoula, MS 39567

6 October 1961

ATTACHMENT 2 TO APPLICATION FOR AMENDMENT OF SOURCE MATERIAL LICENSE

SUB-857

Description of items containing source material

<u>Item</u>	<u>Description</u>	<u>Drawing No.</u>
1.	S3G Core 1 Refueling Machine and Container	X1HF-X75J
2.	S3G Core 1 Shield Extension Assembly	X1HF-X110J
3.	S3G Core 3 Refueling Machine and Cradle	400H046
4.	S5W Refueling Module Replacement Tank Upper Shield	BUSHIPS Plan No. SSN585-200-2161936 Rev. G.
5.	AlW Core 1 Transition Tube	United Shoe Machinery Corp. DWG X443G
6.	AlW Core 2 Transition Tube	United Shoe Machinery Corp. DWG X351J
7.	Support Assembly Removal Cask for D2G use	GE PL 258E552G1
8.	S5W Refueling Machine	Westinghouse 903E0017
9.	AlG Refueling Machine	General Electric 272B853
10.	Control Rod Removal Cask for NR-1 use	NLI 70037F
11.	Control Rod Removal Cask Gate Assembly for NR-1 use	NLI 70040F and 70042F
12.	AlW-3 Supplementary Shielding	Westinghouse 936F349, Gr. 1 and 903E061, Gr. 2