NRC Form 374
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 10

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with letter dated March 19, 1985
1. Department of the Navy Naval Surface Weapons Center 2. Dahlgren Laboratory Dahlgren, Virginia 22448	3. License number 45-07823-06 is amended in its entirety to read as follows:
	4. Expiration date March 31, 1986
	5. Docket or Reference No. 030-06574

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Americium 241	A. Foils (U.S. Radium Model LAB-2041A)	A. Not to exceed 600 microcuries per foil
B. Hydrogen 3	B. Titanium Tritide Foils in Analytical Instruments Model 510-6007 Detector cells	B. Not to exceed 200 millicuries per foil
C. Hydrogen 3	C. Scandium Tritide Foils (U.S. Radium Model LAB-508-3)	C. Not to exceed 1,200 millicuries per foil
D. Hydrogen 3	D. Titanium Tritide Foils (U.S. Radium Model LAB-508-3)	D. Not to exceed 1,200 millicuries per foil
E. Nickel 63	E. Plated Sources in Hewlett-Packard Model 19303 Detector Cells	E. Not to exceed 15 millicuries per foil
F. Nickel 63	F. Foils in Hewlett-Packard Model 2-6195 Detector Cells	F. Not to exceed 2 millicuries per foil
G. Iron 55	G. Sealed Sources (New England Nuclear Model NER-460A)	G. Not to exceed 10 millicuries per source
H. Cadmium 109	H. Sealed Sources (Amersham Model CUC)	H. Not to exceed 5 millicuries per source
I. Americium 241	I. Sealed Sources (New England Nuclear Model NER-478)	I. Not to exceed 1 millicurie per source

9. Authorized use

A. For use in Mine Safety Appliance Billion-Aire Model 706PA or 706CA Trace Gas Analyzers for detection of chemicals in air.
B. For use in gas chromatograph for sample analysis.
C. For use in Honeywell A/E 23D-3 series detectors and alarm instruments for monitoring air.
D. For use in Honeywell A/E 23D-1(v) detectors and alarm instruments for monitoring air.
E. and F. For use in gas chromatographs for sample analysis.
G., H. and I. For use in Columbia Scientific Model 740 analyzers for material analysis.

CONDITIONS

10. Licensed material may be used at the licensee's facilities at Weapons Systems Department, Gun Systems and Munitions Division, Dahlgren, Virginia; aboard U. S. Navy Ships, and at temporary job sites of the licensee anywhere in the United States.

11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."

12. Licensed material shall be used by, or under the supervision of, Joe L. Brumfield, Dennis R. Knudsen, Kenneth A. Musselman, Roger L. Engles, John W. Garrison, William C. Cobbin, William N. Wishard, or Daniel V. Poppen.

CONDITIONS

13. A. (1) Each sealed source containing licensed material, other than hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.

(3) The periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.

B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.

C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within five (5) days of the test with the U. S. Nuclear Regulatory Commission, Region II, 101 Marietta Street, Suite 2900, Atlanta, Georgia 30323 describing the equipment involved, the test results, and the corrective action taken.

D. Tests for leakage and/or contamination shall be performed by licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

CONDITIONS

14. Sealed sources containing licensed material shall not be opened or removed from their respective source holders by the licensee.

15. A. Detector cells containing titanium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees Centigrade.

B. Detector cells containing scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 325 degrees Centigrade.

16. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in Section 20.203(a)(1), Title 10, Code of Federal Regulations, Part 20, the licensee is hereby authorized to label detector cells and cell baths, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement.

17. A. Each chromatograph detector containing Nickel 63 shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a detector received from another person shall not be put into use until tested.

B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the surfaces of the device in which the foil is mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.

C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the foil from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within five (5) days of the test with the U. S. Nuclear Regulatory Commission, 101 Marietta Street, Suite 2900, Atlanta, Georgia 30323 describing the equipment involved, the test results, and the corrective action taken.

D. Tests for leakage and/or contamination shall be performed by licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
45-07823-06

Docket or Reference number
030-06574

Amendment No. 10

CONDITIONS

18. The licensee shall conduct a physical inventory every six (6) months to account for all foils, plated source and sealed sources received and possessed under the license. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material, manufacturer's name and model numbers, location of sealed sources and the date of the inventory.

19. Detector cells containing licensed material shall not be opened or the foil sources removed from the detector cell by the licensee.

20. The licensee may transport licensed material or deliver licensed material to a carrier for transport in accordance with the provisions of Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions".

21. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated November 3, 1980; and letter dated March 19, 1985. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

THE U. S. NUCLEAR REGULATORY COMMISSION

JUN 18 1985

DATE _____

BY Original Signed By
John W. N. Hickey
Material Licensing Branch
Division of Fuel Cycle and
Material Safety
Washington, D. C. 20555

6/17/85

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND DETACHMENT
RADIOLOGICAL AFFAIRS SUPPORT OFFICE (RASO)
YORKTOWN, VA 23691

IN REPLY REFER TO

8128/3253.4B
Ser 6446W/169
29 MAR 1985

U.S. Nuclear Regulatory Commission
Division of Fuel Cycle and Material Safety
ATTN: Chief, Materials Licensing Branch
Mail Stop SS-396
Washington, DC 20555

Gentlemen:

The enclosed application by the Naval Surface Weapons Center, Dahlgren, Virginia to amend U.S. Nuclear Regulatory Commission Materials License Nos. 19-00166-22, SNM-1147, 45-02757-01, 45-07823-05, 45-07823-06 and SMB-1145 is endorsed.

This application requests approval of a new single Radiation Safety Officer for all Naval Surface Weapons Center licenses.

It is requested that receipt acknowledgement data be forwarded to this Office on the enclosed card.

Sincerely,

P. J. DURFEE
Commander, MSC, USN
Director

Enclosure:
(1) NAVSWC Dahlgren ltr
X31-RTW, 1200 of
19 Mar 85
(2) Receipt Acknowledgement Card

Copy to: (w/o encl)
NAVSWC Dahlgren

85 APR -1 P2:55

FEE EXEMPT

8504170186 1p

18836

DEPARTMENT OF THE NAVY

NAVAL SURFACE WEAPONS CENTER
DAHLGREN, VIRGINIA 22448

WHITE OAK
SILVER SPRING, MD. 20910
(202) 394-3760

DAHLGREN, VA. 22448
(703) 663-

FUSDOON

IN REPLY REFER TO
X31-RTW
12000

19 MAR 1985

From: Commander, Naval Surface Weapons Center
To: Director, U. S. Nuclear Regulatory Commission
Office of Nuclear Material Safety and Safeguards
Division of Fuel Cycle and Material Safety
Washington, D. C. 20555
Via: Director, Naval Sea Systems Command Detachment (Code 6446)
Radiological Affairs Support Office
Yorktown, Virginia 23691

Subj: CHANGE OF RADIATION SAFETY OFFICER

Encl: (1) Resume of new Radiation Safety Officer

1. The Naval Surface Weapons Center wishes to delete the current Radiation Safety Officers and substitute Richard T. Whitman.

2. The following is a list of all of the NSWC current licenses:

License	Purpose	Expiration Date
19-00166-22	Broad Type (A)	Timely Renewal
1147	SNM	June 1986
45-02757-01	Radiography	March 1986
(45-07823-05	Misc. Small Items	Requested Consolidation onto-22, 2/85)
45-07823-06	Misc. Small Items	March 1986
1145	SMB (DU+THORIUM)	Timely Renewal

3. A resume copy for each license is attached.

J. D. Meredith

J. D. MEREDITH
By direction

~~8504170492~~ 2pp

NAVAL SURFACE WEAPONS CENTER

RADIOLOGICAL SAFETY OFFICER: Richard T. Whitman,
Health Physicist, GS-12

RESUME OF TRAINING & EXPERIENCE

EDUCATION & TRAINING:

6	Graduate Hours (Radiation Science)	Georgetown University, 1984
MA	Physical Science	West Chester State University, 1975
BS	Biology/Education	Villanova University, 1970

1. Plant Physiology, using labeled Tritium (Villanova) (3 hrs.), 1968
2. Nuclear Biological & Chemical Warfare (First U.S. Army) (2 wks.), 1973
3. Identification of minerals with x-ray diffraction (West Chester) (6 hrs.) 1974
4. Radiation Safety Officer Training (Ft. McClellan, AL) (4 wks.), 1980
5. Microwave/Laser Training Aberdeen Proving Grounds, MD (1 wk.), 1981
6. Medical Effects of Nuclear Radiation, Armed Forces Radiobiology Research Institute (1 wk.), 1981
7. (Navy) Radiation Safety Officer Training (Port Hueneme, CA) (2 wks.), 1983

RELEVANT PROFESSIONAL EXPERIENCE:

1983 - Present	(RSO) Health Physicist, Naval Surface Weapons Center
1981 - 1983	(RSO), Ft. Detrick, Frederick, MD (supervised four (4) licenses)
1980 - 1981	Active Duty Tour: Chemical Officer (CPT, U. S. Army), Ft. Meade, MD
1976 - 1980	Sales Representative, Cancer Chemotherapeutics
1970 - 1976	High School Biology Teacher/College Anatomy/Physiology Instructor
Military:	
1983 - Present	Commander/Chemical Staff Officer (MAJ)(USAR) 431st Chemical Detachment, (NBCE)(JB), 97th US ARCOM, Wilmington, DE
1980 - 1983	Commander/Chemical Recon Officer (CPT)(USAR) 426th Chemical Detachment, (NBC Recon) (LB) (SF), 11th Special Forces Group (ABN), Ft. Meade, MD (Includes 179-day tour)
1978 - 1980	Chemical Staff Officer, (CPT) 309th Medical Group (USAR), Rockville, MD

ISOTOPE EXPERIENCE

H-3	P-32	Ni-63	I-129	Pm-147	U-235	Am-241
C-14	Fe-59	Sr-90	I-131	Po-210	Pu-239	
Na-22	Co-60	In-111	Cs-137	Ra-226	PuBe-239	