



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

5104
Ser N4I/25U116688
19 Aug 25

From: Chairman, Naval Radiation Safety Committee
To: Superintendent, United States Naval Academy

Subj: NAVAL RADIOACTIVE MATERIALS PERMIT 19-00161-E1NP

Ref: (a) OPNAVINST 6470.3 (Series)
(b) USNA ANNAPOLIS MD ltr 5104 Ser 28/484 of 17 Jun 25
(c) USNA ANNAPOLIS MD (RSO) Dr. Burnett / NAVSEA DET RASO YORKTOWN
VA (RPM) Ms. McHugh email of 30 Jun 25
(d) USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN
VA (RPM) Ms. McHugh email of 5 Aug 25

Encl: (1) Naval Radioactive Materials Permit 19-00161-E1NP, Amendment 13

1. Per reference (a), your request, reference (b) and supplemental information provided in references (c) and (d), to amend the subject permit is approved on behalf of the Naval Radiation Safety Committee. This amendment removes radioactive material disposed of via the low-level radioactive waste program and removes assistant radiation safety officers.

2. Please review enclosure (1) carefully to ensure all conditions are understood. Changes as a result of this amendment are printed in bold typeface.

3. For additional information or inquiries, the Naval Sea Systems Command Detachment, Radiological Affairs Support Office point of contact is Ms. Katherine McHugh who can be reached via phone at (757) 887-7573 (DSN 953-7573) or email at katherine.a.mchugh2.civ@us.navy.mil.

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NAVAL RADIOACTIVE MATERIALS PERMIT

Pursuant to the authority stated in OPNAVINST 6470.3 (Series), Naval Radiation Safety Committee, and in reliance on statements made by the applicant, permission is hereby granted for the acquisition, receipt, possession, use, storage, and disposal of radioactive materials listed below subject to the conditions listed in this permit.

1. COMMAND NAME AND ADDRESS: Superintendent United States Naval Academy 121 Blake Road Annapolis, MD 21402-1300	In accordance with the letter dated 17 Jun 25,
	2. PERMIT NUMBER: 19-00161-E1NP is amended in its entirety to read as follows:
	3. AMENDMENT NUMBER: 13
	4. DOCKET NUMBER:
	5. EXPIRATION DATE: 31 July 2039

	6. RADIOACTIVE MATERIAL	7. CHEMICAL/PHYSICAL FORM	8. MAXIMUM QUANTITY AUTHORIZED
A.	Any Byproduct or Accelerator Produced Radioactive Material Atomic Numbers 1 Through 83	Sealed sources or devices registered pursuant to 10 CFR 32.210 or an equivalent Agreement State regulation	Not to exceed 3.7 gigabecquerels (100 millicuries) per radionuclide and 74 gigabecquerels (2 curies) total
B.	Any Byproduct or Accelerator Produced Radioactive Material Atomic Numbers 1 Through 83	Irradiated Electronic and Non-dispersible Samples	No single item to exceed 1.85 gigabecquerels (50 millicuries) total activity not to exceed 37 gigabecquerels (1 curie)
C.	Hydrogen-3	Liquid Analytical Samples	Not to exceed a total quantity of 370 megabecquerels (10 millicuries)
D.	Hydrogen-3	Target - Tritium Absorbed onto Titanium (Thermo MF Physics LLC, Model A-3000 Series, CO1012D101S	Not to exceed 518 gigabecquerels (14 curies) per source; not to exceed 1.036 terabecquerels (28 curies) total
E.	Cobalt-60	Sealed Disk Source (Eckert & Ziegler Isotope Products GF-060D, CA0406S106S)	Two sources, not to exceed 425.5 kilobecquerels (11.5 microcuries) per source; not to exceed 851 kilobecquerels (23 microcuries) total
F.	Natural Uranium	Metal slugs canned in aluminum	Not to exceed 2500 kilograms total
G.	Uranium-238	15 mL liquid in 20 mL flame sealed LSV standard (Eckert & Ziegler Analytics)	One Source not to exceed 0.11 grams (1.3 kilobecquerels 0.034 microcuries) total
H.	Plutonium-239	Sealed Sources Mound Laboratories - Monsanto Research Corporation Los Alamos Memo RRES/EA-2003-419	Not to exceed 37.8 gigabecquerels (1.02 Ci / 16.2 grams) per source; not to exceed 189 gigabecquerels (5.10 Ci / 81 grams) total
I.	Plutonium-239	Sealed sources – electroplated on platinum (Eckert & Ziegler Isotope Products Model AF-239-A1 CA0406S117S)	Not to exceed 37 kilobecquerels (1 microcuries / 16.1 micrograms) per source; not to exceed 185 kilobecquerels (5 microcuries / 80.5 micrograms) total

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SUPPLEMENTARY SHEET Naval Radiation Safety Committee <u>Radioactive Materials Permit</u>			PERMIT NUMBER: 19-00161-E1NP
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J.	Americium-241 (AmBe)	Sealed Source, Eckert & Ziegler Isotope Products, Model Am1.N02, CA0406S193S	One Source not to exceed 3.7 gigabecquerels (100 millicuries) total
K.	Americium-241 (AmBe)	Sealed Source, Eckert & Ziegler, Isotope Products Model Am1.N02, CA0406S193S	One Source not to exceed 370 megabecquerels (10 millicuries) total
L.	Americium-241	Sealed source - Electrodeposited on foil, (Eckert & Ziegler Isotope Products Lab, Model AF-241(PM), CA0406S117S)	Not to exceed 57 kilobecquerels (1.54 microcuries) per source; not to exceed 111 kilobecquerels (3 microcuries) total
M.	Californium-252	Sealed Source – Needle Sealed in Stainless Steel (DOE Model Model SR-CF-100 Series, NR8262S807S)	Not to exceed 119 megabecquerels (3.24 millicuries) per source; not to exceed 119 megabecquerels (3.24 millicuries) total
N.	Americium-241	Anodized Instrument Check Source, Eckert & Ziegler, Drawing #VZ-1370-001	Not to exceed 740 becquerels (0.02 microcuries) per source; not to exceed 1.48 kilobecquerels (0.04 microcuries) total
O.	Mixed Enriched Uranium (U233 through U236 and U238)	Special Form DOE Simulated Enriched Uranium Sealed Source (SEUSS) Test Object, Model XY-2.5	One Source not to exceed 2.063 megabecquerels (56 microcuries / 0.00723 gm)-U233, 137.262 megabecquerels (3.710 millicuries / 0.598gm)-U234, 4.127 megabecquerels (112 microcuries / 51.6 gm)-U235, 1.172 megabecquerels (32 microcuries / 0.492 gm)-U236 and 3.376 megabecquerels (91 microcuries / 281.2 gm)-U238 total
9. AUTHORIZED USE: A. and B., D. through M. and O. “Research and development” as defined in 10 CFR 30.4, teaching and training of students. B. Research and development to include testing of irradiated electronic components and non-dispersible samples. C. Collection and analysis of liquid test samples from support systems for the deuterium-tritium neutron generator. D. For use in deuterium-tritium neutron generator. F. For use in a subcritical water moderated assembly. G. For use as a standard for a liquid scintillation machine. I. For use as a calibration source in Gamma Products G520 System. N. For use as a standard in the iMatic counting system			
CONDITIONS 10. Permitted material shall be used or stored at the command’s facilities located at Rickover Hall, Chauvenet Hall, and at Michelson Hall, United States Naval Academy, Annapolis, MD. Permitted material shall be stored at the command’s facilities located at Hopper Hall, United States Naval Academy, Annapolis, MD.			
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11. Permitted material shall only be used by, or under the supervision of, individuals designated in writing by the USNA Radiation Safety Committee. The command shall maintain records of individuals designated as users for three years after the individual's last use of permitted material. 12. a. The Radiation Safety Officer (RSO) for this permit is Daniel Marron. b. The Assistant Radiation Safety Officer for this permit is Catherine Dommers. 13. The command shall not use permitted material in or on humans. 14. The command shall not use permitted material in field applications where activity is released except as provided otherwise by a specific condition of this permit. 15. Experimental animals, or the products from experimental animals, that have been administered permitted material shall not be used for human or animal consumption. 16. This permit does not authorize commercial distribution of permitted material. 17. a. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State. In the absence of a registration certificate, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months, or at such other intervals as specified. b. Notwithstanding Paragraph a. of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months. c. In the absence of a certificate from a transferor indicating that a leak test has been made, within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received. d. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material. e. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination. f. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) or more of removable contamination, a report per NAVSEA S0420-AA-RAD-010 shall be made and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with U.S. Nuclear Regulatory Commission regulations g. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the command or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State, or Naval Radioactive Materials Permit (NRMP) authorized to perform such services for other commands or organizations. h. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained per NAVSEA S0420-AA-RAD-010. 18. The command is authorized to ship and/or transport permitted material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material," and "Defense Transportation Regulations, DTR 4500.9-R."	
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19. Sealed sources, source rods, foil sources, or detector cells containing permitted material shall not be opened or sources removed from source holders or detached from source rods or foil sources removed from detector cells by the command except as specifically authorized.
20. The command shall conduct a physical inventory every six months or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the permit. Records of inventories shall be maintained per and include information required by NAVSEA S0420-AA-RAD-010.
21. The command shall not acquire permitted material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
22. The command is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash provided:
 - a. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the command.
 - b. A record of each such disposal permitted under this permit condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed into storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
23. Radioactive waste possessed under this permit shall be stored in accordance with the statements, representations, and procedures included with the command's waste storage plan described in USNAINST 5104.2B 9/E&W of 1 Jul 24.
24. The command shall comply with the fixed site physical security requirements of 10 CFR 73.67(f) and physical security requirements during transportation in 10 CFR 73.67(g) for "low strategic significance" quantities of special nuclear material.
25. The command shall comply with and maintain a current copy of the NAVSEA S0420-AA-RAD-010, Radiological Affairs Support Program Manual.
26. Notwithstanding the requirements of condition 30, the command is authorized to make program changes and changes to procedures specifically identified in the application dated 13 October 2023, which were previously approved by the Naval Radiation Safety Committee (NRSC) and incorporated into the NRMP, without prior NRSC approval as long as:
 - a. The proposed revision is documented, reviewed and approved by the command's Radiation Safety Committee in accordance with established procedures prior to implementation;
 - b. The revised program is in accordance with regulatory requirements, will not change the permit conditions, and will not decrease the effectiveness of the Radiation Safety Program;
 - c. The command's staff is trained in the revised procedures prior to implementation; and
 - d. The command's audit program evaluates the effectiveness of the change and its implementation.
27. This NRMP is prohibited from allowing Mr. Scott W. Frampton and/or Mr. Jason V. Julao any occupational involvement in NRMP activities.
28. In addition to the possession limits in Item 8, the command shall further restrict the possession of permitted material to quantities below the minimum limit in 10 CFR 30.35(d) and 40.36(b) and 10 CFR 70.25(d) for which decommissioning financial assurance is required.
29. In addition to the possession limits in Item 8, the command shall further restrict the possession of permitted material to quantities below the limits specified in 10 CFR 30.72 which require consideration of the need for an emergency plan for responding to a release of permitted material.

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30. Except for plutonium contained in a medical device designed for individual human application, no plutonium, regardless of form, shall be delivered to a carrier for shipment by air transport or transported in an aircraft by the command except in packages the design of which U.S. Nuclear Regulatory Commission has specifically approved for transport of plutonium by air.
31. Except as specifically provided otherwise in this permit, the command shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the command's application and correspondence are more restrictive than the regulations.
- a. USNA ANNAPOLIS MD ltr 5104 Ser 28/829 of 21 Aug 23 (Renewal initial request – Amendment 11)
 - b. USNA ANNAPOLIS MD ltr 5104 Ser 28/1040 of 13 Oct 23 (supplemental information response to timely filed letter deficiencies – Amendment 11)
 - c. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 5 Oct 23 (Supplemental information SCIF info/tech specs and DoD Manual – Amendment 11)
 - d. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 11 Oct 23 (Supplemental information ENGRWEPSOP 21 subcritical reactor – Amendment 11)
 - e. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 23 Oct 23 (Supplemental information clarification Th-228/Th-230 – Amendment 11)
 - f. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 4 Dec 23 (Supplemental information LLRW waste certs / inventory – Amendment 11)
 - g. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 18 Jan 24 (Supplemental information SEUSS activity verification / RDR SOP / tritium monitor manual and EW Instruction– Amendment 11)
 - h. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 24 Jan 24 (Supplemental information Pu info item J renewal – Amendment 11)
 - i. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 24 Jan 24 (Supplemental information RSO education / Pu info item I renewal– Amendment 11)
 - j. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 25 Jan 24 (Supplemental information more info Pu item I – Amendment 11)
 - k. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 21 Mar 24 (Supplemental information Preble Hall removal documentation – Amendment 11)
 - l. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 1 May 24 (Supplemental information Add ARSO Dommers desig ltr – Amendment 11)
 - m. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 10 June 24 (Supplemental information Add ARSO Dommers education – Amendment 11)
 - n. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 20 June 24 (Supplemental information updated instruction – Amendment 11)
 - o. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 27 June 24 (Supplemental information ARSO Atwood Designation letter / Th-230 only ever had two sources ARSO Dommer statement – Amendment 11)
 - p. USNA ANNAPOLIS MD (ARSO) Ms. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 28 June 24 (Supplemental information sealed sources – Amendment 11)
 - q. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 28 June 24 (Supplemental information – Amendment 11)
 - r. USNA ANNAPOLIS MD ltr 5104 Ser 28/886 of 9 Sep 24 (Add analytical samples – Amendment 12)
 - s. USNA ANNAPOLIS MD (RSO) Mr. Marron / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. Grason email of 26 Sep 24 (Supplemental information – Amendment 12)

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t. USNA ANNAPOLIS MD ltr 5104 Ser 28/484 of 17 Jun 25 (Remove material and ARSOs – Amendment 13) u. USNA ANNAPOLIS MD (RSO) Dr. Burnett / NAVSEA DET RASO YORKTOWN VA (RPM) Ms. McHugh email of 30 Jun 25 (Supplemental information – Amendment 13) v. USNA ANNAPOLIS MD (RSO) Mr. Marron/ NAVSEA DET RASO YORKTOWN VA (RPM) Ms. McHugh email of 5 Aug 25 (Supplemental information – Amendment 13)		
PRINTED NAME, RANK, AND TITLE: M. D. BEERY CDR MSC USN Executive Secretary, Naval Radiation Safety Committee	SIGNATURE DATE: 19 Aug 25	SIGNATURE: BEERY.MATT.DAV ID.1254691794 Digitally signed by BEERY.MATT.DAVID.1254691794 Date: 2025.08.19 11:56:54 -04'00'
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