

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the California Department of Public Health now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee: NAC Philotechnics, Ltd. 2. Address: 7945 Dunbrook Road, Suites H-I San Diego, CA 92126 Attention: James Reese, CHP Radiation Safety Officer	3. License Number: 7754-37 Amendment Number: 28
	4. Expiration date: January 28, 2032 (3)
	5. Inspection agency: Radiologic Health Branch South

License Number 7754-37 is hereby renewed in its entirety.

6. Nuclide	7. Form	8. Possession Limit
A. Hydrogen-3	A. Any	A. Total not to exceed 185.0 TBq (5 kCi).
B. Carbon-14	B. Any	B. Total not to exceed 16.7 TBq (450 Ci).
C. Source Material other than Depleted Uranium	C. Any	C. Total not to exceed 227 kg (500 lb) or 152.8 TBq (4.13 kCi).
D. Special Nuclear Material	D. Any	D. Not to exceed 10 g U-233, 3.57 GBq (96.5 mCi), or 300 g U-235, 24.0 MBq (648 µCi), or 0.5 g Pu-238, 316.4 GBq (8.55 Ci). The sums of such ratios shall not exceed unity.*
E. Transuranics Excluding Plutonium	E. Any	E. Total not to exceed 7.4 GBq (200 mCi).
F. Any radionuclide with atomic numbers 3-91 inclusive not listed above.	F. Any	F. Total not to exceed 185.0 GBq (5 Ci).
G. Cesium-137	G. Sealed source	G. Total not to exceed 1.1 MBq (30 µCi).
H. Depleted Uranium	H. Solid	H. Total not to exceed 2,268 kg (5,000 lb) or 42.0 GBq (1.134 Ci).

*See License Condition 18.

9. Authorized Use

A.-F. and H. To be used incidental to providing decontamination and decommissioning services, including delivery of radioactive material to a carrier for transport, transport of radioactive material, leak test of sources, removal of devices containing sealed sources from service, storage pending transfer for processing or disposal, interim storage of non-waste radioactive materials as a service (only at the Dunbrook Road facility in San Diego. Maximum storage time not to exceed 365 days), re-packaging or over-packing of materials when in damaged containers, internal survey and sample analysis, storage and maintenance of Philotechnics equipment between projects, and transfers to persons licensed to receive the material.

G. This sealed source is for use only in a liquid scintillation counter and for calibration and maintenance.

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10. Radioactive material shall be used only at the following approved locations:
- (a) Temporary job sites of the licensee in areas not under exclusive federal jurisdiction throughout the State of California (see Condition 19). *(All authorized uses except storage for decay)*
 - (b) 7945 Dunbrook Road, Suites H-I, San Diego, CA. *(All authorized uses)*
11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in Items 6, 7, 8 and 9 of this license. The annual fee for this license is required by and computed in accordance with Title 17, California Code of Regulations, Sections 30230-30232 and is also subject to an annual cost-of-living adjustment pursuant to Section 100425 of the California Health and Safety Code.
12. Radioactive material shall be used by, or under the supervision of, the following individuals:
- | | | |
|-----------------------|------------------------|------------------------|
| (a) Kenneth E. Gavlik | (e) James Reese, CHP | (i) Adam Austin |
| (b) Robert McIntosh | (f) Wesley James Stout | (j) Christopher Hughes |
| (c) Justin Button | (g) Michael E. Shields | (k) Kevin Banks |
| (d) Vicki L. Litton | (h) Laurence Casey | (l) Michael Otlowski |
13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with the statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- (a) The renewal application dated January 8, 2019, with attachments, signed by William H. Button, President, and letters dated August 1, 2022, and September 16, 2022, both with attachments, and both signed by James Reese, CHP, Radiation Safety Officer. The letter dated October 18, 2022, with attachments, from Brian W. Morris, General Counsel and Corporate Secretary, and three emails dated November 1, 2022, November 30, 2022, and December 7, 2022, all with attachments, and all from Brian W. Morris regarding ownership change and updated emergency contact list.
14. (a) The Radiation Safety Officer in this program shall be James Reese, CHP.
- (b) The Alternate Radiation Safety Officers in this program shall be Adam Austin and Michael Otlowski.
15. The licensee is authorized to perform tests for leakage and/or contamination of sealed sources. The following tests may be performed for sources possessed under this license and as a customer service:
- (a) Collection of wipe test samples from sealed sources and devices containing sealed sources.
 - (b) Furnishing leak test kits for sealed sources and devices containing sealed sources to customers authorized to use such leak test kits.
 - (c) Analysis of materials collected by the licensee as stated in (a) above and material returned by customers from leak test kits listed in (b) above for the amount of radioactivity. Reports to customers of analysis shall be in microcuries.
16. Records of leak test results shall be kept in units of becquerels (microcuries) and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 185 Bq (0.005 μ Ci) or more of removable radioactive material shall be reported to the California Department of Public Health, Radiologic Health Branch, MS 7610, PO Box 997414, Sacramento, CA 95899-7414, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.

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17. The licensee shall conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license. Records of the inventories shall be maintained for inspection and may be disposed of following Department inspection.
18. The total mass of special nuclear material possessed under this license at any one time or at any one authorized location of use shall not exceed that stated in the following formula: The number of grams of Uranium-235 divided by 350, plus the number of grams of Uranium-233 divided by 200, plus the number of grams of Plutonium (all isotopes) divided by 200, shall not exceed one (i.e., unity).
19. Before radioactive materials may be used at a temporary job site at any federal facility, the jurisdictional status of the job site must be determined. If the jurisdictional status is unknown, the federal agency should be contacted to determine if the job site is under exclusive federal jurisdiction. A response shall be obtained in writing or a record made of the name and title of the person at the federal agency who provided the determination and the date that it was provided. Authorization for use of radioactive materials at the job sites under exclusive federal jurisdiction shall be obtained either by:
 - (a) Filing an NRC Form-241 in accordance with the Code of Federal Regulations, Title 10, Part 150.20 (b), "Recognition of Agreement State Licenses", or
 - (b) By applying for a specific NRC license.Before radioactive material can be used at a temporary job site in another State, authorization shall be obtained from the State if it is an Agreement State, or from the NRC for any non-Agreement State, either by filing for reciprocity or applying for a specific license.
20. The licensee is authorized to hold radioactive materials with a physical half-life of less than or equal to 120 days for decay in storage before disposal in ordinary trash provided:
 - (a) Radioactive waste to be disposed of in this manner shall be held for decay in storage for at least 10 half-lives.
 - (b) Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
 - (c) Records shall be maintained of the disposal of licensed materials made by decay in storage. These records shall be sufficient to demonstrate compliance with this license condition and shall be retained for three years after the record is made.
 - (d) Generator columns shall be segregated so that they may be monitored separately to ensure decay to background levels prior to disposal.
21. The maximum period the licensee is authorized to store radioactive waste material is as follows:
 - (a) For solid material in non-combustible containers, 24 months.
 - (b) For solid material in combustible containers, six months.
 - (c) For absorbed liquid material and animal carcasses, 90 days.
22. *Notwithstanding the limitations specified by Condition 20 of this license, the licensee is authorized to store all forms of packaged waste for up to five (5) years from the date of receipt while an authorized waste site is not available to receive the waste. If an authorized waste site becomes available during the five year limit specified by this condition, the licensee must meet the requirements of Condition 21 within 90 days of availability of the waste site.*

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23. *The Radioactive Shipment Record, from each customer, shall be on file describing:*
- (a) *Total activity in millicuries, or in the case of source or special nuclear material, the total weight.*
 - (b) *The principal radioisotopes.*
 - (c) *The maximum radiation level at the surface of the container and at one meter from the source.*
 - (d) *The name and address of the licensee from whom the waste was received.*
 - (e) *The date of receipt of the package.*
 - (f) *Form of the radioactive material, specifically whether absorbed liquid, dry solid, animal carcasses or scintillation vials.*
 - (g) *Cataloging system (numbering or lettering) to be used for the accountability, and tracing of the radioactive material through the available documentation pertaining to the specifics of each container and generator.*
24. *The licensee shall, with respect to all radioactive waste collected for disposal at licensed land burial sites, establish and maintain a training program, written operating and radiation safety procedures, and quality assurance inspection and testing procedures which assure that:*
- (a) *All waste is properly segregated and identified with respect to those classes of waste being accepted for burial at the intended burial sites.*
 - (b) *Waste is properly packaged to conform to DOT regulations and specific packaging instructions for the class of waste being packed which are supplied by the broker or intended burial site operator and which are particular to the intended burial site.*
 - (c) *All containers are properly closed, meet DOT specifications, and are acceptable at the burial site for the class of waste contained.*
 - (d) *All containers are free of surface contamination per DOT regulations.*
 - (e) *Radiation levels conform to DOT limits.*
 - (f) *All containers are properly labeled per DOT regulations.*
 - (g) *All records, shipping papers, and certificates are complete and accurate.*
25. *The licensee shall not store more than 2,500 cubic feet of radioactive waste at any one time at its 7945 Dunbrook Road, Suites H-I, San Diego, CA location.*
26. *All radioactive waste shall be loaded and transported in accordance with all applicable U.S. Department of Transportation Regulations, U.S. Nuclear Regulatory Commission Regulations, state regulations, and the requirements of this license. Nothing in this license shall in any way relieve the licensee from full compliance with all applicable local, state, and federal laws and regulations.*
27. *The licensee shall report to the California Department of Public Health, Radiologic Health Branch, within 24 hours of identifying uncontrolled radioactive materials. The report shall include a description of the isotopes, quantities, and chemical and physical forms of the radioactive material, the exact location, and preventive action taken. A written report shall be submitted within seven (7) days of initial report to the California Department of Public Health, Radiologic Health Branch, MS 7610, P.O. Box 997414, Sacramento, CA 95899-7414.*

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28. At least 14 days before initiating activities at a temporary job site, including military or former military sites where the temporary job site is not under federal exclusive jurisdiction, the licensee shall notify, in writing, the California Department of Public Health, Radiologic Health Branch. The notification shall include the following information:
- Site-specific radiological procedures if they have not been previously approved by the Department of Public Health.
 - Estimated type, quantity, and physical/chemical forms of radioactive material.
 - Specification of the site location.
 - Description of project activities that are planned for the site, including management and disposition of radioactive material.
 - Estimated project start date and duration of project.
 - Name, address, title, and phone number of a point of contact for the person managing radiological operations at the temporary job site.

Within 30 days of completing activities at each job site, the licensee shall notify, in writing, the California Department of Public Health, Radiologic Health Branch, regarding the radiological status of the temporary job site and the disposition of any licensed radioactive material.

29. This license does not authorize the use of licensed material at temporary job sites for uses already specifically authorized by a customer's license. If a customer also holds a license issued by the NRC or an Agreement State, the licensee shall establish a written agreement between the licensee and the customer specifying which licensee activities shall be performed under the customer's license and supervision, and which licensee activities shall be performed under the licensee's supervision pursuant to this license. The agreement shall include a commitment by the licensee and the customer to ensure safety, and any commitments by the licensee to help the customer clean up the temporary job site if there is an accident. A copy of this agreement shall be included in the notification required by License Condition 28.
30. The licensee shall maintain records of information important to decommissioning each temporary job site at the applicable job site pursuant to Title 17, California Code of Regulations, section 30256. The records shall be made available to the Department for inspection and to the customer upon request during decommissioning activities and shall be transferred to the customer for retention at the completion of activities at a temporary job site.
31. In accordance with the California Code of Regulations Title 17, Section 30195.1, the licensee shall maintain an acceptable financial instrument in the amount of \$139,973.00 that satisfies the requirements outlined in the letter dated September 9, 2021, with attached decommissioning cost estimate supplement dated August 2019.
32. In accordance with California Health and Safety Code Section 115000.1(h), the licensee shall annually report the radioactive waste inventory held in storage on December 31 of each year and all manifests of Low Level Radioactive Waste (LLRW) shipments to licensed LLRW disposal facilities made during the year to the Department via the online LLRW Tracking System at <https://llrwts.cdph.ca.gov/>.
33. At least 30 days prior to vacating any address of use listed in Condition 10 of this license, the licensee shall provide written notification of intent to vacate to the California Department of Public Health, in accordance with Title 17, California Code of Regulations, Section 30256 (b). Control of all licensed areas must be maintained until such areas are released by the Department for unrestricted use or the license is terminated, in accordance with Title 17, California Code of Regulations, Section 30256 (j).

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34. A copy of this license and a copy of all records and documents pertaining to this license shall be maintained available for inspection at 7945 Dunbrook Road, Suites H-I, San Diego, CA.

Issued for the State of California Department of Public Health

Date: January 9, 2023

By: 

Radiologic Health Branch
MS 7610, P.O. Box 997414
Sacramento, CA 95899-7414