



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

April 16, 2003

Hawaii Agriculture Research Center
ATTN: Stephanie A. Whalen
President and Director
99-193 Aiea Heights Drive, Suite 300
Aiea, HI 96701-3911

SUBJECT: LICENSE AMENDMENT

Please find enclosed Amendment No. 62 to License No. 53-00515-01. You should review this license carefully and be sure that you understand all conditions. If you have any questions, please contact me at 817-860-8252.

NRC expects licensees to conduct their programs with meticulous attention to detail and a high standard of compliance. Because of the serious consequences to employees and the public that can result from failure to comply with NRC requirements, you must conduct your radiation safety program according to the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate by NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Notify NRC in writing of any change in mailing address.
3. By 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:
 - a. When you decide to terminate all activities involving materials authorized under the license; or
 - b. If you decide not to complete the facility, acquire equipment, or possess and use authorized material.
4. Request and obtain a license amendment before you:
 - a. Change Radiation Safety Officers;
 - b. Order byproduct material more than the amount or form authorized on the license;
 - c. Add or change the areas or address(es) of use identified in the license application or on the license; or
 - d. Change the name or ownership of your organization.

5. Submit a complete renewal application or termination request at least 30 days before the expiration date on your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.

In addition, please note that NRC Form 313 requires the applicant, by signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant.

NRC will periodically inspect your radiation safety program. Failure to conduct your program according to NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC may result in enforcement action against you. This could include issuance of a notice of violation; imposition of a civil penalty; or an order suspending, modifying, or revoking your license as specified in the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG 1600.

Thank you for your cooperation.

Sincerely,

/RA/

Anthony D. Gaines, Health Physicist
Nuclear Materials Licensing Branch

Docket: 030-06839
License: 53-00515-01
Control: 469509

Enclosure: As stated

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, 36, 39, 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 February 7, 2003
1. Hawaii Agriculture Research Center	3. License number 53-00515-01 is amended in its entirety to read as follows:
2. 99-193 Aiea Heights Drive, Suite 300 Aiea, Hawaii 96701-3911	4. Expiration date April 30, 2005
	5. Docket No. 030-06839 Reference No.

- | | | |
|---|---|--|
| 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. Phosphorus-32 | A. Any | A. 50 millicuries |
| B. Phosphorus-33 | B. Any | B. 30 millicuries |
| C. Carbon-14 | C. Any | C. 60 millicuries |
| D. Hydrogen-3 | D. Any | D. 100 millicuries |
| E. Sulfur-35 | E. Any | E. 29 millicuries |
| F. Chromium-51 | F. Any | F. 10 millicuries |
| G. Nickel-63 | G. Foil in Tracor Model
111019-0001 detector cells | G. Not to exceed 15 millicuries
per foil |

9. Authorized use

- A. through F. For use in conducting tracer studies in plants and soils. Laboratory analysis of samples.
- G. For use in gas chromatographs for sample analysis.

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 99-193 Aiea Heights Drive; Aiea, Hawaii and at the Kunia Substation; Kunia Road; Waipahu, Hawaii.
11. Licensed material shall be used by, or under the supervision and in the physical presence of, individuals who have been trained as specified in application dated October 31, 1994, and who have been designated by the Radiation Safety Officer.
12. The Radiation Safety Officer for this license is Mel C. Jackson, Ph.D.

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13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Sealed sources need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, 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 or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- E. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30(b)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, ATTN: Director, Division of Radiation Safety and Safeguards. The report shall specify the source involved, the test results, and corrective action taken.
- F. The licensee is authorized to collect leak test samples for analysis by Gamma Corporation. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
14. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

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15. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
16. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.
17. The licensee is authorized to transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
18. The licensee is authorized to hold radioactive material with a physical half-life of less than 90 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 a minimum of 10 half-lives.
 - B. Before disposal as ordinary trash, byproduct material shall be surveyed at the container surface with the appropriate meter 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.
 - C. A record of each disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in 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.
19. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
20. In accordance with 10 CFR 20.2002, the licensee is hereby authorized to release to unrestricted areas twenty, 55-gallon drums of soil, previously contaminated with nine millicuries of carbon-14, after following the procedure detailed in a letter dated October 28, 1996 from Gamma Corporation and verifying that the remaining concentrations are less than 12.5 picocuries per gram of material.

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21. Except as specifically provided otherwise in this license, the licensee 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 licensee's application and correspondence are more restrictive than the regulations.

- A. Letter dated August 25, 1994
- B. Application dated October 31, 1994 except Item 10, Section K., "Waste Management" Number 6, regarding the release of plants and soils to unrestricted areas
- C. Letter dated November 8, 1994
- D. Letter dated November 22, 1994
- E. Letter dated December 20, 1994
- F. Letter dated December 27, 1994 except Item 10, Section K., "Waste Management", Number 6 regarding the release of plants and soils to unrestricted areas
- G. Letter dated March 31, 1995
- H. Letter dated July 26, 1996
- I. Letter dated October 3, 1996
- J. Letter from Gamma Corporation dated October 28, 1996
- K. Application dated June 14, 2000
- L. Letter dated June 4, 2001
- M. Letter dated February 7, 2003

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Date April 16, 2003

By

Anthony D. Gaines, Health Physicist
Nuclear Materials Licensing Branch
Region IV
Arlington, Texas 76011