



Safety Office
P.O. Box 3413
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Laramie, Wyoming 82071-3413
(307) 766-3277

April 7, 1993

License No.: 49-09955-10
Docket No.: 030-01776
Control No.: 463146

United States Nuclear Regulatory Commission
Nuclear Materials Licensing Section
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-8064

Attn: Jack E. Whitten

Dear Jack;

This letter is in response to the communication package you sent to us February 4, 1993 regarding our application for license renewal dated June 25, 1990 and the ammendment request dated November 5, 1992. In the document that follows, we have provided the highlighted information requested in the CHECKLIST FOR REVIEW OF APPLICATIONS FOR BROAD-SCOPE LICENSES, in accordance with the DRAFT WORKING PAPER FOR THE PREPARATION OF APPLICATIONS FOR LICENSES OF BROAD SCOPE, and other documents provided. Included as appendices to our reply are copies of updated versions of the Radiation Safety Manual and other guidance documents.

Attached separately is an addition to the license renewal application for the use of up to 2 mCi of tritium in a lactation study of pronghorn antelope. The antelope have been bred, and the study will need to begin in late May or early June. In a March 9 phone conversation with Jim Herrold you indicated that the fastest way to expedite the ammendment for the remote site would be to include it in the license renewal application. However, if it appears that the license renewal will delay the approval of the pronghorn study, we request that you review it separate from the renewal so that the research is not hindered.

Sincerely Yours,

A handwritten signature in cursive script that reads 'John E. Doerges'.

John E. Doerges
Radiation Safety Officer

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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, 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.

<p>Licensee</p> <ol style="list-style-type: none"> University of Wyoming Radiological Safety Office Mercia Hall, Room 312 P.O. Box 3413 Laramie, Wyoming 82701 	<p>In accordance with application dated June 25, 1990</p> <ol style="list-style-type: none"> License number 49-09955-10 is amended in its entirety to read as follows: Expiration date June 30, 1998 Docket or Reference No 030-01176
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<p>6. Byproduct, source, and/or special nuclear material</p> <ol style="list-style-type: none"> Any byproduct material with Atomic Numbers 3 through 83, inclusive Any byproduct material with Atomic Numbers 3 through 83, inclusive Hydrogen-3 Americium-241 Americium-241 Californium-252 Polonium-210 Plutonium-239 	<p>7. Chemical and/or physical form</p> <ol style="list-style-type: none"> Sealed sources Any, except as sealed sources Any Sealed sources Any, except as sealed sources Sealed sources Sealed sources Encapsulated as Pu-Be neutron sources 	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <ol style="list-style-type: none"> Not to exceed 2 curies per radionuclide and 20 curies total Not to exceed 1 curie per radionuclide and 20 curies total 5 curies 5 curies 0.1 millicurie 100 millicuries 100 millicuries 32 grams total (two sealed sources containing up to 16 grams of Pu-239)
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**MATERIALS LICENSE
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9. Authorized use

- A. through G. Research and development as defined in 10 CFR 30.4 and academic instruction.

CONDITIONS

10. Licensed material shall be used only at The University of Wyoming, Laramie, Wyoming, except as specifically authorized below:
- A. Up to 30 millicuries of cobalt-60 and 1 millicurie of cesium-137 as sealed sources may be used anywhere in the State of Wyoming?
 - B. Sealed sources associated with or incorporated into measuring instruments for field experiments and projects may be used anywhere in the State of Wyoming provided such use is approved by the Radiation Safety Committee.
11. A. Licensed material shall be used by, or under the supervision of, individuals designated by the University of Wyoming's Radiation Safety Committee.
- B. The Radiation Safety Officer for this license is Jim Herrold.
12. Each sealed source containing licensed material to be used outside of a shielded exposure device shall have a durable, legible, and visible tag permanently attached by a durable ring. The tag shall be at least 1 inch square, shall bear a conventional radiation symbol prescribed in 10 CFR 20.203(a) and a minimum of the following instructions: DANGER - RADIOACTIVE MATERIAL - DO NOT HANDLE - NOTIFY CIVIL AUTHORITIES IF FOUND.
13. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents the foil temperature from exceeding that specified by the manufacturer and approved by U.S. Nuclear Regulatory Commission.
14. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in 10 CFR 20.203(a)(1), the licensee is hereby authorized to label detector cells, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols.
15. Sealed sources shall not be opened by the licensee.
16. Licensed material shall not be used in or on human beings.

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17. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
18. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
19.
 - 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 and detector cells 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. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
 - E. 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.

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19. (Continued)

- F. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. 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 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. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- G. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to Perform such services.
20. 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."
21. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 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 3 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.

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22. The licensee shall not store licensed material contained in waste for more than 2 years from the date the waste is put into storage. The licensee shall maintain records which indicate the date that licensed material contained in waste is put into storage.
23. This license does not authorize commercial distribution of licensed material.
24. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the quantities and kinds of byproduct material, manufacturer's name and model numbers, location of the sources and/or devices, and the date of the inventory.
25. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport, storage, or when not under the direct surveillance of an authorized user.
26. In addition to the possession limits in Condition 8, the licensee shall further restrict the possession of unsealed licensed material to quantities less than 10^4 time the applicable limits in Appendix C of 10 CFR Part 20, as specified in 10 CFR 30.35(d).
27. The licensee shall maintain records of information related to decommissioning at University of Wyoming, Radiological Safety Office, Mercia Hall, Room 312, Laramie, Wyoming as specified in 10 CFR 30.35(g) until this license is terminated by the Commission.

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28. 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 U.S. 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. Application dated June 25, 1990
- B. Letter dated June 26, 1990
- C. Letter dated July 27, 1990
- D. Letter dated March 12, 1992
- E. Letter dated November 5, 1992
- F. Letter dated April 7, 1993
- G. Letter dated June 8, 1993

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Original Signed By
Jack E. Whitten

Date JUN 22 1993

By Nuclear Materials Licensing Section
Region IV
Arlington, Texas 76011