

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.

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| Licensee | | |
| 1. Alpha-Omega Geotech, Inc. | 3. License number | 15-23181-01 |
| 2. P. O. Box 6347 Kansas City, Kansas 66106 | 4. Expiration date | July 31, 1990 |
| | 5. Docket or Reference No. | 030-28681 |
| 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. Cesium-137 | A. Sealed sources (Troxler Dwg. No. A-102112) | A. Not to exceed 10 millicuries per source |
| B. Americium-241 | B. Sealed neutron sources (Troxler Dwg. No. A-102451) | B. Not to exceed 50 millicuries per source |
| 9. Authorized use | | |
| A. and B. For use in Troxler Model 3400 Series moisture/density gauges for measurement of properties of materials. | | |

CONDITIONS

10. Licensed material may be used at temporary job sites of the licensee anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.

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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 and in the physical presence of individuals who have completed the Troxler training course in the use of the devices and have been designated by Patricia E. Teeter, Radiation Safety Officer.
13. A. (1) Each sealed source containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed 6 months. In the absence of a certificate from a transferor indicating that a test has been made within 6 months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
(2) 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 6 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 5 days of the test with the U. S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Dr., Suite 1000, Arlington, Texas 76011, describing the equipment involved, the test results, and the corrective action taken.

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13. (continued)

- D. The licensee is authorized to collect leak test samples in accordance with the procedures described in the licensee's application dated May 1, 1985, for analysis by Troxler. Alternatively, leak test samples may be collected and/or analyzed by other persons specifically authorized by the Commission or an Agreement State to perform such services.
14. Sealed sources containing licensed material shall not be opened or removed from moisture/density gauges by the licensee.
15. Maintenance or repair of portable devices involving removal of the sealed sources from the devices or removal or dismantling of shielding may be performed only by the device manufacturer or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
16. The licensee shall conduct a physical inventory every 6 months to account for all sealed sources received and possessed under the license. The records of the inventories shall be maintained for 2 years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material, manufacturers' names and model numbers, location of sealed sources and the date of the inventory.
17. 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 and Transportation of Radioactive Material."
18. 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 May 1, 1985, and letter dated June 24, 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.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Original Signed By
Jack E. Whitten

Date

JUL 25 1985

By

Nuclear Materials Safety Section
Region IV
Arlington, Texas 76011

Official Record Copy

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