

MATERIALS LICENSE

Amendment No. 08

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.

**"OFFICIAL RECORD COPY"**

Licensee

1. Department of the Interior  
Geological Survey  
Water Resources Division
2. New York District  
5 Aerial Way  
Syosset, New York 11791

In accordance with application dated  
August 14, 1984  
3. License number 31-13026-01 is amended in its  
entirety to read as follows:

4. Expiration date July 31, 1990

5. Docket or  
Reference No. 030-05582

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. Americium 241

A. Sealed neutron sources  
(Parkvill Laboratories  
Model PL-AmBe)

A. 2 sources not to exceed  
100 millicuries each

B. Americium 241

B. Sealed neutron source  
(Gammatron, Inc. Model  
AN-HP)

B. 1 source not to exceed  
250 millicuries

C. Cesium 137

C. Sealed source (New  
England Nuclear Model  
571)

C. 1 source not to exceed  
100 millicuries

9. Authorized use

A. and B. For use in well logging probes for soil moisture measurements above the water table.

C. For storage only.

CONDITIONS

10. Licensed material may be stored at 235 B Robbins Lane or 5 Aerial Way, Syosset, New York, and may be used at Geological Survey field sites throughout the State of New York.
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."

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**MATERIALS LICENSE**  
**SUPPLEMENTARY SHEET**

License number

31-13026-01

Docket or Reference number

030-05582

Amendment No. 08

(continued)

**CONDITIONS**

12. Licensed material shall be used by, or under the supervision and in the physical presence of, Anthony A. Giaimo, or James Nakao.
13. A. (1) Each sealed source containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six 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 six 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 I, 631 Park Avenue, King of Prussia, Pennsylvania 19406, describing the equipment involved, the test results, and the corrective action taken.
- D. The licensee is authorized to collect leak test samples in accordance with the procedures described in the licensee's letter dated April 1, 1985 for analysis by Mr. Patrick F. Panetta. 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.
15. The licensee shall report by telephone within 24 hours to the nearest U. S. Nuclear Regulatory Commission Office of Inspection and Enforcement the loss or potential abandonment down-hole of any sealed source containing licensed material. In addition, a written report shall be submitted within 30 days for the lost or abandoned source which shall include information regarding isotope, amount, location, depth, method of immobilization, sealing, placarding, and notations to be placed in public records.

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SUPPLEMENTARY SHEET**

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(continued)

**CONDITIONS**

16. Each source holder and logging tool containing radioactive material shall bear a legible and visible marking. The marking shall bear the conventional radiation symbol and the following wording: DANGER - RADIOACTIVE - DO NOT HANDLE - NOTIFY CIVIL AUTHORITIES.
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 of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions."
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 October 20, 1978; application received April 25, 1979; letter with enclosure dated June 5, 1979; letters dated June 21, 1983, August 14, 1984, November 13, 1984, January 18, 1985 and April 1, 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 Davis

By

Nuclear Materials Safety and  
Safeguards Branch, Region I  
King of Prussia, Pennsylvania 19406

Date JUL 05 1985