

U.S. NUCLEAR REGULATORY COMMISSION

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.

<p style="text-align: center;">Licensee</p> <p>1. Geo-Engineering, LLC</p> <p>2. P.O. Box 270328 San Juan, Puerto Rico 00927-0328</p>	<p>In accordance with the letter dated February 19, 2013,</p> <p>3. License number 52-25266-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date January 31, 2014</p> <hr/> <p>5. Docket No. 030-33265 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Cesium 137</p> <p>B. Americium 241</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed Sources (CPN Model CPN-131; QSA Global Model CDC.805; Isotope Products Laboratories Model HEG-137; Humboldt Scientific, Inc. Dwg. 2200064-1)</p> <p>B. Sealed Sources (CPN Model CPN-131; QSA Global Model AMN.V997; Isotope Products Laboratories Model Am1.N02; Humboldt Scientific, Inc. Dwg. 2200067)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 110 millicuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear regulatory Commission or an Agreement State</p> <p>B. 500 millicuries total and no single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear regulatory Commission or an Agreement State</p>
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9. Authorized use:

A. and B. In CPN International, Inc., Model No. MC Series; and Humboldt Scientific, Inc. Model 5001 portable gauging devices for measuring physical properties of materials.

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CONDITIONS

10. Licensed material may be used or stored at the licensee's facilities located at Urb. Reparto Landrau, Carr. 21 #1413, San Juan, Puerto Rico and 1223 7th Street, Ext. San Agustin, Rio Piedras, Puerto Rico, and 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, including areas of exclusive Federal jurisdiction within Agreement States.
- If the jurisdiction status of a Federal facility within an Agreement State is unknown, the licensee should contact the Federal agency controlling the job site in question to determine whether the proposed job site is an area of exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites in Agreement States not under exclusive Federal jurisdiction shall be obtained from the appropriate state regulatory agency.
11. Licensed material shall be used by, or under the supervision and in the physical presence of individuals who have received the training described in the licensee's standard operating and emergency procedures and satisfactorily completed a portable gauge manufacturer's course for users or an equivalent course that meets to criteria of Appendix D, NUREG 1556 Vol. 1, Rev. 1, dated November 2001. The licensee shall maintain records of individuals designated as users for three years following the last use of licensed material by the individual
12. The Radiation Safety Officer for this license is Carlos E. Rodriguez-Pérez, Ph.D., P.E.
13. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months or at the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
- B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- C. Sealed sources need not be tested if they 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 shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

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- D. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- E. Tests for leakage and/or contamination, limited to leak test sample collection, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is not authorized to perform the analysis; analysis of leak test samples must be performed by persons specifically licensed by U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- F. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.
14. Sealed sources or source rods containing licensed material shall not be opened or sources removed or detached from source rods or gauges by the licensee, except as specifically authorized.
15. The licensee shall conduct a physical inventory every six months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, 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 radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
16. 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 or storage, or when not under the direct surveillance of an authorized user.
17. Any cleaning, maintenance, or repair of the gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
18. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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19. 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 August 29, 2003 (ML032170585)
 - B. Facsimile dated October 23, 2003 (ML040340547)
 - C. Facsimile dated August 23, 2005 (ML052370149)
 - D. Facsimile dated March 17, 2010 (ML100820272)
 - E. Facsimile dated March 25, 2010 (ML100880310)



For the U.S. Nuclear Regulatory Commission

Date February 20, 2013

By

Original signed by Sattar Lodhi, Ph.D.Sattar Lodhi, Ph.D.
Materials Security and Industrial Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406