

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); and to import such byproduct and source material. 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 May 1, 1985	
1.	Seismograph Service Corp.	3.	License number 35-05651-01 is amended in its entirety to read as follows:
2.	6200 E. 41st Street P.O. Box 1590 Tulsa, Oklahoma 74102	4.	Expiration date October 31, 1989
		5.	Docket or Reference No. 030-05914
6.	Byproduct, source, and/or special nuclear material	7.	Chemical and/or physical form
A.	Lanthanum-140	A.	Any
B.	Barium-140/ Lanthanum-140	B.	Any
C.	Scandium-46	C.	Any
D.	Iodine-131	D.	Any
E.	Antimony-124	E.	Any
F.	Iridium-192	F.	Any
G.	Bromine-82	G.	Any
H.	Americium-241	H.	Sealed sources (Gammatron Model AN-HP or Amersham Model AMN CYN Series)
		8.	Maximum amount that licensee may possess at any one time under this license
		A.	500 millicuries
		B.	500 millicuries
		C.	500 millicuries
		D.	500 millicuries
		E.	1 curie
		F.	1 curie
		G.	1 curie
		H.	Not to exceed 20 curies per source

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- | | | |
|------------------|---|---|
| I. Americium-241 | I. Sealed sources
(Parkwell Laboratories
Model PL-AmBe) | I. Not to exceed
10 curies per
source |
| J. Cesium-137 | J. Sealed sources
(New England Nuclear
Model 572) | J. Not to exceed
25 curies per
source |
| K. Cesium-137 | K. Sealed sources
(Gamma Industries
Model VD(HP)) | K. Not to exceed
20 curies per
source |
| L. Cesium-137 | L. Sealed sources
(Gulf Nuclear
Model CSV) | L. Not to exceed
10 curies per
source |
| M. Cesium-137 | M. Sealed sources
(Gamma Industries
Model RC-1(HP)) | M. Not to exceed
5 curies per
source |
| N. Cesium-137 | N. Sealed sources
(Amersham Model
CDC.CYN Series) | N. Not to exceed
3 curies per
source |
| O. Cesium-137 | O. Sealed sources
(Gammatron Model
GT-GHP and GT-G;
or Isotope Specialities
Model C-0037) | O. Not to exceed
1 curie per
source |
| P. Cobalt-60 | P. Sealed sources
(Gammatron Models
GT-GHP) | P. Not to exceed
1 curie per
source |

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- | | | |
|-----------------|---|---|
| Q. Cobalt-60 | Q. Sealed sources
(Gamma Industries
Model VD(HP)) | Q. Not to exceed
20 curies per
source |
| R. Cobalt-60 | R. Sealed sources
(Amersham Model
CKC.800 Series) | R. Not to exceed
5 curies per
source |
| S. Cobalt-60 | S. Sealed sources
(ICN Pharmaceutical
Model 3146) | S. Not to exceed
100 millicuries
per source |
| T. Strontium-90 | T. Sealed sources | T. Not to exceed
10 microcuries
per source |

9. Authorized use

- A. through G. For incorporation into plastic heads and fracturing materials for oil and gas well studies; for use in studies in oil and gas wells and in pipelines between oil and gas wells; for use in industrial fluid tracing studies; and in industrial cleanout pig tracing.
- H. through S. For use in oil, water, and gas well logging; rock mechanic studies in construction applications; geophysical exploration borehole logging; and for instrument calibration.
- T. For use as calibration sources in radiation survey meters.

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CONDITIONS

10. Licensed material shall be used only at Seismograph Service Corp., 6200 E. 41st Street, Tulsa, Oklahoma.
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 training program outlined in application dated April 4, 1983, and have been designated by Bill Fry, Radiation Protection Officer.
13. A. (1) Each sealed source containing licensed material, other than hydrogen-3, with a half-life greater than 30 days and in any form other than gas 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) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.

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- (3) 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.
- D. The licensee is authorized to collect and analyze leak test samples in accordance with the procedures described in the licensee's application dated April 4, 1984. 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 regional office 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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16. 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."
17. 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 April 4, 1983, and letters dated September 13, 1984, and May 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.

Date JUN 26 1985

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Original Signed By
By Jack E. Whitten
Nuclear Materials Safety Section
Region IV
Arlington, Texas 76011

Initial Record Copy

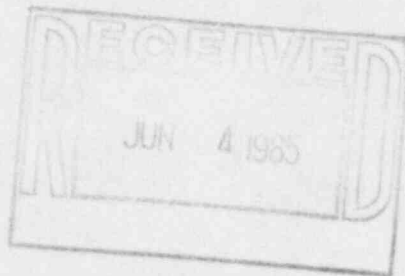
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UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011



BETWEEN: William O. Miller, Chief
License Fee Management Branch
Office of Administration

R. J. Everett, Chief
Material Radiation Protection Section, TPB,
DV&TP, RIV

LICENSEE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee:

Application Dated:

Control No.:

License No.:

Seismograph Serv. Corp.
May. 1, 1985
460639
35-05651-01 (030-05914)

2. FEE ATTACHED

Amount:

Check No.:

3. COMMENTS

Signed _____

Date _____

Signed Laura Hurley
Date May 20, 1985

B. LICENSEE FEE MANAGEMENT BRANCH

1. Fee Category and Amount:

2. Correct Fee Paid. Application may be processed for:

Amendment

Renewal

License

Signed

Date _____

5A - no fee due - mailing
n may be processed for: address
change only

Signed B Jackson
Date 5/30/85

Unacc.