

## MATERIALS LICENSE

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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 1, Parts 30, 31, 32, 33, 34, 35, 36, 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

Mid States Logging &amp; Perforating Co.

1013 W. Main Street  
Olney, Illinois 62450

3. License number 12-19905-01

4. Expiration date July 31, 1987

5. Docket or  
Reference No.6. Byproduct, source, and/or  
special nuclear material7. Chemical and/or physical  
form8. Maximum amount that licensee  
may possess at any one time  
under this license

A. Americium 241

A. Sealed neutron source  
(Gulf Nuclear Model 71-1)A. Not to exceed 5  
curies per source

B. Cesium 137

B. Sealed source (Gulf  
Nuclear Model CSV)B. Not to exceed 2  
curies per source

C. Iodine 131

C. Any

C. 25 millicuries

D. Iridium 192

D. Any

D. 25 millicuries

9. Authorized use

A. and B. Logging of oil and gas wells.

C. and D. Tracer studies in oil and gas wells.

## CONDITIONS

10. Licensed material may be used at 1013 W. Main Street, Olney, Illinois and 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.

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  
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License number

12-19985-01

Docket or Reference number

## CONDITIONS

12. Licensed material shall be used by, or under the supervision and in the physical presence of, Aaron P. Settles, Carl Harbhartt, or Mark McDaniel.
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 five (5) days of the test with the U. S. Nuclear Regulatory Commission, Region III, Office of Inspection and Enforcement, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, describing the equipment involved, the test results, and the corrective action taken.
- D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

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License number

12-19925-01

Docket or Reference number

## CONDITIONS

14. Sealed sources containing licensed material shall not be opened.
15. The licensee shall conduct a physical inventory every six (6) months to account for all sealed sources received and possessed under the license. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material, location of sealed sources, and the date of the inventory.
16. 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.
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 applications dated April 25, 1982, July 11, 1982, and December 15, 1981 with enclosures thereto. 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

~~Stephen W. Bell~~By SCB Material Licensing Branch

Division of Fuel Cycle and

Material Safety

Washington, D. C. 20555

NOV 02 1982

Date \_\_\_\_\_

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MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License number

12-19985-01

Docket or Reference number

20-19552

Amendment No. 01

Mid-States Logging & Perforating Co.  
Rt. 45 N., Box 39  
Fairfield, IL 62837

In accordance with letters (2), dated May 3, 1984 (received May 7 and May 24, 1984), License Number 12-19985-01 is amended to read:

Item 2 (Address) is changed from 1013 W. Main Street, Olney, Illinois 62450 to Rt. 45 N., Box 39, Fairfield, Illinois 62837.

Items 6.A., 6.B., 7.A., 7.B., 8.A., and 8.B. are amended to read:

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 (Gulf Nuclear Model No. 71-1 and Gammatron, Inc. Model No. AN-HP)	A. Not to exceed 5 curies per source
B. Cesium-137	B. Sealed sources (Gulf Nuclear Model Nos. CSV and VL-1)	B. Not to exceed 2 curies per source

Conditions 10., 12., 14., and 18. are amended to read:

10. Licensed material may be used and stored at Rt. 45 N., Box 39, Fairfield, Illinois and Rt 130 N. Albion, Illinois and 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.

12. Licensed material shall be used by, or under the supervision and in the physical presence of, the following individuals for the materials and uses indicated:

Aaron P. Settles	Americium-241, cesium-137, iodine-131, iridium-192
Donald A. Gherardini	Americium-241, cesium-137, iodine-131, iridium-192
Ed Beyers	Americium-241, cesium-137, iodine-131, iridium-192

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**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number

12-19985-01

Docket or Reference number

Amendment No. 01

Tony A. Keylon

Americium-241, cesium-137, iodine-131,  
iridium-192

Steven C. Daley

Americium-241, cesium-137

14. Sealed sources containing licensed material shall not be opened or removed from their source holders, source assemblies, or pressure vessels by the licensee.
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 applications dated April 25, 1982, July 11, 1982, and December 15, 1981 with enclosures thereto; and letters dated May 3, 1984 (received May 24, 1984), except Larry Oliver as Radiation Safety Officer. 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.

Condition 19. is added:

19. The licensee shall ensure that all authorized users are instructed in its operating and emergency procedures prior to initiating work with radioactive materials listed on the license and on a refresher basis.

For the U.S. Nuclear Regulatory Commission

Date June 1, 1984

Original Signed  
By Bruce S. Mallett  
Materials Licensing Section, Region III

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