

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.

Licensee		
1. Aluminum Company of America	3. License number	14-20644-02
2. P.O. Box 3567 U.S. Highway 67 Riverdale, IA 52808	4. Expiration date	November 30, 1988
	5. Docket or Reference No.	030-18712
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. Strontium-90	A. Sealed sources	A. See Subitem 9.A.
B. Americium-241	B. Sealed sources	B. See Subitem 9.B.
C. Strontium-90	C. Sealed sources (AccuRay Model S-16)	C. Not to exceed 1 curie per source
D. Krypton-85	D. Sealed sources (FIFE Model KAC/4)	D. Not to exceed 100 millicuries per source
E. Cesium-137	E. Sealed sources (Troxler Dwg. No. A-100281, Rev. B)	E. Not to exceed 10 millicuries per source
F. Americium-241	F. Sealed sources (Troxler Dwg. No. A-100600, Rev. B; formerly A-100281, Rev. B)	F. Not to exceed 50 millicuries per source
G. Americium-241	G. Sealed sources (Amersham Model No. AMC.50)	G. Not to exceed 5 curies per source and 25 curies per gauging devices
9. Authorized Use		
A. and B. For possession and use in AccuRay Corporation devices which have been evaluated and approved for licensing purposes and authorized for distribution under a license issued by the Nuclear Regulatory Commission or an Agreement State.		

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9. Authorized Use (cont'd)

- C. For use in AccuRay Corporation Model U-3 beta gauges modified as described in license application dated May 18, 1977, and in Alcoa custom-made "C-frame" as described in licensee's application dated July 18, 1978, for measuring the thickness of aluminum.
- D. For use in FIFE Series 8600, Type NS601 source holders to measure thickness of materials.
- E. and F. For use in Troxler Models 2401, 2402, 2451, and 2452 gauges for moisture/density measurements.
- G. For use in a modified Model 5221 profile thickness gauge custom built for the licensee by Isotopen Messsysteme GmbH in accordance with letter dated April 23, 1985 and NRC Sealed Sources and Devices Registry No. NR-117-D-102-S.

CONDITIONS

- 10. Licensed material shall be used only 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. Licensed material shall be used by, or under the supervision of, Stephen C. Smith, J.G. Funk, D.E. Culp, or R.W. Renner except that licensed materials specified in Subitems 9.E. and 9.F. above shall be used by, or under the supervision and in the physical presence of employees who have successfully completed the Troxler training course in the safe use of the portable gauges.
- 12. A. (1) The source(s) specified in Item(s) 7.A. through G. shall be tested for leakage and/or contamination at intervals not to exceed 6 months. Any source received from another person which is not accompanied by a certificate indicating that a test was performed within 6 months before the transfer 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.
- B. Any source in storage and not being used need not be tested. When the source is removed from storage for use or transfer to another persons, it shall be tested before use or transfer.

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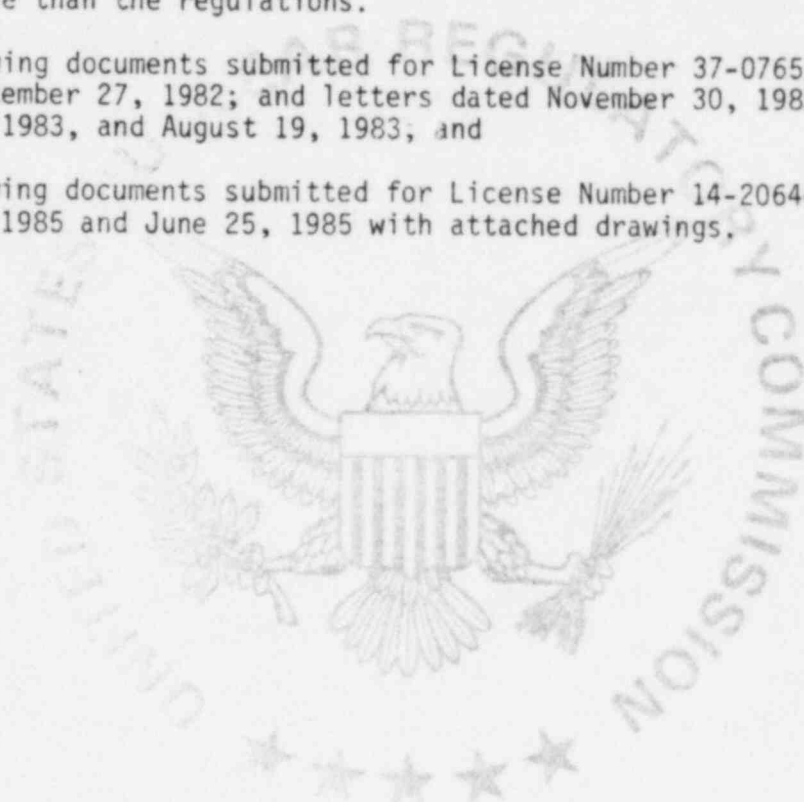
- C. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more to removable contamination, the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, ATTN: Chief, Nuclear Materials Safety and Safeguards Branch. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to perform such services.
13. Sealed sources containing licensed material shall not be opened or removed from the devices by the licensee.
14. A. Installation, relocation, maintenance, repair, and initial radiation survey of devices containing licensed material listed in Subitems 9.A., 9.B., 9.C., and 9.D. shall be performed only by Stephen C. Smith, J.G. Funk, D.E. Culp, the device manufacturer, or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
- B. Installation, relocation, maintenance, repair, and initial radiation survey of devices containing licensed material listed in Subitem 9.G. shall be performed only by the device manufacturer, or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
- C. Installation, replacement, and disposal of sealed sources containing licensed material used in devices shall be performed only by the device manufacturer or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
15. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 2 years from the date of each inventory.
16. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material".
17. After installation of devices containing licensed material listed in Subitem 9.G. and prior to use, a survey shall be conducted to determine radiation levels around the devices with beam shutters in both the open and closed positions. The licensee shall use the results of the survey to determine the need for personnel monitoring devices, caution signs, labels, and other controls appropriate to the installation which will insure compliance with the requirements of 10 CFR 20.202 and 10 CFR 20.203.

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18. All records required by conditions of this license and/or Nuclear Regulatory regulations shall be maintained at the license's permanent address at P.O. Box 3567, U.S. Highway 67, Riverdale, Iowa.
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 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. The following documents submitted for License Number 37-07653-03; application dated September 27, 1982; and letters dated November 30, 1982, January 7, 1983, March 17, 1983, and August 19, 1983; and
- B. The following documents submitted for License Number 14-20644-01; letters dated April 23, 1985 and June 25, 1985 with attached drawings.



For the U.S. Nuclear Regulatory Commission

Date DEC 26 1985

Original Signed
By Patricia J. Whiston
Materials Licensing Section, Region III

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