

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.

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| Licensee | | |
| 1. National Starch & Chemical Corporation | 3. License number | 12-24475-01 |
| 2. Box 197 Meredosia, IL 62665 | 4. Expiration date | May 31, 1990 |
| | 5. Docket or Reference No. | 030-18658 |
| 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. Cesium-137 | A. Sealed sources (Ohmart Model A-2102 or 3M Model 4F65) | A. Five sources not to exceed 500 millicuries |
| 9. Authorized Use | | |
| A. To be used in Ohmart Model SHD source holder in conjunction with Level Art Series Gauging system for measurement of levels of processed materials. | | |

CONDITIONS

10. Licensed material shall be used only at South Washington Street, Meredosia, Illinois.
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. A. Licensed material shall be used by or under the supervision of individuals who have been trained in the use of the gauges by the device manufacturer and who have been designated by the licensee's Radiation Protection Officer. The licensee shall maintain records of the individuals who have been designated as authorized users.
- B. The Radiation Protection Officer for the activities authorized by this license is Vernon Rose.

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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; except those sealed sources as specified by the manufacturer and specifically authorized by the Commission or an Agreement State may be leak tested at intervals not to exceed three years. 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) 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 of less alpha emitting material.
- 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 Region III, U. S. Nuclear Regulatory Commission, 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.
- E. The licensee is authorized to collect leak test samples in accordance with the procedures described in the licensee's application dated March 25, 1985 for analysis by Ohmart Corporation. 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 or removed from their respective source holders by the licensee.
15. Installation, relocation, removal from service, maintenance, repair, and initial radiation survey of devices containing licensed material and installation, replacement, and disposal of sealed sources containing licensed material used in devices shall be performed only by the manufacturer or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

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16. 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, manufacturer's name and model numbers, location of the sealed sources and the date of the inventory.
17. The licensee shall operate each gauge within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder is not compromised.
18. The licensee shall establish "lock-out" procedures to assure that prior to maintenance or repair in or around equipment to which licensed gauges are mounted, steps are taken to terminate the radiation beams, (e.g., "lock-out" shutters, placement of "beam stoppers," etc.) to prevent individuals from entering the radiation beam.
19. Individuals who work in or whose duties may require them to work in restricted areas or in the vicinity of licensed materials, shall be instructed in the items specified in 10 CFR 19.12 at the time of initial employment and at least annually thereafter.
20. 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 March 14, 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 George M. McCann

Materials Licensing Section, Region III

Date May 10, 1985

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