

## 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. City of Detroit  
City Engineering Department  
Freeway Construction Office
2. 8221 W. Davison  
Detroit, MI 48238

3. License number 21-24406-01

4. Expiration date June 30, 1990

5. Docket or Reference No. 030-18607

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 source  
(Troxler Dwg.  
No. 102112)A. No single source  
to exceed 10  
millicuries each

B. Americium-241

B. Sealed source  
(Troxler Dwg.  
No. 102451)B. No single source  
to exceed 50  
millicuries each

## 9. Authorized Use

A. and B. To be used in Troxler Series 3400 moisture/density gauge to measure moisture/density of construction materials.

## CONDITIONS

10. Licensed material may be used at the licensee's facilities located at 12255 Southfield Road, Detroit, Michigan and at temporary job sites of the licensee located within the city limits of Detroit, Michigan.
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 satisfactorily completed the device manufacturer's training program for gauge users and 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.
13. The Radiation Protection Officer for the activities authorized by this license is Daniel Tumidanski.

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**MATERIALS LICENSE**  
**SUPPLEMENTARY SHEET**

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14. A. 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.
- 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, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, describing the equipment involved, the test results, and the corrective action taken.
- D. The licensee is authorized to collect leak test samples in accordance with the procedures described in the licensee's letter dated April 15, 1985 for analysis by Troxler Electronics. 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.
15. Sealed sources containing licensed material shall not be opened or removed from the moisture/density gauge by the licensee.
16. When performing tests at temporary job sites, the authorized user shall not leave the moisture/density gauge unattended. Upon completion of tests the device shall be locked in the licensee's vehicle or a secure building to prevent unauthorized use, loss or theft.
17. The licensee shall conduct a physical inventory every six (6) months to account for all gauges 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 gauges and the date of the inventory.
18. 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."

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19. The licensee shall use whole body film badges to measure the radiation dose to personnel. Film badges shall be exchanged and evaluated monthly.
20. The source shall be in the "safe" or "shielded" position when the gauge is in storage.
21. 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 October 9, 1984, and letters dated March 11, 1985, March 29, 1985, and April 15, 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

Date May 17, 1985

Original Signed  
By William P. Reichhold  
Materials Licensing Section, Region III  
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