

U.S. NUCLEAR REGULATORY COMMISSION

**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, 36, 39, 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.

<p style="text-align: center;">Licensee</p> <p>1. Indiana Michigan Power Tanners Creek Plant</p> <p>2. 800 AEP Drive Lawrenceburg, IN 47025-0312</p>	<p>3. License number 13-32728-01</p> <p>4. Expiration date March 31, 2019</p> <p>5. Docket No. 030-37884 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Radium-226</p>	<p>7. Chemical and/or physical form</p> <p>A. Foils or plated sources that are compatible with the model of smoke detector as specified in Item 9 of this license.</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 11 sources not to exceed 40 microcuries per source. Total activity 440 microcuries.</p>
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9. Authorized use

For use in Pyrotronics Model FES-5 or 1F5 smoke detectors.

CONDITIONS

- 10. Licensed material shall be used only at the licensee's facilities located at 800 AEP Drive, Lawrenceburg, Indiana.
- 11. A. Licensed material shall be used by, or under the supervision of Thomas Utter.  
B. The Radiation Safety Officer for this license is Thomas Utter.
- 12. Detector cells containing licensed material shall not be opened or the foil or plated sources removed from the detector cell by the licensee.
- 13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.  
B. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.

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- C. Sealed sources need not be leak tested if:
- (i) they contain only hydrogen-3; or
  - (ii) they contain only a radioactive gas; or
  - (iii) the half-life of the isotope is 30 days or less; or
  - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
  - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- D. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- E. Tests for leakage an/or contamination, limited to leak test sample collection shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is not authorized to perform the analysis. Analysis of leak test samples must be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
14. Maintenance, repair, cleaning, replacement, and disposal of foils or plated sources contained in detector cells shall be performed only by the device manufacturer or 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 foil or plated sources and/or devices received and possessed under the license.
16. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.

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17. 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. Application dated February 11, 2009.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date FEB 24 2009

By



William P. Reichhold  
Materials Licensing Branch  
Region III