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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 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>Licensee</p> <p>1. United Technologies Corporation Pratt and Whitney</p> <p>2. 400 Main Street, M/S 124-26 East Hartford, Connecticut 06108</p>	<p>In accordance with the letter dated November 11, 2002,</p> <p>3. License number 06-07522-02 is amended in its entirety to read as follows:</p> <p>4. Expiration date March 31, 2005</p> <p>5. Docket No. 030-03796 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Gadolinium 153</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed source (GNI Inc. Model GD-15)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. Not to exceed 350 millicuries per source and 3 curies total</p>
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<p>9. Authorized use:</p> <p>A. For use in United Technologies Corp. Model LTG1 layer thickness gauge.</p>
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CONDITIONS

- 10. Licensed material shall be used only at the licensee's facilities located at Aircraft Road, Middletown, Connecticut; and 400 Main Street, East Hartford, Connecticut.
- 11. Licensed material shall be used by, or under the supervision of, Wayne Caverly, Michael Carcy or Stephen M. Juers.
- 12. The Radiation Safety Officer for this licensee is Stephen M. Juers.
- 13. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee.

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030-03796

Amendment No. 44

14. 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 are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed 3 years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. 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 or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen 3; or
 - (ii) they contain only krypton 85; 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 transfer 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.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source involved, the test results, and corrective action taken.

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- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
15. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
 16. Installation, initial radiation survey, relocation, removal from service, maintenance, and repair of devices containing sealed sources and installation replacement and disposal of sealed sources shall be performed only by persons specifically licensed by the Commission or an Agreement State to perform such services.
 17. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
 18. 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 October 7, 1988
 - B. Letter dated April 17, 1990
 - C. Letter dated July 10, 1992
 - D. Application dated December 22, 1993
 - E. Letter dated November 7, 1994
 - F. Letter dated February 9, 1995
 - G. Letter dated September 30, 1997

For the U.S. Nuclear Regulatory Commission

Date December 10, 2002

By **Original signed by Elizabeth Ullrich**

 Elizabeth Ullrich
 Nuclear Materials Safety Branch 2
 Division of Nuclear Materials Safety
 Region I
 King of Prussia, Pennsylvania 19406

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