

July 17, 2017

Dr. David M. Slaughter
Chief Executive Officer
Nuclear Labyrinth LLC
10874 South Bay Meadow Circle
Sandy, UT 84092

SUBJECT: AEROTEST OPERATIONS, INC., ISSUANCE OF AMENDMENT NO. 5 TO
AMENDED FACILITY OPERATING LICENSE NO. R-98 TO MAKE
CONFORMING CHANGES ASSOCIATED WITH THE INDIRECT TRANSFER
OF THE LICENSE TO NUCLEAR LABYRINTH LLC (CAC NO. MF7221)

Dear Dr. Slaughter:

By letter dated May 30, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML12152A233 and ML12180A384), as supplemented by letters dated July 19, 2012, October 15, 2012, January 10, 2013, April 21, 2016, June 16, 2016, August 22, 2016, and October 10, 2016 (ADAMS Accession Nos. ML122021201, ML12291A508, ML13015A395, ML16117A259, ML16176A221, ML16245A230, and ML16294A250, respectively), Aerotest Operations, Inc. (Aerotest) and Nuclear Labyrinth LLC (Nuclear Labyrinth) submitted an application to the U.S. Nuclear Regulatory Commission (NRC), pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.80, requesting approval of the indirect license transfer of Facility Operating License No. R-98 for the Aerotest Radiography and Research Reactor (ARRR) held by Aerotest. The indirect transfer would occur as a result of the sale of Aerotest by Autoliv ASP, Inc., to Nuclear Labyrinth. The application also requested approval of a conforming amendment to the facility operating license pursuant to 10 CFR Section 50.90, consisting of administrative changes to the license and technical specifications (TSs) that would become effective upon completion of the proposed indirect transfer. By letter dated February 28, 2017 (ADAMS Accession No. ML16333A446), the NRC issued an order and safety evaluation (SE) (ADAMS Accession Nos. ML16333A448 and ML16333A449, respectively), approving Aerotest and Nuclear Labyrinth's application for indirect license transfer and conforming amendment. By letter dated May 19, 2017 (ADAMS Accession No. ML17139C525), as updated by electronic mail dated May 30, 2017 (ADAMS Accession No. ML17150A067), by letter dated June 8, 2017 (ADAMS Accession No. ML17159A689), by electronic mail dated June 13, 2017 (ADAMS Accession No. ML17164A294), by letter dated July 6, 2017 (ADAMS Accession No. ML17187A198), by letter dated July 13, 2017 (ADAMS Accession No. ML17194B013), and by electronic mail dated July 14, 2017 (ADAMS Accession No. ML17198A183), Aerotest notified the NRC that the transfer would be completed today, July 17, 2017.

Accordingly, the NRC has issued the enclosed Amendment No. 5 to Amended Facility Operating License No. R-98 for the ARRR to make the conforming administrative changes associated with the indirect transfer of the license, which were previously reviewed and approved as documented in the NRC's February 28, 2017, SE, to the license and TSs.

If you have any questions, please contact Edward Helvenston at 301-415-4067, or by electronic mail at Edward.Helvenston@nrc.gov.

Sincerely,

/RA/

Spyros A. Traiforos, Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-228

Enclosure:
As stated

cc w/enclosure: See next page

Aerotest Operations, Inc.

Docket No. 50-228

cc:

Sandy Warren, General Manager
Aerotest Operations, Inc.
3455 Fostoria Way
San Ramon, CA 94583

California Energy Commission
1516 Ninth Street, MS-34
Sacramento, CA 95814

Radiologic Health Branch
P.O. Box 997414, MS 7610
Sacramento, CA 95899-7414

Test, Research, and Training
Reactor Newsletter
P.O. Box 118300
University of Florida
Gainesville, FL 32611

Jay E. Silberg
Pillsbury Winthrop Shaw Pittman LLP
1200 Seventeenth Street, NW
Washington, DC 20036-3006

SUBJECT: AEROTEST OPERATIONS, INC., ISSUANCE OF AMENDMENT NO. 5 TO AMENDED FACILITY OPERATING LICENSE NO. R-98 TO MAKE CONFORMING CHANGES ASSOCIATED WITH THE INDIRECT TRANSFER OF THE LICENSE TO NUCLEAR LABYRINTH LLC (CAC NO. MF7221) DATED: July 17, 2017

DISTRIBUTION:

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ADAMS Accession No.: ML17138A310

concurred via email

OFFICE	NRR/DPR/PRLB/PM	NRR/DPR/PRLB/PM	NRR/DPR/PRLB/LA*	OGC/NLO*
NAME	EHelvenston	STraiforos	NParker	JWachutka
DATE	5/19/17	5/19/17	5/19/17	5/19/17
OFFICE	NRR/DPR/PRLB/BC	NRR/DPR/D		
NAME	AAdams (DHardesty for)	LLund		
DATE	5/19/17	7/17/17		

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AEROTEST OPERATIONS, INC.

DOCKET NO. 50-228

AEROTEST RADIOGRAPHY AND RESEARCH REACTOR

AMENDMENT TO AMENDED FACILITY OPERATING LICENSE

Amendment No. 5
License No. R-98

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for indirect transfer of license and conforming amendments to Amended Facility Operating License No. R-98, filed by Aerotest Operations, Inc., and Nuclear Labyrinth, LLC, dated May 30, 2012, and supplemented on July 19 and October 15, 2012; January 10, 2013; and April 21, June 16, August 22, and October 10, 2016, complies with the standards and requirements of the Atomic Energy Act of 1954 (the Act), as amended, and the rules and regulations of the Commission as stated in Title 10, Chapter I, "Nuclear Regulatory Commission," of the *Code of Federal Regulations* (10 CFR Chapter I).
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission.
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations.
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," and all applicable requirements have been satisfied.

Enclosure

2. Accordingly, the license and technical specifications are amended as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of issuance and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Louise Lund, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Amended Facility
Operating License and Appendix A,
"Technical Specifications"

Date of issuance: July 17, 2017

ATTACHMENT TO AMENDMENT NO. 5

AMENDED FACILITY OPERATING LICENSE NO. R-98

DOCKET NO. 50-228

Replace the following pages of the Amended Facility Operating License No. R-98 with the attached revised pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Amended Facility Operating License

Remove

1
2
3

Insert

1
2
3

AEROTEST OPERATIONS, INC.

DOCKET NO. 50-228

AEROTEST RADIOGRAPHY AND RESEARCH REACTOR (ARRR)

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. R-98

1. The Nuclear Regulatory Commission (NRC or the Commission), having previously made the findings set forth in Amended Facility Operating License No. R-98 issued on January 28, 1981, has now found that:
 - A. The application for indirect transfer of license and conforming amendments to Amended Facility Operating License No. R-98, filed by Aerotest Operations, Inc., and Nuclear Labyrinth, LLC, dated May 30, 2012, and supplemented on July 19 and October 15, 2012; January 10, 2013; and April 21, June 16, August 22, and October 10, 2016, complies with the standards and requirements of the Atomic Energy Act of 1954 (the Act), as amended, and the rules and regulations of the Commission as stated in Title 10, Chapter I, "Nuclear Regulatory Commission," of the *Code of Federal Regulations* (10 CFR Chapter I).
 - B. Construction of the facility has been substantially completed in conformity with Construction Permit No. CPRR-86, and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - E. Aerotest Operations, Inc. is technically and financially qualified to possess, use, and operate the facility in accordance with the rules and regulations of the Commission;

Amendment No. 5

- F. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public, and does not involve a significant hazards consideration;
 - G. The receipt, possession, and use of byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30 and 70, including Sections 30.33, 70.23, and 70.31;
 - H. The licensee is qualified to be the holder of the license; and
 - I. The transfer of the license is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission pursuant thereto.
2. Facility Operating License No. R-98, issued to Aerotest Operations, Inc., is hereby indirectly transferred to Nuclear Labyrinth, LLC, and the license is amended to read as follows:
- A. This license applies to the Aerotest Radiography and Research Reactor (ARRR), a pool-type nuclear reactor owned by Aerotest Operations, Inc. The facility is located at the Aerotest Operations site near San Ramon, California, and is described in the application dated September 14, 1964 (the application), and in supplements thereto, including the application for transfer of license dated April 24, 1974, and the application for indirect transfer dated May 30, 2012.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Aerotest Operations, Inc.:
 - (1) Pursuant to Section 104c of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the reactor at the designated location in San Ramon, California, in accordance with the procedures and limitations set forth in this license;
 - (2) Pursuant to the Act and 10 CFR Part 70, "Special Nuclear Material," to receive, possess, and use up to 5.0 kilograms of contained uranium 235 in connection with operation of the reactor; and
 - (3) Pursuant to the Act and 10 CFR Part 30, "Licensing of Byproduct Material," (1) to receive, possess, and use a 2 curie americium-beryllium neutron startup source, and (2) to possess, but not to separate, such byproduct material as may be produced by operation of the reactor.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 250 kilowatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 5, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Physical Security Plan

The licensee shall maintain in effect and fully implement all provisions of the NRC-approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR Section 50.54(p). The approved security plan consists of the document withheld from public disclosure pursuant to 10 CFR 2.790(d), entitled "Aerotest Operations, Inc. Security Plan" dated August 10, 1976, submitted by letter dated October 4, 1976, as revised January 16, 1979.

D. Reports

In addition to reports otherwise required under the license and applicable regulations:

(1) The licensee shall report in writing to the Commission within 10 days of its observed occurrence any incident or condition relating to the operation of the facility which prevented or could have prevented a nuclear system from performing its safety function as described in the Technical Specifications or in the Hazards Summary Report.

(2) The licensee shall report to the Commission in writing within 30 days of its observed occurrence any substantial variance disclosed by operation of the facility from performance specifications contained in the Hazards Summary Report or the Technical Specifications.

(3) The licensee shall report to the Commission in writing within 30 days of its occurrence any significant change in transient or accident analysis, as described in the Hazards Summary Report.

ATTACHMENT TO AMENDMENT NO. 5

AMENDED FACILITY OPERATING LICENSE NO. R-98

DOCKET NO. 50-228

Replace the following page of Appendix A, "Technical Specifications," with the attached revised page. The revised page is identified by amendment number and contains vertical lines indicating the areas of change.

Technical Specifications

Remove

12

Insert

12

- 11.4 All fuel transfers in the reactor tank shall be conducted by a minimum staff of three men, and shall include a licensed Senior Operator and a licensed Operator. The staff members shall monitor the operation using appropriate radiation monitoring instrumentation. Fuel transfers outside the reactor tank but within the facility shall be supervised by a licensed Operator.
- 11.5 Not more than one fuel element shall be allowed in the facility which is not in storage or in the core lattice.

12.0 Administrative Requirements

12.1 Organization

- 12.1.1 The Reactor Supervisor shall have responsibility of the reactor facility. In all matters pertaining to reactor operations and to these Technical Specifications, the Reactor Supervisor shall be responsible to the President, Aerotest Operations, Inc. The President, Aerotest Operations, Inc. shall report to the Board of Directors of Aerotest Operations, Inc.
- 12.1.2 The Radiological Safety Officer shall review and approve all procedures and experiments involving radiological safety. He shall enforce rules, regulations and procedures relating to radiological safety, conduct routine radiation surveys and is responsible to the Manager, Aerotest Operations.
- 12.1.3 The Reactor Safeguards Committee shall be composed of not less than five members, of whom no more than three are members of the operating organization. The committee shall meet on call of the chairman and they shall meet at least annually. The committee shall be responsible for, but not limited to the following:
 - 12.1.3.1 Reviewing and approving nuclear safety standards associated with the use of the facility;
 - 12.1.3.2 Reviewing and approving all proposed experiments and procedures and changes thereto, and modifications to the reactor and its associated components;