

**OFFICE OF NUCLEAR REACTOR REGULATION**  
**REQUEST FOR ADDITIONAL INFORMATION**  
**REGARDING THE INDIRECT LICENSE TRANSFER**  
**AEROTEST RADIOGRAPHY AND RESEARCH REACTOR**  
**FACILITY OPERATING LICENSE NO. R-98**  
**DOCKET NO. 50-228**

By letter dated May 30, 2012, as supplemented by a letter dated July 19, 2012, (collectively, "the application"), pursuant to Section 184 of the Atomic Energy Act of 1954, as amended, and Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.80, "Transfer of Licenses," Aerotest Operations, Inc. (Aerotest, the applicant), requested the U.S. Nuclear Regulatory Commission's (NRC) consent to the indirect transfer of control of the Facility Operating License No. R-98 for the Aerotest Radiography and Research Reactor (ARRR), resulting from the proposed acquisition of Aerotest by Nuclear Labyrinth, LLC (Nuclear Labyrinth). Based on its review of the application and supplement, the NRC staff requests the following additional information.

- 1) The NRC's regulation under 10 CFR 50.33(f)(2) states that: [T]he applicant shall submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license.

Under Section V, "Financial Qualifications," of the application, the applicant stated that "[. . .] at closing of the transaction, [the] seller [Autoliv] will transfer funds sufficient to fund approximately twelve months of operating expenses during the restart of the facility and its resumption of commercial operations." Attachment 6, "Initial Year Income Estimate for Aerotest Operations," and Attachment 7, "5 Year Projected Income Statement for Aerotest Operations, Inc.," of the application indicated that the projected costs of operation for the first year after consummation of the transfer are approximately [ ]. However, the Funding Agreement included within the July 19, 2012, supplement to the application indicated that Autoliv will transfer [ ] to fund the Aerotest operating expenses for approximately 12 months.

Based on information provided in the application, clarify this discrepancy regarding the first year of operating costs, and explain how the initial contribution from Autoliv will fund the operating expenses of Aerotest for a 12-month period.

- 2) Inspections of fuel have determined that certain fuel elements need to be removed from service (see NRC Inspection Report No. 50-228/2012-204 dated August, 14, 2012). Describe the anticipated operating condition of the reactor at the time of license transfer. If the reactor will not be fully operational (e.g., will be operated at reduced power because of reactivity limitations due to limited fuel inventory) at the time of license transfer, describe the operational limitations that will be in place.
- 3) The NRC's regulation under 10 CFR 50.33(f)(2) states: [T]he applicant shall submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license. In addition, 10 CFR 50.33(f)(4) states: [N]ewly-formed entity organized for the primary purpose of constructing and/or operating a facility must also include information showing: (i) [t]he legal and financial relationships it has or proposes to have with its stockholders or owners; (ii) [t]he stockholders' or owners' financial ability to meet any contractual obligation to the entity which they have incurred or proposed to incur; and (iii) [a]ny other information considered necessary by the Commission to enable it to determine the applicant's financial qualification.

Under Section V, "Financial Qualifications," of the application, the applicant did not identify any sources of funds to cover the projected operating costs identified in Projected Income Statement included in Attachment 7, pursuant to 10 CFR 50.33(f)(2). On July 5, 2012, the NRC staff requested Aerotest and Nuclear Labyrinth to supplement the application to provide the source(s) of funds to cover the projected operating costs, specifically to state if there are any committed sources of funds (e.g., commercial, government, or educational) for operations of the ARRR facility, and to provide any applicable commitments, letters of intent, or contracts with these sources. In the July 19, 2012, supplement to the application, the applicant stated that [

] In addition, the applicant also stated that Nuclear Labyrinth was created for the purpose of purchasing the shares of Aerotest, and that as a newly formed entity, it has no financial statements to submit to the NRC.

Based on the information provided in the application, provide the following additional information, pursuant to 50.33(f) regarding financial qualification:

a) [

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[

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b) [

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- c) Provide information to demonstrate Nuclear Labyrinth's financial ability to provide funding for all liabilities regarding the management, storage, removal and disposal of the nuclear fuel located at the facility, as described in the application. In addition, provide the costs in 2012 dollars associated with the stated liabilities.
  - d) Provide a pro forma balance sheet, which recognizes decommissioning costs as a liability, for Nuclear Labyrinth.
  - e) Inspections of fuel have determined that certain fuel elements need to be removed from service (see NRC Inspection Report No. 50-228/2012-204 dated August, 14, 2012). State whether the projected operating costs include the costs associated with damaged fuel, such as technical analysis, replacement, and/or repairs, etc, before the reactor can be returned to operation. If the projected operating costs do not include these costs, provide information on how these costs will be covered (e.g., the reactor be returned to an operating state before the license transfer).
  - f) If reactor operation is limited at the time of license transfer (e.g., reactor will need to operate at reduced power because of limited fuel inventory), describe how the potential limitations will affect the projected revenue as provided in Attachment 7 of the application. In addition, update Attachments 6, 7, and 9 to reflect the potential impact of the operation limitation on cost and revenue.
- 4) The NRC's regulation under 10 CFR 50.75(d)(1) states: Each non-power reactor applicant for or holder of an operating license for a production or utilization facility shall submit a decommissioning report as required by § 50.33(k). . .

Pursuant to 10 CFR 50.75(d)(2), the decommissioning report must: (i) Contain a cost estimate for decommissioning the facility; (ii) Indicate which method or methods described in paragraph (e) [ . . . ] as acceptable to the NRC will be used to provide funds for decommissioning; and (iii) Provide a description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility.

Under Section VI, "Decommissioning Funding," of the application, the applicant provided a decommissioning cost estimate prepared by EnergySolutions. The applicant stated that: (1) decommissioning funding assurance would be held in a decommissioning trust,

with Autoliv to provide the initial decommissioning trust fund contribution of \$3,285,800; (2) future funding will be provided by Aerotest per the schedule included in Attachment 9; (3) for purposes of projecting future costs, the schedule included in Attachment 9 uses a cost escalation factor of 3 percent; and (4) the future funds will be from decommissioning fees charged to users of the ARRR for the first five years of operation under the new ownership.

Based on the information provided in the application, provide the following additional information, pursuant to 50.75(d) regarding financial assurance:

- a) Update the decommissioning cost estimate to current 2012 dollars.
  - b) Provide the basis for using a cost escalation factor of 3 percent (e.g., independent study, consumer price index long-term historical data, etc.).
  - c) Provide a revised method or methods that will be used to provide funds for decommissioning since future funds from customers is not credited for decommissioning financial assurance unless the licensee meets the requirements of 10 CFR 50.75(e)(1)(ii)(A) or (B), or (e)(1)(v).
- 5) The NRC's regulation under 10 CFR 50.75(e)(1) states: A licensee that has prepaid funds based on a site-specific estimate [ . . . ] may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate.

The NRC's regulation under 10 CFR 50.75(f)(5) states: If necessary, the cost estimate, for power and non-power reactors, shall also include plans for adjusting levels of funds assured for decommissioning to demonstrate that a reasonable level of assurance will be provided that funds will be available when needed to cover the cost of decommissioning.

Under Section VI, "Decommissioning Funding," of the application, the applicant stated that the projection for decommissioning financial assurances uses a real rate return of 1.96 percent based on an imputed tax affected rate of return on 30 year t-bills, on average, since 2001. In addition, the applicant stated that the required decommissioning funding level will be adjusted on a bi-annual basis based on updated decommissioning cost estimates to be prepared by outside experts, after the first five years of operation. Attachment 9, "Decommissioning Financial Assurance Projection," shows funds and decommissioning cost projection for the first nine years of operation.

Based on the information provided in the application, provide the following additional information, pursuant to 10 CFR 50.75(d) regarding decommissioning funding assurance:

- a) Clarify if amounts shown in Attachment 9, "Decommissioning Financial Assurance Projection," are in current dollars or future dollars. The NRC staff noted that Attachment 9 includes a cost escalation of 3 percent on the decommissioning cost and a real rate of return of 1.96 percent on the Autoliv contribution, as stated in Section VI of the application.
  - b) Provide a summary schedule of annual expenses to include safe storage cost, projected earnings, and end-of-year fund balances, expressed in 2012 dollars, in order to take earning credit. Otherwise, update Attachment 9 to exclude the real rate of return.
  - c) Clarify how often the decommissioning cost estimate will be prepared by outside experts after the first five years of operation.
  - d) Describe how Nuclear Labyrinth will monitor and ensure decommissioning funding levels during the year(s) where a decommissioning cost estimate is not being assessed by outside experts.
  - e) Describe how decommissioning financial assurance levels will be adjusted to account for higher than planned cost escalation rates or lower than planned real rates of return.
  - f) State any actions Nuclear Labyrinth will take to cover shortfalls in the decommissioning trust fund, and how quickly they will be covered.
- 6) The NRC's regulation under 10 CFR 50.33(f)(5) states: The Commission may request an established entity or newly-formed entity to submit additional or more detailed information respecting its financial arrangements and status of funds if the Commission considers this information appropriate.

Under Section III, "General Corporate Information Regarding Aerotest Operations, Inc. and Nuclear Labyrinth, LLC," of the application, the applicant stated that "Nuclear Labyrinth is a business that evolved from E-Cubed Inc. (E3) established in 1989 in the State of Utah. In addition, the applicant stated that "[i]n approximately 2002, the State of Utah awarded Dr. Slaughter funds for a Center of Excellence, which, among other things, was to identify nuclear based spinoff. This effort was the impetus for changing the company name to Nuclear Labyrinth." In the July 19, 2012, supplement to the application, the applicant stated that Nuclear Labyrinth was created to purchase the shares of Aerotest and that it is a newly formed entity.

Based on the information provided in the application, provide the following additional information, pursuant to 10 CFR 50.33(f)(5) regarding financial qualifications:

- a) Clarify when Nuclear Labyrinth was formed and its relationship with E3.

- b) Explain any funding sources from E3 that will assist NRC staff to review the financial qualification of Nuclear Labyrinth.
- 7) The NRC's regulation under 10 CFR 50.80(b)(2) states: The application shall include [ . . . ] the nature of the transaction necessitating or making desirable the transfer of the license.

Under Section 1, "Introduction," of the application, the applicant stated that "Aerotest Operations, Inc., the owner of the ARRR, is a wholly owned subsidiary of OEA Aerospace, Inc., a wholly owned subsidiary of OEA, Inc., which is a wholly-owned subsidiary of Autoliv ASP, Inc. (collectively, "seller")." The Funding Agreement included within the July 19, 2012, supplement to the application, stated that Autoliv ASP, Inc., an Indiana corporation or its designated affiliate, is the Seller.

Please provide details on the proposed transaction; include the type of transaction (merger, acquisition, transfer of stocks, etc), the actual current owner of Aerotest stock, and the actual seller of Aerotest stock.