July 1, 2009

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

SUBJECT: AEROTEST OPERATIONS, INC. - NRC ROUTINE INSPECTION REPORT NO. 50-228/2009-201

Dear Ms. Warren:

On June 8-11, 2009, the U.S. Nuclear Regulatory Commission (NRC, the Commission) conducted an inspection at your Aerotest Radiography and Research Reactor facility (Inspection Report No. 50-228/2009-201). The enclosed report documents the inspection results, which were discussed on June 11, 2009, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of this inspection, no findings of significance were identified. No response to this letter is required.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390, "Public inspections, exemptions, and requests for withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (Agencywide Documents Access and Management System (ADAMS)). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Craig Bassett at (404) 358-6515 or by electronic mail at Craig.Bassett@nrc.gov.

Sincerely,

**/RA/**

Johnny H. Eads, Jr., Chief
Research and Test Reactors Branch B
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-228
License No. R-98

Enclosure: NRC Inspection Report No. 50-228/2009-201

cc w/encl: See next page

cc w/encl:

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Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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**ACCESSION NO.: ML091770065** *** via e-mail** **TEMPLATE #: NRC-002**

| OFFICE | PRTB:RI | PRT:LA | PRTB:BC |
|---|---|---|---|
| NAME | CBassett (*) | GLappert | JEads |
| DATE | 6/18/2009 | 6/29/2009 | 7/1/2009 |

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**U. S. NUCLEAR REGULATORY COMMISSION**
OFFICE OF NUCLEAR REACTOR REGULATION

| | |
|---|---|
| Docket No: | 50-228 |
| License No: | R-98 |
| Report No: | 50-228/2009-201 |
| Licensee: | Aerotest Operations, Inc. |
| Facility: | Aerotest Radiography and Research Reactor |
| Location: | 3455 Fostoria Way<br>San Ramon, CA 94583 |
| Dates: | June 8-11, 2009 |
| Inspector: | Craig Bassett |
| Approved by: | Johnny H. Eads, Jr., Chief<br>Research and Test Reactors Branch B<br>Division of Policy and Rulemaking<br>Office of Nuclear Reactor Regulation |

# EXECUTIVE SUMMARY

Aerotest Operations, Inc.
Aerotest Radiography and Research Reactor
Report No: 50-228/2009-201

The primary focus of this routine, announced inspection was the on-site review of selected aspects of the Aerotest Operations, Inc. (the licensee's) Class II research and test reactor safety program including: 1) organization and staffing, 2) review and audit and design change functions, 3) reactor operations, 4) procedures, 5) operator requalification, 6) maintenance and surveillance, 7) fuel handling, 8) experiments, and 9) emergency preparedness since the last U.S. Nuclear Regulatory Commission (NRC) inspection of these areas. The licensee's program was acceptably directed toward the protection of public health and safety and in compliance with NRC requirements. No violations or deviations were identified.

Organization and Staffing

- The licensee's organization and staffing were in compliance with the requirements specified in Section 12 of the facility Technical Specifications.

Review and Audit Functions and Design Control

- Review and oversight functions required by Technical Specifications Section 12.1.3 were acceptably completed by the Reactor Safeguards Committee.

- No changes had been made at the facility since the last NRC inspection but a process for design change was in place and would be followed if changes were initiated.

Reactor Operations

- Reactor operations were conducted in accordance with Technical Specification requirements and applicable procedures.

Procedures

- Facility procedures were acceptable and were being reviewed periodically by the licensee and changes to procedures were reviewed and approved by the Reactor Safeguards Committee as required by Technical Specifications and administrative procedures.

Operator Requalification

- Operator requalification was being conducted and completed as required by the Operator Requalification Program.

- Medical examinations for each operator were being completed biennially as required.

Maintenance and Surveillance

- Maintenance was being completed in accordance with Technical Specifications and procedural requirements.

- The program for completing surveillance checks, tests, verifications, and calibrations was being implemented in accordance with Technical Specifications requirements.

Fuel Handling

- Fuel movements and inspections were completed and documented in accordance with the requirements specified by procedure.

Experiments

- The program for the control of experiments satisfied regulatory, procedural, and Technical Specifications Section 6.7 requirements.

Emergency Preparedness

- The current facility Emergency Plan and implementing procedures were being reviewed biennially as required and updated as needed.

- Emergency response equipment was being maintained and alarms were being tested periodically as required.

- The Letter of Agreement with the local hospital was being verified annually as required.

- Evacuation drills were being conducted twice each year as required by the Emergency Plan.

- Emergency preparedness training for staff personnel was being completed as required.

# REPORT DETAILS

## Summary of Plant Status

The Aerotest Operations, Inc. (Aerotest, the licensee) two hundred and fifty kilowatt (250 kW) TRIGA conversion research reactor, known as the Aerotest Radiography and Research Reactor (ARRR) continued to be operated in support of neutron radiography experiments and reactor operator training. During the inspection, the reactor was started up and operated each day at approximately 150 kW to complete neutron radiography operations. Although the maximum authorized power level was 250 kW, the licensee had made the decision to reduce the typical operating power level in an effort to keep personnel radiation exposures as low as reasonably achievable (ALARA).

## 1. Organization and Staffing

a. Inspection Scope (Inspection Procedure [IP] 69001)

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of Technical Specifications (TS) Sections 10.1 and 12.1, as implemented through the latest revision to the Facility License Number (No.) 98, Amendment No. 4, dated January 28, 1981, were being met:

- ARRR staff personal qualifications
- Staffing during routine operation of the ARRR
- Management responsibilities and organizational structure as specified in the TS
- Section II of the ARRR Procedures Manual entitled, “Operating Procedures,” Procedure Change Notice (PCN) No. 2, RSC approval dated June 28, 1990
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2006 to June 30, 2007, submitted to the NRC on July 27, 2007
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2007 to June 30, 2008, submitted to the NRC on July 11, 2008

b. Observations and Findings

Through discussions with licensee representatives, the inspector determined that management responsibilities and the organizational structure at the facility had not functionally changed since the previous NRC inspection in April 2008 (Inspection Report No. 50-228/2008-201). The inspector determined that the Reactor Supervisor retained direct control and overall responsibility for management of the facility as specified in the TS. The Reactor Supervisor reported to the President, Aerotest Operations, Inc (AO). Also, the Radiological Safety Officer reviewed and approved all procedures and experiments involving radiological safety as required.

The current AO organization consisted of the President of AO, the General Manager who was also the facility Radiological Safety Officer, the Reactor Supervisor who was also the Reactor Operations Manager, the Research and Development Manager, the Neutron Radiography Manager, the Quality Assurance Manager, an electronics

engineer, five radiographers, and three office personnel. Through review of records and logs, as well as through discussions with licensee personnel, the inspector determined that the current staffing at the facility was acceptable to support the workload and ongoing activities. Staffing levels during reactor operations were determined to be consistent with the requirements outlined in the TS. Staff personnel also met the qualification requirements of the TS for reactor operations and radiation protection.

c. Conclusions

The licensee's organization and staffing were in compliance with the requirements specified in the TS.

**2. Review and Audit and Design Change Functions**

a. Inspection Scope (IP 69001)

In order to ensure that the audits and reviews stipulated in the requirements of TS Section 12.1.3 were being completed and to verify that any modifications to the facility were consistent with 10 CFR 50.59, the inspector reviewed the following:

- Completed Reactor Safeguards Committee audits for 2007 and 2008
- Changes made under the licensee's 10 CFR 50.59 change process
- Reactor Safeguards Committee meeting minutes for 2007 and 2008
- Duties of the Reactor Safeguards Committee detailed in TS Section 12
- Charter of the Reactor Safeguards Committee outlined in Section I of the ARRR Procedures Manual entitled, "Administrative Procedures," PCN No. 2, RSC approval dated June 28, 1990
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2006 to June 30, 2007, submitted to the NRC on July 27, 2007
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2007 to June 30, 2008, submitted to the NRC on July 11, 2008

b. Observations and Findings

(1) Review and Audits Functions

The Reactor Safeguards Committee (RSC) met at least once per year in accordance with TS requirements with the last two meetings held on November 29, 2007, and on November 18, 2008. The inspector reviewed the RSC's meeting minutes for these meetings. The meeting minutes showed that the RSC had considered the types of topics stipulated by the TS. It was noted that the meetings were attended by all members of the committee. Review of the minutes also indicated that the committee provided guidance and direction to ensure suitable oversight of reactor operations.

The inspector verified that the periodic audits specified by TS Section 12.1.3 were being completed as required. The RSC minutes and audit records indicated that the Chair of the RSC and another RSC member conducted unannounced audits of facility operations annually and submitted the results to the President, AO. The inspector noted that there were no significant issues found during the audits and that the licensee took appropriate corrective actions in response to those audit findings or recommendations that were noted.

(2) Design Control Functions

Through review of applicable records and interviews with licensee personnel, the inspector determined that some design changes had been considered at the facility but that none had actually been initiated or completed since the last NRC operations inspection. It was noted that TS and procedural requirements were in place to ensure that changes, if proposed, would be reviewed by the RSC and in accordance with 10 CFR 50.59 as required.

c. Conclusions

Review and oversight functions required by TS Section 12.1.3 were acceptably completed by the RSC. No changes had been made at the facility since the last NRC inspection but a process for design change was in place and would be followed if changes were initiated.

## 3. Operations

a. Inspection Scope (IP 69001)

The inspector reviewed selected portions and/or aspects of the following to ensure compliance with TS Sections 10 and 12:

- Staffing for routine reactor operations
- Selected ARRR Operational Log Sheets for 2008 and 2009
- Selected ARRR Startup/Shutdown Sheets for 2008 and 2009
- Reactor startup, operations, and shutdown activities during the inspection
- Operations Request Forms for selected scrams in 2007, 2008 and to date in 2009
- Section II of the ARRR Procedures Manual entitled, “Operating Procedures,” PCN No. 2, RSC approval dated June 28, 1990
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2006 to June 30, 2007, submitted to the NRC on July 27, 2007
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2007 to June 30, 2008, submitted to the NRC on July 11, 2008

b. Observations and Findings

The inspector reviewed selected ARRR Startup/Shutdown Sheets and Operational Log Sheets dating from January 2008 through the date of this inspection. The inspector determined that reactor operations were carried out following written procedures as required by TS Section 12.2.1.1. Reactor Safety System scrams were identified in the log as "automatic scrams", and were reported and resolved as required before the resumption of operations under the authorization of a Senior Reactor Operator (SRO). Logs and records also showed that operational conditions and parameters were consistent with license and TS requirements and that TS operational limits had not been exceeded.

The operating logs were generally complete and provided an acceptable indication of operational activities. The Annual Summaries of Changes, Tests, and Experiments (the licensee's annual reports to the NRC) documented the abnormal events that had occurred during the year. For any unresolved scrams, i.e., when the cause had not been determined, an Operations Request Form (ORF) was completed to document the measures that were taken to resolve or track the events. ORFs were also used to provide documentation and the resolution of various reactor-related issues, such as emerging maintenance required on TS required instruments.

The inspector conducted observations of the reactor startup, shutdown, and routine operations on June 9 and 10, 2009, and reviewed the associated records and logs completed for those operations. The inspector noted that the licensed SRO on duty was knowledgeable and competent. Observation of operational activities also confirmed that reactor operations were carried out in accordance with written procedures and TS requirements.

c. Conclusions

Reactor operations were conducted in accordance with TS requirements and applicable procedures.

## 4. Procedures

a. Inspection Scope (IP 69001)

The inspector reviewed the following to ensure that the requirements of TS Section 12.2 were being met concerning written procedures:

- Varioius ARRR procedures
- Procedure Approval Sheets and Change Notice forms
- ARRR procedure revision, review, and approval process
- Section I of the ARRR Procedures Manual entitled, "Administrative Procedures," PCN No. 2, RSC approval dated June 28, 1990, which detailed the process used to review, revise, and approve all facility procedures

- Section II of the ARRR Procedures Manual entitled, “Operating Procedures,” PCN No. 2, RSC approval dated June 28, 1990
- Section IV of the ARRR Procedures Manual entitled, “Critical Assembly and Power Calibration Procedures,” PCN No. 7, RSC approval dated November 2, 2005
- Section VII of the ARRR Procedures Manual entitled, “Experiment and Approval,” PCN No. 2, RSC approval dated June 28, 1990

b. Observations and Findings

The inspector noted that procedures had been developed for reactor operations and safety as required by the TS. The licensee’s procedures were found to be acceptable for the current facility status and staffing level. The inspector noted that the administrative procedure specified the responsibilities of the RSC. The inspector verified that a designated member of the RSC had completed biennial reviews of the facility procedures as required. The last review of all procedures had occurred on May 15, 2008. It was also noted that substantive revisions to procedures were routinely presented to the RSC for review and approval as required by TS. The inspector verified that the latest revisions to various procedures had been through this review and approval process as required.

c. Conclusions

Facility procedures were acceptable and satisfied TS and administrative procedure requirements for being revised by the licensee and reviewed and approved by the RSC.

## 5. Operator Requalification Program

a. Inspection Scope (IP 69001)

To verify compliance with the Operator Requalification Program, which was submitted to the NRC on July 13, 2000, the inspector reviewed:

- Status of all qualified operators’ licenses
- Operator physical examination records for 2006 and 2008
- Selected ARRR Operational Log Sheets documenting reactivity manipulations
- 2008 Senior Reactor Operator Biennial Written Examinations and related records
- 2007 and 2008 Senior Reactor Operator Annual Operating test results and related records

b. Observations and Findings

There were three people who maintained SRO licenses at the facility. The inspector noted that the General Manager was encouraging two other employees to start and complete the required training to become licensed operators. No formal training for those individuals had been initiated to date.

The inspector verified that the SROs' licenses were current. Records showed that operators were given biennial requalification examinations and annual operations tests as required. Logs indicated that operators maintained active duty status as required by operating the reactor the required number of hours quarterly and by completing the required number of reactivity manipulations. The inspector also verified that the operators were reviewing the contents of all abnormal and emergency procedures on a regularly scheduled basis as indicated by a sign off sheet located in the emergency procedures folder. The inspector determined that the Operator Requalification Program was being maintained up to date.

The inspector further verified that each operator had received a biennial physical examination as required.

c. Conclusions

Operator requalification was being conducted and completed as required by the Operator Requalification Program. Medical examinations for each operator were being completed biennially as required.

## 6. Maintenance and Surveillance

a. Inspection Scope (IP 69001)

To determine that maintenance and surveillance activities were being completed as required by TS Sections 3, 4, 5, 6, and 7, the inspector reviewed:

- ARRR Repair Folders for various instruments
- Reactor Period Data Sheets for the past two years
- Operations Request Forms for 2007, 2008, and to date in 2009
- Monthly Alarm Check Lists for 2007, 2008, and to date in 2009
- ARRR Pool Water Analysis sheets for 2008 and to date in 2009
- Quarterly Maintenance Check Lists for 2007, 2008, and to date in 2009
- Control Rod Calibration - Rod Drop Data Sheets (Graphic Version)
- Selected ARRR Startup/Shutdown Sheets for 2008 and to date in 2009
- Section IV of the ARRR Procedures Manual entitled, "Critical Assembly and Power Calibration," PCN No. 7, RSC approval dated November 2, 2005
- Section VIII of the ARRR Procedures Manual entitled, "Maintenance Procedures," PCN No. 2, RSC approval dated January 14, 1993

b. Observations and Findings

(1) Maintenance

The various Repair Folders and Operations Request Forms maintained by the licensee indicated that emergent problems were addressed by appropriate corrective maintenance as needed. If electrical components for the nuclear instrumentation were replaced, the maintenance procedures required that calibrations and voltage checks occur prior to the instrumentation being placed

back into service. The inspector verified that these tests were completed as required. Records showed that routine maintenance activities were conducted at the required frequency and in accordance with the TS and/or the applicable procedure. Maintenance activities ensured that equipment remained consistent with the Safety Analysis Report and TS requirements.

(2) Surveillance

Daily, monthly, quarterly, semiannual, and annual surveillance tests, checks, verifications, and calibrations were completed on schedule and in accordance with licensee procedures and TS requirements. All of the recorded results for the surveillance checks reviewed by the inspector were within the associated TS and/or procedurally prescribed parameters. The records and logs reviewed appeared to be complete and were being maintained as required.

c. Conclusions

Maintenance was being completed in accordance with TS and procedural requirements. The program for surveillance checks, tests, verifications, and calibrations was being implemented in accordance with TS requirements.

## 7. Fuel Handling

a. Inspection Scope (IP 69001)

The inspector reviewed selected aspects of the following to verify that fuel movement and handling was being conducted as required by TS Section 5.1.1 and Section 11:

- Fuel movement and examination records
- Fuel handling equipment and reactor instrumentation
- Various records and data sheets related to fuel movement
- Selected ARRR Operational Log Sheets for the past two years
- Data Sheets for Fuel and Graphite Transfer forms for 2008 and 2009
- Section IV of the ARRR Procedures Manual entitled, “Critical Assembly and Power Calibration,” PCN No. 7, RSC approval dated November 2, 2005

b. Observations and Findings

Based on the results of past fuel inspections, the licensee noted that several fuel elements had been deformed such that they were “stuck” in the reactor core, making them difficult to remove. As a result of the fuel “sticking” problem, in January 2006 the licensee had decided to remove all fuel possible from the core and conduct an inspection of all the fuel elements. Those elements that could be removed were placed in storage. The licensee then used a movable camera and monitor set-up to conduct an inspection of those elements that were “stuck” in place. After that was completed, an inspection of all the remaining elements was also completed and the elements were returned to their original positions in the core. No new or unusual problems were identified during that inspection.

During this inspection, the inspector verified that the fuel movements were conducted in compliance with procedure and pre-planned fuel moves. It was noted that the licensee was documenting the various movements that had been completed and maintaining the required records. Although reactor fuel was not required by the TS to be inspected, the licensee typically inspected 20 percent (20%) of the fuel elements annually in order to remain cognizant of the physical status of the fuel. When compared to the results of previous fuel inspections, no problems, other than those noted in the past, were found by the licensee during the recent fuel examinations.

c. Conclusions

Fuel movements and inspections were completed and documented in accordance with the requirements specified by procedure.

## 8. Experiments

a. Inspection Scope (IP 69001)

To ensure that the requirements of TS Sections 8 and 9 were being met concerning experimental programs, the inspector reviewed selected aspects and/or portions of:

- Experiment Sheets and Production Log Sheets
- Experimental administrative controls and precautions
- Aerotest Experiment Type Review forms (previously designated as AGNIR Operation Request Forms) documenting experiments approved by the RSC
- Section VII of the ARRR Procedures Manual entitled, “Experiment Review and Approval,” PCN No. 2, RSC approval dated June 28, 1990, stipulating experimental program requirement
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2006 to June 30, 2007, submitted to the NRC on July 27, 2007
- Annual Summary of Changes, Tests, and Experiments Performed at the Aerotest Radiography and Research Reactor (ARRR) for the period from July 1, 2007 to June 30, 2008, submitted to the NRC on July 11, 2008

b. Observations and Findings

There were six basic types of experiments that had been approved to be conducted at the ARRR facility. These included: 1) No. 114 - neutron radiography performed in the radiography facilities, 2) No. 116 - activation analysis of hydrocarbon samples, 3) No. 117 - neutron activation of iodine and silver, 4) No. 120 - irradiation of plastic slides impregnated with microscopic quantities of fissionable materials, 5) No. 123 - irradiation of fission detectors, and 6) No. 124 - irradiation of solid state electronic components. However, the inspector verified that the only type of experiment that had been conducted at the facility in the past several years was neutron radiography (N-Ray). The typical N-Ray experiment consisted of radiographing various components such as explosive devices for different uses including the space shuttle fuel tank

separation system, fighter jet ejection systems, and automobile air bag initiating devices. All N-Ray experiments were routine in nature and had been conducted for many years. The results of the experiments were documented in the appropriate logs or records. Based on observations of ongoing work, the inspector concluded that the neutron radiography operations were being conducted in a safe and appropriate manner.

The inspector noted that no new experiments had been initiated, reviewed, or approved since the last inspection. It was also noted that the TS required that new experiments be reviewed and approved by the RSC. The licensee stated that the RSC review and approval process would be followed for any new experiments that might be proposed in the future.

c. Conclusions

The program for the control of experiments satisfied regulatory, procedural, and TS Section 6.7 requirements.

## 9. Emergency Preparedness

a. Inspection Scope (IP 69001)

To verify compliance with the facility Emergency Plan, the inspector reviewed selected aspects of:

- Emergency response facilities, supplies, and instrumentation
- Quarterly Maintenance Check Lists for 2007, 2008, and to date in 2009
- Emergency drill records for 2007, 2008, and 2009 documented in the Monthly Alarm Check Lists
- Emergency response training for 2007, 2008, and 2009 documented in the Training Log
- Offsite support as indicated in the current Letter of Agreement with the Valley Care Health System
- Emergency Plan implementing procedures, Section III of the ARRR Procedures Manual entitled, “General Emergency Procedures,” PCN No. 4, last revised January 28, 2005
- Emergency response requirements stipulated in ANSI/ANS 15.16 – 1982 (R1988), “Emergency Planning for Research Reactors”

b. Observations and Findings

The Emergency Plan for the Aerotest Radiography and Research Reactor in use at the facility was the same as the version most recently approved by the NRC with the last revision dated January 14, 2005. The inspector verified that the Emergency Plan (E-Plan) was audited and reviewed biennially as required. E-Plan implementing procedures were also reviewed and revised as needed to implement the Plan effectively.

Through records review and through interviews with staff personnel, emergency responders were determined to be knowledgeable of the proper actions to take in case of an emergency. Emergency response equipment was being maintained and calibrated and alarms were being tested at the frequency stipulated in the E-Plan. Communications capabilities with the various offsite support groups were acceptable. The facility emergency Notification List was maintained up to date by the alarm contractor, Denalect, and verified by the licensee.

The inspector verified that emergency preparedness and response training for staff personnel was being completed annually as required. Evacuation drills had been conducted twice a year as required by the E-Plan. The licensee was again encouraged to conduct more challenging drills, i.e., with participation by the fire department or the police department, in order to test communications procedures and check on the response of facility personnel and support of offsite groups to a simulated radiological or industrial hazards problem.

The inspector reviewed the Letter of Agreement (LOA) that had been signed with the Valley Care Health System which operated a hospital in nearby Pleasanton, CA. The LOA stated that the hospital would treat potential victims of a radiological event if such were to occur at the ARRR facility. The inspector verified that the hospital had been contacted annually as required to ensure that the LOA remained in effect and to verify facility readiness. The Fire Department was also being contacted annually to review emergency interface requirements as required.

During the inspection, the inspector visited the San Ramon Valley (SRV) Fire Prevention District (FPD) Station No. 34 and observed the emergency response equipment that would be used during an emergency at the facility. During the tour of the fire station, it was noted that the facility maintained more than a sufficient amount of equipment to respond to any fire emergency at the ARRR facility. The licensee representative extended the invitation to the FPD personnel to visit the ARRR for a tour whenever it was convenient. It was noted that there appeared to be a good working relationship between the licensee and SRV FPD personnel.

c. Conclusions

The inspector concluded that the emergency preparedness program was conducted in accordance with the Emergency Plan because: 1) the Emergency Plan and implementing procedures were being reviewed biennially as required and updated as needed, 2) emergency response equipment was being maintained and alarms were being tested monthly as required, 3) the Letter of Agreement with the local hospital was being verified annually as needed, 4) evacuation drills were being conducted twice a year as required, and 5) emergency preparedness training for staff personnel was being completed as required.

## 10. Follow-up on Previously Identified Items

a. Inspection Scope (IP 92701)

The inspector reviewed the licensee's actions taken in response to a previously identified Inspector Follow-up Item.

b. Observation and Findings

(1) Inspector Follow-up Item (IFI) - 50-228/2005-201-03 - Follow-up on conducting facility tours and reorientation for the SRV FPD Hazardous Material (HAZMAT) personnel.

During a tour of the SRV FPD Station No. 35 in 2005, the inspector asked the HAZMAT specialist at the fire station what the ARRR could do to help fire department personnel fulfill their role of providing emergency response support for the reactor facility. The HAZMAT specialist stated that they had the training they needed to provide assistance to the ARRR in an emergency situation, but it may be useful to have a periodic tour of the facility to reorient themselves with the hazards contained in the building. The licensee management member who was present during the SRV FPD station tour agreed that a periodic ARRR facility tour would be useful to the fire department.

During an inspection in 2007, it was noted that, during the preceding two years, the licensee had attempted to set up tours for SRV FPD personnel and also had attempted to develop a scenario for a training drill. However, to date, no periodic tours of the ARRR facility had been established and a drill involving the SRV FPD had not occurred. At that time the licensee was informed that this issue would remain open.

During this inspection, it was noted that the licensee had made various attempts but was unable to arrange tours for SRV FPD personnel. The licensee indicated that there was an open invitation for the SRV FPD to visit and tour the facility. The inspector determined that the licensee was not able to independently arrange tours for the FPD personnel but was completely dependent upon their schedule and their availability. FPD officials would have to take the initiative and arrange for the tours or training by making time in their schedule. This issue is considered closed.

(2) IFI - 50-228/2007-201-01 - Follow-up on the completion of the Autoliv, Inc. divestiture and negation plans involving Aerotest Operations, Inc.

During a previous inspection in June 2007, the inspector discussed the issue of the apparent indirect or ultimate transfer of the license which occurred when the ownership of the Aerotest Radiography and Research Reactor (ARRR) was transferred in substantial part to Autoliv, Inc., through an indirect transfer.

This issue had been under review by both the licensee and the NRC for several years. During the 2007 inspection it was noted that the pathway to a resolution had apparently been established. On October 7, 2003, the NRC issued the licensee a letter indicating the need for Aerotest to create a plan for full, or at least partial, divestiture. On January 9, 2004, Autoliv, Inc. submitted a letter to the NRC

outlining a proposal for a divestiture plan for the ARRR. The plan consisted of Autoliv's intent to sell the Aerotest business operation but, as of the date of that letter, no buyers had been identified. Since no buyer was available at that time, Autoliv proposed a partial divestiture plan under which Autoliv would attempt to identify an appropriate person or entity for the transfer of between 1% and 5% of the ownership of Aerotest. In conjunction with the partial divestiture, Autoliv also proposed a negation plan.

The inspector followed up on the actions taken by the licensee during this inspection. The inspector noted that the issue of foreign ownership of the Aerotest reactor has been the subject of much correspondence and several very recent meetings between NRC and licensee personnel. Both parties involved were striving to resolve this issue in an appropriate and equitable manner as soon as possible. Because of the actions taken by the licensee and the NRC, a resolution of this issue will be worked out in the near future. This item remains open.

c. Conclusions

One IFI identified during a previous inspection was closed.

## 11. Exit Meeting Summary

The inspector reviewed the inspection results with members of licensee management at the conclusion of the inspection on June 11, 2009. The licensee acknowledged the findings presented and did not identify as proprietary any of the material provided to or reviewed by the inspector during the inspection.

## PARTIAL LIST OF PERSONS CONTACTED

Licensee Personnel

| | |
|---|---|
| C. Bauman | Research and Development Manager |
| K. Kumar | Electronics Engineer |
| F. Meren | Reactor Supervisor and Reactor Operations Manager |
| T. Richey | Neutron Radiography Manager |
| S. Warren | General Manager and Radiological Safety Officer |
| M. Wilkinson | Quality Assurance Manager |

Other Personnel

| | |
|---|---|
| J. Breashers | Captain, San Ramon Valley Fire Prevention District, Station 34 |

## INSPECTION PROCEDURE USED

| | |
|---|---|
| IP 69001: | Class II Non-Power Reactors |
| IP 92701 | Review of Previously Identified Items |

## ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

| | | |
|---|---|---|
| 50-228/2005-201-03 | IFI | Follow-up on conducting facility tours and reorientation for the SRV FPD Hazardous Material (HAZMAT) personnel. |

Discussed

| | | |
|---|---|---|
| 50-228/2007-201-01 | IFI | Follow-up on the completion of the Autoliv, Inc. divestiture and negation plans involving Aerotest Operations, Inc. |

## LIST OF ACRONYMS USED

| | |
|---|---|
| ADAMS | Agencywide Documents Access and Management System |
| AO | Aerotest Operations, Inc. |
| ARRR | Aerotest Radiography and Research Reactor |
| CFR | Code of Federal Regulations |
| E-Plan | Emergency Plan |
| FPD | Fire Prevention District |
| IFI | Inspector Follow-up Item |
| kW | kilowatt |
| LOA | Letter of Agreement |
| N-Ray | neutron radiography |
| NRC | Nuclear Regulatory Commission |
| OEA | OEA Aerospace, Inc. |
| ORF | Operations Request Form |
| PCN | Procedure Change Notice |
| RSC | Reactor Safeguards Committee |
| SRO | Senior Reactor Operator |
| SRV | San Ramon Valley |
| TS | Technical Specification |