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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 24, 1977

DO NOT REMOVE - 4
Posted

Docket No.: 50-228

*AMDT #2
TO R-98*

Aerotest Operations, Inc.
ATTN: Mr. R. L. Newacheck
President
3255 Fostoria Way
San Ramon, California 93583

Gentlemen:

By letter dated October 4, 1976, you submitted a revised security plan dated August 10, 1976, for the Aerotest Radiography and Research Reactor Facility. Our past practice of issuing approval letters for revisions to the security plan has been discontinued. The Commission has taken this opportunity to issue the enclosed Amendment No. 2 to Facility Operating License No. R-98 which identifies the currently approved security plan and incorporates the plan as a condition of the license. The issuance of this amendment has been discussed with and agreed to by your staff. In the future, changes which require prior Commission approval should be identified as license amendment requests. Conversely, changes which do not require prior Commission approval but must be reported will not be the subject of license amendments themselves but rather will be incorporated in the license during some later amendment.

The documents comprising the currently approved security plan for the Aerotest Radiography and Research Reactor Facility and our evaluation findings have been placed in the Commission's files. Pursuant to 10 CFR Part 2.790(d) this information is being withheld from public disclosure.

Sincerely,

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosure:
Amendment No. 2

cc w/enclosure:
See next page

CC: Aerojet-General Corporation
Nuclear Division
Post Office Box 77
San Ramon, California 94583

OEA, Inc.
1030 E. North Avenue
DesPlaines, Illinois 60016

Dr. Simon Kinsman, Chief
Radiological Health Section
722 Capitol Mall - Room 2077
Sacramento, California 95814



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AEROTEST OPERATIONS, INC.

AEROTEST RADIOGRAPHY AND RESEARCH REACTOR (ARRR)

DOCKET NO. 50-228

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 2
License No. R-98

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The facility will operate in conformity with the provisions of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission;
 - B. 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;
 - C. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - D. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - E. Publication of notice of this amendment is not required since it does not involve a significant hazards consideration nor amendment of a license of the type described in 10 CFR Section 2.106(a)(2).

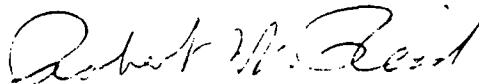
2. Accordingly, the license is amended by the addition of new paragraph 2.C.(3) as follows:

(3) Physical Security Plan

The licensee shall maintain in effect and fully implement all provisions of the NRC-approved physical security plan, including changes made pursuant to the authority of 10 CFR Section 50.54(p). The approved security plan for the Aerotest Radiography and Research Reactor Facility consists of the revision dated August 10, 1976, submitted by Aerotest Operations letter dated October 4, 1976.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Date of Issuance: February 24, 1977

DO NOT REMOVEUNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 18, 1979

Amendment # 3.

Docket No.: 50-228

Mr. R. L. Newacheck, President
Aerotest Operations, Inc.
3255 Fostoria Way
San Ramon, California 93583

Dear Mr. Newacheck:

By letter dated January 16, 1979, you submitted a revision of the Aerotest Operations, Inc. Security Plan. We have reviewed the submittal and agree with you that the revision does not decrease the effectiveness of the security plan. Your approved security plan now consists of the document dated August 10, 1976, as revised by letter dated January 16, 1979. Since the current NRC-approved Physical Security Plan should properly be reflected in the license authorization for your facility, we are treating your letter as a request for appropriate Commission authorization. This has been discussed with and agreed to by your staff. In this connection, we are herewith issuing Amendment No. 3 to Facility License No. R-98, which identifies your currently approved security plan.

Future changes which do not decrease the effectiveness of your plan do not require prior NRC approval but should continue to be reported as provided in 10 CFR §50.54(p). Changes which do require prior NRC approval should be identified as license amendment requests.

The documents comprising the currently approved security plan for the Aerotest Radiography and Research Reactor Facility and our evaluation findings have been placed in the Commission's files. Pursuant to 10 CFR Part 2.790(d), this information is being withheld from public disclosure.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert W. Reid".

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosure:
Amendment No. 3

cc w/enclosure: See next page

DO NOT REMOVE

Aerotest Operations, Inc.

cc w/enclosure(s):

~~Aerojet-General Corporation
Nuclear Division
P. O. Box 77
San Ramon, California 94583~~

~~OEA, Inc.
1030 E. North Avenue
DesPlaines, Illinois 60016~~

~~Dr. Simon Kinsman, Chief~~
Joe Ward
Radiological Health Section
722 Capitol Mall - Room 2077
Sacramento, California 95814

Energy Resources Conservation and
Development Commission
ATTN: Librarian
1111 Howe Avenue
Sacramento, California 95825

Director
Energy Facilities Siting Division
Energy Resources Conservation &
Development Commission
1111 Howe Avenue
Sacramento, California 95825

California Department of Health
ATTN: Chief, Environmental
Radiation Control Unit
Radiologic Health Section
714 P Street, Room 498
Sacramento, California 95814



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AEROTEST OPERATIONS, INC.

AEROTEST RADIOGRAPHY AND RESEARCH REACTOR (ARRR)

DOCKET NO. 50-228

AMENDMENT TO FACILITY LICENSE

Amendment No. 3
License No. R-98

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The facility will operate in conformity with the provisions of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission.
 - B. 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;
 - C. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - D. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - E. Publication of notice of this amendment is not required since it does not involve a significant hazards consideration nor amendment of a license of the type described in 10 CFR Section 2.106(a)(2).
2. Accordingly, the Facility License No. R-98 is hereby amended by revising paragraph 2.C.(3) to read as follows:

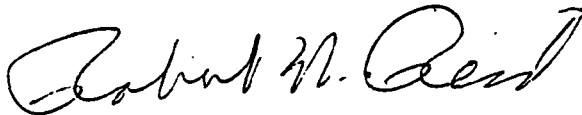
(3) Physical Security Plan

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.

3. The license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Date of Issuance: July 18, 1979



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WASHINGTON, D. C. 20555

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Docket No. 50-228

JAN 28 1981

Posted
Amndt 4
to
R-98

Aerotest Operations, Inc.
ATTN: Mr. Richard L. Newacheck
President
3455 Fostoria Way
San Ramon, California 94583

Dear Mr. Newacheck:

By letter dated January 15, 1981, you transmitted a plan proposing maintenance on your TRIGA reactor core. This plan included removing fuel from the grid structures and temporarily storing the elements in racks located within the reactor pool.

One set of those fuel storage racks consists of the usual type provided by the reactor vendor, which is located at the reactor tank wall. The other racks which you propose to use are of your design and would be positioned on the reactor tank bottom. In your letter, you requested that we consider your suggestion that your Technical Specifications could be interpreted to disallow the use of any in-pool racks except the set at the wall. You pointed out that you believe that the intent of your Technical Specifications was only to describe permanent in-pool fuel storage, but not to exclude appropriately designed temporary storage. We agree with your interpretation of the intent of your Technical Specifications in this regard.

We also agree that the wording of your Technical Specifications could be interpreted to preclude the use of all in-tank fuel storage facilities except those on the tank-wall. Therefore, in order to clarify these points and to remove the ambiguity, we have issued Amendment No. 4 to Facility License No. R-98 which re-states paragraph 11.2 of your Technical Specifications. This has been discussed with and agreed to by your staff.

During additional discussions, you have agreed to provide in-pool storage racks which cannot be tipped over accidentally, and you will re-assemble and test the control rod systems in a manner which is consistent with the original vendor's specifications. Furthermore, you have agreed to perform the fuel re-loading with the usual safety procedures, including having an operator at the control console, having a start-up neutron source in the core region, and maintaining an operational start-up neutron monitor.

JAN 28 1981

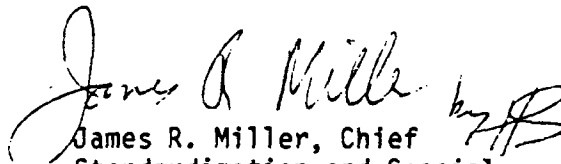
In conformance with your facility license, the procedures for these activities are not subject to prior review by the Nuclear Regulatory Commission.

Since this amendment is administrative in nature and is issued to reword your Technical Specification, we have concluded that:

- (1) the amendment does not involve a significant increase in the probability or consequences of accidents previously considered, does not involve a significant decrease in a safety margin, and, therefore, does not involve a significant hazards consideration;
- (2) there is reasonable assurance that the health and safety of the public will not be endangered by this action, and
- (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

We have determined that this amendment will not result in any significant environmental impact and that it does not constitute a major Commission action significantly affecting the quality of the human environment. We have also determined that this action is not one of those covered by 10 CFR 51.5(a) or (b). Having made these determinations, we have further concluded that, pursuant to 10 CFR 51.5(d)(4), an environmental impact appraisal and negative declaration need not be prepared in connection with issuance of this amendment.

Sincerely,


James R. Miller, Chief
Standardization and Special
Projects Branch
Division of Licensing

Enclosure:
As stated

cc: See next page



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AEROTEST OPERATIONS, INC.

DOCKET NO. 50-228

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 4
License No. R-98

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The facility will operate in conformity with the provisions of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission;
 - B. 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;
 - C. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - D. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - E. Publication of notice of this amendment is not required since it does not involve a significant hazards consideration nor amendment of a license of the type described in 10 CFR Section 2.106(a)(2).
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. R-98 is hereby amended to read as follows:

2.C.(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 4, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

JAN 28 1981

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James R. Miller
James R. Miller, Chief
Standardization & Special Projects Branch
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance JAN 28 1981

9.12.3 The explosive devices shall be subjected to a total exposure not to exceed 3×10^{11} neutrons/cm² and 3×10^3 roentgens of gammas.

9.12.4 Explosive devices that, upon ignition, have or provide a thrust in a definite direction shall be positioned so as to be aimed away from the reactor and components."

*Chg # 7
dtc 6/24/71*

10.0 General Operating Limitations

10.1 Reactor operation shall be permitted only when two or more personnel are in the reactor building, at least one of whom is a licensed Operator.

10.2 The reactor shall not be operated wherever there are significant defects in fuel elements, control rods or control circuitry.

10.3 Upon occurrence of abnormal operation of the reactor, including its controls, safety systems and auxiliary systems, action shall be taken immediately to secure the safety of the facility and determine the cause of the abnormal behavior.

11.0 Fuel Storage and Transfer

11.1 The fuel storage pits located in the floor of the reactor room shall accommodate a maximum of 19 fuel elements (700 gm U-235) in storage racks dry or flooded with water. The fuel storage pits shall be secured with a lock and chain except during fuel transfer operations.

11.2 Additional fuel storage racks may be located in the reactor tank. Each of these storage facilities shall be so designed that for all conditions of moderation k_{eff} shall not exceed a value of 0.8.

11.3 A fuel handling tool shall be used in transferring fuel elements of low radioactivity between the storage pits and the reactor; a shielded fuel transfer cask shall be used for the transfer of highly radioactive fuel elements. The fuel handling tool shall remain in a locked cabinet under the cognizance of the Reactor Supervisor when not authorized for use.