AEROTEST OPERATIONS, INC.

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April 30, 2018

ATTENTION: Document Control Desk
U.S. Nuclear Regulatory Commission
White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

AEROTEST RADIOGRAPHY AND RESEARCH REACTOR
DOCKET NO. 50-228/LICENSE NO. R-98.

SUBJECT: Elimination of TS 6.6

Ladies and Gentlemen:

The current Technical Specification (TS) 6.6 as written: "During a critical experiment, subcritical multiplication plots shall be obtained from at least three instrument channels. These channels may be used in addition to the normal operating instrumentation in Table 1." After continued evaluation concerning the modification or elimination of TS 6.6 for ARRR, I request the contents of the letter dated March 29, 2018, which requested a modification to Technical Specification 6.6, be superseded by this request. I propose the elimination of TS 6.6. It is not required to be present in the technical specifications according to 10 CFR 50.36 Technical Specifications there is no NUREG guide or ANSI standard that requires such a condition to be present in the License's TSs. Review of TSs of licenses of similar reactor type, that were recently renewed, confirms this belief. Operating procedures are the typical type of document that provide the safe application. As required, any changes to the procedures are reviewed by the Reactor Safety Committee. The approach to critical procedure is given in the ARRR restart plan dated 4/03/18.

There is no written justification in the historical documents for presence of TS 6.6. It is most likely an artifact of the start-up activities; TS 6.6 may have been seen as relevant upon startup in 1965 and 1966 during the time when the reactor operational characteristics were being defined. (The approach to criticality is no longer performed as an experiment.) The research indicated the detector type, source orientation to the detector, and the loading sequence impact the safety of the approach to critical process, the quality and usefulness of the data. Procedures and

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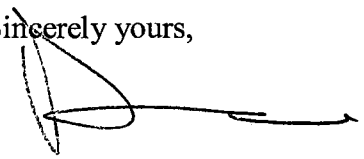
instructions for approach to critical have been modified for effective use as needed. For example, the last approved change by the Reactor Safety Committee was in January 1981 to Procedure IV. The current TS 6.6 if followed will most likely produce inaccurate and low quality data from 2 of the 3 instruments due to less optimal element loading sequence and orientation of source and detector, etc.

I enclosed a replacement for TS page 5. Should you have any questions or require additional information regarding this submission, please contact AO President David M. Slaughter, Ph.D. at (801) 631 5919 or dmsraven@gmail.com

I declare under penalty of perjury that the statements above are correct and truthful.

Sincerely yours,



David M. Slaughter, Ph.D.
President and Reactor Admin.
Aerotest Operations, Inc.

Enclosure:

- Appendix A license No. R-98 TS Page 5 , "6.6 Blank" replacing "6.6 During a critical experiment experiment, subcritical multiplication plots shall be..... "

6.6 Blank

6.7 Process instrumentation with readout in the control room shall be operating to permit continuous indication of pool water temperature and conductivity. Alarms shall be operated to indicate low water flow, low pool water and improper location of the crane bridge.

7.0 Radiation Monitoring

"7.1 A fixed gamma monitor employing Geiger tube detectors shall be located on the wall connecting the control room and the reactor room. This monitor shall serve as both an area radiation monitor and a criticality alarm and will annunciate through an automatic monitoring system to the San Ramon, California, Fire Department and actuate a siren within the reactor building on high radiation level. The monitor shall have a minimum range of 0 to 20 mr/hr. The annunciation and the siren actuation shall be tested monthly."

Change #5 4-20-70

See 3rd Para & Change 5

7.2 During reactor operation, a gas sample shall be continuously withdrawn from the roof vent above the reactor, or from the vicinity of the reactor bridge and glory hole over the reactor core, and pumped through a radioactive gas detection chamber. The gas chamber shall be monitored by a beta-gamma detector which shall have a continuous readout in the control room. An annunciator shall indicate when the gas exceeds 2 mr/hr.

7.3 A fission product water monitor shall be attached to the process water cleanup system loop adjacent to the demineralizer and shall provide continuous indication in the control room. High radiation levels within the demineralizer or pool water shall annunciate an audible alarm on the reactor console. The range of the monitor shall be from 0.1 to 100 mr/hr.

7.4 Portable survey instruments for measuring beta-gamma dose rates in the range of 0.01 mr/hr to 50 r/hr shall be available at the facility.

7.5 Portable instruments for measuring fast and thermal neutron dose rates from 0.1 mrem/hr to 1.0 rem/hr shall be available at the facility.