RADIATION CENTER

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September 30, 1998

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Reference: Oregon State University TRIGA Reactor (OSTR)
Docket No. 50-243, License No. R-106

Subject: a) Request for Additional Information (TAC No. MA3303) on Proposed Amendments to OSTR Technical Specifications.

b) Notification of Personnel Changes

Gentlemen.

The following information is in response to your request for additional information on proposed amendments to the OSTR Technical Specifications.

Proposed Change to Technical Specification 3.8.e.

The wording below is a replacement for that submitted in our July 27, 1998 letter to the NRC. Although the wording currently in place *may* be satisfactory, there is concern on our part about how the phrase "airborne concentration of radioactivity in the reactor bay and the unrestricted area will not exceed the applicable regulatory concentration limits in 10 CFR 20" *could* possibly be interpreted. There are imaginable situations wherein the radionuclide *concentration* could exceed the *concentration* limit in 10 CFR 20, but the associated *dose* to an individual would never come close to the applicable dose limit. This is especially true with many of the short-lived radionuclides that are produced in a research reactor.

Consequently Technical Specification 3.8.e. has been rewritten to avoid any ambiguity in interpretation. The new wording focuses on not exceeding the applicable 10 CFR 20 *dose* limits rather than *concentration* limits. We feel that this is a much more appropriate approach in that it addresses the actual intent of the regulatory requirements in the new Part 20, namely to operate such that the "total dose to an individual...does not exceed the standards for protection against radiation prescribed in" 10 CFR 20.

The changes in Technical Specification 3.8.e. and the corresponding basis are given below.

Key: [*deleted text*] **added text**

3.8 LIMITATIONS ON EXPERIMENTS

e. Where the possibility exists that the failure of an experiment (except fueled experiments) under (1) normal operating conditions of the experiment or reactor, (2) credible accident conditions in the reactor, or (3) possible accident conditions in the experiment[,] could release radioactive gases or aerosols to the reactor bay or the unrestricted area, the quantity and type of material in the experiment shall be limited such that the airborne [*concentration of*] radioactivity in the reactor bay [*and*] **or** the unrestricted area will not [*exceed*] **result in exceeding** the applicable [*regulatory concentration*] **dose** limits in 10 CFR 20, assuming 100% of the gases or aerosols escape from the experiment.

Bases

e. This specification is intended to **meet the purpose of 10 CFR 20 by** [*reduce*] **reducing** the likelihood that **released** airborne radioactivity **to the reactor bay or unrestricted area surrounding the OSTR will result in exceeding the total dose limits to an individual** [*in excess of the limits in Appendix B*] **as specified in** [*of*] 10 CFR [*Part*] 20 [*will be released to the reactor bay and unrestricted area surrounding the OSTR*].

Attachment A contains the corrected text for Technical Specification 3.8.e and its basis should you agree to the amendments proposed in the letter of July 27, 1998 and this letter.

Personnel changes

In separate matters, I would like to provide notification of changes to personnel shown in the organization chart of the OSTR Technical Specifications as required by Technical Specification 6.7.c.3. Dr. Steven R. Reese has replaced Dr. Jack F. Higginbotham as Reactor Administrator of the OSTR. Also Dr. Jack F. Higginbotham has replaced Dr. Stephen E. Binney as Chairman of the Reactor Operations Committee.

Sincerely,

Stephen E. Binney
Director

c:

Al Adams, Senior Project Manager, Non-Power Reactors and Decommissioning Projects Directorate, U.S. Nuclear Regulatory Commission, M.S. 0-11-B-20, Washington, D.C. 20555

Oregon Office of Energy, 625 Marion Street, NE, Salem, Oregon 97310, Attn: David Stewart-Smith
Wilson C. Hayes, Vice Provost for Research
Jack F. Higginbotham, Chairman, Reactor Operations Committee
Steven R. Reese, Reactor Administrator
David S. Pratt, Senior Health Physicist
Arthur D. Hall, Reactor Supervisor

State of Oregon)
) ss
County of Benton)

Stephen E. Binney, being first duly sworn on oath, deposes and says that he has affixed his signature to the letter above in his official capacity as Director, Oregon State University Radiation Center; that he has signed this letter requesting Technical Specification changes as required by 10 CFR 50.4b(5)(ii); that in accordance with the provisions of 10 CFR 50.30(b), he is attaching this affidavit; that the facts set forth in the letter within are true to his best information and belief.

Stephen E. Binney, Director

OFFICIAL SEAL
SHIRLEY CAMPBELL
NOTARY PUBLIC - OREGON
COMMISSION NO. 304648
MY COMMISSION EXPIRES SEPTEMBER 09, 2001

Subscribed and sworn before me, a Notary Public, in and for the County of Benton, State of Oregon, this 30th day of Sept 98, A.D., 1998.

Notary Public of Oregon

9/9/01
My Commission Expires

ATTACHMENT A

3.8 LIMITATIONS ON EXPERIMENTS

e. Where the possibility exists that the failure of an experiment (except fueled experiments) under (1) normal operating conditions of the experiment or reactor, (2) credible accident conditions in the reactor, or (3) possible accident conditions in the experiment could release radioactive gases or aerosols to the reactor bay or the unrestricted area, the quantity and type of material in the experiment shall be limited such that the airborne radioactivity in the reactor bay or the unrestricted area will not result in exceeding the applicable dose limits in 10 CFR 20, assuming 100% of the gases or aerosols escape from the experiment.

Basis:

e. This specification is intended to meet the purpose of 10 CFR 20 by reducing the likelihood that rele ,ed airborne radioactivity to the reactor bay or unrestricted area surrounding the OSTR will result in exceeding the total dose limits to an individual as specified in 10 CFR 20.