

March 28, 2005

Dr. Charles R. Fay  
Vice Provost for Research Administration  
Cornell University  
314 Day Hall  
Ithaca, NY 14853-2801

SUBJECT: Request for Additional Information Concerning Decommissioning Plan for the Ward Center for Nuclear Studies at Cornell University, TRIGA Reactor, Docket No 50-157, License R-80 and the ZPR, Docket No. 50-97, License R-89 (TAC NO. MC1141)

Dear Dr. Fay:

We are reviewing your Decommissioning Plan (DP) for the Ward Center for Nuclear Studies at Cornell University, Revision 1, July 2003 (DP) for Facility Operating Licenses No. R-80 and R-89 for the Cornell University Reactors. The DP was submitted on August 22, 2003. During our review of your DP, questions have arisen for which we require additional information and clarification. Please provide responses to the enclosed request for additional information within 60 days of the date of this letter. In accordance with 10 CFR 50.30(b), your response must be executed in a signed original under oath or affirmation. Following receipt of the additional information, we will continue our evaluation of your DP.

If you have any questions regarding this review, please contact me at 301-415-1631.

Sincerely,

**/RA/**

Daniel E. Hughes, Project Manager  
Research and Test Reactors Section  
New, Research and Test Reactors Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 50-157/97

Enclosure: As stated

cc w/enclosure: Please see next page

Cornell University

Docket Nos. 50-157/97

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REQUEST FOR ADDITIONAL INFORMATION  
CORNELL UNIVERSITY RESEARCH REACTORS  
DOCKET NO. 50-157/97

DP, Page 12 of 73, Current Facility Status

What is the date that the TRIGA was permanently shut down? (Please use the Technical Specification (TS) definition of Shutdown)? What is the date that all fuel reached DOE storage facilities?

DP, Page 12 of 73, Section 1.2.2 Reactor Decommissioning Overview

Discuss the source of the contamination in the floor drains and the possibility that it has spread beyond the drains. What are the nuclides expected as the contaminate?

DP, Page 13 of 73, Section 1.2.2 Reactor Decommissioning Overview

Discuss the statement "Either decontaminate and release the material as non-radioactive waste, or package for transport as radioactive waste." What is the screening process to be used to determine whether or not the waste is "non-radioactive?" Also see Section 2.3.1.1.3.3, bullet 7 (page 27 of 73).

Page 14 of 73, Section 1.2.5 Program Quality Assurance

Please provide a more detailed summary of the Quality Assurance Program. Please specify the percentage of samples analyzed by the vendor laboratory that will be held for possible verification by the NRC or their contractor.

DP, Page 16 of 73, Top Paragraph

Please differentiate between the regulation in 10 CFR 20.1402 and the "guidance" documents listed.

DP, Page 23 of 73, Section 2.2.1

With a history of pool leaks and facility floor drains shown to be contaminated, please clarify the impact, if any, the leaks may have had on the soil, the ground water and specify the outfall of the floor drains.

DP, Page 24 of 73, Section 2.3.1.1 Characterization Surveys

Discuss the characterization surveys that are planned to be done prior to decommissioning and completion of the Final Status Survey (FSS) Plan.

DP, Page 26 of 73, Section 2.3.1.1.3.1 Disposition of Decommissioning Equipment and Materials and Section 4.1.2, page 64 of 73

RG 1.86, "Termination of Operating Licenses for Nuclear Reactors," June 1974 described methods and procedures considered acceptable by the Regulatory staff for the termination of operating licenses for nuclear reactors. NUREG 1575, MARSSIM, provides information on planning, conducting, evaluating, and documenting building surface and surface soil final status radiological surveys for demonstrating compliance with dose or risk-based regulations or standards. It is not appropriate to use either document as criteria for determination of clean waste vs. radioactive waste. The appropriate criterion is that no licensed radioactive material may be disposed of as clean waste. For practical purposes, that means no detectable licensed material. The licensee is responsible for determining that waste disposed as clean waste contains no licensed radioactive material. Please propose a program for screening waste.

For guidance use:

Information Notice No. 88-22, "Disposal of Sludge from Onsite Sewage Treatment Facilities at Nuclear Power Stations" at  
(<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1988/in88022.html>),

Information Notice No. 85-92, "Surveys of Wastes Before Disposal From Nuclear Reactor Facilities" at  
(<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1985/in85092.html>), and

IE Circular No. 81-07, "Control of Radioactively Contaminated Material" at  
(<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/circulars/1981/cr81007.html>)

DP, Section 2.3.1.3, page 32 of 73

In this section it is stated that "...a final status survey (FSS) of each of the reactor rooms and other applicable locations covering the Ward Center will be performed and documented." In DP, Section 2.3.1.1.3, it is stated that the entire Ward Center will be decontaminated and surveyed.

Please verify your intended coverage of Ward Center with respect to the FSS.

DP, Section 2.4, page 32 of 73

Discuss the functions, responsibilities, and qualifications of the Cornell Project Manager.

DP, Section 2.4, page 32 of 73

Discuss the functions, responsibilities, qualifications, and composition of the Cornell D and D Oversight Committee.

DP, Section 2.4.2, page 36 and 37 of 73

Please clarify how Ward Center Director for Nuclear Studies position and the Reactor Supervisor position fit in Figure 2-4.

DP, Section 2.7, Page 40 of 73

The last sentence of the next to the last paragraph states that "...small amounts of concrete from the radiologically controlled area may be released using the volumetric soil release criteria." Please describe and justify the process that is being proposed.