

January 11, 2007

Dr. Woodrow Whitlow, Jr, Director  
NASA Glenn Research Center at Lewis Field  
21000 Brookpark Road M.S. 3-2  
Cleveland, Ohio 44135

SUBJECT: NRC INSPECTION REPORTS 50-30/06-01(DNMS) AND 50-185/06-01(DNMS)

Dear Dr. Whitlow:

On December 12, 2006, the NRC completed inspection activities at the NASA Plum Brook Reactor Facility. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on December 12, the inspectors discussed the findings with members of your staff.

This inspection consisted of an examination of decommissioning activities at the Plum Brook Reactor Facility as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection included: a selective examination of procedures and representative records, observations of activities in progress, and interviews with personnel. Based on the results of this inspection, the NRC did not identify any violations.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

We will gladly discuss any questions you may have regarding this inspection.

Sincerely,

*/RA/*

Jamnes L. Cameron, Chief  
Decommissioning Branch

Docket No. 50-30 and 50-185  
License No. TR-3 and R-93

Enclosure:  
NRC Inspection Reports 50-30/06-01(DNMS) and 50-185/06-01(DNMS)

cc w/encl:  
See next page

W. Whitlow

-2-

cc w/encl: Radiation Health Program Director, Ohio Department of Health  
Stephen Helmer, Bureau of Radiation Protection, Ohio Department of Health  
Ohio Environmental Protection Agency, Division of Planning  
Keith Peecook, NASA, Plumbrook Station

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Letter to Woodrow Whitlow, Jr. from Jamnes L. Cameron dated January 11, 2007

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cc w/encl: Radiation Health Program Director, Ohio Department of Health  
Stephen Helmer, Bureau of Radiation Protection, Ohio Department of Health  
Ohio Environmental Protection Agency, Division of Planning  
Keith Peacock, NASA, Plumbrook Station

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 050-00030 and 050-00185

License Nos: TR-3 and R-93

Report Nos: 050-00030/06-01(DNMS) and  
050-00185/06-01(DNMS)

Licensee: National Aeronautics and Space Administration

Facility: Plum Brook Reactor Facility  
Test Reactor and Mockup Reactor

Location: Sandusky, Ohio

Dates: December 11-12, 2006

Inspectors: William Snell, Senior Health Physicist  
Dr. Peter Lee, CHP, Health Physicist  
Andrew Bramnik, Health Physicist

Approved by: Jamnes L. Cameron, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure

## EXECUTIVE SUMMARY

### NASA Plum Brook Reactor Facility Report Nos: 50-30/06-01(DNMS) and 50-185/06-01(DNMS)

These inspection activities included a routine inspection to evaluate the current status of decommissioning activities. During the inspection the inspectors toured the Plum Brook Reactor facilities, discussed the status of the decommissioning activities with licensee personnel, and examined licensee records and procedures.

#### Decommissioning Activities

- The licensee's decommissioning radiation protection program adequately controlled contamination and radioactive materials; workers employed sound health physics work practices; and safety committees met and conducted safety reviews as required by procedures and Technical Specifications. (Section 1.0)

## Report Details<sup>1</sup>

### **1.0 Research and Test Reactor Decommissioning (69013)**

#### **1.1 Inspection Scope**

The inspectors interviewed licensee personnel, reviewed records and procedures, and toured the reactor facilities to assess the decommissioning radiation protection program. Aspects of the licensee's program reviewed by the inspectors included laboratory analyses, analytical and quality assurance/quality checking (QA/QC) procedures for the germanium detector, liquid scintillation detector, and the gas proportional detector.

The inspectors reviewed the minutes for 30 different calendar year 2006 Project Safety Committee (PSC) meetings against the requirements specified in Procedure PSC-03, "Project Safety Committee Meetings, Revision 2." The inspectors also reviewed the records from the Decommissioning Safety Committee (DSC) meetings held on April 8, 2005, December 2, 2005, and July 11, 2006.

#### **1.2 Observations and Findings**

The licensee analyzes radiological samples collected pursuant to decommissioning activities in an onsite laboratory while samples collected for environmental monitoring are sent to an offsite contract laboratory for analysis. No concerns were identified with the analytical capabilities or QA/QC program of the onsite laboratory. Analytical results of environmental monitoring results for the Plum Brook Reactor Facility (PBRF) site from calendar year 2005 for surface water, sediment, ground water, and air sampling showed no identifiable impacts attributable to the current decommissioning operation at PBRF.

During a tour of the PBRF facilities, step-off pads were appropriately placed, friskers and other survey and monitoring instrumentation were all within current calibration dates, postings and boundaries were adequate and appropriate, and contaminated material was being controlled. Workers were properly dressed-out for the work being performed, adhered to all boundaries, and employed good health physics work practices.

The PSC meetings were conducted at least monthly, as required, were conducted with a quorum present, and were attended at a minimum by the personnel specified in procedure PSC-03. Based on the meeting minutes, the PSC meetings addressed and resolved safety related issues appropriate to the Committee's level of oversight. The DSC is a Committee established by Technical Specification 6.7 "to conduct reviews of all matters with safety implications relative to activities at PBRF, and will provide an executive level overview of PBRF activities." The Committee met semi-annually as required, and each meeting was conducted with a quorum. The inspectors identified no concerns with the DSC meeting records reviewed. An Action Item opened in the April 8 Meeting had been adequately addressed and closed prior to the December 12 meeting.

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<sup>1</sup>A list of acronyms used in the report is included at the end of the Report Details.

### 1.3 Conclusion

The licensee's decommissioning radiation protection program adequately controlled contamination and radioactive materials; workers employed sound health physics work practices; and safety committees met and conducted safety reviews as required by procedures and Technical Specifications.

### 2.0 **Exit Meeting Summary**

The inspectors presented preliminary inspection findings to members of the licensee management team at the conclusion of onsite inspection activities on December 12, 2006. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **PARTIAL LIST OF PERSONS CONTACTED**

#### Licensee

\*K. Peecook, Program Manager

\*J. Thomas, Licensing Engineer

\*Persons present at the exit meeting on December 12, 2006.

### **INSPECTION PROCEDURES USED**

IP 69013      Research and Test Reactor Decommissioning

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened                      None

Closed                      None

Discussed                      None

### **PARTIAL LIST OF DOCUMENTS REVIEWED**

Licensee documents reviewed and utilized during the course of this inspection are specifically identified in the "Report Details" above.

### **LIST OF ACRONYMS USED**

CFR	Code of Federal Regulations
DSC	Decommissioning Safety Committee
IP	Inspection Procedure
NASA	National Aeronautics and Space Administration
NRC	Nuclear Regulatory Commission
PBRF	Plum Brook Reactor Facility
PSC	Project Safety Committee
QA	Quality Assurance
QC	Quality Check

