

**NUCLEAR REGULATORY COMMISSION**

**[Docket Nos.: 50-30 and 50-185; NRC-2012-0243]**

**Notice of License Terminations for  
National Aeronautics and Space Administration  
Plum Brook Reactor and Plum Brook Mock-Up Reactor**

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is noticing the termination of the National Aeronautic and Space Administration (NASA) Facility License Nos. TR-3 and R-93 for the Plum Brook Reactor Facility (PBRF) near Sandusky, Ohio.

The NRC has terminated the two licenses for the decommissioned NASA PBRF reactors and has released the site for unrestricted use. The licensee requested termination of the licenses in a letter to the NRC dated September 18, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML12268A326). The Plum Brook Reactor was a 60-megawatt materials test reactor, constructed to perform irradiation testing of fueled and unfueled experiments for space program applications. The Plum Brook Mock-up Reactor was a 100-kilowatt swimming-pool type reactor constructed to test "mock-up" irradiation components for the Plum Brook Reactor. The reactors operated from 1961 to 1973. In 1973, the PBRF reactors were shutdown.

The licensee submitted a proposed decommissioning plan to the NRC for review and approval in a letter dated December 20, 1999 (ADAMS Accession Numbers ML993630054 and ML993630075). A notice and solicitation of comments under sections 20.1405 and 50.82(b)(5) of Title 10 of the *Code of Federal Regulations* (10 CFR), concerning the proposed action to decommission the NASA PBRF, appeared in the *Federal Register* (65 FR 12040; March 7, 2000). Prior to issuance of the amendments, the Commission published an Environmental Assessment and Finding of No Significant Impact concerning this action in the *Federal Register* (65 FR 16421; March 28, 2000). On March 20, 2002, the NRC approved the decommissioning

plan by Amendment No. 11 to License TR-3 and Amendment No. 7 to License No. R-93 (ADAMS Accession Number ML020390069).

In 2007, the licensee submitted a revised Final Status Survey Plan and a request for amendment to the licenses incorporating this plan prior to performing final radiation surveys (ADAMS Accession Numbers ML070450166, ML070450170 and ML070450171). The NRC published a "Notice of Consideration of Issuance of Amendment to Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing" for the PBRF in the *Federal Register* (72 FR 46521; August 20, 2007). On March 24, 2008, the NRC approved the revised Final Status Survey Plan by License Amendment No. 13 to License TR-3 and Amendment No. 9 to License R-93 (ADAMS Accession Number ML073020311). Following the issuance of the license amendments, the licensee revised the decommissioning plan (ADAMS Accession Number ML082070086) to reflect the approval of the revised Final Status Survey Plan.

The licensee completed final status surveys and documented the survey results in the Final Status Survey Report (FSSR). The FSSR consists of one summary report and eighteen attachments each documenting final status survey results for different areas of the facility. The FSSR documented the level of residual radioactivity remaining at the facility. The licensee stated that radiological remediation of all areas of the PBRF has been completed and the facility meets the criteria for unrestricted release specified in 10 CFR 20.1402. The NRC completed its review of the FSSR, and the NRC staff verified that the criteria in the approved decommissioning plan has been met and determined that the facility and site met the criteria in 10 CFR 20.1402 for unrestricted use. The NRC review was documented in a Technical Evaluation Report and included in its response (ADAMS Accession Number ML12223A244) to the licensee's request for termination of licenses.

Pursuant to 10 CFR 50.82(b)(6), the NRC staff has concluded that the PBRF has been decommissioned in accordance with the approved decommissioning plan and that the terminal radiation survey and associated documentation demonstrate that the facility and site may be released in accordance with the criteria in the NRC-approved decommissioning plan. Further, on the basis of the decommissioning activities carried out by NASA, the NRC's review of the licensee's FSSR, and the results of the NRC inspections conducted at the PBRF and the NRC confirmatory surveys, the NRC has concluded that the decommissioning process is complete and the facility and site may be released for unrestricted use. Therefore, Facility Licenses Nos. TR-3 and R-93 are terminated.

For further details with respect to this action, see licensee's request for license termination dated September 18, 2012. The above referenced documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR) at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Publicly available records for the NASA PBRF dated after January 30, 2000, will be available online in the NRC Library in ADAMS at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should call the NRC's PDR Reference staff at 1-800-397-4209 or 301-415-4737 or e-mail [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

Dated at Rockville, Maryland, this 10<sup>th</sup> day of October 2012.

For the Nuclear Regulatory Commission.

**/RA/**

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