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The Business of Innovation

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June 30, 2006

Mr. Mike McCann
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352


Dear Mr. McCann:

Subject: Submission of Environmental Report Document by Battelle for NRC Review

Please find the enclosed report titled "Environmental Report for Termination of the NRC License for Battelle Columbus Laboratories Facilities at Columbus and West Jefferson, Ohio" for Nuclear Regulatory Commission (NRC) review in support of the termination of Battelle's NRC License SNM-7 as an unrestricted release site. The report was prepared using the guidance of NUREG 1748 "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs."

If you have any questions or comments, please do not hesitate to call me at 614-424-6376.

Sincerely,



Patrick Weaver, P.E.
BCLDP Program Manager

Enclosure: As stated

JDJ:PWJ



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*Environmental Report for Termination of the NRC License
for Battelle Columbus Laboratories Facilities at
Columbus and West Jefferson, Ohio*

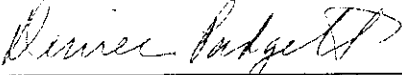
Battelle Memorial Institute
Columbus, Ohio

June 2006

APPROVAL SHEET

This document, *Environmental Report for Termination of the NRC License for Battelle Columbus Laboratories Facilities at Columbus and West Jefferson, Ohio*, has been prepared and approved by:

Prepared by:

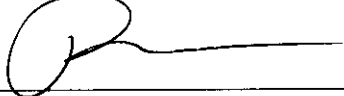


Desiree Padgett, Senior Technical Writer
Battelle Columbus Operations

June 23, 2006

Date

Approved by:



Patrick Weaver, BMI BCLDP Project Manager
Battelle Columbus Operations

6/30/06

Date

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List of Acronyms and Abbreviations

BCL	Battelle Columbus Laboratories
BCLDP	Battelle Columbus Laboratories Decommissioning Project
DOE	U.S. Department of Energy
EA	environmental assessment
FONSI	finding of no significant impact
FY	fiscal year
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
TRU	transuranic

Environmental Report for Termination of the NRC License for Battelle Columbus Laboratories Facilities at Columbus and West Jefferson, Ohio

1.0 Introduction

In 1990, the U.S. Department of Energy (DOE) proposed to decommission 15 buildings and associated premises belonging to Battelle Memorial Institute headquartered in Columbus, Ohio. The facilities had become contaminated with varying amounts of radioactive material as a result of nuclear research and development activities conducted over a period of approximately 43 years for DOE, its predecessor agencies, and other commercial contracts. The facilities at the West Jefferson North site were operated under a Nuclear Regulatory Commission (NRC) nuclear materials license (No. SNM-7). Under the proposed Battelle Columbus Laboratories Decommissioning Project (BCLDP), DOE sought to clean up and decommission nine buildings at the Battelle Columbus Laboratories (BCL) King Avenue site in Columbus and six buildings at Battelle's West Jefferson site, West Jefferson, Ohio. In addition, DOE was responsible for managing (treating, storing, and disposing of) all radioactive waste generated during facility cleanup.

The overall objective of the BCLDP was to return the 15 contaminated buildings and surrounding grounds to Battelle, free from radiological restrictions (e.g., unrestricted release), at or below levels consistent with NRC and DOE applicable requirements. In 1990, in accordance with the National Environmental Policy Act (NEPA), DOE issued an environmental assessment (EA) and finding of no significant impact (FONSI) addressing all project activities (DOE 1990). The BCLDP has also been overseen by the NRC and, when Ohio became an Agreement State in 2000, by the Ohio Department of Health. While the NRC has maintained regulatory control of Battelle's activities through an approved decommissioning plan (BCO 2003), it chose not to become the lead agency for NEPA compliance; instead, it accepted DOE's 1990 EA.

Cleanup efforts at the King Avenue site were largely completed in 1998. By the end of fiscal year (FY) 2000, all planned decontamination was complete at Battelle's King Avenue site, and the condition of buildings and grounds had been independently verified as suitable for reuse without radiological restrictions. After early 1998, work focused on BCL facilities in rural West Jefferson. Cleanup at the West Jefferson site was completed during February 2006.

The proposed action is to terminate amended License No. SNM-7 issued by the NRC on April 28, 1983. From 1987 through 2006, 30 amendments to the license were issued.

1.1 Purpose and Need for the Proposed Action

Amendment 26 of the NRC license under which Battelle operated its facilities expired on December 31, 2005. Under Amendment 30, the NRC license was extended to August 31, 2006, to allow for completion of the cleanup work and of the license termination process (Attachment A). By February 2006, DOE had taken the final steps to complete its cleanup and decommissioning activities when it had removed the last of the transuranic (TRU) waste (approximately 37 cubic meters [1,307 cubic feet]), 37,338 cubic meters (1,318,573 cubic feet)

of low-level waste, and 17.7 cubic meters (623.8 cubic feet) of radioactive mixed waste staged and/or stored at the West Jefferson site.

1.2 Proposed Action

NRC License No. SNM-7 will expire in August 2006. With the removal of the TRU waste, low-level waste, and radioactive mixed waste at the West Jefferson site, radioactive contamination at the West Jefferson North site grounds has been reduced to levels consistent with use of the grounds without radiological restrictions. Therefore, Battelle proposes to terminate the NRC license under which the BCL facilities and grounds operated. This proposed action triggers no other regulatory requirements, permits, or consultations for Battelle.

2.0 Description of the Alternatives

Because the BCL facilities and related grounds have been cleaned up and the BCLDP is complete, Battelle is not considering any alternatives to the proposed action. The no-action alternative would consist of failure to terminate the NRC license.

3.0 Description of the Affected Environment

The BCLDP comprises two separate sites located in Franklin and Madison Counties in the State of Ohio: the King Avenue site (Figure 1) and the West Jefferson site (Figure 2).

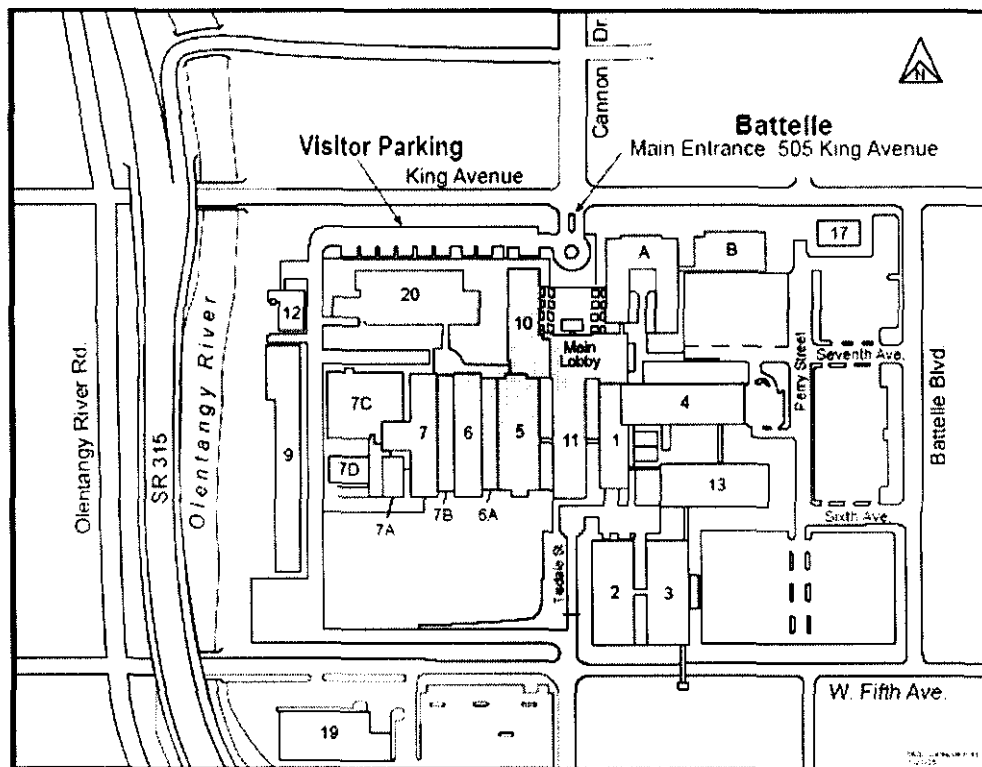


Figure 1. King Avenue Site, Franklin County, Columbus, Ohio

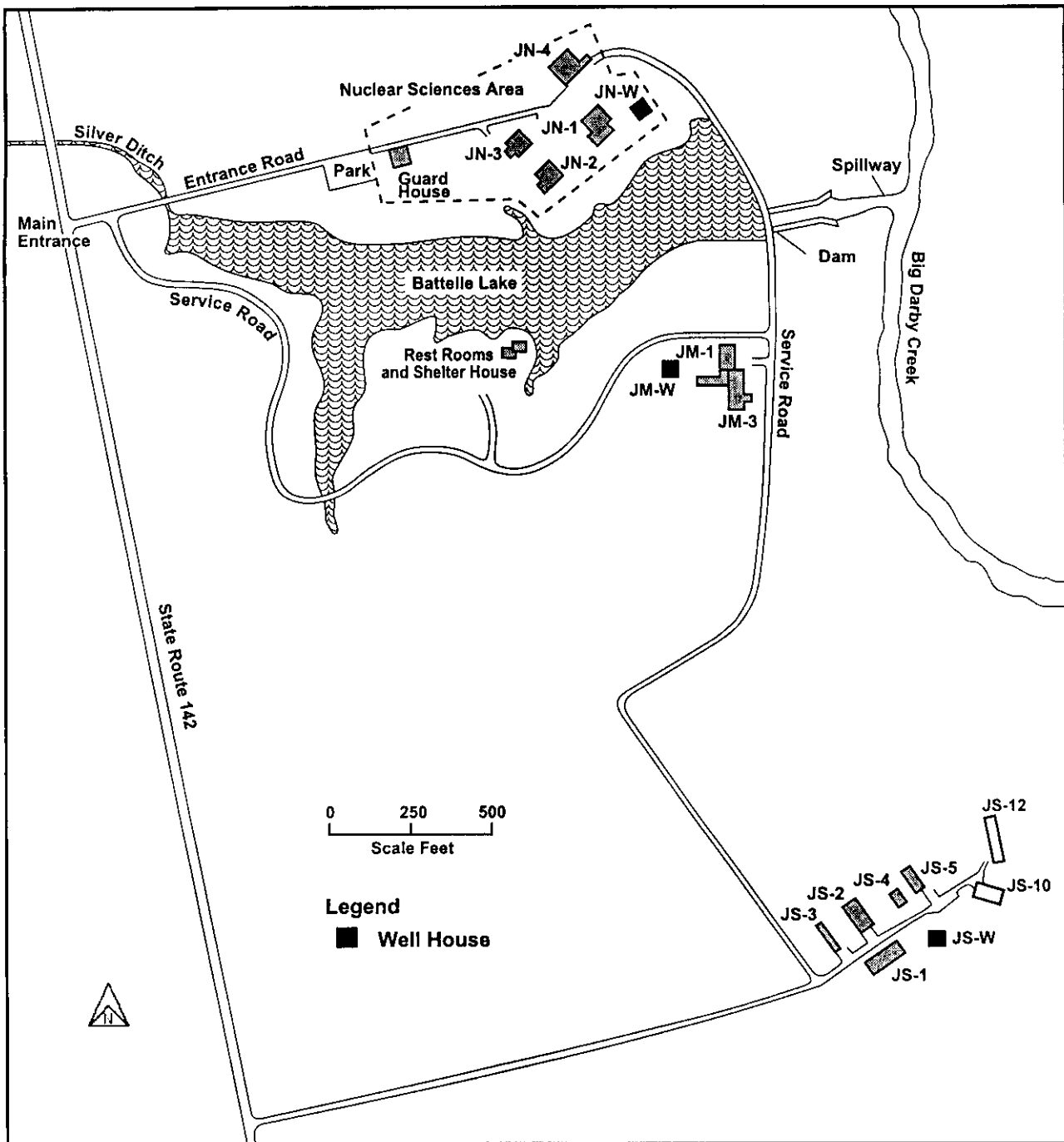


Figure 2. West Jefferson Site, Madison County, West Jefferson, Ohio

SThollen/1-13

3.1 King Avenue Site

The 4-hectare (10-acre) King Avenue facility is located in Franklin County, in the west-central portion of the city of Columbus, Ohio. This facility comprises 21 buildings. It is bounded on the north by King Avenue, on the east by Battelle Boulevard and Perry Street, on the south by Fifth Avenue, and on the west by the Olentangy River (see Figure 1).

Nine of the buildings involved in the BCLDP are located at the King Avenue site. The nuclear research performed in these buildings included processing and machining of enriched, natural, and depleted uranium, thorium fuel fabrication, radio-tracer studies, radiochemical analyses, and powder metallurgy studies. In addition, one of the buildings contained secure vault storage for nuclear material.

3.2 West Jefferson Site

The West Jefferson site (see Figure 2) is located in Madison County approximately 24 kilometers (15 miles) west of the King Avenue facility. The site consists of a 400-hectare (1,000-acre) tract with the following boundaries:

- The northern boundary is approximately 1.6 kilometer (1 mile) south of Interstate 70 and extends from State Road 142 (the Plain City-Georgesville Road) east to Big Darby Creek.
- The southern boundary consists of the Conrail railroad tracks.
- The eastern boundary parallels Big Darby Creek.
- The western boundary is defined by State Road 142 (the Plain City-Georgesville Road).

Six of the buildings involved in the BCLDP were located at the West Jefferson site. Research was performed at two areas: the Nuclear Sciences area in the northern portion (three buildings), and the Engineering area in the southeastern portion (three buildings). The buildings in the Engineering area were used for fuel element fabrication and ballistics studies and are still standing and in use by Battelle. In the Nuclear Sciences area, the former Hot Cell Building (JN-1) was the most highly contaminated. Work conducted there included examinations and evaluations of power and research reactor fuels; post-irradiation examination of fissile control rod, source, and structural materials and components; and examinations of irradiation surveillance capsules. In addition, this building has been the site of radiation source encapsulation and of physical and mechanical property studies of irradiated materials and structures.

The other two buildings at the Nuclear Sciences area were the Critical Assembly Laboratory (JN-2) and the Research Reactor Building (JN-3). The Critical Assembly Laboratory was used for reactor critical assembly experiments, direct energy conversion experiments, experiment assembly, special nuclear materials handling, and plutonium research activities. The Research Reactor Building contained the Battelle research reactor, which was actively used from 1956 until 1974, when it was partially dismantled. At that time, the associated NRC License R-4 was changed to a possession-only license; in 1987, the entire JN-3 facility was added to the SNM-7 license with the termination of NRC License R-4.

4.0 Environmental Impacts

4.1 Proposed Action

Termination of NRC License No. SNM-7 is an administrative activity. Its implementation would not result in any impacts to the human or natural environment at either the King Avenue site or the West Jefferson site.

4.2 No-Action Alternative

If the NRC license were not terminated (the no action alternative), Battelle would be viewed by NRC as not being timely with administratively terminating the license.

5.0 Mitigation Measures

Because the termination of NRC License No. SNM-7 would not result in any environmental impacts, no mitigation measures would be required.

6.0 Environmental Measurements and Monitoring Programs

Termination of NRC License No. SNM-7 is an administrative activity resulting in no impacts to the human or natural environment; therefore, no environmental measurements or monitoring programs would be required.

7.0 Cost-Benefit Analysis

If the proposed action were implemented, no cost-benefit analysis would be required because the action being taken is an administrative action only.

8.0 Summary of Environmental Consequences

If the proposed action, termination of NRC License No. SNM-7, were implemented, no impacts to the human or natural environment would occur. Battelle would be in compliance with any applicable laws or regulations governing the affected sites. Battelle does not need to obtain any other Federal authorizations for the proposed action.

9.0 List of References

- BCO (Battelle Columbus Operations), 2003. *Decommissioning Plan for the Battelle Memorial Institute Columbus Operations*, DD-93-19, Rev. 5, approved by the U.S. Nuclear Regulatory Commission, December 10, 2003.
- DOE (U.S. Department of Energy), 2005. *Revision to the Record of Decision for the Department of Energy's Waste Management Program*, 70 Fed. Reg. 60508, October 18, 2005.
- DOE (U.S. Department of Energy), 1990. *Environmental Assessment for Battelle Columbus Laboratories Decommissioning Project*, DOE/EA-0433, June 1990.

10.0 List of Preparers and Reviewers

Patrick J. Weaver	BMI BCLDP Project Manager Battelle Columbus Operations
Joseph Jacobsen	BCLDP Radiation Safety Officer Battelle Columbus Operations
Adam Wagenbach	Associate General Counsel Battelle Columbus Operations
Lucinda Low Swartz	Project/Program Manager, NEPA Services Group DOE Field Operations Battelle Columbus Operations
Desiree B. Padgett	Senior Technical Writer DOE Field Operations Battelle Columbus Operations

NRC Materials License No. SNM-7, Amendments 26 and 30

U.S. NUCLEAR REGULATORY COMMISSION		Form NRC-100 (Rev. 1-79)	
MATERIALS LICENSE		Amendment No. 00	
<p>Subject to the Atomic Energy Act of 1946, as amended, the Energy Reorganization Act of 1974 (Public Law 93-236), and the NRC Code of Federal Regulations, Chapter 1 Parts 31, 32, 33, 34, 35, 36, 38, 41, and 70 and all orders, regulations and interpretations and amendments made by the Commission, a license is hereby issued authorizing the licensee to receive, possess, transport and transfer, to store and use, and to make minor alterations to the following material in the form and quantity specified below:</p> <p>Source: <u>100% enriched uranium metal rods</u> (see <u>100% enriched uranium metal rods</u> in the <u>Inventory of the Licensee's Material</u>).</p> <p>Use: <u>Research and development work</u> (see <u>Research and development work</u> in the <u>Inventory of the Licensee's Material</u>).</p> <p>Disposition: <u>Transfer to the licensee's own use</u> (see <u>Transfer to the licensee's own use</u> in the <u>Inventory of the Licensee's Material</u>).</p> <p>Disposition: <u>Transfer to the licensee's own use</u> (see <u>Transfer to the licensee's own use</u> in the <u>Inventory of the Licensee's Material</u>).</p>			
<p>PL 21130</p> <p>30042</p>			
<p>Licensee</p> <p>Battelle Memorial Institute Battelle Columbus Operations 1735 King Avenue Columbus OH 43201-2583</p>		<p>In accordance with the letter dated August 30, 2000 1. License holder SNM-7 is amended in its entirety as follows: 2. Expiration date: December 31, 2005 3. Order No. 000 00000 Reference No. R-4-050-00000</p>	
<p>1. Hypocritical source and/or special nuclear material</p> <p>A. Uranium (as defined in 10 CFR Part 150.11)</p> <p>B. Plutonium (as defined in 10 CFR Part 150.11)</p>		<p>2. Chemical and its physical form</p> <p>A. Any chemical material containing special nuclear source and/or byproduct materials</p> <p>B. Any chemical material containing special nuclear source and/or byproduct materials</p>	
<p>3. Authorized places of Use</p> <p>A. and B. Possession incident to radiological survey, storage of waste, and/or disposal, decontamination and remediation of buildings, equipment and materials, and outdoor areas as described in Decommissioning Plan, Battelle Memorial Institute Columbus Operations, DFO 90-19, Revision 4, January 22, 2003.</p>		<p>4. Maximum amount that licensee may possess at any one time under this license</p> <p>A. As described in letter dated February 5, 1990 and July 13, 2002 (Continuation of License Possession Limit)</p> <p>B. As described in letter dated February 5, 1990 and July 13, 2002 (Continuation of License Possession Limit)</p>	
<p>CONDITIONS</p>			
<p>1. Licensee shall be responsible for the possession and protection of the material in the following locations: <u>1425 Plain City Corporate Road, Suite 100, West Jefferson, Ohio</u></p>			
<p>2. The Radiological Safety Officer, responsible for oversight and supervision of the licensee's Radiological Safety Officer, shall be responsible for the protection of the material in the following locations: <u>1425 Plain City Corporate Road, Suite 100, West Jefferson, Ohio</u></p>			
<p>3. The Radiological Safety Officer, responsible for oversight and supervision of the licensee's Radiological Safety Officer, shall be responsible for the protection of the material in the following locations: <u>1425 Plain City Corporate Road, Suite 100, West Jefferson, Ohio</u></p>			

GRC License No.	U.S. NUCLEAR REGULATORY COMMISSION	Page 1 of 1
		License No. NRM-00037
		Date of Issuance 07/01/01
		Amendment No. 29

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

Licensee's Decommissioning Plan and Radiation Protection Plan

12. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations:

- Applications dated April 14, 2000, and August 28, 2002
- Three letters dated August 22, 2002 with the following documents attached:
 - Response to Request for Information, Arkansas Argonne Center SSM-00002, Docket No. 970-00008
 - Response to NRC Staff Review Comments, BIC DP Decommissioning Plan dated May 10, 2002, Revision 1
 - Decommissioning Plan, Battelle Memorial Institute, Columbus Operations, DD-03-19, Revision 4, January 23, 2003
 - Radiation Protection Program Plan, ^(Rev. 2/03) Battelle Columbus Laboratories Decommissioning Project, DD 90-02, Revision 4, January 23, 2003
- Letter dated February 5, 1999 concerning Clarification of Licensee Procession Limits, with HFA-01, 36 C.F.R. Part 10, Control of Radwaste to Radiation Protection Documents and CD AP-5.1, Revision 10, Document Control, attached July 18, 2002, August 23, 2002, and January 29, 2003

4 1 2 3 4

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: FEB 04 2005

By: George M. McCarty
Deputy Assistant Director
NRC Region II

*Environmental Report for Termination of the NRC License for
Battelle Columbus Laboratories Facilities at Columbus and West Jefferson, Ohio*

Amendment 26

NRC FORM 374		U.S. NUCLEAR REGULATORY COMMISSION		PAGE 1 OF 2 PAGES	
				Amendment No. 30	
MATERIALS LICENSE					
<p>Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct source, and special nuclear material designated below, to use such material for the purposes, and at the place(s) designated below, to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and in any conditions specified below.</p>					
Licensee		In accordance with the letter dated			
1. Battelle Memorial Institute		October 27, 2005			
2. 505 King Avenue Columbus OH 43201-2693		3. License number SNM-7 is amended in its entirety as follows:			
		4. Expiration date August 31, 2006			
		5. Docket No. 070-00008			
		Reference No. R-4/050-00006			
6. Byproduct, source, and/or special nuclear material		7. Chemical and/or physical form		8. Maximum amount that licensee may possess at any one time under this license	
A. Uranium (as defined in 10 CFR Part 150.11)		A. Any residual material containing special nuclear source and byproduct materials		A. As described in letter dated February 5, 1999, and July 18, 2002 (Clarification of License Possession Limits)	
B. Plutonium (as defined in 10 CFR Part 150.11)		B. Any residual material containing special nuclear source, and byproduct materials		B. As described in letters dated February 5, 1999, and July 18, 2002 (Clarification of License Possession Limits)	
9. Authorized places of Use:					
A. and B. Possession incident to radiological survey, storage of waste awaiting disposal, decontamination and remediation of buildings, equipment, and materials, and outdoor areas, as described in the licensee's approved Decommissioning Plan.					
CONDITIONS					
10. Licensed material shall be possessed and processed at the licensee's facilities located at the Battelle West Jefferson North Site 1425 Plain City-Georgeville Road, State Route 142 West Jefferson, Ohio.					
11. The Battelle Columbus Laboratories Decommissioning Project (BCLDP) Radiation Safety Officer (RSO), responsible for oversight and supervision of the licensee's decommissioning program's radiation protection program, is Joseph D. Jacobsen.					
12. The BCLDP RSO, Joseph D. Jacobsen, and Patrick J. Weaver, BMI BCLDP Project Manager (PM), are responsible for the day-to-day oversight of the West Jefferson decontamination and decommissioning work. Qualified designees appointed to periodically act in lieu of the BCLDP RSO and BMI PM must be approved in writing by the BCLDP RSO and BMI PM. Records of these approvals must be maintained for inspection by the NRC.					

NRC FORM 374A		U.S. NUCLEAR REGULATORY COMMISSION		PAGE 2 OF 2 PAGES	
				License Number SNM-00007	
				Docket or Reference Number 070-00008	
				Amendment No. 30	
MATERIALS LICENSE SUPPLEMENTARY SHEET					
13. The BCLDP RSO and BMI BCLDP Project Manager or approved designee(s) (BMI employees or BMI contractors) shall maintain a written log of daily observations of decontamination and decommissioning activities when being conducted under the authority of the BMI Decommissioning Plan. Records of the BMI daily logs, and BMI "Management Walk-downs" conducted in accordance with licensee's procedure MA-AP-20.1 shall be maintained for review during NRC inspection.					
14. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.					
A. Applications dated April 14, 2000, August 28, 2002, and June 6, 2003.					
B. Response to Request for Information, Renewal Application License SNM-00007, Docket No. 070-00008, attached to letter dated August 22, 2000, response to NRC Staff Review Comments, BCLDP Decommissioning Plan dated May 30, 2000, Revision 1, and response to NRC comments dated October 30, 2003, attached to letter dated November 17, 2003.					
C. Letters dated February 5, 1999 (containing Clarification of License Possession Limits), with HP-AP-36.0, Revision 10, Control of Conditions for Radiation Protection Documents, and QD-AP-6.1, Revision 10, Document Control, attached July 18, 2002, August 22, 2000 with Radiation Protection Program Plan, Battelle Columbus Laboratories Decommissioning Project, DD-30-02, Revision 4, January 23, 2003, attached, August 23, 2002, and January 24, 2003, and letter dated October 17, 2003 with Decommissioning Plan Battelle Memorial Institute Columbus Operation, DD-93-19, Revision 5, dated October 15, 2003, attached (excluding mechanism to revise financial assurance), April 23, 2004, December 17, 2004, and October 27, 2005.					

FOR THE U.S. NUCLEAR REGULATORY COMMISSION					
Date		DEC 16 2005		By	
				George M. McCann Decommissioning Branch NRC, Region III	

Amendment 30