

APPENDIX A
MATERIALS DECOMMISSIONING INSPECTION FIELD NOTES
FOR FACILITIES NEEDING SIGNIFICANT DECOMMISSIONING EFFORT
Region III

Inspection Report No.	07000008/2003-004(DNMS)
License No.	SNM-7
Docket No.	070-00008
Licensee (Name & Address)	Battelle Memorial Institute Battelle Columbus Laboratories Decommissioning Project
Licensee Contact	Craig Jensen, Corporate Radiation Safety Officer
Telephone No.	614-424-5170
Last Amendment No.	27
Date of Amendment	12/10/03
Date of Last Inspection	June 16-20, 2003
Date of This Inspection	On site inspection between September 29 and October 3, 2003 with continuing NRC review through December 18, 2003
Date of Next Inspection	2nd Quarter of FY 2004
Type of Inspection:	(X) Announced () Unannounced (X) Routine () Special () Initial Decomm. (X) Reinspection of Decomm.
Level of Inspection:	(X) Normal () Reduced () Extended

Brief Description of Inspection Activities:

The NRC conducted a routine inspection. The inspection activities covered a primarily management oversight and audit responsibilities and direct licensed activity performance based inspection.

Brief Description of Findings and Action:

The areas above were inspected in accordance with the appropriate inspection procedures. No violations of NRC requirements were identified but one Information Followup Item (IFI) was noted concerning the failure of a vacuum cleaner gasket.

Summary of Findings and Action:

(X) No violations cited, clear NRC Form 591 or regional letter issued
() Violation(s), clear NRC Form 591 issued
() Violation(s), regional letter issued
() Followup on previous violations

Inspector: *Michael LaFranzo*
Michael LaFranzo - Radiation Specialist

Date 12/19/03

Approved: *George M. McLean*
for Christopher G. Miller

Date 12/22/03

87104, Appendix A A-2 Issue Date: 07/29/02

[Field notes are to be used by the inspector to assist with the performance of the inspection. Note that all areas indicated in the field notes are not required to be addressed during each inspection. However, for those areas not covered during the inspection, a notation ("Not Reviewed") should be made in each section where applicable. Additionally, all areas covered during the inspection should be documented in sufficient detail to describe what activities and/or records the inspector observed. The fieldnotes to the "Decommissioning Inspection Procedure for Materials Licensees" should be supplemented with: (1) the applicable inspection procedures for operating facilities provided in the Inspection Procedure (IP) 87100 series; and (2) other written documentation of the inspection, as necessary.]

1. SUMMARY OF DECOMMISSIONING STATUS

The checklist below is intended to provide, in a written outline format, summary documentation of the status of the licensee's facility in the decommissioning process. This documentation will be filed as part of the inspection report. The inspector should use this information to develop each inspection plan(s) for the various stages of decommissioning, namely, before dismantlement, during dismantlement and site remediation, and after site remediation.

- | | | |
|--|------------------|-------------|
| A. Licensee ceased operational program. | | (X) Y () N |
| B. Required decommissioning financial assurance mechanisms in place. | | (X) Y () N |
| C. Decommissioning Plan (DP) required. | | (X) Y () N |
| D. Licensee final survey required. | | (X) Y () N |
| E. NRC confirmatory survey required. | (Not applicable) | () Y () N |
| F. NRC closeout inspection required. | | (X) Y () N |
| G. Licensee doing decommissioning planning and preparation before dismantlement. | | (X) Y () N |
| H. Licensee actively remediating site. | | (X) Y () N |
| I. Licensee completed site remediation. | | () Y (X) N |

Description of Facility Status:

At the time of the inspection, the licensee was entering a staffing transition phase. Specifically, the Department of Energy (DOE) was in the process of obtaining a new contractor to complete the site decommissioning activities. Battelle was still performing decommissioning activities on site that included, but not limited to, decontamination and remediation efforts.

The licensee constructed a Transuranic Waste Staging Pad before the inspection. The licensee plans to place all transuranic waste on the pad in special concrete containers so that remediation efforts in building JN-1 can continue. JN-1 is the building where the licensee originally stored the transuranic waste.

2. INSPECTION OF KEY DECOMMISSIONING ACTIVITIES

The following is a generic checklist of major licensee activities occurring at various stages of decommissioning. From this generic checklist and from facility-specific activities you identify, develop the set of licensee activities to be inspected - for each individual inspection throughout the decommissioning process. Plan to inspect licensee activities that present potential high-risk conditions. Then apply the standard health and safety inspection areas in Section 3 of these fieldnotes (taken from the applicable 87100 series IP for the licensee's operational program) to the specific licensee decommissioning activities that are being inspected. To complete the licensee activities checklist, the inspector will need to obtain information from the Licensing Project Manager, review the DP, make observations at the licensee's facility, review licensee records, take measurements and samples of contaminants, and undertake other investigative measures, to determine whether the licensee is meeting all regulatory and DP commitments for each decommissioning activity the licensee is performing.

A. LICENSEE ACTIVITIES INSPECTED BEFORE DISMANTLEMENT

- | | |
|---|-----------|
| 1. SNM inventory cleanout/off-site removal of licensed material used in operations has been performed by licensee. | See Below |
| 2. Facility license conditions are in place and met by licensee. | (X)Y ()N |
| 3. Site security and control of contaminated material being maintained in compliance with 10 CFR 20.1801 and 20.1802. | (X)Y ()N |
| 4. Support systems and services (e.g., lighting, water supply) are in place. | (X)Y ()N |
| 5. Decommissioning schedules are consistent with timeliness requirements in 10 CFR 30.36, 40.42, and 70.38. | (X)Y ()N |
| 6. Licensee's record keeping is consistent with 10 CFR 30.35, 40.36, and 70.25. | (X)Y ()N |
| 7. Financial assurance requirements are being maintained in accordance with 10 CFR 30.35, 40.36, and 70.25. | (X)Y ()N |
| 8. Licensee is conducting site characterization in accordance with applicable radiation protection procedures. (Not Reviewed) | ()Y ()N |
| 9. Construction of new site features (e.g., roads, rail spurs, staging areas, sediment control ponds) conforms to DP and does not compromise health and safety of workers and public. | (X)Y ()N |
| 10. Licensee activities conform to specific license conditions and licensee programs and procedures. | (X)Y ()N |
| 11. Other licensee activities: (Not applicable) | ()Y ()N |

Basis for Findings:

The licensee is still in possession of transuranic waste. The transuranic waste will remain on site until the licensee can transfer the material to an authorized location. At this time, the licensee is still reviewing options for the disposal of the waste.

B. LICENSEE ACTIVITIES INSPECTED DURING DECONTAMINATION, DISMANTLEMENT, AND SITE REMEDIATION

1. Site security and control of contaminated material being maintained in compliance with 10 CFR 20.1801 and 20.1802. (X)Y ()N
2. Decontamination and dismantlement of structures are being performed consistent with DP and sound industry practice (structures include buildings, utilities, treatment lagoons, etc.). (X)Y ()N
3. Decontamination and remediation of the following are being performed consistent with DP and sound industry practice: **Not Reviewed**
 - a. Soil. ()Y ()N
 - b. Sediment. ()Y ()N
 - c. Surface waters. ()Y ()N.
 - d. Groundwater. ()Y ()N
 - e. Other mediums: ()Y ()N
4. Licensee release and disposal of decommissioning wastes are consistent with DP and approved by NRC for:
 - a. Liquid wastes (e.g., groundwater, surface water, liquid from treatment ponds, process liquids). (X)Y ()N
 - b. Solid wastes (e.g., building materials, process and other facility equipment, concrete rubble, soil). (X)Y ()N
 - c. Other wastes: (X)Y ()N
5. Temporary, onsite storage of low-level radioactive wastes from decommissioning meets license conditions and guidance in IP 84890. (X)Y ()N
6. Packaging and shipment of radioactive waste materials meet requirements in 40 CFR Parts 171-178 and 10 CFR Part 71. (Not reviewed) ()Y ()N
7. Restoration of Site - Licensee has restored site to meet license conditions and NRC-approved plans. ()Y (X)NA
8. Licensee survey of material and equipment for free release sufficient to demonstrate compliance with release criteria (Not reviewed) ()Y ()N
9. Other licensee activities: (Not reviewed) ()Y ()N

Basis for Findings:

The licensee is continuing to implement the Decommissioning Plan (DP) as required.

C. LICENSEE ACTIVITIES INSPECTED AFTER COMPLETION OF SITE REMEDIATION

This section was not reviewed during this inspection.

1. Licensee has submitted NRC Form 314 for disposition of licensed material in accordance with 10 CFR 30.36, 40.42, and 70.38. ()Y ()N
2. Licensee's final survey program is acceptable (see Appendix B for inspection items for final surveys). ()Y ()N

3. NRC confirmatory survey performed. () Y () N

4. Site maintenance activities (if any, for restricted use) conform to license conditions and NRC-approved plans and are in place and functional. () Y () N

5. Other licensee activities: () Y () N

Basis for Findings:

3. INSPECTION OF STANDARD HEALTH AND SAFETY AREAS FROM THE OPERATIONAL INSPECTION PROGRAM

Identify the standard inspection areas (from the inspection program of the licensee's operational program) to be covered during each decommissioning inspection. [Inspection areas A through L below correspond to the typical inspection areas in the 87100 series Ips that are applicable to decommissioning.] Then identify the new activities within the standard inspection areas undertaken by the licensee during decommissioning. Some of the new activities given below, as well as any other activities the inspector identifies, should be considered inspection items under the general set of health and safety inspection areas used in the applicable 87100 series IP.

Minimum inspection areas for the initial decommissioning inspection:

decommissioning organization; decommissioning activities in compliance with NRC approved DP; licensee procedures for implementing the DP; Radiation Safety Committee (RSC) and Radiation Safety Officer (RSO) responsibilities; and the licensee's decommissioning training program.

A. GENERAL OVERVIEW

1. Describe the licensee's decommissioning organizational structure:

a. Licensee is performing decommissioning activities in compliance with its approved decommissioning plan. (X) Y () N

b. Licensee has implementing procedures for the decommissioning activities identified in the DP. (X) Y () N

c. The RSC and RSO fulfill license requirements to deal with all decommissioning activities. (X) Y () N

B. FACILITIES

1. Describe, from field observation, the licensee-identified facilities and outdoor areas to be decommissioned:

Licensee-identified facilities and outdoor areas to be decommissioned have been described in previous inspection reports. No other areas were identified since the last inspection.

2. The licensee's remediation plan includes all the contaminated facilities and areas on-site and off-site. **(Not reviewed)** Y N
3. All essential systems and services (e.g., electrical power, water supply, communications systems) are in place and functional for the planned decommissioning activities. Y N
4. Licensee's emergency plan is in place and operative for the duration of decommissioning. **(Not reviewed)** Y N
5. For complex sites needing site characterization, describe the key site characterization activities to be performed by the licensee to determine the nature and extent of contamination:

At this time, the licensee has relocated the transuranic waste from JN-1 to a waste staging pad. The staging pad is within the West Jefferson site fenced area. The licensee is continuing to decommission and remediate areas within JN-1, JN-2 and JN-3.

6. Licensee's characterization activities performed in conformance with good industry practice. Y N

Basis for Findings: Inspector observations, and discussions with licensee management.

C. EQUIPMENT AND INSTRUMENTATION

1. Survey instruments are applicable to contaminants of interest. Y N
2. Use of survey instruments appropriate for site. Y N

Basis for Findings: **The inspector did not identify any non-functional or out-of-calibration instrumentation that was being used for radiological surveys.**

On September 29, the licensee identified that a vacuum cleaner's (model PAC VAC) gasket seal was compromised while vacuuming contamination within a radiologically controlled area. The PAC VAC was in a non-contaminated area when the event occurred. Because of the gasket failure, contamination from the vacuum operations entered the non-contaminated area. The licensee stopped vacuum operations until it could make an evaluation.

The licensee determined that the PAC VAC may not have been an appropriate vacuum cleaner system to use in contaminated areas. The licensee created a Radiological Awareness Report (RAR No. 03-011) to document the event. The licensee had not completed its evaluation before the inspection ended. The NRC will continue to review the circumstances and the licensee's response (IFI 070-00008/2003004-001).

D. MATERIALS

1. Radioactive materials licensed during operations have been removed offsite; residual quantities conform to license conditions. **See Below**
2. Security and control of licensed materials, including contaminated areas, is being maintained. (X) Y () N

Basis for Findings: **The licensee is continuing to transport low-level radioactive waste to authorized entities. Currently, the licensee can not ship the transuranic waste off-site.**

E. TRAINING

1. Licensee has developed training program for new decommissioning activities (e.g., demolition of structures, excavation of soil); program is adequate. (X) Y () N
2. Training program being effectively implemented. (X) Y () N

Basis for Findings: **During interviews with management and the staff, the inspector did not identify any deficiencies in the licensee's training program.**

F. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL

1. Area surveys are being performed in areas being decommissioned. (X) Y () N
2. Where active remediation (e.g., demolition of structures, excavation of soil) is being performed, radiation levels in unrestricted areas do not exceed 2 mrem in any one hour. (X) Y () N

Basis for Findings: **While performing independent radiological surveys and interviews with staff and management, the inspector did not identify any deficiencies in the licensee's survey or contamination control program.**

G. RADIATION PROTECTION

1. The licensee's approved health physics program is being

implemented in the field for new decommissioning activities. (X) Y () N

2. Site security and control of contaminated material are in compliance with 10 CFR 20.1801 and 20.1802. (X) Y () N

Basis for Findings: While performing independent radiological surveys and interviews with staff and management, the inspector did not identify any deficiencies regarding the licensee's security or health physics program.

H. RADIOACTIVE WASTE MANAGEMENT/EFFLUENTS/ENVIRONMENTAL MONITORING

1. Offsite disposal of decommissioning wastes conforms to free release criteria and disposal site requirements. (X) Y () N

2. All new effluent releases conform to DP and applicable regulations. (Not reviewed) () Y () N

3. The licensee's environmental monitoring program is being implemented in conformance with the DP and all applicable limits are being met. (Not reviewed) () Y () N

4. Temporary storage/staging areas for radioactive wastes from building demolition, equipment dismantlement, soil excavation, etc., are adequately posted and protected. (X) Y () N

Basis for Findings: The licensee is continuing to transport low-level radioactive waste to authorized entities. Currently, the licensee can not ship the transuranic waste off-site.

I. RECORD KEEPING FOR DECOMMISSIONING

1. Copies of the licensee's decommissioning cost estimates and funding methods are on file. () Y () N

2. Licensee has adequate records for decommissioning activities performed (e.g., for decontamination and dismantlement of structures; decontamination and remediation of soil, sediment, surface waters, groundwater; surveys of remediated facilities). () Y () N

3. Licensee's financial assurance conforms with the financial assurance requirements of NRC-approved possession limits and NRC regulations. () Y () N

Basis for Findings: Inspector observations and discussions.

J. TRANSPORTATION

1. Describe the licensee's program to package and ship decommissioning waste materials:

The licensee is continuing to ship low-level radioactive waste off site to authorized entities. However, the licensee is not shipping the transuranic waste until authorized by numerous stakeholders including, but not limited to, the State of Washington and the Department of Energy.

2. Licensee's program meets all applicable 10 CFR and 49 CFR requirements for marking labeling, placarding, and shipping paper requirements for radioactive waste shipments. () Y (X) NR

Basis for Findings: The licensee's corrective actions were not reviewed concerning a violation of NRC requirements identified in inspection report number 07000008/2003003. The licensee's corrective actions will be reviewed during a subsequent inspection to ensure compliance with NRC requirements.

K. POSTING AND LABELING

1. All contaminated areas, waste processing areas, and waste handling areas are posted in conformance with regulations. (X) Y () N
2. Packaged radioactive waste materials are labeled in accordance with regulations. (X) Y () N

L. OCCUPATIONAL HEALTH AND SAFETY

1. Describe the occupational health and safety observations made at the licensee's facilities:

The inspector toured the facility and did not identify any issues, concerns or violations associated with the occupational health and safety.

2. Licensee and Occupational Safety and Health Administration were informed of occupational health and safety issues observed during the inspection. () Y () NA

4. **VIOLATIONS, NON-CITED VIOLATIONS, FOLLOWUP ITEMS, AND OTHER ISSUES**

Briefly state (1) the requirements and (2) how and when the licensee violated the requirement. For non-cited violations, indicate why the violation was not cited. Briefly describe followup items and other issues.

No violations of NRC requirements were identified during this inspection.

One Information Followup Item (No. 070-00008/2003003-001) was noted regarding continuing NRC review of an incident involving a gasket failure on a vacuum cleaner being used in a radiologically contaminated area.

The NRC will follow up on licensee corrective actions concerning a violation of NRC requirements as documented in Inspection Report No. 070-00008/2003003 during a subsequent inspection.

END

Issue Date: 07/29/02 B-1 87104, Appendix B