

May 23, 2000

Mr. Craig Jensen  
Radiation Safety Officer  
Battelle Memorial Institute  
Columbus Operations  
505 King Avenue  
Columbus, OH 43201-2693

SUBJECT: NRC INSPECTION REPORT 070-00008/2000001(DNMS)

Dear Mr. Jensen:

On April 27, 2000, the NRC completed an inspection of decommissioning activities at Battelle Columbus Laboratories' West Jefferson Site, located at West Jefferson, Ohio. Areas examined during this inspection included facility management and control, transportation management, and radiological safety. The enclosed report presents the results of the inspection.

In general, decommissioning activities in the areas inspected were performed satisfactorily. Management was monitoring, assessing, and controlling work conduct, transportation of radiological wastes, and the radiological aspects of decommissioning. No violations of NRC requirements were identified during this inspection.

One area of concern was identified, associated with deviations from several commitments described in your NRC license renewal which is under NRC review. The inspection identified that Battelle had made several changes to its management structure and responsibilities described in its license renewal and had not submitted a revision to its initial submittal. Had NRC approved the original submittal, Battelle would have been in violation of its license. In response to this concern, Battelle is preparing a consolidated amendment request to accurately describe their performance in the areas of concern. Therefore, no response is required regarding this concern.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure(s) will be placed in the NRC Public Electronic Reading Room (PERR) link at the NRC homepage, namely, <http://www.nrc.gov/NRC/ADAMS/index.html>.

C. Jensen

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We will gladly discuss any questions you have concerning this inspection.

Sincerely,

**/RA by Roy Caniano Acting for/**

Cynthia D. Pederson, Director,  
Division of Nuclear Materials Safety

Docket No. 070-00008  
License No. SNM-7

Enclosure: Inspection Report 070-00008/2000001(DNMS)

cc w/encl: R. Vandegrift, Ohio Department of Health

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION III

Docket No: 070-00008  
License No: SNM-7

Report No: 070-00008/2000001(DNMS)

Licensee: Battelle Memorial Institute - Columbus Division

Location: West Jefferson, Ohio

Dates: February 28-March 3, 2000  
April 3-6 & 24-27, 2000

Inspector: George M. McCann, Senior Radiation Specialist  
Eugenio Bonano, Laboratory Operations Specialist

Accompanied By: Joseph Crombie, Ohio Department of Public Health

Approved By: Bruce L. Jorgensen, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

## EXECUTIVE SUMMARY

### BATTELLE COLUMBUS LABORATORIES DECOMMISSIONING PROJECT NRC Inspection Report 070-00008/2000001(DNMS)

This routine decommissioning inspection covered aspects of facility management and control, waste transportation management, and radiological safety. Overall, major decommissioning activities were adequately monitored and controlled, and were performed on schedule. Examples were noted of activities being at variance with descriptions provided to NRC in licensing documents, indicating a need for management attention to ensure activities match commitments as the documents are incorporated into the license as regulatory requirements.

#### **Facility Management and Control**

- Management was providing adequate over-sight of the decommissioning program. However, concerns were identified regarding communications and understanding of duties, responsibilities, and authorities of the various managers responsible for the oversight and implementation of the BCLDP, in the Radiation Protection Program area. Additionally, the NRC had not been informed regarding organizational changes to a structure different from that described in a licensing document.
- Assessment and auditing of program activities, and resolution of issues, appeared to be satisfactory. Communications between the separate Event Reporting and the RAR systems could be improved.
- The lack of direct auditing and assessment of the radiation protection program by the RSO, and the postponement of the Annual Program review of the BCLDP by the Radiation Safety Committee (RSC) were a concern.
- The system for decommissioning records maintenance and for maintaining procedures current was acceptable.

#### **Radiological Safety**

- Radiation protection practices observed during the inspection, including the preparation and conduct of surveys, postings and labeling, and actions to maintain occupational exposures ALARA, were adequate.
- The observed failure of an employee to perform a frisk prior to exiting a contaminated area appeared to represent a change in general practice and was contrary to the applicable RWP, though no regulatory requirement was violated.

#### **Waste Transportation Management Activities**

- Activities involving the shipment of used protective clothing (PCs) and radioactive waste, were efficiently and professionally conducted. No items of concern or violations were identified.

## REPORT DETAILS

### Summary of BCLDP Activities

During the inspection period the licensee continued to perform radiological characterization and reduction of gross radiological materials from its hot cells located in the JN-1 Building located at the West Jefferson Site. The licensee has initiated the use of a nuclear laundry to clean mop-heads used for contamination control. They continued to use a solvent decontamination apparatus, and to compact and ship radiological waste off-site for further volume reduction or final disposal.

### **1.0 Facility Management and Control (88005)**

#### 1.1 General

In order to assess overall facility management and control, NRC inspectors conducted reviews of ongoing decommissioning activities, interviewed managers and supervisors responsible for over-sight of the decommissioning program, and attended licensee meetings addressing these activities. Specific events and findings are detailed in the sections below.

#### 1.2 Organizational Structure (88005-02.01)

##### a. Inspection Scope

The inspectors discussed management organization changes, and changes in personnel responsibilities and functions which had occurred since the last inspection. Also, with respect to these changes, the inspectors ascertained whether the individuals who made the changes were qualified to make them, and if the changes were approved by NRC's licensing branch, or as otherwise required by the license or the licensee's procedures.

##### b. Observations and Findings

Battelle's license incorporated by reference a number of documents which described the Management organization to be implemented for the over-sight and control of the BCLDP. The approved Decommissioning Plan also describes the Management Organization. These documents include individual descriptions of duties and responsibilities for the Radiation Safety Committee, the Radiation Safety Officer, and other Managers with over-sight responsibilities. During discussions between Battelle and NRC staff conducted late in 1999 and early 2000, it was determined that the Manager of the Safety, Health and Environmental Support (SH&ES), and the SH&ES group, had been eliminated as part of a flattening of the BCLDP Management Organization. Review of licensing documents and the Decommissioning Plan indicated that the SH&ES Manager had primary responsibility for the over-sight of the BCLDP radiation protection program. In response to the staff discussions, BCLDP submitted an amendment to their license requesting that an interim "*BCLDP RADIATION PROTECTION ORGANIZATION*" be approved. This request was approved by license Amendment No. 22, dated March 29, 2000. The amendment included a commitment to

submit a subsequent amendment to incorporate a finalized BCLDP Management Organization description which would also be incorporated into their license.

The reorganization of the BCLDP program had been implemented without first requesting and receiving an amendment to the NRC license. This was discussed with the Program Manager, who indicated a belief from past discussions with NRC staff that an amendment had not been necessary. However, he further indicated that after discussions with the RSO, he realized that an amendment was needed and the failure to do so had been due to a misunderstanding of past communications.

In order to assess compliance with the Interim Radiation Protection Organization, the Inspector interviewed the BCLDP DDO Program Manager, Radiation Safety Officer, supervisors, and staff designated in the Interim Organization as responsible for the over-sight of the BCDLP Program. The commitments in the Interim Organization were being implemented. However, staff were concerned about a lack of internal written guidance which defined individual responsibilities and authorities. Staff directly responsible for supervising the Radiation Program were also concerned that the incorporation of operational program over-sight (50% of their time) could impact their ability to audit and enforce their radiation protection over-sight responsibilities. This issue was discussed with the DDO Manager who agreed that written guidance needed to be expanded and stated that job descriptions were being written to address the reorganization. These descriptions were to be included with the license amendment to be submitted to the NRC during April 2000. He also indicated that he had orally directed all staff in positions of radiation protection responsibility, that their first responsibility was to ensure compliance with the radiation safety program.

The Inspector reviewed the activities of the Radiation Safety Committee (RSC) and observed that no actions requiring reviews or approvals by the Committee had been performed since the last inspection. The RSC had established a D&D Subcommittee which was Chaired by the RSO. The RSC Charter and BCL Document 1081 both stipulated an Annual Program Review of all BCLDP program areas; however, review of the RSC's *Radiation Safety Program Audit Report, 1999*, showed that the BCLDP audit had been postponed to year 2000. An RSC audit of some areas was conducted between November 15, and December 10, 1999, which identified some minor issues pertaining to generic radiation protection commitments or requirements. The audit directed appropriate staff to follow up on these items, and required that the corrective actions be reported back to the Committee.

The Inspector discussed the May 11, 1999, *BCLDP Management Self Assessment* with the RSO. This Annual Assessment was conducted during the period of March 22, through April 30, 1999, and was reported to the BCLDP DDO Program Manager. The assessment was performed to evaluate Adequacy and effectiveness of the project Quality Program and implementation of effective management systems, including measures that support SH&ES and Quality Programs. Effective planning and resource allocation/utilization, staff understanding their roles and responsibilities and being properly trained and qualified, effective operation of integrated management systems including self-assessment principles and requirements, and work processes in the field and Radioanalytical Laboratory were all considered.

The Assessment was comprehensive and identified a number of issues which were indicated as needing management attention, but no regulatory noncompliances. However, the assessment indicated similar concerns voiced by the BCLDP staff; e.g., a need to ensure that all BCLDP staff have an understanding of the project organization and of the roles and responsibilities of key staff. This is important for planning, prioritizing and management of work activities, especially considering the higher dose rates at West Jefferson as compared to King Avenue, and the unknowns associated with the material in the remaining cells. Project staff appeared unclear about the responsibilities of the project organizations directly involved with work activities. For example, the responsibilities of Waste Management and Remedial Action organizations need to be documented and communicated to project staff, including subcontractor organizations, to clarify where "Waste Management" responsibilities in specific work areas end and "Remedial Action" responsibilities begin.

The Inspector also interviewed the RSO regarding the RSO duties and responsibilities for over-sight of the BCLDP Radiation Protection Program, approval of radiological activities, and periodic audits. Most of the day-to-day over-sight of the Radiation Protection Program had been delegated to two other Battelle managers, the Radiological Technical Support Manager, and the Radiological Field Operations Manager. The RSO did not conduct periodic audits or walk-downs. Review of documents referenced in the Battelle license, the Decommissioning Plan, and Radiation Safety Manual, and past letters provided to the NRC inferred a more direct involvement by the RSO. Due to the age of the last license renewal, and interim correspondence submitted in response to attempts to renew and amend the BCLDP license, some confusion developed regarding the duties and responsibilities of the RSO. The RSO agreed that a greater personal involvement with the Radiation Program is needed, and the revision to the license (due in April 2000), should clarify this issue.

The Inspector examined licensee procedures that govern the changes specified above and other administrative procedures used in the control of the licensee's Radiation Protection Program. Many of the administrative procedures still contained the requirement for the review and approval of the Manager of Safety, Health, and Environmental Support, whose position had been eliminated. The inspector also determined that many of the procedures designated the RSO as responsible for implementation, but they were being implemented by the two managers designated to act for him on a daily basis. In order to prevent staff confusion when using the administrative procedures, the licensee developed a temporary field change, to be implemented until all the procedures can be revised. The field change clarified signature authority and responsibility for insuring compliance with the procedures.

c. Conclusion

The management program was providing adequate over-sight of the Radiation Protection Program. However, concerns were identified during interviews of BCLDP staff and in the review of the 1999 Management Assessment, regarding communications and understanding of duties, responsibilities, and authorities of the various managers with over-sight of the BCLDP Radiation Protection Program. Based on discussions with BCLDP Management, much of the confusion will be resolved with issuance of new job descriptions, revision of procedures, and amendment of its NRC license.

### 1.3 Reviews, Audits, and Assessments (88005-02.03)

#### a. Inspection Scope

The inspector examined the licensee's activities for performing internal reviews, self-appraisals, and audits, including corrective actions and root cause evaluations.

#### b. Observations and Findings

The Inspector reviewed activities involving monitoring, reporting, and assessing the BCLDP Program, as described in the following sections.

##### 1. Quality Assurance Department

The licensee's BCL Document 1081 discussed the responsibility of the licensee's Quality Assurance Program. The DDO Quality Manual, Section 18.0, "Independent Assessments" provided that independent assessments are conducted by two methods: programmatic assessments (IPAs, formerly referred to as audits) and activity assessments (IAAs, formerly referred to as surveillances). Two types of IAAs are performed: unscheduled IAAs are performed on fluctuating real-time work activities, based on operations defined in work plans and in weekly scheduling meetings, and scheduled IAAs are performed in accordance with a formal IAA Schedule for Routine Activities issued annually and updated periodically.

The inspector interviewed the Quality Department Manager and the Lead Auditor regarding the function and responsibilities of the Quality Department as it pertained to the BCLDP Program. The inspector also reviewed the licensee's *DDO Independent Activity Assessment Schedule, for BCLDP Activities, and BCLDP Assessment Schedule, FY 1999 and FY2000 (interim draft)*. The review of the IAA Log for 1999 and 2000 showed that 14 IAA's were performed in 1999 and 17 IAAs had been performed in 2000, as of the date of this inspection. The IAAs Log identified three types of issues; i.e., Finding (A lack of compliance with specified requirements. An activity or process not performed in accordance with approved procedures, or other requirement); Observation (Weakness or practice that is not necessarily a deviation from a requirement, but could lead to a more serious condition if not corrected); and None (observed activity met procedural or regulatory requirements). The log indicated that in 1999, there were 7 Findings and 6 Observations. The IAA Log for the year 2000, as of the date of this inspection, indicated 1 Finding and 2 Observations.

The inspector reviewed Activity Assessment Reports AAR No.: 00-005-01, 00-011-02, and IAA No. 00-004, 00-009, 00-011, 00-012, 00-013, 00-017. The reports were well written and comprehensive, identifying several procedural conditions needing correction or improvement. The reports designated responsible persons for follow up and resolution of issues. The reports were followed up appropriately, and were closed once the written report from the person designated for follow up was received. In addition to identifying issues, the reports made suggestions for improvement and recognized good performance when observed.

2. Regulatory Compliance and Environment, Safety and Health Oversight Department (RC&ESHO)

The inspector interviewed the RC&ESHO Manager regarding the function, duties and responsibilities of his program. The RC&ESHO Manager is responsible for determining if an abnormal event is reportable and for coordinating the reporting of events. The Manager is also responsible for the implementation of RC-AP-3.0, Revision 1, RC&ESHO DEPARTMENT ADMINISTRATIVE PROCEDURE, which described the responsibility of the Manager and BCLDP staff for reporting abnormal events. It also described a Reportable Event as a "...condition that results in or could have resulted in a significant injury or damage to equipment, that has or could have had a meaningful effect on the environment, that is indicative of a significant failure of an ES&H or operational program, or that is reportable to any federal or state regulatory agency." The Manager indicated that radiological reports are to be tracked by the Radiological Awareness Reporting system, which is the responsibility of the RTSM. The RC&ESHO Manager indicated that no issues had been identified, during the period since the last NRC inspection, which required notification or reporting to the NRC.

3. Radiological Technical Support

A. ALARA Program

The inspector interviewed the RTSM and ALARA staff members regarding their duties and responsibilities for implementation of the BCLDP ALARA Program. Discussion and observations of ALARA staff in the performance of their duties, and review of the Annual and Quarterly ALARA Reports, showed that a thorough and well run ALARA Program existed.

Review of the 1999 Annual ALARA Report identified, in part, the following activities were performed:

**Design Reviews** - An ALARA design review is required by procedure HP-AP- 3 1.0, ALARA Reports, when radiologically significant modifications to existing and/or new facilities are made. The purpose of the review is to ensure that ALARA considerations are evaluated, incorporated, and documented. Four Design Reviews were conducted in 1999.

**Post Job Reviews** - The purpose of a Post Job Review is to identify and document the effectiveness of ALARA controls, problems encountered, and lessons learned to assist in future work planning. The governing ALARA procedure, HP-AP-3 ) 1. 0 Revision 3, states that a Post Job Review will be performed upon the completion of a Work Instruction driven job task. More specifically, this procedure specifies that a Post Job Review be performed when one of two criteria is met; when the total received personnel dose exceeds the original dose estimate by 25% or more, or when the total dose received to personnel is greater than 5 person-rem. In 1999 there were multiple Post Job Reviews performed.

**Routine ALARA Audits** - ALARA audits are conducted at the discretion of the ALARA coordinator to evaluate current planning, tracking, and performance practices. The purpose of an ALARA audit is to ensure the adequacy of current ALARA controls, maximize work efficiency and dose savings, and improve monitoring and tracking techniques. Multiple ALARA Audits were conducted throughout CY 1999.

B. RADIOLOGICAL AWARENESS REPORTS. HP-AP-210,

The inspector interviewed the Radiological Technical Support Manager, and the Radiological Awareness Report Coordinator regarding the implementation of the "Radiological Awareness Reports (RAR) program. RARs apprise management of radiological deficiencies, incidents and hazards. This procedure applies to all BCLDP personnel who perform, support, manage or control equipment, materials, services, procedures, measurement, or other activities associated with the implementation of the radiation protection program. RARs are evaluated by Radiological Technical Support (RTS) staff and corrective actions are provided by building management and operations personnel. Based on interviews, it was determined that RARs had been filed with the RTS Group as follows: 1993 -16; 1994-9; 1995-4; 1996-10; 1997-6; 1998-8; 1999-2; and 2000-3 (to the date of inspection).

The 2 RARs for 1999 addressed one issue which had occurred at the West Jefferson Site (WJS) and one issue at the King Avenue Site. Discussions with staff regarding the low number of RARs for 1999, when it appeared that the work activities at the WJS had accelerated, indicated that this reporting system may not have been emphasized, and a number of incidents which should have been handled through the RAR system may have been reported through the Event Reporting System.

Two of the three RARs filed in 2000 occurred at the WJS. The inspector discussed these RARs with the RAR Coordinator and determined the following:

- 1) RAR No. 00-001, February 28, 2000, involved the loss/theft of three TLD finger ring badges from the WJS Dosimetry trailer. Follow up actions by the RFOM and the RTSM included evaluation of extremity dose for the employees and consideration of installation of card reader and closed circuit TV.
- 2) RAR No. 00-003, March 8, 2000, involved penetration of radiological contamination through the PCs of employees working in the alpha-gamma cells due to perspiration. Follow up action by the RFOM involved conduct of "lessons learned" with staff and more use of supplied air, to help with heat and involved PCs with a higher protective factor.

c. Conclusions

Identification, assessment and resolution of issues appeared to be satisfactory. Communications between the auditing groups could be improved, particularly regarding reporting of radiological issues between the Event Reporting and the RAR systems.

Additionally, based on discussions with staff, more emphasis on the use of the RAR System appeared warranted.

## **2.0 Radiological Safety**

### **2.1 General**

The inspectors conducted reviews of ongoing activities in order to assess the overall radiation protection program. Specific findings are detailed in the sections below.

### **2.2 Radiation Protection (83822)**

#### **a. Inspection Scope**

Numerous aspects of the licensee's radiation protection program to minimize occupational radiation exposure were selectively examined. Areas examined included: planning, preparation and conduct of surveys and monitoring; external exposure control; control of radioactive materials and contamination; and maintaining occupational exposure ALARA.

#### **b. Observations and Findings**

The inspectors accompanied and observed the activities of several Health Physics Technicians (HPT), Health Physicist (HP), and ALARA Technical Support Staff (ATSS) during the conduct of radiological surveys and assessments of controlled areas. The HPT's preparations, which included instrument selection and verification of operability, were thorough. The instruments used for conducting surveys were in calibration and had been source checked. The surveys observed included the following activities: 1) Alpha/Gamma Cells (Cleanup in and behind Alpha-Gamma Cell 3); 2) TRU Decontamination System (Laundry system operation); 3) HFC Operations (TRU waste packaging in the High Energy Cell); and, 4) HLC/LLC/MTC Operations (packaging, sorting and segregation of waste activities). Survey techniques were observed to be adequate and the BCLDP staff were conscientious in the conduct of their work.

Independent spot radiological surveys were performed. All measurements taken along posted areas were in compliance with the regulations. Proper use of protective clothing was noted. Adequate health physics coverage was noted where work was being performed in controlled areas.

The inspectors spot checked postings, RWP Sign-in Sheets, Work Instruction Packages, and RWPs. The system appeared to be working well and appeared to be up-to-date.

#### **c. Conclusions**

Radiation protection practices observed during the inspection, including the preparation and conduct of surveys, postings and labeling, and actions to maintain occupational exposures ALARA, were adequate.

### **2.3 Failure to Perform Whole Body Frisk When Exiting High Contamination Area**

a. Inspection Scope

The inspector did follow up review after observing a BCLDP worker leave a contaminated area and not perform a whole body frisk.

b. Observations and Findings

During inspector observation of work in Alpha-Gamma Cell 3, a radiation worker was seen exiting the Contaminated Area without using the frisker there to perform a whole body frisk. A follow up review indicated this was not in keeping with the licensee's BCLDP Procedure HP-OP-012, Revision 4, *RADIOLOGICAL AREA POSTING AND ACCESS CONTROL*, section 5.15, which states that individuals are responsible for "Performing a whole body contamination survey upon exiting from a Contaminated Area." Additionally, RWP 00-JN-0-019, revision 0, issued to cover this work, stated in Section IV, "Worker Requirements - *Special Instruction to Workers*" - "Perform a whole body frisk upon exit from contaminated areas." When the inspector questioned this action, he was informed that the background in the area was too high, and that personnel contamination would be masked. The individual was frisked at a remote location and proved not to be contaminated.

The inspector was also informed that the above procedure allows, pursuant to section 6.3.9.3, "Contaminated Areas which require personnel access on a daily basis shall have a frisking station within 10 feet of the access/egress buffer zone, if background radiation levels permit. All personnel exiting the Contaminated Area shall perform a whole-body frisk prior to leaving the area."

Inspector review of the procedure also indicated that Health Physics is responsible for the following: section 5.21 "Performing radiation, contamination, and airborne radiological surveys as necessary to verify the adequacy of area postings and the radiological controls within an area." Therefore, if the background levels at the egress point from the contaminated area were too high to allow for personal frisking, then the RWP and instructions to the personnel working in the area should have been changed.

An April 5, 2000, memorandum from the RFOM to the ALARA Coordinator addressed this issue, indicating that the high background made personal frisking at the contamination area exit point infeasible. However, he also notes that frequent radiological and smear surveys of the control point buffer zones for the hot cell areas revealed no significant contamination, and that a personal contamination monitoring station was available at the exit point of the control area. The memorandum goes on to indicate that Health Physics survey coverage will be performed to assist in preventing the release of contamination.

c. Conclusion

The licensee promptly evaluated the above situation and determined that the radiation worker was in compliance with the intent of the procedure, and that the RWP needed to be revised to reflect the actual conditions of the work area.

### **3. INSPECTION OF TRANSPORTATION**

#### **a. Inspection Scope (86740)**

The inspection included an evaluation to determine whether the licensee properly received and shipped radioactive materials, in order to assess the potential for safety problems resulting from these activities and from the transportation of radioactive materials. The inspector evaluated licensee compliance with NRC and Department Of Transportation (DOT) regulations for packaging and shipment of radioactive materials.

#### **b. Observations and Findings**

The inspector observed the loading of two shipments of waste materials from the site. One involved shipping contaminated protective clothing (PCs) from the JN-1 Building to a nuclear laundry, and the other involved the shipment of LSA materials for volume reduction. The BCLDP Waste Management staff were observed performing checks of the vehicles to assure that the loads were secure and not tampered with. Discussions were conducted with HPTs who performed surveys on the PCs and LSA containers. Prior to performing any work, Waste Management Staff briefed all involved parties regarding safety and loading requirements. The truck was checked for blocking and bracing, labeling, and truck safety items (i.e., tires, lights, general truck condition, and radiological survey of the truck's exterior). The inspector reviewed the Department of Transportation (DOT) shipping papers and the licensee's paper work used to log and verify the adequacy of radioactive material waste shipments. All individuals were knowledgeable of their work assignments and carried out their tasks efficiently and professionally. No problems were noted with the blocking and bracing, labeling, truck safety items, or with the documents reviewed.

The drivers of both trucks were interviewed, and the routing and tracking of the trucks while the shipments were in transit was discussed. Paperwork regarding the shipment of the waste was reviewed. Independent measurements were taken by the inspector and compared against the licensee's surveys. Labeling, posting, truck maintenance (lighting, tires, and general condition), and blocking and bracing were all reviewed. No items of concern were identified.

#### **c. Conclusion**

The licensee's actions involving the shipment of used PCs and radioactive waste were efficiently and professionally conducted. No items of concern or violations were identified.

### **4.0 Exit Meeting**

The inspectors presented preliminary inspection results to members of licensee management at the conclusion of the inspection on April 6, 2000. The licensee acknowledged the findings presented and took some issue with the inspectors' preliminary conclusions. Additional information was subsequently provided and reviewed in the NRC regional office. A telephone exit discussion was held on May 2, 2000, to discuss the final inspection results. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary.

## PARTIAL LIST OF PERSONS CONTACTED

N. Gantos, BCLDP, Program manager  
C. Jensen, BCLDP, RSO  
M. Jackson, BCLDP, Manager, Regulatory Compliance & ES&H Oversight  
A. Chance, BCLDP, Manager, Radiological Technical Support and ARSO  
D. Seifert, BCDLP, Manager, Remedial Action  
R. Baruth, BCLDP, Training & Records Management  
J. Halgren, BCLDP, Radiological Field Operations Manager  
L. Lowrie, Quality Assurance Specialist (Lead Auditor)  
D. Chapman, Lead Health Technician  
R. Parson, BCLDP, Task Leader, Low Level Waste Operation,  
P. Erickson, BCLDP, Task Leader, TRU Waste Program  
J. Eidie, Manager, BCLDP, Project Manager, TRU Waste  
G. Kirsh, BCLDP, HP, RAR Coordinator  
M. Neal, D&D Supervisor, Alpha-Gamma Cell  
T. Wilcox, HPT, Charpy Cell  
B. Johns, Lead HPT, Alpha-Gamma Cell Project  
L. Sander, BCLDP, HP, ALARA Coordinator  
D. Ridgley, BCLDP, ATSS  
H. Stoddard, BCLDP, ATSS

## INSPECTION PROCEDURES USED

IP87104	DECOMMISSIONING INSPECTION PROCEDURE FOR MATERIALS LICENSEES
IP88005	MANAGEMENT ORGANIZATION AND CONTROLS1
IP83822	RADIATION PROTECTION
IP86740	INSPECTION OF TRANSPORTATION ACTIVITIES

## LIST OF ACRONYMS USED

ALARA	As-Low-As-Reasonably-Achievable
AAR	Activity Assessment Report
ATSS	ALARA Support Staff
BCLDP	Battelle Columbus Decommissioning Project
DDO	Decontamination & Decommissioning Operations
CAA	Controlled Access Area
CFR	Code of Federal Regulations
DOT	Department of Transportation
HP	Health Physicist
HPT	Health Physics Technician
HEC	High Energy Cell
HLC	High Level Cell
AS	King Avenue Site
IAA	Independent Assessment Audit
LLC	Low Level Cell
LSA	Low Specific Activities
MTC	Mechanical Test Cell
NRC	Nuclear Regulatory Commission

PC	Protective Clothing
QA	Quality Assurance
RAR	Radiological Awareness Report
RC&ESHO	Regulatory Compliance & Environmental, Safety, Health Operations
RFOM	Radiological Field Operations Manager
RSO	Radiation Safety Officer
RTSM	Radiological Technical Support Manager
RWP	Radiation Work Permit
TLD	Thermoluminescence Dosimeters
WJS	West Jefferson Site

### **LICENSEE DOCUMENTS REVIEWED**

AAR No. 99-010-02 - (Observation) Section 4.2.4 of HP-AP-29.0, Revision 4 states that "Sources used to calibrate instruments shall be decay corrected at an interval not to exceed 0.1 times the half-life."

AAR No. 99-003-01 (Finding) - Section 2.3 of the WIPP QAPP (CAO-94-1010, Revision 0 "Each testing and analytical facility performing Program activities shall participate in the Performance Demonstration Program and demonstrate conformance to QA objectives for the Program."

AAR No. 00-05-01 (Observation) - Requirement/Reference Criteria: Section 5.5 of the Training Department Administrative Procedure TD-AP-2.0, Revision 3 states that "Responsible Managers shall ensure that employees' qualifications are current and renewed at the frequency specified."

IAA. NO. 00-009 -West Jefferson (WJ) Independent Activity Assessment (IAA) of Routine Surveillance and Maintenance (S&M) Daily, Weekly, and Monthly Health Physics (HP) Activities

IAA No. 00-011 - West Jefferson (WJ) Independent Activity Assessment (IAA) Involving Internal Radiological and Video Surveys to Characterize Underground Drain Lines at the WJ North Site (WI-970) by the Science and Engineering Associates (SEA), Inc.

IAA No. 00-012 - An Independent Activity Assessment (IAA) Involving a Review of the West Jefferson Surveillance and Maintenance (S&M) Mechanical Inspection and Maintenance Activities Data Packages for October, November, and December 1999

IAA No. 00-013 - An Independent Activity Assessment (IAA) Involving Review of the Environmental Monitoring (EM) Air and Water Sample Data Packages for Calendar Year 1999

IAA No. 00-017 - An Independent Activity Assessment (IAA) Involving a Review of the West Jefferson Waste Management (WM) Data Package for January 2000