April 29, 2011

Mr. Scott Ward
Senior Vice-President and General Manager
Analytical Bio-Chemistry Laboratories, Inc.
7200 East ABC Lane
Columbia, MO 65202

SUBJECT: NRC DECOMMISSIONING INSPECTION REPORT 030-05154/11-01(DNMS) - ANALYTICAL BIO-CHEMISTRY LABORATORIES, INC.

Dear Mr. Ward:

On April 22, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed inspection activities at the Analytical Bio-Chemistry Laboratories, Inc. (ABC), site located at 7200 ABC Lane, Columbia, Missouri. The inspection involved on-site inspection activities on March 8 and 9, 2010, with continuing in-office review through April 22, 2011. The purpose of the inspection was to observe characterization sample collection for the sanitary lagoon and drain field decommissioning project. At the conclusion of the on-site inspection on March 9, 2011, the inspector discussed the preliminary findings with you and members of your staff. On April 22, 2011, a final exit meeting was conducted by telephone with members of your staff following review of the results from both NRC and your site's collected samples.

The inspection consisted of an examination of activities as they relate to safety and compliance with Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Specifically, the NRC observed collection of characterization survey samples and took split samples in 5 locations in the drain field. Additionally, the NRC observed three geological core bore samples and three new hydrological sampling well placements.

Based on the results of the inspection, the NRC did not identify any violations.

In accordance with Title 10 Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), 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/

Christine Lipa, Chief
Materials Control, ISFSI, and
Decommissioning Branch
Division of Nuclear Materials Safety

Docket No. 030-05154
License No. 24-13365-01

Enclosures:
Inspection Report 030-05154/11-01(DNMS)

cc w/encls: J. Langston, Missouri Department
of Health and Senior Services (MDHSS)
K. Henke, MDHSS
B. Keck, Radiation Safety Officer

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K. Henke, MDHSS
B. Keck, Radiation Safety Officer

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.:	030-05154
License No.:	24-13365-01
Report No.:	030-05154/11-01(DNMS)
Licensee:	Analytical Bio-Chemistry Laboratories, Inc.
Facility:	7200 ABC Lane Columbia, Missouri
Dates:	March 8 – 9, 2011 April 22, 2011, In-Office review
Inspectors:	Katie Streit, Health Physicist
Approved by:	Christine A. Lipa, Chief Materials Control, ISFSI, and Decommissioning Branch Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Analytical Bio-Chemistry Laboratories, Inc.
NRC Inspection Report 030-05154/11-01(DNMS)

The U.S. Nuclear Regulatory Commission (NRC) decommissioning inspection included a review of Analytical Bio-Chemistry Laboratories' (ABC) characterization survey activities in the sanitary lagoon and associated drain field decommissioning project. The inspection scope included an evaluation of the licensee's radiation protection practices and procedures involved in the characterization survey, conduct of the surveys, and actions taken to address the past NRC violation cited in NRC Inspection Report No. 030-05154/10-02 (DNMS).

Closeout Inspection and Survey

The inspector determined that the sampling activities were conducted consistent with the licensee's work plan, were carried out using adequate radiation protection practices, and ensured the proper handling of samples collected. A comparison of the results of the radiological analysis of the samples split between the licensee and NRC verified the accuracy of the licensee's analytical results. The NRC will review the adequacy of the survey during the formal technical review of the licensee's decommissioning plan and request for release for unrestricted use since the characterization study was not approved by the NRC prior to the survey activities.

Report Details

1.0 Closeout Inspection and Survey (IP 83890)

a. Inspection Scope

The inspector observed the collection of characterization samples in the drain field and collected 5 split samples to determine the adequacy and accuracy of the licensee's procedures and analytical results. The inspector observed geological core bores and placement of three new hydrological sampling wells. The inspectors reviewed the characterization survey plan "RE: Addendum to work for site characterization, Analytical Bio-Chemistry Laboratories, Inc., Columbia, MO;" water liquid scintillation results dated March 7, 2011; Minimum Detectable Concentration licensee calculation dated March 11, 2011; and State of Missouri, Geological survey program, monitoring well certification records.

b. Observations and Findings

The inspector observed the licensee collect subsurface soil samples along the sanitary lagoon drain line. The samples were collected as part of a characterization study to determine the extent of radiological contamination that exists in the soil surrounding a drain line buried along the sanitary lagoon. The licensee collected soil samples along the west side of the drain line at varying depths. The farthest north sample location was at the end of the drain line, which was identified not to possess a cap. The sample was collected in the soil directly below the end of the drain line. At all other drain line sample locations, the inspector observed penetrations within a foot of the sample locations. Sample locations were chosen at random using a global positioning system (GPS) to identify the locations in the field.

During the characterization survey, the inspector noted that the licensee adhered to its work plan "RE: Addendum to Work for Site Characterization, Analytical Bio-Chemistry Laboratories, Inc., Columbia, MO," for radiological sampling. Since this plan has not been approved by the NRC, no review was conducted at this time as to the acceptability of these samples supporting the release of the site for unrestricted use. Sample locations were marked by GPS and depth was determined by a yard stick. Samples were collected in an approximate 6 inch interval and placed directly into a pre-labeled sample container when splits were not taken. In locations were splits samples were collected, the licensee placed the sample in an unused pan, mixed the sample, and placed in pre-labeled sample containers. Gloves were changed and sampling instruments were washed between each sample locations to avoid cross contamination.

The five NRC samples were sent to the Oak Ridge Institute for Science and Education (ORISE) for evaluation by liquid scintillation analysis for carbon-14 and tritium (hydrogen-3). ORISE completed their analysis of the soil samples and provided the NRC with the results in the document, "Letter Report for Analytical Results for Five Soil Samples from Analytical Bio-Chemistry Laboratories, Columbia, Missouri," dated March 30, 2011 (ML110940086). The results for tritium ranged from below minimum detectable concentration to 17.1 pCi/g, with all sample results below the NUREG-1757 screening value of 110 pCi/g for tritium in surface soil. Samples results ranged from below MDC to 76.2, with 2 sample results above the NUREG-1757 screening value of 12 pCi/g for carbon-14 in surface soil.

By e-mail dated April 15, 2011, the licensee forwarded the results of their sample analyses to the NRC. The results showed good comparison between the NRC and licensee sample results. Since derived concentration guideline levels (DCGLs) have not been approved for the decommissioning of the sanitary lagoon by the NRC, no comparison was made at this time between these sample results and their acceptability for supporting the release of the site for unrestricted use. The NRC will review the adequacy and the sample results during the formal technical review of the licensee's decommissioning plan and request for release for unrestricted use.

Three geological core bores around the sanitary lagoon and the "State of Missouri, Missouri Department of Natural Resources, Geological Survey Program Wellhead Protection Section, monitoring Well Certification Record," demonstrated the geology of the site contained clay to a minimum depth greater than 10 feet. Hydrological sampling wells were placed in accordance with "RE: Addendum to Work for Site Characterization, Analytical Bio-Chemistry Laboratories, Inc., Columbia, MO." Since this plan has not been approved by the NRC, no review was conducted at this time as to the acceptability of samples from these wells supporting the release of the site for unrestricted use. The NRC will review the adequacy and the necessary geological and hydrological data collected during the formal technical review of the licensee's decommissioning plan and request for release for unrestricted use.

c. Conclusions

The inspector determined that the sampling activities were conducted consistent with the licensee's work plan, were carried out using adequate radiation protection practices, and ensured the proper handling of samples collected. A comparison of the results of the radiological analysis of the samples split between the licensee and NRC verified the accuracy of the licensee's analytical results. Since the characterization survey was not approved prior to the licensee's survey, the NRC will review the adequacy of the survey during the formal technical review of the licensee's decommissioning plan and request for release for unrestricted use.

2.0 Closure of Past Violation

(Closed) VIO 03005154/10-02-01: Failure to make or cause to be made a survey to ensure containers possessing radioactive material have a durable, clearly visible label as required by 10 CFR 20.1904(a), pursuant to 10 CFR 20.1501. As of December 4, 2010, the licensee did not make adequate surveys of materials located in Building M to assure compliance with 10 CFR 20.1904(a), which requires that each container of licensed material bear a durable, clearly visible label bearing the radiation symbol and the words, "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL."

The licensee's corrective actions included surveying material in Building M to ensure compliance with 10 CFR 20.1904(a) and setting up a secured area with a chained linked fence to place all material until it could be surveyed. Further, material determined to contain, or be contaminated with, radioactive material remained in the secure area and was labeled pursuant to 10 CFR 20.1903(a). The inspector observed the secured area and posting and labels and interviewed staff to ensure adequate surveys had been conducted. This item is closed.

3.0 Exit Meeting Summary

The inspector presented the inspection results to licensee management at the conclusion of the onsite inspection on March 9, 2011. A follow-up telephone exit was conducted with the Radiation Safety Officer on April 22, 2011, following the review of licensee soil samples results received on April 15, 2011. The licensee did not identify any documents reviewed by the inspectors as proprietary.

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

* S. Ward, Senior Vice-President and General Manager
* T. DeVault, Director, Director of Corporate Services
*#B. Keck, Radiation Safety Officer

* Persons present at the preliminary exit meeting on March 9, 2011
# Persons present at the exit meeting on April 22, 2011

INSPECTION PROCEDURES USED

IP 83822	Radiation Protection
IP 83890	Closeout Inspection and Survey

LIST OF ACRONYMS USED

ALARA	As Low as Reasonably Achievable
CFR	Code of Federal Regulations
DCGL	Derived Concentration Guideline Limits
DP	Decommissioning Plan
GPS	Global Positioning System
IP	Inspection Procedure
NRC	Nuclear Regulatory Commissioning
MDC	Minimum Detectable Concentration
ORISE	Oak Ridge Institute for Science and Education
pCi/G	picocuries per gram
VIO	Violation

ITEMS OPENED, CLOSED, AND DISCUSSED

Closed	Type	Summary
03005154/10-02-01	VIO	Failed to conduct adequate surveys to ensure labeling of containers holding radioactive material