

September 25, 2006

Mr. Phillip M. Mazor
Remedial Projects Manager
Waste Management, Inc.
700 56th Avenue
Zeeland, MI 49464

SUBJECT: NRC INSPECTION REPORT 040-09022/06-001 - (DNMS)
THE SCA HARTLEY AND HARTLEY LANDFILL SITE,
KAWKAWLIN TOWNSHIP, MICHIGAN

Dear Mr. Mazor:

On August 25, 2006, the NRC completed an inspection at the SCA Hartley and Hartley Landfill Site, Kawkawlin Township, Michigan. The purpose of the inspection was to determine whether decommissioning activities were conducted in accordance with your Decommissioning Plan, Health and Safety Plan for Site Decommissioning Activities, and NRC regulations. Specifically, during on-site inspections on May 9, 2006 and June 19 and 20, 2006, the NRC inspectors observed the installation of leachate extraction wells, the cutting of trenches in the cover of the northwest landfill for placement of leachate transfer piping, and the excavation of two slag piles and relocation into the northwest landfill, and evaluated the security and control of contaminated material. The inspectors also evaluated the performance of your final status surveys, including sample collection and analysis. The inspectors obtained independent and split soil samples, and samples previously analyzed by your contract laboratory to be counted at the NRC's contract laboratory in Oak Ridge, Tennessee. At the conclusion of the on-site inspections, the NRC inspectors discussed the preliminary findings with members of your staff. On August 25, 2006, the inspectors completed an in-office review of the laboratory data results for the soil samples that were collected during the on-site inspections and conducted a telephone exit interview with your Decommissioning Contractor Senior Project Manager, Linda Hicken.

This inspection consisted of an examination of decommissioning activities at the SCA Hartley and Hartley Landfill site as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of representative records, interviews with personnel, and independent confirmatory measurements.

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

In accordance with 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 Publicly Available Records (PARS) component of NRC's

P. Mazor

-2-

document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

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

Sincerely,

/RA/

Jamnes L. Cameron, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

License No. SUC-1565
Docket No. 040-09022

Enclosure:
Inspection Report 040-09022/06-001(DNMS)

DISTRIBUTION w/encl:

- Docket File
- K. McConnell, NMSS
- D. Nelson, NMSS
- G. Grant, RIII
- S. Reynolds, RIII
- S. Lee, RIII

*See previous concurrence

DOCUMENT NAME: E:\Filenet\ML062690436.wpd

Publicly Available Non-Publicly Available Sensitive Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII:DNMS	C	RIII:DNMS	N	RIII		RIII
NAME	EABonano:dh*		JLCameron				
DATE	09/21/06		09/25/06				

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.: 040-09022

License No.: SUC-1565

Report No.: 040-09022/06-001(DNMS)

Licensee: S.C. Holdings, Inc./Waste Management, Inc.

Facility: SCA Hartley and Hartley Landfill Site

Location: Kawkawlin Township, MI

Dates: May 9, 2006 (on-site inspection)
June 19 and 20, 2006 (on-site inspection)
August 25, 2006 (in-office review and telephone exit)

Inspector(s): Peter J. Lee, PhD., CHP, Health Physicist
Samuel J. Mulay, Health Physicist
Eugenio A. Bonano, Health Physicist

Approved By: Jamnes L. Cameron, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Waste Management, Inc. SCA Hartley and Hartley Landfill Site, Kawkawlin Township, MI Inspection Report No. 040-09022/06-001(DNMS)

The SCA Hartley and Hartley Landfill Site is a former waste disposal facility located in Kawkawlin Township, 2370 South Two Mile Road, Kawkawlin, Michigan 48706. The site is surrounded by the Tobico Marsh State Game Area, which is undeveloped woodlands and marsh. Light commercial and residential properties are located south of the site. The site accepted municipal and industrial waste from the 1950s until 1978. There are two main disposal areas on the site - the Northwest Landfill and the East Landfill. During the period from 1970 to 1972, thorium-bearing foundry slag was disposed in the Northwest Landfill, and in two small slag piles (Slag Piles A and B). Therefore, the radioisotope of concern is thorium-232. No record of disposal outside of these locations has been identified. In 1995, the NRC issued Source Materials License No. SUC-1565 for thorium and uranium in waste at the SCA Hartley and Hartley Landfill Site. The current owner of the property is S.C. Holdings, Inc., successor by merger to SCA Services, Inc.

Decommissioning activities included consolidating the material in Slag Piles A and B into the Northwest Landfill, installing a leachate extraction system, and constructing an engineered cover over the Northwest Landfill.

The focus of the inspections was to determine whether the licensee, and its contractors, conducted work in accordance with the approved Decommissioning Plan (DP), Health and Safety Plan for Site Decommissioning Activities (HASP), and the Final Status Survey Plan (FSSP). Specifically, the inspectors evaluated the licensee's performance during the installation of leachate extraction wells, the cutting of trenches in the cover of the Northwest Landfill for placement of leachate transfer piping, the excavation of two slag piles and relocation into the Northwest Landfill, and the final status surveys, including sample collection and analysis. The inspectors performed surface scans, with calibrated survey meters, of Slag Pile Area A (Slag Pile Area B was under water and therefore could not be surveyed), the haul roads between the Northwest Landfill and the Slag Pile Areas A and B, and class two survey units (outside perimeter of the Northwest Landfill). The inspectors obtained independent and split soil samples, and samples previously analyzed by the licensee's contract lab, to be counted at the NRC's contract laboratory in Oak Ridge, Tennessee. The inspectors evaluated the security and control of contaminated material.

Close-out Inspection and Survey

- The inspectors concluded that the licensee and its contractor conducted the final status surveys, sample collection and analysis in accordance with the Decommissioning Plan, Final Status Survey Plan, and procedures.

Decommissioning Inspection Procedure for Materials Licensees

- The inspectors concluded that the licensee conducted all decommissioning activities safely and in accordance with the Health and Safety Plan for Site Decommissioning Activities, and NRC regulations.

Report Details

1 Closeout Inspection and Survey (83890)

1.1 Inspection Scope

The inspectors evaluated the performance of the licensee's final status surveys (FSS), sample collection and analysis, to verify that work was in accordance with the licensee's Decommissioning Plan (DP) and the Final Status Survey Plan (FSSP). The inspectors reviewed select procedures, and interviewed contractor personnel, performed side-by-side and independent radiological surveys, collected independent and split soil samples. The inspectors obtained soil samples previously analyzed by the licensee's contract laboratory to be counted at the NRC's contract laboratory, Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE) located in Oak Ridge, Tennessee. The inspectors reviewed select procedures, STL-RC-0003, "Drying and Grinding of Soil and Solid Samples," Revision 6; RSP-008, "Instrumentation," Revision 003; RSP-018, "Surveillance," Revision 002.

1.2 Observations and Findings

During the May 9, 2006 inspection, the inspectors performed independent radiological surveys (surface scans) using a calibrated radiation survey meter, Ludlum 2241-2 survey meter (NRC Tag Number: 061686, Serial Number: 132192, Calibration Due Date: July 1, 2006) with a Ludlum 44-10 sodium iodide 2 by 2 detector (Serial Number: PR110265) of areas where decommissioning activities had been completed by the licensee. The radiation levels, measured at the surface of the select class two locations (perimeter grid areas) outside of the class one survey unit (Northwest Landfill), were indistinguishable from the natural background radiation levels. The inspectors collected three soil samples from within the class two survey units and three background samples, approximately 10 miles off site, northwest of the landfill. The analytical results were documented in the ESSAP/ORISE laboratory report dated July 14, 2006, (see ADAMS ML061950606). All results were below the approved DCGL value of 141 pCi/g for thorium-232.

During the June 19 and 20, 2006 inspections, the inspectors performed side-by-side and independent radiological surveys (surface scans) using a calibrated radiation survey meter, Ludlum 2241-2 survey meter (NRC Tag Number: 059756, Serial Number: 130052, Calibration Due Date: March 21, 2007) with a Ludlum 44-10 sodium iodide 2 by 2 detector (Serial Number: PR110264), of the Slag Pile Area A, and the haul roads between the Slag Pile Areas A and B, and the Northwest Landfill. Slag Pile Area B was under water at the time of the inspection and could not be surveyed. During the survey of the Slag Pile Area A, the inspectors identified three locations with elevated radiation levels above background; the background radiation level was approximately 5000 counts per minute (cpm). Soil samples were collected at these locations (NRC sample numbers: SCH-06-2-04 (10,000 cpm), SCH-06-2-05 (18,000 cpm), and SCH-06-2-06 (14,000 cpm)). The inspectors also collected three split soil samples with the licensee (NRC sample numbers: SCH-06-2-07, SCH-06-2-08, and SCH-06-2-09); and obtained three of the licensee's soil samples (NRC sample numbers: SCH-06-2-01, SCH-06-2-02, and SCH-06-2-03), previously analyzed by the licensee's contract laboratory, and sent

them to the ESSAP/ORISE laboratory for analysis to verify the adequacy of the licensee's analytical counting capability. All results of the soil sample analysis were documented in the ESSAP/ORISE laboratory report dated August 4, 2006 (see ADAMS ML062200306). All analytical results were below the approved DCGL value of 141 pCi/g for thorium-232.

The analytical results of the licensee's previously analyzed soil samples showed good agreement. Two of the licensee's split sample results (SCH-06-2-08 and SCH-06-2-09) were more conservative than the NRC's results. All sample results were below the approved DCGL value of 141 pCi/g for thorium-232. The selected sample results are listed below:

NRC Region III Sample ID	ESSAP Sample ID	S.C. Holding's Sample ID	S.C. Holding's Radionuclide Concentrations (pCi/g)	ESSAP's Radionuclide Concentrations (pCi/g)
			Thorium-232 (by Actinium-228)	Thorium-232 (by Actinium-228)
SCH-06-2-01	1709S0007	2C-05-04	0.65 ± 0.31	0.58 ± 0.15
SCH-06-2-02	1709S0008	2C-04-02	0.30 ± 0.25	0.53 ± 0.21
SCH-06-2-03	1709S0009	2C-01-02	0.53 ± 0.32	0.64 ± 0.27
SCH-06-2-07 (Split Sample)	1709S0013	1A-01	0.12 ± 0.14	0.15 ± 0.08
SCH-06-2-08 (Split Sample)	1709S0014	1A-04	1.12 ± 0.36	0.56 ± 0.13
SCH-06-2-09 (Split Sample)	1709S0015	1A-07	3.19 ± 0.87	0.98 ± 0.15

1.3 Conclusions

The inspectors concluded that the licensee and its contractor conducted the final status surveys, sample collection and analysis in accordance with the Decommissioning Plan, Final Status Survey Plan, and procedures.

2 Decommissioning Inspection Procedure for Materials Licensees (87104)

2.1 Inspection Scope

The inspectors evaluated the licensee's decommissioning activities to determine whether activities were conducted safely and in accordance with the, "Health and Safety Plan for Site Decommissioning Activities (HASP)," dated September 2005. The Inspectors also observed and evaluated: postings, security and control of the site and contaminated material, environmental monitoring (air samplers), management organization and controls, occupational safety & health administration (OSHA), issues

related to non-radiological safety hazards, radioactive waste management, and low-level radioactive waste storage. The inspectors interviewed licensee and contractor personnel, and reviewed related documents and procedures.

2.2 Observations and Findings

The licensee's decommissioning activities consisted of the installation of leachate extraction wells, the cutting of trenches in the cover of the northwest landfill for placement of leachate transfer piping, the excavation of two slag piles and relocation into the northwest landfill. The final status surveys of the Slag Pile Area A (Slag Pile Area B was under water and therefore could not be surveyed), the haul roads between the Northwest Landfill and the Slag Pile Areas A and B, and class two survey units (outside perimeter of the Northwest Landfill) were conducted in accordance with the licensee's Final Status Survey Plan. The licensee maintained ALARA goals as stated in the HASP. Radiation workers received pre-job briefings, and their training records were complete and up to date.

The licensee maintained appropriate safeguards to ensure security and control of material on site are in accordance with their procedures and regulatory requirements. All postings were in accordance with 10 CFR Part 20 requirements. The licensee also maintained an environmental monitoring program using air samplers on a routine basis. The inspectors did not identify any problems with the air sample results or the placement of the air samplers. In the area of management organization and controls, the licensee maintained proper levels of expertise and independence for job positions. The inspector did not note any Occupational Safety & Health Administration concerns during the inspection.

The licensee demonstrated proper use of survey instruments, and radiological survey records were detailed and complete. The licensee ensured that areas were free from contamination, especially the path between the on-site building and the two gated entrances.

2.3 Conclusions

The inspectors concluded that the licensee conducted all decommissioning activities safely and in accordance with the Health and Safety Plan for Site Decommissioning Activities, and NRC regulations.

3 Exit Meeting

The inspectors presented preliminary inspection results to the licensee at the conclusion of the on-site inspections on May 9, June 19 and 20, 2006. A final exit meeting was conducted by telephone on August 25, 2006 with the RMT Senior Project Manager (PM) to discuss the NRC's in-office review of the analytical results of the soil sample analyses. The PM acknowledged the findings presented, and did not identify any materials that could be included in the inspection report as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

D. Nelson, NRC Project Manager, NMSS, DWM
K. Coble, Michigan Department of Environmental Quaiity, WHMD, RPMWS
P. Mazor, Project Manager/Radiation Safety Officer, S.C. Holdings, Inc.
L. Hicken, Decommissioning Contractor Senior Project Manager, RMT, Inc.

INSPECTION PROCEDURES USED

IP 83890 Closeout Inspection and Survey
IP 87104 Decommissioning Inspection Procedure for Materials Licensee

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened None
Closed None
Discussed None

LIST OF ACRONYMS USED

ADAMS Agencywide Documents Access and Management System
ALARA As Low As Reasonably Achievable
CFR Code of Federal Regulations
DNMS Division of Nuclear Materials Safety
DP Decommissioning Plan
ESSAP Environmental Survey and Site Assessment Program
FSS Final Status Survey
HASP Health & Safety Plan for Site Decommissioning Activities
NRC Nuclear Regulatory Commission
ORISE Oak Ridge Institute for Science and Education
PARS Publicly Available Records
pCi/g microcuries per gram
RSO Radiation Safety Officer