

April 23, 2007

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

SUBJECT: RELEASE OF THE S.C. HOLDINGS, INC., BAY CITY, MICHIGAN SITE, AND
TERMINATION OF LICENSE (LICENSE NO. SUC-1565)

Dear Mr. Mazor:

This letter is to inform S.C. Holdings, Inc. that the U.S. Nuclear Regulatory Commission (NRC) is terminating NRC License SUC-1565 and is authorizing the release of land at the Bay City, Michigan site for unrestricted use.

S.C. Holdings, Inc. has completed final status surveys (FSSs) at the site in accordance with the approved Decommissioning Plan (DP). Based on the NRC's review of those surveys and the results of an NRC confirmatory survey, NRC concludes that the site is suitable for unrestricted use. A Safety Evaluation Report (SER) which supports this conclusion is attached.

The NRC staff reviewed the final status survey reports, and compared the residual contamination levels against the trigger values for soil and groundwater in the "Memorandum of Understanding (MOU) between the U.S. Environmental Protection Agency and the NRC on Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The staff concluded that the trigger levels for soil and groundwater were not exceeded. Thus, in accordance with Section V.C.2 of the MOU, no consultation is required. NRC does not plan to take any further action regarding the S.C. Holdings, Inc. site and will not require additional decommissioning in response to future NRC criteria or standards, unless additional contamination is found that is a significant threat to public health and safety and the environment.

We have discussed this action with the staff of the Michigan Department of Environmental Quality, and they have no objections. However, release of the S.C. Holdings, Inc. site for unrestricted use does not relieve S.C. Holdings, Inc. from complying with other local, state, and federal requirements.

P. Mazor

- 2 -

If you have any questions on this matter, please contact David Nelson, Project Manager for the site, at (301) 415-6626.

Sincerely,

/RA/

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials and
Environmental Management Programs

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

cc: S.C. Holdings, Inc. Distribution List

Enclosures:

1. Terminated License
2. Safety Evaluation Report

P. Mazor

- 2 -

If you have any questions on this matter, please contact David Nelson, Project Manager for the site, at (301) 415-6626.

Sincerely,

/RA/

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials and
Environmental Management Programs

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

cc: S.C. Holdings, Inc. Distribution List

Enclosures:

1. Terminated License
2. Safety Evaluation Report

DISTRIBUTION:

DCD r/f GBonano RIII

ML070430246

OFC	DWMEP:PM	DWMEP:BC	OGC	DWMEP:DD
NAME	Dnelson: DWN	RTadesse: RT	F.Cameron: FC	KMcConnell
DATE	2/16/07	2/16/07	2/20/07	4/23 /07

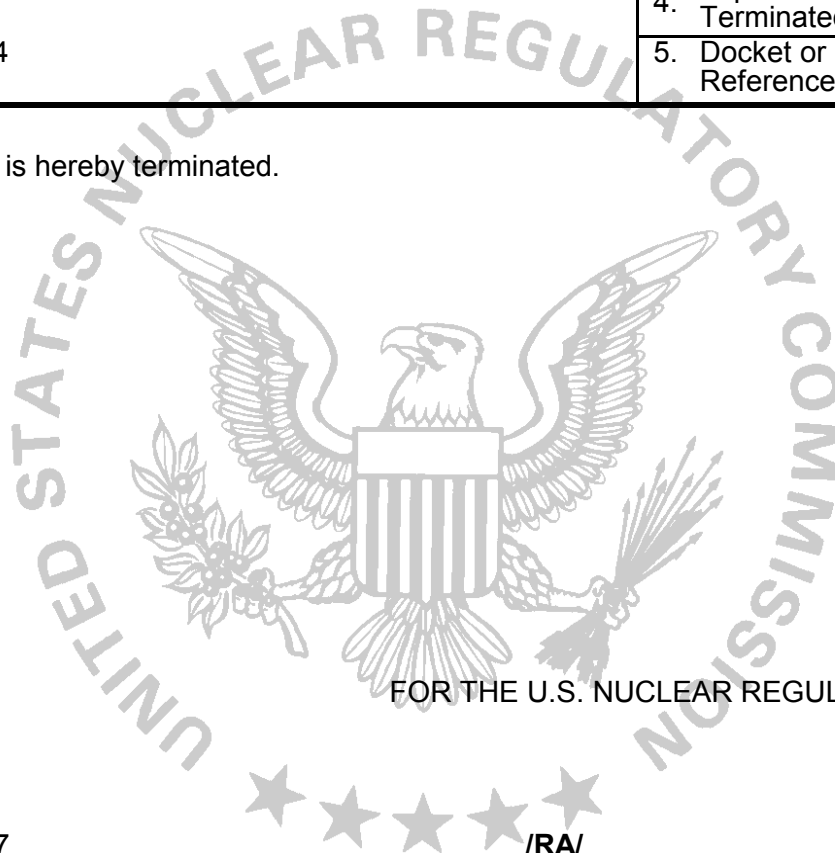
Enclosure 1
Terminated License

MATERIALS LICENSE

Amendment No. 5

Licensee		
1 S.C. Holdings, Inc. .		3. License Number
2 700 56 th Avenue . Zeeland, MI 49464		4. Expiration Date Terminated
		5. Docket or Reference Not Applicable

License SUC-1565 is hereby terminated.



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Dated: 04/23/2007

/RA/

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials and
Environmental Management Programs

DOCKET NO: 040-09022

LICENSE NO: SUC-1565

FACILITY: S. C. HOLDINGS, INC., BAY CITY, MI

SUBJECT: SAFETY EVALUATION REPORT FOR ISSUANCE OF AMENDMENT NO. 5
TO MATERIALS LICENSE NO. SUC-1565, S.C. HOLDINGS, INC. (TAC
#60510)

1. EXECUTIVE SUMMARY

This Safety Evaluation Report (SER) has been prepared as part of the U.S. Nuclear Regulatory Commission (NRC) staff's review of S.C. Holdings', Inc. request to terminate license No. SUC-1565 and release its Bay City, MI, site for unrestricted use. Decommissioning activities were restricted to excavating slag piles A and B, moving the material from the piles into the Northwest Landfill, installing leachate wells and collection piping, and conducting final status surveys (FSSs). The NRC conducted several inspections and one confirmatory survey at the site.

Based on the review of the FSS report (FSSR) and the staff's confirmatory survey, the NRC determined that the licensee has adequately demonstrated that the site meets the requirements of 10 CFR Part 20 Subpart E and the site meets the NRC's radiological criteria for unrestricted use (10 CFR 20.1402).

2. FACILITY OPERATING HISTORY

The site is a part of the former (now closed) industrial waste disposal area locally known as the Hartley & Hartley Landfill. The landfill is a former waste disposal facility that accepted municipal and industrial waste from the 1950s until 1978. The facility is estimated to have received 18,000 barrels of spent solvents, oils, and other liquid and solid wastes for disposal during the 1960's and early 1970's. From 1970 to 1972, foundry slag containing radioactive thorium (Th) and progeny was also disposed of in the Northwest Landfill and in two small slag piles (slag piles A and B). There are no records of Th-bearing slag in any area other than the Northwest Landfill and the two slag piles. In 1995, NRC issued Source Materials License No. SUC-1565 to SCA Services, Inc., for storage of radioactive Th and uranium (U) in slag/waste at the Hartley & Hartley Landfill site. The current owner of the property is S.C. Holdings, Inc., successor by merger to SCA Services, Inc. Post-closure activities at the site included construction of slurry walls with clay caps and subsurface clay dikes to enclose the landfills to contain the chemical wastes and preclude the potential migration of chemical (non-radioactive) contaminants beyond those areas already impacted by the disposal.

3. FACILITY DESCRIPTION

The Hartley & Hartley Landfill industrial disposal site is currently treated as two separate sites, the Michigan Department of Natural Resources (MDNR) site and the S. C. Holdings, Inc site. The S.C. Holdings, Inc. site covers about 235 acres and contains two landfills (East and Northwest Landfills) surrounded by support areas and wetlands. Both landfills are enclosed within slurry walls and covered with clay caps. Slag piles A and B were located immediately adjacent to the landfills and are covered by a layer of clean clay.

The licensee completed site radiological characterization surveys in 1996. Reviews of site histories and characterization survey results indicated that on-site Th contamination was restricted to the Northwest Landfill and slag piles A and B. The landfills also contain hazardous chemical wastes.

The State of Michigan regulates all non-radiological hazardous wastes on-site.

4. RADIOLOGICAL STATUS OF FACILITY

S.C. Holdings, Inc. has requested release of the site for unrestricted use pursuant to 10 CFR 20.1402. Therefore, residual radioactivity levels that are distinguishable from background remaining at the site at the time of license termination cannot result in a total effective dose equivalent to an average member of the critical group that exceeds 25 mrem/y. Residual radioactivity must also be at levels that are as low as reasonably achievable.

In a letter dated December 5, 2006, S.C. Holdings, Inc. submitted the FSSR for FSSs performed by S.C. Holdings, Inc. on the footprints left following the excavation of slag piles A and B and areas immediately surrounding the Northwest Landfill. Characterization surveys completed in 1996 indicated that residual radioactivity was confined to slag piles A and B and the Northwest Landfill. Review of the FSSR and the results of the July 2006 inspection confirmed that residual radioactivity levels within the footprint of slag pile A and the areas on and surrounding the Northwest Landfill were below the limits specified in the DP.

S.C. Holdings, Inc. was unable to perform direct scanning surveys on the footprint left from the excavation of slag pile B. During excavation of slag pile B additional non-radiological waste (i.e., solid/industrial waste) was discovered in the area of the pile. To remove the non-radiological waste, S.C. Holdings, Inc. had to excavate an additional 6 feet. Unfortunately, the excavation quickly filled with infiltrating groundwater, which was encountered 6 inches below ground level. This prevented S.C. Holdings, Inc. from performing direct scanning surveys on the bottom of the excavation. S.C. Holdings, Inc. did analyze soil samples from the material removed from the excavation, which provided results that were well below the derived concentration guideline levels (DCGLs) for the site. In addition, excavation of this area was performed until radiation levels in the excavated soil were indistinguishable from background. The slag pile B excavation was eventually capped in a manner similar to that for the Northwest Landfill.

5.0 Evaluations

Even though S.C. Holdings was unable to obtain direct measurement from the base of the slag pile B excavation, the staff concluded that direct exposure measurements scans were not needed. Initial site characterization results for slag pile B showed a maximum thorium activity of 36.0 pCi/g, which was well below the modeled DCGL value of 141 pCi/g. The slag pile was subsequently remediated to an average thorium activity of less than 5 pCi/g. Also, soil samples collected during the FSS provided results below the DCGLs. Since the DP allowed the slag pile B footprint to be released for unrestricted use without a cap, the addition of a cap reduces any direct exposure to residual thorium and, therefore, provides additional protection of public health and safety.

S.C. Holdings provided a dose assessment of the Northwest landfill and the leachate collection and treatment system (LCTS) to confirm that the residual radioactivity remaining at the site poses very little risk to any future users of the land. In addition, radionuclide-specific DCGLs were developed for slag piles A and B. An industrial worker composite scenario was used by S.C. Holdings in performing its assessment of the Northwest landfill and the slag piles. This scenario was consistent with the NRC's realistic exposure scenario guidelines. S.C. Holdings

eliminated shallow groundwater as a potable water source because of non-radiological contaminants, and determined that groundwater quality and yield are not appropriate for irrigating a garden or for livestock. The NRC staff agreed with the land use scenario and input parameters selected by S.C. Holdings for these areas. The dose calculated by the licensee for the industrial worker from on-site residual radioactivity from the Northwest landfill was 5 mrem/yr. The NRC staff's independent calculation also resulted in a value of 5 mrem/yr based on the same parameters used by S.C. Holdings. The licensee's DCGLs for the slag piles reflected the concentration of radionuclides that may be present in the slag piles and result in a maximum dose of less than 25 mrem/yr over background. The licensee did not take into account the presence of the capped Northwest Landfill in derivation of the DCGLs for the remediated slag pile areas because the dose contribution from the capped landfill at the slag pile locations would not be distinguishable from background.

For potential leachate leakage from the LCTS, the licensee used an analysis performed by MDNR. S.C Holdings should have provided justification for using the MDNR leachate leakage analysis. However, staff found the MDNR leachate leakage analysis to be bounding for the SCA site. The annual dose for the potential leachate leaking from the LCTS was less than 1 mrem/y, and the dose from gamma radiation exposure for a worker within close proximity to the leachate tank was less than 2 mrem/y. The NRC staff concluded that the dose modeling completed for this site was adequate and that the actual dose to any future user of the land would be much less than the 25 mrem/y release criteria for unrestricted use under 10 CFR 20.1402.

6.0 Documents Required for License Termination

NRC license termination regulations also have requirements for forwarding specific records to the NRC prior to license termination. The licensee has met these requirements.

7.0 Environmental Considerations

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment (EA) and finding of no significant impact (FONSI) was published in the Federal Register on July 12, 2005 (70 FR 40065) for approval of the decommissioning plan. Accordingly, no EA or FONSI will be prepared for termination of License No. SUC-1581.

8.0 Summary and Conclusion of Safety Evaluations

NRC staff finds that the licensee has completed decommissioning in accordance with its approved DP. The site meets the dose limitation requirements of the License Termination Rule (10 CFR 20.1402). Therefore, the staff concludes that the site is acceptable for unrestricted use with no further action, and the license can be terminated.

9.0 Principle Contributors

David Nelson, Project Manager
Shamica Walker, System Performance Analyst

10.0 References

- NRC Materials License No. SUC-1565.
- Memorandum of Understanding entitled, Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites, October 9, 2002.

- S.C. Holdings, Inc., Letter dated December 5, 2006, "Submittal of the Final Status Survey Report SCA Hartley and Hartley Landfill Site, Kawkawlin Township, Michigan USNRC Source Material License No. SUC-1565." [ADAMS Accession Nos. ML070190464 and ML070190462]
- S.C. Holdings, Inc., Letter dated December 5, 2006, "Submittal of the Final Status Survey Report SCA Hartley and Hartley Landfill Site, Kawkawlin Township, Michigan USNRC Source Material License No. SUC-1565." [ADAMS Accession No. ML070190464]
- S.C. Holdings, Inc., Letter dated November 26, 2003, "Submittal of the Decommissioning Plan SCA Hartley & Hartley Landfill Site, Kawkawlin Township, Michigan NRC Materials License No. SUC-1565, Docket No. 40-9022." [ADAMS Accession No. ML033450337]
- NRC, Letter dated October 14, 2004, "The Nuclear Regulatory Commission's Request for Additional Information (RAI) with Regard to the Decommissioning Plan, for the S.C. Holdings, Inc. Hartley and Hartley Landfill Site, Kawkawlin, Michigan." [ADAMS Accession No. ML042670354]
- S.C. Holdings, Inc., Letter dated May 9, 2005, "Response to RAI SCA, Hartley & Hartley Landfill Site, Kawkawlin Township, Michigan NRC Source License SUC-1565." [ADAMS Accession No. ML051380221]
- NRC, Letter dated October 28, 2005, "Request for Additional Information (RAI) with Regard to the Decommissioning Plan, for the S.C. Holdings, Inc. Hartley and Hartley Landfill Site, Kawkawlin, Michigan." [ADAMS Accession No. ML052900502]
- S.C. Holdings, Inc., Letter dated December 8, 2005, "Response to Second Request for Additional Information SCA, Hartley & Hartley Landfill Site, Kawkawlin Township, Michigan NRC Source License SUC-1565." [ADAMS Accession No. ML053480161]
- S.C. Holdings, Inc., Letter dated September 15, 2005, "Submittal of the Quality Assurance Project Plan and the Health and Safety Plan for Site Decommissioning SCA Hartley & Hartley Landfill Site, Kawkawlin Township, Michigan NRC Source License SUC-1565." [ADAMS Accession No. ML052640183]
- S.C. Holdings, Inc., Letter dated March 13, 2006, "Amendment No. 4 to Source Materials License No. SUC-1565 Authorizing the Incorporation of the Decommissioning Plan, the Health and Safety Plan for Site Decommissioning Activities, and the Quality Assurance Project Plan for Decommissioning Activities into the License (TAC No. L60510)." [ADAMS Accession No. ML060370014]
- NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with Nuclear Materials Safety and Safeguards (NMSS) Programs, August 2003.
- NUREG-1757, Volume 1, Rev 1, Consolidated NMSS Decommissioning Guidance, Decommissioning Process for Materials Licensees, Final Report, September 2003.
- NUREG-1757, Volume 2, "Consolidated NMSS Decommissioning Guidance: Characterization, Survey, and Determination of Radiological Criteria." September, 2003.

- Title 10 Code of Federal Regulations, Part 20, Subpart E, “Radiological Criteria for License Termination.”
- NRC, 2002. NMSS Decommissioning Standard Review Plan (NUREG-1727). Division of Waste Management, Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission Washington, DC; September 2002.
- NRC, 2003. Consolidated NMSS Decommissioning Guidance. NUREG-1757, Volume 2, September 2003. Office of Nuclear Material Safety and Safeguards. Washington, DC.
- Oak Ridge Associated Universities (ORAU), 1985. Radiological survey of the SCA Chemical Services, Inc., Landfill Site, Bay City, Michigan, July 1985.
- NRC, 1998. “Decision Methods for Dose Assessment to Comply With Radiological Criteria For License Termination.” NUREG-1549, July 1998. Office of Nuclear Regulatory Research. Washington, DC.

S.C. Holdings, Inc. Site Remediation Service List

cc:

Timothy Bertram
Geologist
Saginaw Bay District Office
Michigan Department of Environmental
Quality
503 N Euclid Avenue
Bay City, MI 48706

Phil Mazor
Remedial Projects Manager
Waste Management, Inc.
700 56TH Avenue
Zeeland, MI 49464

Thor Strong
Waste and Hazardous Materials Division
Michigan Department of Environmental
Quality
P. O. Box 30241
Lansing, MI 48909-7741

Mr. Dennis Fedewa
Chief Deputy
Michigan Department of Natural Resources
P. O. Box 30028
Lansing, MI 48909