

October 14, 2004

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

SUBJECT: THE U. S. NUCLEAR REGULATORY COMMISSION'S REQUEST FOR
ADDITIONAL INFORMATION WITH REGARD TO THE DECOMMISSIONING
PLAN FOR THE SC HOLDINGS, INC. HARTLEY AND HARTLEY LANDFILL
SITE, KAWKAWLIN, MI.

Dear Mr. Mazor:

In a letter dated, March 1, 2004, the U.S. Nuclear Regulatory Commission (NRC) informed you that the Decommissioning Plan (DP) for the SC Holdings, Inc., Hartley and Hartley landfill site was found to be acceptable for a detailed technical review. In that letter, we indicated that during our technical review we could request additional information that were not identified or in our acceptance review. This letter identifies several issues that resulted from our review.

In your DP, you indicated that a leachate extraction system will be installed in the Northwest Landfill, and that the system would be used for an indeterminate period of time after the site had been released for unrestricted use. You did not in the DP, however, address the potential for exposure to radioactive contamination if the leachate system leaked during operation, or the potential for exposure to contamination in the leachate piping during operation of the system. Since you have requested that the site be released for unrestricted use, issues such as these regarding the operation of the system need to be addressed. Specifically, it is unclear whether the leachate contains significant quantities of thorium and/or its daughter products, and if the leachate is contaminated, how future system leaks and exposures to the system during operation would be controlled. The enclosure to this letter specifically addresses these and related issues and requests additional information.

In the DP, the Quality Assurance Project Plan (QAPP) and Health and Safety Plan (HSP) were not developed fully and during a subsequent discussion you informed us that the QAPP and HSP would be submitted prior to final approval of the DP. In our March 1, 2004, letter to you regarding our completion of our 90-day acceptance review of the DP, we reiterated the need for submitting the plans prior to our final approval of the DP. Please include your fully developed QAAP and HSP plans in your response to this letter.

The DP did not clearly describe plans for the final status survey for the onsite building. In ensuing discussions, you informed us that you intend to: 1) meet the 25 mrem/yr limit using screening values from NUREG/CR-5512, Vol. 3, 2) consider the building a Class 3 survey unit, and 3) survey the building following guidance in the Multi-Agency Radiological Survey and Site Investigation Manual (MARSSIM). In our March 1, 2004, letter we included this

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issue as one that needed to be addressed before the final review. Please include your plans for the final status survey for the onsite building in your response to this letter.

Once we receive your response to this request and determine that no additional information is needed, the technical review of DP should be completed with 60 days. If you wish to meet to discuss the enclosed questions or if you have any questions regarding this letter, please contact me at (301) 415-6626, or dwn@nrc.gov.

Sincerely,

/RA/

David W. Nelson, Program Manager
Decommissioning Directorate
Division of Waste Management
and Environmental Protection
Office of Nuclear Material Safety
and Safeguards

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

Enclosure:
Request for Additional Information

cc: SC Holdings, Inc., Distribution List

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issue as one that needed to be addressed before the final review. Please include your plans for the final status survey for the onsite building in your response to this letter.

Once we receive your response to this request and determine that no additional information is needed, the technical review of DP should be completed with 60 days. If you wish to meet to discuss the enclosed questions or if you have any questions regarding this letter, please contact me at (301) 415-6626, or dwn@nrc.gov.

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cc: SC Holdings, Inc., Distribution List

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Request for Additional Information

1. In the Decommissioning Plan, you indicate that a leachate collection system will be built in the Northwest Landfill. Provide assurances that during construction of the system, contaminated material within the Landfill will not be excavated and, if excavated, will not contaminate the surrounding environments or result in doses to the average member of the critical group exceeding 25 mrem per year.

Basis: The *Code of Federal Regulations* Title 10 (10 CFR) 20.1402, "Radiological Criteria for Unrestricted Use" states, in part, that a site is acceptable for unrestricted use if the residual radioactivity results in a total effective dose equivalent (TEDE) to the average member of the critical group not exceeding 25 mrem per year. Dose projections for the average member of the critical group on the site assume that the contaminated material will remain in the Landfill. If contaminated material is excavated from the Landfill and brought to the surface, dose projections would have to be recalculated.

2. Before a leachate collection system is installed in the Northwest Landfill, sufficient hydraulic pressure could build within the cell to cause leakage. Provide assurances that if the Landfill leaks, the leachate would be monitored for radioactivity, and any resulting contamination would be remediated.

Basis: 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use" states, in part, that a site is acceptable for unrestricted use if the residual radioactivity results in a TEDE to the average member of the critical group does not exceed 25 mrem per year. Dose projections for the average member of the critical group on site assume that the contaminated material will remain in the Landfill. If contaminated material leaks from the Landfill dose, projections would have to be recalculated.

3. It is possible that during operation of the leachate collection system piping or tanks could leak leachate. If that leachate contains thorium or its daughter products, the cell cap and the surrounding environment could become contaminated. SC Holdings, Inc., needs to identify the actions it would take if, during operation, the system leaks leachate that contains thorium or its daughter products. In addition, during operation of the system, future workers may be exposed to radioactive contamination within the system piping, wells, and tanks. Since SC Holdings, Inc., requests unrestricted release of the site after remediation, the staff requires assurance that any future operation of a leachate collection system will not pose an unacceptable radiological dose to those who may be exposed to the leachate. SC Holdings, Inc., should identify the potential dose to workers and visitors during the operation of the system.

Basis: 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use" states, in part, that a site is acceptable for unrestricted use if the residual radioactivity results in a TEDE to the average member of the critical group does not exceed 25 mrem per year. SC Holdings, Inc., has requested that the site be released for unrestricted use following remediation of the site. Activities on site following remediation may or may not have an effect on the dose to a member of the critical group.

4. Provide a commitment that at some future date, SC Holdings, Inc., will not be required to do additional excavation in the Northwest Landfill or if such work is required, demonstrate that doses to members of the critical group will not exceed 25 mrem per year. The Michigan Department of Environmental Quality (MDEQ) has regulatory jurisdiction over the non-radiological hazardous materials on the Michigan Department of Natural Resources and SC Holdings, Inc., sites. The MDEQ has indicated in conversations with the NRC, MDNR and SC Holdings, Inc., that a leachate collection system needs to remain operational for the foreseeable future. The MDEQ believes that the system will be needed to remove leachate from waste cells at both sites to reduce the potential for leaks. We are concerned that other activities at the site may be undertaken at the behest of the MDEQ that could result in contaminated material being reintroduced to the surrounding environs. Specifically, repairs or upgrades of the collection system could be mandated and that work result in releasing thorium contamination from within the cell.

Basis: 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use" states, in part, that a site is acceptable for unrestricted use if the residual radioactivity results in a TEDE to the average member of the critical group does not exceed 25 mrem per year. Dose projections for the average member of the critical group on the site assume that the contaminated material will remain in the Landfill. If contaminated material is removed from the Landfill and brought to the surface, dose projections would have to be recalculated.

5. In the Decommissioning Plan (DP), the Quality Assurance Project Plan (QAPP) and Health and Safety Plan (HSP) were not fully developed. Provide the completed QAPP and HSP plans in your response to this letter.

Basis: 10 CFR 40.42 requires, in part, that a DP be submitted if required by license condition or if procedures and activities necessary to carry out decommissioning of the site and those procedures could increase potential health and safety impacts to workers or to the public. QAPPs and HSPs do have impacts on the health and safety of the workers and visitors during remediation activities. Therefore, the plans need to be completed for the DP to be approved and the license amended to incorporate the DP.

6. The DP did not clearly describe plans for the final status survey for the onsite building. During phone conversations following submission of the DP, you indicated that you intend to meet the 25 mrem per year limit using screening values from NUREG/CR-5512, Vol. 3, intend to consider the building a Class 3 survey unit and will survey the building following guidance in the Multi-Agency Radiological Survey and Site Investigation Manual (MARSSIM). Include your commitments regarding the disposition of the onsite building in your response to this letter.

Basis: 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use" states, in part, that a site is acceptable for unrestricted use if the residual radioactivity results in a TEDE to the average member of the critical group does not exceed 25 mrem per year.