

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NO. 40-00017

**ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED
TO ISSUANCE OF AMENDMENT NO. 11 TO MATERIALS LICENSE NO. STB-527, THE
DOW CHEMICAL COMPANY (TDCC), BAY CITY, MI SITE (TAC #L60463)**

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Notice of Availability.

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SUPPLEMENTARY INFORMATION:

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) is considering the issuance of a license amendment to the Dow Chemical Company's (TDCC) Material License, No. STB-527. The amendment would allow an alternate method for conducting surveys, would add two plans to the license, and would expand the scope of onsite decommissioning activities.

NRC has prepared an Environmental Assessment (EA) in support of this amendment in accordance with the requirements of 10 CFR Part 51. Based on the EA, the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate. The amendment will be issued following the publication of this Notice.

II. Environmental Assessment

Background

TDCC is the current holder of NRC radioactive source materials license STB-527 (NRC Docket 040-00017). The license authorizes TDCC, to possess and use licensed materials (materials contaminated with source material) during activities leading to their removal from the Bay City, MI site. License STB-527 continues in effect until the Commission notifies the licensee in writing that the license is terminated. The source material (radiological contamination) consists of thorium and its daughter products. The license authorizes the removal and transport of contaminated materials from the site in accordance with an approved decommissioning plan (DP). The DP for TDCC Bay City, MI site was approved in License Amendment No. 7 dated July 21, 1997 (See ADAMS ML050750212). The NRC is considering a license amendment (License Amendment No. 11) to approve the following:

1. An alternate method (AAR Method as described in Revision 2 to the Supplement to the DP) for conducting final status radiological surveys at its Bay City, MI site, (See ADAMS ML051040383), and
2. The addition of four structures and two small pieces of land adjacent to the property to the scope of decommissioning activities (See ADAMS ML051040383), and
3. The incorporation of the Groundwater Monitoring Plan (GMP) for TDCC Bay City site into the license (See ADAMS ML051040383), and
4. The incorporation of Revision 3 of TDCC Thorad Project Radiological Health and Safety Plan into the license (See ADAMS ML051290296).

The objective of decommissioning at TDCC's Bay City, MI site is to remediate radiological constituents, to the extent required, to allow the NRC to release the property for unrestricted use and terminate TDCC's license for the site (STB-527).

The Proposed Action

The proposed action is to allow TDCC to more accurately determine the spatial distribution of the radiological contamination in the subsurface soil using an alternate surveying method (AAR Method) to that described in the Final Survey Plan. The amendment would also incorporate a formal GMP and Revision 3 of the Radiological Health and Safety Plan into the license and add four structures and two small plots of land to the scope of decommissioning activities.

Purpose and Need for the Proposed Action

Through the proposed action, the licensee believes the alternate survey method would more accurately characterize the radiological contamination in the subsurface soil. By more accurately characterizing the subsurface soil, the licensee believes that the volume of soil excavated would be reduced thus reducing the cost of decommissioning. The original DP did not address the four structures and two small plots of land in the scope of decommissioning activities. In order to release the whole site for unrestricted use, the four structures and two plots of land need to be formally addressed in the DP. The license has routinely collected ground water samples on-site without an approved GMP and the amendment would formally incorporate the GMP into the license. Revision 3 of the Radiological Health and Safety Plan addresses administrative issues that have arisen since its last revision.

Alternative to the Proposed Action

The "no-action" alternative would be to require TDCC to continue to conduct surveys using the method described in License Amendment No. 7. This could result in the licensee unnecessarily excavating soil that exceeded the approved release criteria.

The inclusion of the GMP into the license is not required. However, inclusion does formally commit the licensee to all of the provisions of the GMP and may prevent misunderstandings between the NRC and TDCC regarding its implementation.

To release the entire site for unrestricted use, all buildings and plots of land must be surveyed and remediated to the levels required in License Amendment No. 7. The staff compares survey results to the release criteria before concluding that the site is suitable for license termination and can be released for unrestricted use. If the buildings and plots of land are not addressed in the DP and, therefore, not released for unrestricted use, TDCC would be required to maintain control of them in the license. This would place an unnecessary regulatory burden on TDCC.

The Affected Environment and Environmental Impacts

An earlier and more extensive EA was prepared for License Amendment No. 7 (See ADAMS ML050750212). The amendment approved TDCC's unrestricted release criteria and final survey plan for the Bay City, MI site (See ADAMS ML050750212). The NRC staff determined that decommissioning of the site using the proposed release criteria and the final survey plan could be accomplished to demonstrate compliance with the NRC public and occupational dose limits, and effluent release limits. In addition, the staff concluded that the approval of the decommissioning activities at TDCC Bay City, MI site in accordance with the commitments in NRC license STB-527 Amendment No. 7, and employing the unrestricted release criteria and the final survey plan, would not result in a significant adverse impact on the environment. For more details on the facility description, operating history, radiological status, evaluation of decontamination, evaluation of decontamination of outdoor areas, radiation protection programs, and environmental impacts, refer to the EA prepared for License Amendment No. 7 (See ADAMS ML050750212).

Radiological and non-radiological impacts are discussed in detail in the EA prepared for the decommissioning of the site in License Amendment No. 7. Since the release criteria remains the same for soils and surfaces, changing the survey methodology and adding four buildings and two small plots of land to the scope of decommissioning activities will not cause an increase the level of radiological and non-radiological impacts. Compliance with the soil and surfaces release criteria ensures that the dose limit for the site will not be exceeded. Adding the GMP to the DP and revising the Health and Safety Plan are administrative issues that have no environmental impact.

Agencies and Persons Contacted

NRC staff has consulted with Michigan Department of Environmental Quality (MDEQ), the US Fish and Wildlife Service, and the Michigan State Historic Preservation Office in the preparation of this EA. The NRC staff has determined that Section 7 consultation is not required because listed/habitat are not present in the proposed action area, therefore the proposed action will not affect listed species or critical habitat. The NRC staff has determined that the proposed action is not a type of activity that has potential to cause effects on historic properties because it is administrative/procedural action. Therefore no further consultation is required under Section 106 of the National Historic Preservation Act. The MDEQ had no comments on the proposed action.

List of References

- A. Nuclear Regulatory Commission, "Issuance of License Amendment to the Dow Chemical Company to Approve the Decommissioning Criteria and Final Survey Plan for the Decommissioning of Thorium Contaminated Slag Storage Piles at the Dow Chemical Company's Sites in Midland and Bay City, Michigan." July 21, 1997, (ML050750212).

- B. The Dow Chemical Company, "Revised RAIs and Revision 2 of Supplement to the Decommissioning Plan for the TDCC Bay City, MI, Site." April 13, 2005, (ML051040383).
- C. Nuclear Regulatory Commission, "Revised Radiological Health and Safety Plan for the TDCC Bay City, MI, Site." May 6, 2005, (ML051290296).
- D. Nuclear Regulatory Commission, "Method for Surveying and Averaging Concentrations of Thorium in Contaminated Subsurface Soil", February 1997.
- E. NUREG-5849, Manual for Conducting Radiological Surveys in Support of License Termination. June 1992.
- F. NUREG-1757, Volume 1, Rev 1, Consolidated NMSS Decommissioning Guidance, Decommissioning Process for Materials Licensees, Final Report, September 2003.
- G. Title 10 Code of Federal Regulations, Part 20, Subpart E, "Radiological Criteria for License Termination."
- H. Title 10, Code of Federal Regulations, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

III. Finding of No Significant Impact

Based upon the analysis in this EA and the EA prepared for License Amendment No. 7; the NRC staff has concluded that there will be no significant environmental impacts from the proposed action and has determined not to prepare an environmental impact statement for the proposed action.

IV. Further Information

Documents related to this action, including the application for amendment and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's

