

September 25, 2001

Ben Baker
Project Manager
The Dow Chemical Company
9008 Bldg., Office 154
4520 East Ashman
Midland, MI 48674

SUBJECT: ACKNOWLEDGMENT OF REQUEST TO APPROVE THE SUPPLEMENT TO
THE DECOMMISSIONING PLAN, REMOVAL OF MAGNESIUM-THORIUM
SLAG, THE DOW CHEMICAL COMPANY BAY CITY, MI, SITE (TAC# L60463)

Dear Mr. Baker:

I am responding to your letter dated August 17, 2001, addressed to Robert A. Nelson, requesting U.S. Nuclear Regulatory Commission staff review and approval of a supplement to the previously approved decommissioning plan (DP) for License STB-527. On August 23, 2001, we wrote to the Dow Chemical Company stating that the approval of the supplement to the DP would require an amendment to the NRC license. Even though a license amendment was not specifically requested, we stated that we will treat your August 17, 2001, submittal as a license amendment request.

The NRC staff completed the initial processing of your request, which is an administrative review. During the initial processing, which included preliminary technical issues, some omissions/deficiencies were identified. These deficiencies are noted in the enclosure. The identified information should be provided within 30 days of the date of this letter so that your request can be forwarded for technical review. Please note that the technical review may identify omissions in the submitted information or technical issues not identified during the administrative review that require additional information.

If you have any questions concerning this letter, please contact me at (301) 415-6694.

Sincerely,

/RA/

M. (Sam) Nalluswami, Project Manager
Facilities Decommissioning Section
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

cc: D. Minnar, MDEQ

Docket No.: 040-00017
License No.: STB-527

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cc: D. Minnar, MDEQ
Docket No.: 040-00017
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Ticket# DCB-315

AN:

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DATE	9/ 24 /01	9/ /01	9/ 24 /01	9 / 25 /01

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THE DOW CHEMICAL COMPANY, BAY CITY SITE, MICHIGAN

SUPPLEMENT TO THE DECOMMISSIONING PLAN (AUGUST 17, 2001)

ADMINISTRATIVE REVIEW COMMENTS

General Comment

We have completed our administrative review of the August 17, 2001, Supplement to the Decommissioning Plan (SDP) to remediate the subsurface contamination in the unsaturated and saturated zones at the Dow Chemical Company's (TDCC's), Bay City, Michigan, site (License STB-527) and have determined that the information contained in the SDP does not provide an adequate basis for plan approval. During the administrative review, which included preliminary technical issues, some omissions and deficiencies were identified.

Specific Comments

1. Specifically, as explained in our evaluation of the TDCC's conceptual plan to remediate the unsaturated and saturated zones (letter to TDCC dated May 29, 2001), several significant issues required resolution in order to ensure that the SDP for site remediation complies with the cleanup criteria for unrestricted release under the Site Decommissioning Management Program (SDMP) action plan (SECY-92-106). Of the 12 issues identified in the May 29, 2001 letter, the SDP minimally addressed a few, while the majority were not addressed. Most attention was given to the derivation of boundary conditions for radionuclide soil concentrations in the saturated zone. However, significant issues that were not addressed included the potential for leaching of radionuclides from the slag to the groundwater over 1,000 years, the effect of fill material post remediation on these leach rates, provision of remediation action levels (with derivation including geometries and soil composition) using the MicroShield code, and associated calibration procedures for instruments used in the saturated zone.
2. During the SDP administrative review, other significant issues were identified that require resolution prior to the SDP approval. Amendment No. 11 dated March 6, 2001, to TDCC's NRC License No. STB-527, includes the following condition:

- 14A. The Dow Chemical company shall conduct ground water monitoring at the Bay City site in accordance with the letter dated February 7, 2001, and include a ground water assessment in a proposed revision to the decommissioning plan.

The SDP does not include a ground water monitoring program. For example Section 2.3, "Demonstrating Compliance with Drinking Water Criterion," explains that groundwater samples will be collected from at least five (5) separate monitoring wells at the time of license termination to demonstrate compliance with the EPA Drinking Water Regulations. However, as the SDP gives no information specific to these groundwater monitoring wells (e.g., locations and depths, etc.), no determination can be made as to the adequacy of compliance

Enclosure

with the drinking water regulations. No supporting documentation is provided on ground water issues for the site.

3. Additionally, the conceptual plan provided a value of "1.26" as the ratio of the concentration of Th-232 to Th-230 in the slag material, where as the SDP gives a value of "3". This inconsistency needs to be resolved and supporting data provided.