

June 14, 2002

Michelle R. Osmun  
The Dow Chemical Company  
2030 Dow Center  
Midland, Michigan 48674

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING DOW  
CORPORATION 2002 UPDATE OF DECOMMISSIONING FINANCIAL  
ASSURANCE

Dear Ms. Osmun:

The staff reviewed the 2002 update of decommissioning financial assurance submitted by the Dow Chemical Company by letter dated March 27, 2002.

The staff found that changes are needed in the financial assurance instruments in order to conform to the US Nuclear Regulatory Commission's regulatory guidance. Briefly stated, additional information is needed on decommissioning cost guarantees listed in the financial test, and the self-guarantee must include additional recitals. Dow needs to revise its financial test and self-guarantee agreement and resubmit the documents. The independent accountant's report must be updated to review the new submittals. Details of the changes and the reasons they are needed are discussed in the enclosed Request for Additional Information.

Excerpts of our regulatory guidance are enclosed to illustrate the changes that are needed.

If you have any questions, please contact me at 301-415-5971.

Sincerely,  
**/RA/**

Thomas L. Fredrichs, Project Manager  
Decommissioning Branch  
Division of Waste Management  
Office of Material Safety  
and Safeguards

Enclosures: Request for Additional Information  
Excerpt of NUREG-1727

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ENCLOSURE 1

REQUEST FOR ADDITIONAL INFORMATION

## **REQUEST FOR ADDITIONAL INFORMATION THE DOW CHEMICAL COMPANY**

### Background

By letter dated March 27, 2002, The Dow Chemical Company (Dow) submitted a Self-Guarantee Agreement in order to comply with the financial assurance requirements for decommissioning costs specified in 10 CFR Parts 30, 40, and 50. The self-guarantee was supported by a letter from its Chief Financial Officer (CFO), a financial test, a report from Dow's independent auditor, and Dow's 2001 Annual Report.

The US Nuclear Regulatory Commission (NRC) staff reviewed the submittal for compliance with regulatory requirements in 10 CFR Parts 30, 40, and 50, and conformance to the regulatory guidance of NUREG-1727, "NMSS Decommissioning Standard Review Plan."

The staff found that the financial instruments submitted by the licensee must be changed to conform to the regulatory guidance of NUREG-1727. The changes and the reasons for them are discussed below.

### Discussion

#### **1) Revise the financial test to provide additional detail for all decommissioning obligations, both radiological and non-radiological, guaranteed to government agencies.**

The financial test used to demonstrate a licensee's ability to provide a self-guarantee for decommissioning costs provides for listing all decommissioning obligations guaranteed by the licensee, whether radiological or non-radiological. The listing of decommissioning obligations to is broken into three parts: guarantees made to the NRC for radiological decommissioning, those made to Agreement States for radiological decommissioning (see Radiological Decommissioning Guarantees discussion below for an explanation of Agreement States), and those made to other State and Federal agencies for non-radiological cleanup costs, such as the US Environmental Protection Agency (EPA), or a State Department of Environmental Quality.

The financial test relies, in part, on the ratio of tangible net worth to the total decommissioning costs guaranteed by the licensee. If the licensee's tangible net worth falls below the required level, a ratio of 10 in the case of a self-guarantee, it may not use the self-guarantee method as financial assurance to the NRC. Decommissioning obligations guaranteed to government agencies other than the NRC are included in the list to assure that the licensee's assets are not inadvertently double counted for several decommissioning projects.

The staff noted that the licensee's 2001 Annual Report states that the total environmental obligations accrued by the licensee totaled \$444 million (Note P to the Consolidated Financial Statements, page 62). However, the total of all decommissioning costs identified in the licensee's financial test is \$61 million.

The staff seeks additional information regarding the decommissioning and environmental cleanup obligations of the licensee. The licensee must identify what portion of its total environmental obligation consists of guarantees made to government agencies, whether the NRC, other Federal agencies, or State agencies, for decommissioning and environmental

cleanup costs. These guarantees may be parent company guarantees made by Dow for its subsidiaries, self-guarantees made by Dow for its own facilities, or a financial test performed by Dow as required by a government agency to demonstrate the ability to fund decommissioning or cleanup activities.

Note that financial assurance for decommissioning may be made by means other than a financial test or guarantee by the licensee or its parent company. Funds may be set aside in escrow, or a third party financial institution may guarantee to pay funds upon demand, by providing an irrevocable letter of credit or a surety bond. For purposes of the Self-Guarantee for decommissioning under NRC regulations, only those decommissioning costs that are guaranteed by a parent company guarantee, a self-guarantee, or a financial test should be included in the list of obligations used to pass the financial test for the NRC. Other financial instruments, such as letters of credit, surety bonds, escrow accounts, etc., should not be included as part of the costs guaranteed to government agencies.

The staff notes that only three of the licenses listed in the licensee's submittal are NRC licenses: License Nos. 21-00265-06, R-108, and STB-527. All these facilities are located at the licensee's Midland, Michigan site. They should be listed in the category of guarantees made to the NRC for radiological decommissioning. The other licenses listed in the licensee's submittal are not NRC licenses, and should be reported separately on the appropriate line of the financial test.

The licensee must then categorize the guaranteed costs into the three parts mentioned above, and report each value in the financial test. If, in fact, the licensee has no obligations in a particular category, then a value of "0" must be reported. The total of all guarantees for both radiological and non-radiological costs is used to calculate the ratio of tangible net worth to total decommissioning costs in the financial test.

### **1a) Radiological Decommissioning Guarantees**

Civilian use of radioactive materials is regulated by the NRC and several states, known as Agreement States, who derive their regulatory authority through agreements with the NRC. Both the NRC and Agreement States issue radioactive material licenses which require the licensee to provide financial assurance for decommissioning costs, under certain conditions. Where financial assurance is required, except for special cases not applicable to Dow, the licensee must provide it to the government agency that issued the license.

Because NRC and Agreement State financial assurances are regulated separately, the NRC's financial test provides for listing these two categories of guarantees separately.

However, the licensee's financial test combined the guaranteed costs for NRC and Agreement State licenses. The license for Hampshire Chemical Company is issued by the State of New Hampshire, and should not be combined with the total of costs guaranteed to the NRC because New Hampshire is an Agreement State. (The staff did not determine the issuing agency for the licenses listed for Union Carbide's Puerto Rico and Texas facilities. Texas is an Agreement State, Puerto Rico is not. Dow must determine which category these facilities fall into, which may be a guarantee for non-radiological cleanup, and report them appropriately.)

Therefore, the licensee must revise its financial test to report the amounts guaranteed to the NRC and Agreement States as separate line items. If, in fact, there are no guarantees made to Agreement States, the licensee must report a value of "0" on the corresponding line of the financial test.

### **1b) Non-Radiological Decommissioning and Cleanup Guarantees**

Environmental laws in the United States require financial assurance for decommissioning and cleanup of certain non-radiological wastes. To the extent that the costs of decommissioning or cleanup of these wastes are covered by a parent company guarantee, a self-guarantee, or a financial test required by a State or Federal government agency, the amounts of such guarantees must be included in the NRC's financial test.

The non-radiological decommissioning obligations are included in the NRC's financial test in order to eliminate inadvertent double counting of assets to guarantee individual projects. This could happen if each project was reported separately to an individual agency and no centralized listing of the total was checked.

The licenses listed for Union Carbide's Puerto Rico and Texas facilities are not NRC licenses, and may be licenses issued by environmental agencies for hazardous waste. The licensee must determine which category these costs fall into and report them appropriately.

The staff noted that the licensee's 2001 Annual Report states that the total environmental obligations accrued by the licensee totaled \$444 million (Note P to the Consolidated Financial Statements, page 62). However, the total of all costs identified in the licensee's financial test is \$61 million. The staff seeks additional information regarding the balance of the environmental obligations that was not accounted for in the financial test submitted to the NRC.

Therefore, the licensee must revise its financial test to report the amount of parent company guarantees, self-guarantees, or financial tests provided to other State or Federal agencies, such as a State Department of Environmental Quality or the US EPA, as financial assurance for non-radiological decommissioning or cleanup costs. If, in fact, there are no such other guarantees, the licensee must enter "0" on the corresponding line of the financial test.

### **2) Revise the Self-Guarantee Agreement to guarantee only costs of decommissioning NRC licensed facilities, and to conform with all the recitals listed in NRC Regulatory Guidance**

Although the financial test includes a report of all decommissioning guarantees provided by the licensee, the Self-Guarantee Agreement is applicable only to NRC issued licenses. Only those facilities whose decommissioning costs are guaranteed to the NRC may be included in the Self-Guarantee.

In addition, the NRC has published guidance in NUREG-1727, "NMSS Decommissioning Standard Review Plan," which provides the standard format and content of a self-guarantee agreement between a licensee and the NRC. The standard format and content provide adequate assurance that the licensee will provide funds for decommissioning when needed. Accordingly, the licensee must submit a self-guarantee agreement that provides at least equal financial assurance for decommissioning funding.

## **2a) Decommissioning costs of non-NRC licensed facilities**

The licensee's Self-Guarantee Agreement includes several licenses not issued by the NRC. The NRC does not have the authority to accept guarantees for such facilities.

Only License Nos. 21-00265-06, R-108, and STB-527 are issued by the NRC. All other licenses mentioned in the Self-Guarantee are issued by other agencies.

Therefore, the Self-Guarantee Agreement must be revised to remove any guarantee for facilities not licensed by the NRC.

## **2b) NRC Regulatory Guidance**

The licensee's Self-Guarantee Agreement does not conform to NRC regulatory guidance because it omits several of the recitals listed in the standard format and content for financial instruments issued in NUREG-1727.

The standard format and content of the self-guarantee agreement contained in the NRC's regulatory guidance has 18 applicable recitals. The licensee's submittal contains 2 recitals and 6 statements of agreement. The omitted recitals are necessary to assure that funds will be available when needed for decommissioning.

For example, Recital 1 of the standard Self-Guarantee Agreement issued in NUREG-1727 (page F139), specifies that the Guarantor has the authority to enter into a self-guarantee agreement with the NRC and that the Board of Directors has approved entering into the agreement. However, the licensee's Self-Guarantee does not make such a recital. Consequently, the agreement could be challenged as being outside the powers of the corporation, which could delay radiological decommissioning of a licensed facility.

The other omitted recitals contain additional conditions necessary to preserve the NRC's interest in assuring that funds for decommissioning will be available when needed.

Therefore, the licensee must revise its self-guarantee agreement to include all the recitals of the standard format and content of the NRC regulatory guidance.

## Enclosure

Excerpts of NUREG-1727 are enclosed to illustrate the changes needed to the financial test and self-guarantee agreement.

ENCLOSURE 2

EXCERPT OF NUREG-1727

ACCESSION NO.: ML021640437