



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

April 28, 2009

By U.S. Mail and Facsimile

Mr. Geoffery E. Merszei
Chief Financial Officer
The Dow Chemical Company
2030 Dow Center
Midland, Michigan 48674

**Re: Form 10-K for the Fiscal Year Ended December 31, 2008
Definitive Proxy Statement on Schedule 14A filed March 31, 2009
File No. 001-03433**

Dear Mr. Merszei:

We have reviewed your response letter dated April 7, 2009 and have the following additional comments. If you disagree, we will consider your explanation as to why our comments are inapplicable or a revision is unnecessary. After reviewing this information, we may or may not raise additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2008

Item 7. Management's Discussion and Analysis...., page 26

Results of Operations, page 29

1. We note your response to prior comment five; however, it continues to appear to us that if you present a tabular presentation that identifies an item as significant in one period and the same item impacts another period presented, particularly at an amount in excess of other items included in the table, you should include the impact of the item you identified as significant for each period presented.

Other Matters, page 50

Critical Accounting Policies, page 50

General

2. We note your response to prior comment seven; however, it appears to us that your proposed disclosures under the last three bullets of our initial comment do not provide sufficient information for investors to understand and assess the key estimates and assumptions underlying your impairment analysis or determine the

potential impact of changes in your assumptions. Therefore, please revise future filings to also quantify the material assumptions you used and provide a sensitivity analysis of those assumptions based upon reasonably likely changes; quantify the impact of changes in your assumptions and methodologies during the periods presented; and reconcile your market capitalization to the estimated fair value of your reporting units.

Definitive Proxy Statement on Schedule 14A filed March 31, 2009

Compensation Discussion and Analysis, page 16

Special Compensation Actions Taken by the Committee based on 2008 Results, page 17

3. We note your tabular disclosure on page 17 comparing 2008 and 2009 compensation. With a view toward future disclosure, please tell us why you believe that this table “provides a more complete picture of Committee action taken in response to the current economic environment and Company performance” than the compensation tables or the 2008 compensation decisions shown under the “2008 Compensation and Award Actions made by the Committee” section.

Role of the Compensation and Leadership Development Committee, page 19

4. We note disclosure that the committee analyzes tally sheets and “other relevant data” and the committee sets named executive officer compensation after considering the recommendations from the CEO “as well as other data.” In future filings, please provide a materially complete description of this other data, as you must disclose all material factors used to award compensation to the named executive officers.
5. We note that you disclose where you target each element of compensation against peer companies for your named executive officers. In future filings, please disclose where actual payments of each element of compensation fell for each named executive officer within targeted parameters. To the extent actual compensation was outside a targeted percentile range, please explain why.

Long Term Incentive Awards, page 21

6. In future filings, please disclose the following for stock options and deferred stock awards:
 - For each named executive officer, please explain in detail how you determined the amount of the award.

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- Please identify any exercise of the committee's discretion to increase or reduce the amount of an award.
- Please identify all of the material factors that were considered in connection with the award determinations for each named executive officer.

Director Compensation for 2008, page 34

7. In future filings, please disclose whether directors are in compliance with your Stockholding Guidelines.

* * *

Please respond to these comments within 10 business days, or tell us when you will provide us with a response. Please provide us with a response letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please furnish your response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Sherry Haywood, Staff Attorney, at (202) 551-3345 if you have any questions regarding comments on legal matters. If you have any questions regarding comments on financial statements or related matters, you may contact Dale Welcome, Staff Accountant, at (202) 551-3865, Anne McConnell, Senior Staff Accountant, at (202) 551-3709 or, in their absence, to the undersigned at (202) 551-3768.

Sincerely,

John Cash
Accounting Branch Chief