



DIVISION OF
CORPORATION FINANCE

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

May 4, 2011

Mr. William H. Weideman
Chief Financial Officer
The Dow Chemical Company
2030 Dow Center
Midland, Michigan 48674

**Re: The Dow Chemical Company
Form 10-K for the Fiscal Year Ended December 31, 2010
Definitive Proxy Statement on Schedule 14A Filed March 25, 2011
Form 8-K Filed April 28, 2011
File No. 001-03433**

Dear Mr. Weideman:

We have reviewed your filings and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2010

Item 1. Business, page 3

Patents, Licenses and Trademarks, page 12

1. In future filings, please disclose the duration of all patents, trademarks and licenses held.
2. We note disclosure that your business is not materially dependent upon any single patent, license or trademark. In future filings, please disclose whether any group of patents, licenses or trademarks is material to your business.

Definitive Proxy Statement on Schedule 14A Filed on March 25, 2011

Compensation Discussion and Analysis, page 20

Elements of Compensation: Performance Award – Detailed Information, page 23

3. We note disclosure that the actual award payouts of the performance awards, for named executive officers, may be 175% of base salary which may be adjusted up or down by 25%. With a view towards future disclosure, please tell us how you calculated the actual payouts disclosed in the Summary Compensation Table for each of your named executive officers, including whether discretion was applied. In future filings, please consider an illustrative example.

2010-2012 Performance Share Program –Additional Information, page 24

4. We note disclosure of the targeted performance share payouts for each named executive officer after a review of your actual TSR and ROC compared to the peer group. In future filings, please disclose the historical actual TSR and ROC used to determine the payouts to each named executive officer. Please show us what your disclosure would look like.

2010 Compensation Actions, page 29

5. We note disclosure that there was no material difference between the actual base salaries and the survey group median survey values except for Mr. Weidman. In future filings, if the actual base salary of a named executive officer is outside of the range of the benchmark, please disclose where such officer's base salary fell in relation to the benchmarked parameters and to the extent actual compensation was outside the targeted percentile range, please explain why. Using information for your most recently completed fiscal year, please show us in your response what your revised disclosure will look like.

Form 8-K Filed April 28, 2011

6. In regard to the non-GAAP disclosures you present, please revise all future filings to address the following:
 - We note you present non-GAAP measures titled “earnings per share”, “EBITDA”, and “EBITDA margin” and provide a footnote that indicates these measures exclude certain items. It appears to us that your titles of these non-GAAP measures are potentially confusing and that your current footnote designation is not transparent. Please appropriately title each non-GAAP measure you present so that the title clearly and adequately conveys what the measure actually represents;
 - For each non-GAAP measure you present, please disclose the most directly comparable GAAP measure with equal or greater prominence; and

Mr. William H. Weideman
The Dow Chemical Company
May 4, 2011
Page 3

- We note you provide a table of the items you exclude from the non-GAAP measures you present. Please appropriately include a reconciliation of each non-GAAP measure you present to the most directly comparable GAAP measure. Please refer to Item 10(e) of Regulation S-K.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Dale Welcome at (202) 551-3865 or Anne McConnell at (202) 551-3709 if you have questions regarding comments on the financial statements and related matters. Please contact Sherry Haywood at (202) 551-3345 or Andrew Schoeffler at (202) 551-3748 with any other questions.

Sincerely,

John Cash
Accounting Branch Chief