



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4631

May 24, 2017

Via E-mail

Mr. Ron Edmonds
Controller & Vice President of Controllers and Tax
The Dow Chemical Company
2030 Dow Center
Midland, MI 48674

**Re: The Dow Chemical Company
Form 10-K for the Fiscal Year Ended December 31, 2016
Filed February 9, 2017
File No. 1-3433**

Dear Mr. Edmonds:

We have limited our review of your filing to the financial statements and related disclosures 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2016

Management's Discussion and Analysis of Financial Condition and Results of Operations,
page 30

Certain Items Impacting Results, page 39

1. Please expand your disclosure here, and in earnings releases filed on Form 8-K, to more clearly explain how the tax effects of the non-GAAP adjustments are calculated. Refer to Question 102.11 of the updated Non-GAAP Financial Measures Compliance and Disclosure Interpretations issued on May 17, 2016.

Critical Accounting Policies, page 57

2. We note you assumed liabilities from Dow Corning related to breast implant and other product liability claims. We also note disclosures that appear to indicate an additional material loss related to this contingency is reasonably possible. Since the breast implant

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liability relies on a number of significant assumptions, including claim filing levels, it appears to us that you should provide a roll-forward of such claims during each period presented and disclose the average settlement amount per claim for each period presented, similar to the disclosures you provide related to asbestos claims.

Consolidated Financial Statements

Note 4 – Acquisitions, page 84

3. We note your disclosure that liabilities assumed from Dow Corning, included certain contingent liabilities relating to breast implant and other product liability claims which were valued at \$290 million and commercial creditor issues which were valued at \$105 million. We also note your disclosure in note 15 that as part of the ownership restructure of Dow Corning, the “Company” recorded a liability of \$290 million for breast implant and other product liability claims. Please tell us and clarify what “Company” recorded these liabilities. If you recorded or adjusted these liabilities through the purchase price allocation related to your acquisition of the additional 50% interest in Dow Corning, please explain to us why that was appropriate. Please specifically address any differences between your assessments of these liabilities and Dow Corning’s assessments.

Note 15 – Commitments and Contingent Liabilities, page 111

Litigation – Asbestos-Related Matters of Union Carbide Corporation, page 113

4. We understand that Union Carbide’s total asbestos-related liability, including defense and processing costs, is approximately \$1.5 billion at December 31, 2016. Please tell us, and clarify in your summary, whether it is reasonably possible you will incur additional losses, in excess of amounts accrued, that could be material to your financial position, results of operations, and/or cash flows, and, if applicable, provide a range of reasonably possible additional losses or explain why a range cannot be estimated. Refer to ASC 450-20-50-3 and 50-4.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Dale Welcome at (202) 551-3865 or Anne McConnell at (202) 551-3709 with any questions.

Sincerely,

/s/ W. John Cash

W. John Cash
Accounting Branch Chief
Office of Manufacturing and
Construction