



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

Mail Stop 4631

December 23, 2009

Via U.S. mail and facsimile (989) 638-9723

W.H. Weideman
Vice President and Controller of The Dow Chemical Company
1254 Enclave Parkway
Houston, Texas 77077

**RE: Union Carbide Corporation
Form 10-K for the fiscal year ended December 31, 2008
File No. 001-1463**

Dear Mr. Weideman:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Legal Proceedings, page 6

1. With a view towards future disclosure, please tell us why you do not disclose the average cost of disposing of asbestos-related claims.

Item 15. Exhibits and Financial Statement Schedules, page 50

2. We note that you do not appear to have publically filed Exhibit B to your credit agreement listed as Exhibit 10.5. The filed versions of the agreements relating to

your credit facilities should contain all of the schedules and exhibits to those agreements. Accordingly, please file your complete credit agreement, including all of its schedules and exhibits, with your next periodic report or, if you wish, a current report on Form 8-K.

* * * *

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 supplemental response letter that keys your responses to our comments and provides any requested supplemental information. Detailed letters greatly facilitate our review. Please file your supplemental response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in writing, a 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Mr. W.H. Weideman
Union Carbide Corporation
December 23, 2009
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You may contact Chambre Malone, Staff Attorney at (202) 551-3262 or Dietrich King, Staff Attorney at (202) 551-3338 if you have any questions.

Sincerely,

Pamela Long
Assistant Director