



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

December 13, 2010

By U.S. mail and facsimile to (203) 229-3143

Mr. Steven C. Giuliano, Chief Financial Officer
Arch Chemicals, Inc.
501 Merritt 7
Norwalk, CT 06851

**RE: Arch Chemicals, Inc.
Form 10-K for the fiscal year ended December 31, 2009
Filed February 19, 2010
File No. 1-14601**

Dear Mr. Giuliano:

We have reviewed your response letter dated December 8, 2010 and have the following additional comment. If you disagree, we will consider your explanation as to why our comment is inapplicable. After reviewing this information, we may or may not raise additional comments.

Annual Report on Form 10-K filed on February 19, 2010

Exhibits, page 113

1. We note your response to comment one in our letter dated November 23, 2010 and reissue this comment. In this regard, we note that Item 601(b)(10) does not permit exclusion of these exhibits or schedules. If you believe there is competitively sensitive information in the exhibits or schedules, you may file an application for confidential treatment pursuant to Rule 24b-2 under the Exchange Act, which sets forth the exclusive means for obtaining confidential treatment of information contained in a document filed under the Exchange Act. Please also refer to Staff Legal Bulletins No. 1 and 1A, dated February 28, 1997 and July 11, 2001, respectively, which set forth the Division of Corporation Finance's views regarding the proper preparation of a request for confidential treatment.

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As appropriate, please respond to this comment within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your response to our comment and provides any requested supplemental information. Detailed response letters greatly facilitate our review. Please file your response letter on EDGAR. Please

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understand that we may have additional comments after reviewing your response to our comment.

You may contact Andy Schoeffler at (202) 551-3748 if you have questions regarding this comment.

Sincerely,

Terence O'Brien
Branch Chief