



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

Mail Stop 3030

April 27, 2009

Via Facsimile and U.S. Mail

Mr. Terry M. Murphy  
Executive Vice President and Chief Financial Officer  
A. O. Smith Corporation  
11270 West Park Place  
Milwaukee, Wisconsin 53224

**Re: A. O. Smith Corporation**  
**Form 10-K for the year ended December 31, 2009**  
**Filed February 26, 2010**  
**Definitive Proxy Statement on Schedule 14A filed March 2, 2010**  
**File No. 1-00475**

Dear Mr. Murphy:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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 information so we may better understand your disclosure. After reviewing this information, we may 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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the year ended December 31, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 17

1. In future filings, please revise your MD&A to provide an overview that includes a balanced, executive-level discussion that identifies the most important themes or other significant matters with which management is concerned primarily in evaluating the company's financial condition and operating results. Your overview should discuss material business opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused, and the actions they are taking in response to them. For example, we note your discussion of gross margins and increased commodity costs in your fourth quarter earnings call on January 26, 2010. For further guidance on the content and purpose of the "Overview," see Interpretive Release No. 33-8350 on our website.

Note 1 – Organization and Significant Accounting Policies, page 31

– Earnings per share of common stock, page 36

2. We note that you have two classes of stock – Class A Common Stock and Common Stock. Please revise this disclosure in future filings to provide a clear description of how you calculate earnings per share considering your two-class structure. Refer to FASB ASC 260-10.

Note 2 – Acquisitions, page 37

3. We note that you acquired an 80% interest in Tianlong Holding Co. Ltd. Additionally we note that you in the process of finalizing an appraisal from a third-party which could affect your purchase price allocation. Please describe to us the nature and extent of the role played by the valuation firm in determining the amounts included in your financial statements. In this regard, we also refer you to the guidance provided in Question 141.02 of the Compliance and Disclosure Interpretations on Securities Act Sections, which can be found at <http://www.sec.gov/divisions/corpfin/guidance/sasinterp.htm>, which explains the circumstances under which a valuation firm would be named and its consent included in registration statements, including those into which you incorporate your Form 10-K by reference.

Note 15 – Operations by Segment, page 51

4. We note that your long-lived assets by geographic location include other intangible assets. Disclosure of long-lived assets by geographic area should present tangible assets

only and should not include intangibles. Please revise your disclosures in future filings to comply with paragraph 280-10-55-23 of the FASB Accounting Standards Codification.

Item 11 – Executive Compensation, page 56

5. We note your discussion under “Consideration of Risk” on page 15 of your proxy statement which you incorporate by reference into your Form 10-K in response to Item 402(s) of Regulation S-K. Please describe the process you undertook to reach the conclusion that your compensation policies and practices for your employees are not reasonably likely to have a material adverse effect on the registrant.
6. We note from your discussion under "Base Salary" on page 21 of your proxy statement and “Long-Term Incentive Compensation” on page 23 of your proxy statement that you incorporate by reference into your Form 10-K that you target base salaries to the median of surveyed companies and target the total value of all long-term incentive components to the median level of surveyed companies. In future filings, please include an analysis of where actual payments under each element of compensation actually fell within the targeted range. If, in future filings, any of your named executive officers are compensated at levels that are materially different from the targeted levels of compensation, please also provide discussion and analysis as to why. In addition, in your applicable future filings, please identify the peer companies you use.
7. We note from your discussion under "Annual Incentive Compensation" on page 22 of the proxy statement that you incorporate by reference into your Form 10-K that you have not disclosed the specific target for Return on Performance Assets to be achieved in order for your named executive officers to earn their respective annual cash incentive payments. Please provide such disclosure in your future filings, as applicable. To the extent you believe that disclosure of such information, on a historical basis, would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation supporting your conclusion. To the extent that it is appropriate to omit specific targets or performance objectives, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b) of Regulation S-K. Refer also to Question 118.04 of the Regulation S-K Compliance and Disclosure Interpretations available on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. In discussing how difficult or likely it will be to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

Definitive Proxy Statement on Schedule 14A filed March 2, 2010  
Our Leadership Structure, page 14

8. We note your disclosure in “Our Leadership Structure” in response to Item 407(h) of Regulation S-K. Please tell us whether the non-management “presiding director” you

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describe in the third paragraph is an “independent director” as Item 407(h) describes. For example, it appears you have some non-management directors who may not be independent. Please revise your future filings as appropriate.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. 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.

You may contact Eric Atallah, Staff Accountant, at (202) 551-3663 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Allicia Lam, Staff Attorney, at (202) 551- 3316, or Jay Mumford, Reviewing Attorney, at (202) 551-3637 if you have questions on any other comments. In this regard, do not hesitate to contact me or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

Kevin L. Vaughn  
Accounting Branch Chief