



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

DIVISION OF  
CORPORATION FINANCE

January 14, 2014

Via Email

Kenneth J. Galaznik  
Senior Vice President, Chief Financial Officer  
and Treasurer  
American Science and Engineering, Inc.  
829 Middlesex Turnpike  
Billerica, Massachusetts 01821

**Re: American Science and Engineering, Inc.  
Form 10-K for the Fiscal Year Ended March 31, 2013  
Filed June 7, 2013  
Form 8-K Dated November 12, 2013  
Filed November 12, 2013  
File No. 001-06549**

Dear Mr. Galaznik:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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 amending your filing, 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 or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended March 31, 2013

Item 8. Financial Statements

Report of Independent Registered Public Accounting Firm, page 29

1. We see that the first sentence of the scope paragraph of the audit report refers to consolidated statements of "operations" and of "stockholders' equity and comprehensive income." However, we note that the financial statements present consolidated statements of "operations and comprehensive income" and of "stockholders' equity." Accordingly,

it appears that the scope paragraph of the audit report was not updated to conform to changes to the financial statements made pursuant to ASU 2011-05.

In an amendment, please have your auditors revise their report to conform the descriptions of the financial statements in the scope paragraph to the titles of the financial statements actually presented in the filing. The amended filing should include a cover page with an explanatory paragraph, the entire text of the financial statement item and currently dated certifications pursuant Item 601 of Regulation S-K.

Unaudited Quarterly Consolidated Financial Data, page 48

2. It appears that you recorded significant unusual or infrequently occurring items in the fourth quarter of 2013, including, for instance, charges for severance and contract losses. In future filings, please describe the effect of extraordinary, unusual or infrequently occurring items recognized in each full quarter within the two most recent fiscal years as well as the aggregate effect and the nature of year-end or other adjustments which are material to the results of that quarter. Please refer to Item 302 of Regulation S-K.

Form 8-K Dated November 12, 2013

Exhibit 99.1

3. We see disclosure of a non-GAAP measure of free cash flow in the heading to your earnings release. Tell us how your disclosure of this measure conforms to the requirements of Item 10(e) of Regulation S-K. In that regard tell us:
  - How you have provided disclosure of the most directly comparable measure prepared according to GAAP with equal or greater prominence;
  - Where you have provided a statement describing why you believe the measure provides useful information to investors; and,
  - Where you have reconciled the non-GAAP measure to the most directly comparable measure prepared according to GAAP.

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;

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- 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 Andri Boerman at (202) 551-3645 or Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. You may also contact me at (202) 551-3676.

Sincerely,

/s/Gary Todd for

Brian Cascio  
Accounting Branch Chief