

Mail Stop 4561
Via Fax (610) 646-0149

May 7, 2009

John C. Long
Chief Financial Officer
Innovative Solutions and Support, Inc.
720 Pennsylvania Drive
Exton, PA 19341

Re: Innovative Solutions and Support, Inc.
Form 10-K and Form 10-K/A for the Fiscal Year Ended
September 30, 2008
Filed December 11, 2008 and December 19, 2008
Form 10-Q for the Fiscal Quarter Ended December 31, 2008
Filed on February 6, 2009
File No. 000-31157

Dear Mr. Long:

We have reviewed your response letter dated April 22, 2009 in connection with the above-referenced filings and have the following comments. If 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 raise additional comments. Unless otherwise noted, where prior comments are referred to they refer to our letter dated April 10, 2009.

Form 10-K and Form 10-K/A for Fiscal Year Ended September 30, 2008

General

1. We note from your response to our prior comment 1 that you concluded the errors in the presentation of the line items on the cash flow statement did not meet the definition of an error under SFAS 154 because they resulted from a typographical error and not a mathematical mistake. The Staff believes that the error in the presentation and disclosures of the cash flow statement resulted from an oversight (i.e. an inadvertent omission or an unintentional mistake) of facts that existed at

the time the financial statements were prepared and therefore, would meet the definition of an error pursuant to paragraph 2(h) of SFAS 154. Accordingly, please file an Item 4.02 Form 8-K.

2. In addition, we note from your disclosures on page 52 of the September 30, 2008 Form 10-K that the Company performed an evaluation of the effectiveness of your disclosure controls and procedures as of September 30, 2007. Please confirm that the Company performed your evaluation as of the end of the period covered by the report (i.e. September 30, 2008). Further, considering the error in the cash flow statement and the failure to file an Item 4.02 Form 8-K, please tell us whether your officers have reconsidered the effectiveness of your disclosure controls and procedures for the periods impacted. Also, please confirm to us that you plan to address this reconsideration and the related conclusions in your Form 10-Q for the quarter ended March 31, 2009.

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Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit all correspondence and supplemental materials on EDGAR as required by Rule 101 of Regulation S-T. If you amend your filing(s), you may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter that keys your response 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 any amendment and your response to our comments.

You may contact Melissa Feider, Staff Accountant, at (202) 551-3379 or me at (202) 551-3499 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Kevin Dougherty, Staff Attorney, at (202) 551-3271 or Mark P. Shuman, Legal Branch Chief, at (202) 551-3457.

Sincerely,

Kathleen Collins
Accounting Branch Chief