

January 22, 2010

**VIA FEDEX & EDGAR**

Stephen Krikorian  
Accounting Branch Chief  
United States  
Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Washington, D.C. 20549

Re: PDF Solutions, Inc.  
Form 10-K for the Fiscal Year ended December 31, 2008  
Filed March 16, 2009  
Form 10-K/A for the fiscal year ended December 31, 2008  
Filed April 30, 2009  
Form 10-Q for the Quarterly Period ended September 30, 2009  
Filed November 9, 2009  
File No. 000-31311

Dear Mr. Krikorian:

On behalf of our client, PDF Solutions, Inc. (the "Company"), we have set forth below, the Company's responses to the Staff's comment letter dated January 7, 2010. For the Staff's convenience, the Staff's comments are set forth in italics before each response.

General

1. *We note that your response to prior comment 7 as filed on EDGAR appears to be missing your complete response to our comment. Please file the complete response to prior comment 7 in your next response letter.*

Pursuant to the Staff's request, the complete response to prior comment 7 is as follows:

The Company respectfully acknowledges that revenue earned from gainshare performance incentives in the three months ended September 30, 2009, increased significantly in comparison to the three months ended March 31, 2009, and the three months ended June 30, 2009. The increase was due to increased wafer starts for every one of the Company's gainshare performance incentives customers. The increase in wafer starts was not a result of any particular customer or contract. Rather, it was caused by the short-term increase in demand for wafers resulting from the strengthened performance of the Semiconductor Industry during the three months ended September 30, 2009. The increase in wafer starts was realized by all of the Company's contributing gainshare performance incentive contracts during the period. During the three months ended March 31, 2009 and to a slightly lesser degree in the three months ended June 30, 2009, the Company's customers experienced a sharp reduction in wafer production in response to the effects that the global economic environment had on consumer demand for

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electronic goods. The extent of the reduction of manufacturing volumes during this period created significant inventory shortages as manufacturers entered their highest period of production in anticipation for the holiday season which takes place during the fourth quarter of each calendar year. As such, the increase in production was attributable as much to inventory shortages as it was due to improved consumer confidence. Additionally, the Company's customers are uncertain as to the extent and timing of an overall recovery within their own operations as they cannot confidently predict if the manufacturing levels witnessed during the three months ended September 30, 2009 will be sustained.

Since revenue earned from gainshare performance incentives is determined by the amount of wafer starts produced in the quarter, and the amount of wafer starts produced in the quarter is completely dependant on the independent decisions of the Company's customers, wafer starts are unpredictable in nature and entirely out of the Company's control. It is difficult for the Company to speculate whether this short-term increase in gainshare performance incentives revenue represents a trend. While the Company does believe there has been improvement in overall consumer confidence, the Company does not have sufficient visibility into the motivation of its customer base to predict a trend at this time.

Based on these circumstances, the Company believes that it would be misleading to suggest that there is an increasing trend in gainshare performance incentives revenue based on the increase in gainshare performance incentives revenue during the three months ended September 30, 2009. Therefore, the Company did not explain the sequential quarterly changes in gainshare performance incentives revenue within the discussion and analysis section of the Form 10-Q. The Company feels that a comparison to the three and nine months ended September 30, 2008 is more appropriate as it reflects the operating trends in light of the current economic climate.

Form 10 K/A filed on April 30, 2009

Part III

Item 11. Executive Compensation

Performance Bonuses, page 9

2. *In response to prior comment 6, you reference your disclosure that at the end of each fiscal year, the Compensation Committee assesses the company's performance for the fiscal years, as a general matter and as compared to the financial goals established by the Board, and decides whether to fund a performance bonus pool, and if so, the size of such pool. However, for neither fiscal 2008 nor fiscal 2007 have you provided a discussion of what such*

company targets were, nor you have provided how achievement relative to such targeted corporate performance goals translated into your decision to fund, or not fund, a bonus pool, and if so, the size of your bonus pool. Please disclose the applicable corporate performance targets. See Item 402(b)(2)(v) of Regulation S-K.

As discussed in the Company's response to the Staff's prior comment 6, the Company's bonuses, if any, are within the complete discretion of the Compensation Committee, and no pre-established formula is followed by the Compensation Committee for determining whether and the extent to which any employee may receive a bonus. More specifically, the Compensation Committee does not prospectively establish individual or company-wide qualitative or quantitative targets that must be achieved in order for employees to earn a bonus under the discretionary bonus program. Our references to performance in our prior disclosure were describing the retrospective review of company and individual performance that the Compensation Committee does following the end of the fiscal year when determining whether and the amount of discretionary bonuses that it may award under the bonus program. When reviewing company performance, the Compensation Committee may do so, in part, by reference to the fiscal year business plan for the Company, which is established by the Board of Directors in a manner consistent with the general process that is followed by many companies and that is wholly separate and apart from the discretionary bonus program.

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The Company respectfully submits that, given the discretionary nature of the bonus program and the fact that no individual or company-wide qualitative or quantitative targets are established prospectively for the bonus program, no further disclosure or discussion of any goals is required.

In response to the Staff's request, the Company supplementally discloses that when determining whether and to what extent to fund the bonus pool for fiscal year 2007, the Compensation Committee considered the Company's overall strong financial performance for fiscal year 2007 (and, in particular, the strong financial performance during the first half of fiscal year 2007), the individual performance of the named executive officers (as described in more detail in our response to comment 4 below) and the Company's successful acquisition of Fabbrix, Inc. during fiscal year 2007. In the future, the Company will provide this level of disclosure with respect to the specific elements of the Company's performance relating to establishing a bonus pool in either its annual proxy statement or 10-K, as appropriate.

3. *If you believe disclosing the targets would result in competitive harm such that the targets could be excluded properly under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation supporting your conclusion. If disclosure of quantitative or qualitative performance-related factors would cause competitive harm, you are required to discuss how difficult it will be for you to achieve the target levels or other factors. See Instruction 4 to Item 402(b) of Regulation S-K.*

The Company did not establish specific quantitative or qualitative targets for the bonuses that were paid in 2008 as a result of fiscal year 2007 performance. Please see the Company's response to the Staff's comment 2 above.

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4. *As part of your review of 2007 performance, in early 2008, after deciding to fund a bonus pool, you disclose that you approved bonuses ranging from \$10,000 to 17,000 to Mr. Jones, Mr. Joseph, Mr. Hartring and Mr. Michaels after you assessed their individual performances. To the extent your compensation is based in any part on individual performance, clearly describe the elements of individual performance of each named executive officer. See Item 402(b)(2)(vii) of Regulation S-K.*

In response to the Staff's comment, the Company supplementally provides the following breakdown of the specific elements of individual performance relating to compensation for its named executive officers: In 2008, Mr. Jones received a discretionary bonus of \$10,000 in recognition of his achievements in upgrading the Company's financial accounting team during 2007. In 2008, Mr. Joseph received a discretionary bonus of \$12,000 due to his efforts in co-leading the successful acquisition of Fabbrix, Inc. during 2007. In 2008, Mr. Hartgring received a discretionary bonus of \$17,000 in recognition of his strong successes in leading the field team during 2007 and positioning the Company to achieve favorable gainshare results on its engagements. In 2008, Mr. Michaels received a discretionary bonus of \$10,000 due to his efforts in co-leading the successful acquisition of Fabbrix, Inc. during 2007. In the future, the Company will provide this level of disclosure with respect to the specific elements of individual performance relating to compensation for its named executive officers in either its annual proxy statement or 10-K, as appropriate.

Form 10-Q for the Quarterly Period ended September 30, 2009

Comparison of the Three Months Ended September 30, 2009 and 2008, page 20

5. *We have reviewed your response to our prior comment number 7. Although you note in your response that a comparison to the three and nine months ended September 30, 2008 is more appropriate as it reflects the operating trends in light of the current economic climate, your response also highlights several current economic conditions that are not addressed in your filing that would appear to provide your readers with a better understanding of your gainshare performance incentives revenue. For example, your filings does not identify that one of the reasons for the increase in wafer starts is due to significant inventory shortages at manufactures. Tell us how you have considered providing more of the information included in your response to your filing. Refer to Section III.B.I of SEC Release 33-8350.*

The Company respectfully acknowledges the Staff's comment and in future filings will provide additional disclosures along the lines described in the Staff's comment and in SEC Release 33-8350. Specifically, in connection with our 2009 10-K filing, we intend to include all such factors mentioned above to provide our readers with a more detailed discussion of the drivers which led to the fluctuations of our reported gainshare amounts in 2009 as compared to 2008. In our response, we will adequately address the timing of when such factors occurred.

Please do not hesitate to contact me at (650) 614-7455 with further questions or to discuss the Company's responses set forth above.

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Sincerely,

/s/ Lowell D. Ness

Lowell D. Ness

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cc: Keith A. Jones  
Chief Financial Officer  
and Vice President, Finance  
PDF Solutions, Inc.

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