



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

DIVISION OF
CORPORATION FINANCE

September 30, 2013

Via E-mail

Mr. Mark Aslett
President and Chief Executive Officer
Mercury Systems, Inc.
201 Riverneck Road
Chelmsford, MA 01824

**Re: Mercury Systems, Inc.
Form 10-K for the Fiscal Year Ended June 30, 2013
Filed August 16, 2013
File No.: 000-23599**

Dear Mr. Aslett:

We have reviewed your filings and have the following comments. 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 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, please tell us why in your response.

After reviewing the information you provide in response to our comments, we may have additional comments.

Business, page 3

Hardware Products, page 9

1. Please describe for us in greater detail the types of hardware products that you produce. In this regard, we note that you describe the technologies you utilize to develop your hardware products and also describe end products that contain your hardware products; however, your disclosure does not clearly identify and describe the hardware products you provide to your customers. Please also confirm that you will provide similar disclosure in future filings, as applicable.

Results of Operations, page 31

2. We noted disclosures that net revenues in your MCE segment decreased during fiscal 2013 as compared to fiscal 2012 and the decrease was primarily driven by lower net defense revenues of \$54.8 million. When individual line items disclosed in your statements of operations significantly fluctuate in comparison to the comparable prior period, management should quantify and disclose the nature of each item that caused the significant change. For example, please quantify each material factor, i.e. such as price changes and / or volume changes, separately disclose the effect on operations attributable to each factor causing the aggregate change from year to year in your segments and total revenues and disclose the nature of or reason for each factor causing the aggregate change. Your disclosures should discuss the underlying material causes of the factors described as well as the known or expected future impact of any referenced factors on operating results. Please revise future filings to incorporate the above comment to all of the disclosures herein related to the analysis of your results of operations. For further guidance, please refer to Item 303 and the related instructions in Regulation S-K as well as SEC Interpretive Release No. 34-48960 (December 19, 2003).

Critical Accounting Policies and Significant Judgments and Estimates, page 40

3. We saw disclosures on page 59 that “you determined the fair values of the ACS and MFS reporting units as of January 1, 2013” and also saw disclosures on that same page that “a 1% increase in the discount rate used in the discounted cash flow analysis of the ACS reporting unit would have resulted in the failure of the step one interim goodwill impairment test”. In addition, we noted your market capitalization is or has recently been less than your shareholders’ equity at June 30, 2013. To the extent that any of your reporting units have estimated fair values that are not substantially in excess of their carrying values of operations and goodwill for such reporting units, in the aggregate or individually, if impaired, could materially impact your results or total shareholders’ equity, in future filings please identify and provide the following disclosures for each such reporting unit:
 - The percentage by which fair value exceeds carrying value.
 - The amount of goodwill allocated to the reporting unit.
 - A description of the material assumptions that drive estimated fair value. For example, we noted your disclosures on page 42 of the impact of changes in discount rate assumption on your step one calculations but you should also consider discussing the impact of changes in your growth rate and operating margins on your step one calculations.
 - A discussion of any uncertainties associated with each key assumption.
 - A discussion of any potential events, trends and/or circumstances that could have a negative effect on estimated fair value.

Please refer to Item 303 of Regulation S-K.

Statements of Operations and Comprehensive Income (Loss), page 46

4. We note the disclosures in this section and in the “Business” section on page 3, which indicate that you generate revenues from both the sale of products and the provision of services. Tell us the amount of revenues you recorded relating services in each reported period. As applicable, revise this statement in future filings to comply with Rules 5-03(b)(1) and (2) of Regulation S-X.

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;
- 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 Jay Webb, Staff Accountant, at (202) 551-3603 or me at (202) 551-3671 if you have any questions regarding comments on the financial statements and related matters. Please contact Joseph McCann, Staff Attorney, at (202) 551-6262, or Tim Buchmiller, Reviewing Attorney, at (202) 551-3635, if you have questions on any other comments.

Sincerely,

/s/ Martin James

Martin James
Senior Assistant Chief Accountant