



DIVISION OF  
CORPORATION FINANCE

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

March 21, 2014

Via E-Mail

Mr. Thomas T. McEntire  
Chief Financial Officer  
Geospace Technologies Corporation  
7007 Pinemont Drive  
Houston, Texas 77040

**Re: Geospace Technologies Corporation  
Form 10-K for the Fiscal Year Ended September 30, 2013  
Filed November 22, 2013  
Form 10-Q for the Quarterly Period Ended December 31, 2013  
Filed February 6, 2014  
File No. 001-13601**

Dear Mr. McEntire:

We have reviewed your filings 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 September 30, 2013

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 15

Consolidated Results of Operations, page 15

1. Tell us why segment revenues and operating income for your 2012 and 2011 year ends are different than the corresponding amounts disclosed in the segment disclosures

presented in Note 19 to your audited financial statements. In that regard, tell us how your accounting for the segment reorganization implemented on October 1, 2012 considers the guidance from FASB ASC 280-10-50-34 through -50-36. Please also refer to Compliance and Disclosure Interpretation 104.4.

Item 8. Financial Statements

Note 14. Stockholders' Equity, page F-18

2. You disclose that you incurred payroll costs of \$900,000 in your fiscal 2013 year end in order to compensate employees who were delayed in exercising their stock options. Please explain to us the underlying facts and circumstances leading to this charge and clarify how the accounting complies with GAAP. In that regard, your disclosure on page F-19 suggests that you have not issued options or restricted stock since 2001.
3. As a related matter, in light of your disclosure that you have not granted options or restricted stock since 2001, please clarify for us the source of the stock-based compensation recorded in each of the past three fiscal years. Also, clarify how it is that options vested in each of the past three fiscal years, if you have not granted stock options since 2001. Clarify for us how your disclosures about stock-based based compensation are complete under the disclosure guidance from FASB Codification Topic 718.

Form 10-Q for the Quarterly Period Ended December 31, 2013

Item 4. Controls and Procedures, page 21

4. We see that you include an assessment of internal control over financial reporting as of the quarter ended December 31, 2013. Under Item 308 of Regulation S-K and Exchange Act Rule 13a-15(c), you are only required to provide management's assessment of internal control over financial reporting on an annual basis at the end of your fiscal year. Please tell us whether you performed a full assessment of internal control over financial reporting as of the quarter ended December 31, 2013. If a full assessment was not performed, please tell us why management's assessment of internal control over financial reporting is presented in the Form 10-Q.
5. Please amend your Form 10-Q to provide management's conclusion regarding the effectiveness of disclosure controls and procedures as of December 31, 2013. Refer to Item 307 of Regulation S-K and Exchange Act Rule 13a-15(b). Under the cited guidance, you are required to assess and disclose the effectiveness of disclosure controls and procedures as of the end of each quarter.

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

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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 Jeanne Bennett, Staff Accountant, at (202) 551-3606 or Gary Todd, Reviewing Accountant, at (202) 551-3605 if you have questions regarding these comments. In this regard, do not hesitate to contact me at (202) 551-3676.

Sincerely,

/s/Gary Todd for

Brian Cascio  
Accounting Branch Chief