

October 12, 2006

Mail Stop 4561

John V. Moran
Chief Executive Officer
GSE Systems, Inc.
7133 Rutherford Road, Suite 200
Baltimore, MD 21244

Re: **GSE Systems, Inc.**
Registration Statement on Form S-3/A
Amendment 3 filed on September 28, 2006
File No. 333-134569

Quarterly Reports on Form 10-Q, as amended
For the period ended March 31, and June 30, 2006
Filed on May 16, August 14, and October 4, 2006
File No. 1-14785

Dear Mr. Moran:

We have reviewed the above-referenced filings and response letter dated September 28, 2006 and have the following additional comments. Please note that some of the comments below also relate to your Forms 10-Q for March 31, 2006 and June 30, 2006. As applicable, an amendment to those filings should be made not later than October 26, 2006.

Form S-3

Prospectus Summary

Recent Developments, page 2

1. In response to prior comment 1 of our letter dated September 14, 2006, you filed an amendment to your March 31, 2006, Form 10-Q on October 4, 2006. We are unable to concur with your view that GSE was not materially dependant on the supply agreement with Emirates Simulation Academy, as a material portion of its revenues were derived under that contract. We presume that a confidential treatment request was filed with the Office of the Secretary on approximately October 4, 2006. Once any such application is transmitted internally to our office we will review that application, as well as related disclosure in the periodic report,

and we may have comments at that time. Comments regarding any confidential treatment request must be resolved prior to the desired effective time.

Description of the February 27, 2006 Offering, page 2

2. Please refer to prior comment 4 of our letter dated September 14, 2006. Consistent with the prior comment, please move the sub-sections of the prospectus summary that begin with the heading "Description of the February 27, 2006 Offering" through "Registration Rights" to a portion of the filing that is not subject to Rule 421(d). The information in these sub-sections is too detailed for a summary. It appears that numbered paragraphs 1-3 on page 1 introduce investors to these transactions. Please limit the descriptive text in the summary so that it satisfies Rule 421(d). A materially complete and self-contained description of these prior arrangements and transactions with the selling security holders should be presented near the Selling Security Holder section. With respect to the added text that incorporates information from periodic reports, please refer to Rule 411. Note that required information may be incorporated into a prospectus only to the extent the form allows that incorporation. In this regard, it does not appear that Item 507 of Regulation S-K authorizes your company to present information responsive to Item 507 through incorporation by reference.

Risk Factors, page 5

3. With respect to prior comment 5, please expand the second paragraph of the first risk factor to describe concisely and concretely the "transactions described in the prospectus" that you expect will be sources for funds that will address the \$26.4 million capital deficiency. State the portions of that deficiency you expect to fund from each of those sources and from the forecasted cash flows that your reference. To the extent that portions of the needed capital are not committed, so indicate, and discuss the potential effect on the operations of the company if it is not able to obtain funding from sources that are not assured. Please ensure that the liquidity and capital resources portion of your most recent periodic report thoroughly addresses the company's capital needs, the anticipated sources of those funds, and the potential consequences that result from the lack of enforceable arrangements for the needed funds.

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John V. Moran
GSE Systems, Inc.
October 12, 2006, 2006
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If you have any questions you may contact me at (202) 551-3462 or in my absence
Barbara C. Jacobs, Assistant Director at (202) 551-3730.

Sincerely,

Mark P. Shuman
Branch Chief—Legal

cc: James R. Hagerty and Valerie Pelton
Facsimile: (202) 223-6625