

June 21, 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
Filed on May 30, 2006
File No. 333-134569

Form 10-KSB for the year ended December 31, 2005
Form 10-QSB for the quarter ended March 31, 2006
File No. 1-14785

Dear Mr. Moran:

This is to advise you that we have limited our review of the above-referenced filings to the matters addressed in the comments below. Where indicated, we think you should revise your filings 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 or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filings. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form S-3

General

1. The nature of the transactions being registered is not clear due to conflicting or incomplete disclosure. We will not be able to complete our initial considerations of your document until your description of the transactions being registered is amended. Changes in the cover page, prospectus summary, selling security holders and plan of distribution sections should be made in response to this comment. In revising your filing in response to this comment, please consider, for example that:
 - a) Your front and back cover contains the text "Amended Confidential Private Placement Memorandum," while the offering by means of the registration statement is public in character.
 - b) The cover page suggests that the issuer is conducting a registered offering of units consisting of preferred stock and warrants at a fixed price, but the presence of a selling security holders section and the disclosure in the plan of distribution section suggests the transaction being registered is the resale of shares underlying the warrants and preferred stock that will be offered at fluctuating prices, generally based upon future trading prices of those shares.
 - c) Your cover contains the logo of Northeast Securities, Inc. placement agent for your unregistered offering, but the role of that company in the transaction being registered is not clear, nor is that role described in the prospectus summary or the plan of distribution section.
 - d) On page 8 you state that there is no minimum offering amount, which suggests that GSE is continuing to offer units consisting of preferred stock and warrants.
 - e) On page 16 you disclose that there were no convertible preferred shares issued by the Company before the date of the prospectus, but it appears convertible preferred shares were issued in an unregistered transaction in February.
2. Please tell us whether GSE is currently offering warrants consisting of the 8% convertible stock and warrants, or if such securities were being offered by GSE on May 30, 2006 or thereafter. If the offering of the units was completed on a date prior to May 30, 2006, please describe the circumstances under which this took place. Your registration statement should include a materially complete explanation of the unit offering, including when it began and ended, as applicable.

Disclosure in this respect should be provided in the summary, selling security holders section and in recent sales of unregistered securities.

3. On page 17 you indicate that you will issue additional warrants to holders of preferred stock in the event that two consecutive dividend payments on the preferred stock are missed. In your response letter, identify the exemption you intend to rely upon with respect to these warrant issuances and why you believe that exemption would be available. Also explain whether the warrants issuable upon defaults on dividends or the underlying shares of common stock bear any relationship to the shares of stock being registered for resale in this registration statement.

Cover Page

4. Eliminate the second paragraph that is in bold-faced type. Your cover page disclosure should be limited to information responsive to the requirements of Item 501 of Regulation S-B. You should avoid duplicative text, such as the last sentence of the third paragraph, which is very similar to the first paragraph. Information that is not specifically required by Item 501 should not be provided on the cover, unless it is so key to investors that they must be provided with that information on the first page of the filing.
5. In your response letter, please explain the role of your transfer agent in the offering. Why is a reference to the transfer agent key information that warrants presentation on the cover page?

Forward-Looking Statements, page 5

6. Please move this section, as well as the section "Guide to Reading this Prospectus", so that they are presented after the Risk Factors section. The portions of the filing that are subject to Rule 421(d) should be presented without any interruption by information that is not required by or permitted on the cover page, inside cover page, prospectus summary or risk factors sections.

Selling Security Holders, page 20

7. Please tell us whether any of the selling security holders are registered broker-dealers. Unless a registered broker-dealer that is a selling security holder acquired its shares as transaction-based compensation for investment banking services, revise the prospectus to name the broker-dealer as an underwriter. Please also state in your response letter that none of the selling security holders are affiliated with a registered broker-dealer and if not, disclose this in the prospectus and briefly describe the affiliation. With respect to any selling security holder that is an affiliate of a registered broker-dealer, disclose whether

such selling security holder purchased its shares in the ordinary course of business, and whether at the time of the purchase of the securities to be resold, the seller had any agreements or understandings, directly or indirectly, with any person to distribute the securities.

8. Please note that disclosure regarding all material transactions with a selling security holder that took place within the past three years must be provided to conform to the requirements of Item 507 of Regulation S-K. Please revise to disclose clearly for each selling security holder the transactions by which they received their shares subject to resale. We note cross-references in your footnotes to other sections where the material terms of the transaction are contained may be appropriate.
9. Please identify the natural person(s) with sole or shared voting or dispositive power over the shares held by each of the entities listed in this table. For example identify the natural persons with sole or shared voting or dispositive power over the shares held by Opallo Investment Ltd. and TEBO Capital LLC. Refer to interpretation 4S of the Regulation S-K section of the March 1999 supplement to the Publicly Available Telephone Interpretation Manual and interpretation I.60 of the July 1997 Publicly Available Telephone Interpretation Manual, which are publicly available on our website.

Plan of Distribution, page 19

10. You indicate that the selling security holders may engage in short sales. Please confirm that that you and the selling security holders are aware of our position on short sales. See interpretation A.65, of the July 1997 Publicly Available Telephone Interpretation Manual.

Incorporation of Certain Documents by Reference, page 25

11. Please advise as to the basis for the statement that “[i]n addition, we incorporate by reference any future filings made with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, which is deemed not to be incorporated by reference herein.” It appears this statement is not the required language pursuant to Item 12(b) of Form S-3. Please revise accordingly.
12. Please advise under what legal basis you are incorporating by reference your Forms S-3. See Item 12(a)(3) of Form S-3 and Rule 411.

Undertakings, page 29

13. The undertakings under Item 512 of Regulation S-K relating to Rule 415 offerings have been amended recently. Please revise your undertakings in conformity with Item 512 of Regulation S-K.

Exhibits Index, page 27

14. Please advise why you have referenced exhibits 4.17, 13(i)1, 13(i)2, 19.1 and 19.2.

Signatures, page 27

15. Please revise to include the signatures of your principal financial officer, controller or principal accounting officer, and at least a majority of the board of directors. See instruction 1 to the "Signatures" section of Form S-3.

Legal Opinion

16. Please have counsel supplementally confirm that it is their understanding that the reference to "General Corporation Law of the State of Delaware" also includes the Delaware statutory provisions as well as the Delaware Constitution as interpreted by the courts. See Section VIII(A)(14) of our Current Issues Outline dated November 14, 2000.
17. Please advise why counsel believes the legend "ATTORNEY-CLIENT COMMUNICATION – PRIVILEGED AND CONFIDENTIAL," is appropriate despite the fact you have publicly filed this document.
18. It appears the statement "[w]e have not made any independent investigation," does not specifically reference an independent investigation of the information contained in the same paragraph. Please have counsel revise to identify the investigations that were not made in preparing the opinion. These statements should not be inconsistent with the investigations that must necessarily be performed by counsel in the ordinary course of rendering the legal conclusions.
19. Please advise why counsel believes the assumption relating to the "receipt of the appropriate consideration for the Common Shares" is appropriate. Tell us the nature of the additional consideration that is to be received and explain why its receipt is required to conclude the shares are validly issued, fully paid and nonassessable.

Form 10-K for the year ended December 31, 2005

Controls and Procedures

20. Please confirm that when providing your conclusion regarding effectiveness of your disclosure controls and procedures, you determined that your disclosure controls and procedures were effective at the “reasonable assurance” level. Refer to SEC Release No. 34-47986 (June 5, 2003), Section F.4.

Exhibits

Form 10-Q for the quarter ended March 31, 2006

Controls and Procedures, page 31

21. We note disclosure that your principal executive officer and principal financial officer concluded that the Company’s disclosure controls and procedures are effective to ensure that information required to be disclosed in the reports that you file or submit under the Exchange Act is recorded, processed and summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms. Tell us how you considered the entire definition of “disclosure controls and procedures” under Exchange Act Rule 13a-15(e) in concluding your disclosure controls and procedures were effective. Please confirm, for example, that your controls and procedures were also “designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Act is accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.” Please provide the same confirmation for conclusion contained in your Form 10-K and confirm you will consider this comment in preparing future periodic reports.

Exhibits 31.1 & 31.2

22. Please note you should include the exact language contained in statements 2, 3, and 4. For example, we note you discuss quarterly report throughout your certifications after statement 1 as opposed to just the term “report.”

* * * * *

As appropriate, please amend your filings in response to these comments. You may wish to provide us with marked copies of the amendments to expedite our review. Please furnish a cover letter with your amendments that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendments and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filings or in response to our comments on your filings.

We will consider a written request for acceleration of the effective date of the registration statements as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rule 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

John V. Moran
GSE Systems, Inc.
June 21, 2006
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If you have any questions, please call Adam Halper at (202) 551-3482. If you require additional assistance 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