

Mail Stop 6010

July 25, 2008

Via U.S. Mail and Fax (772) 781-4778

Adrian Goldfarb  
Chief Financial Officer  
Ecosphere Technologies, Inc.  
3515 S.E. Lionel Terrace  
Stuart, Florida 34997

**Re: Ecosphere Technologies, Inc.**  
**Form 10-KSB for the fiscal year ended December 31, 2007**  
**Filed April 15, 2008**  
**File No. 000-25663**

Dear Mr. Goldfarb:

We have reviewed your filings and correspondence dated July 15, 2008 and have the following comments. Where indicated, we think you should revise your future 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 information so we may better understand your disclosure. After reviewing this information, we may 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 filing. We look forward to working with you in these respects. We welcome any questions you may have about our comment or on any other aspects of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-KSB for the fiscal year ended December 31, 2007

Item 7. Financial Statements

Stock-based compensation, page F-12

1. We reference your response to prior comment 4 in our letter dated July 1, 2008, where you indicate that your common stock began public trading (on the Bulletin Board) on January 25, 2006. Since you have been a public company with reporting history dating back to 1999 tell us why your common stock was not traded prior to January 25, 2006.
2. In addition, tell us why it was appropriate to consider the 1% of volatility (calculated based on few private transactions) prior to your public trading and to assign it approximately 80% of overall weight in your weighted average volatility calculation for 2006. Tell us how you considered the guidance in paragraph A22 and A31 of SFAS 123(R) and how you determined that it was appropriate to apply volatilities based on private transactions prior to public trading. Furthermore, tell us why you were not able to consider volatilities of similar entities or apply other methods as described in SFAS 123(R.)

Note 17. Significant Transaction, page F-33

3. We reference your response to prior comment 6 in our letter dated July 1, 2008. We also note your reference to Example 12, paragraph A26b. of Appendix A to SFAS 144. Tell us whether you still operate or remain in the coating removal business, subsequent to the asset sale to Chariot. Your Form 10-Q for the quarter ended March 31, 2008 indicates that UES, the subsidiary relating to the robotic coating removal industry, "has been inactive since October 9, 2007." Please tell us whether you have significant continuing involvement in the robotic coating removal industry as defined by SFAS 144. Furthermore, tell us why your coating business does not "represent a group that on its own is a component of the entity," as stated in the example. Paragraph 41 of SFAS 144 defines a component of an entity and it includes segments, which UES appear to fall under.
4. We reference your response to prior comment 8 in our letter dated July 1, 2008. We also note that you have indicated you are in the business of identifying, developing, patenting and then selling or licensing clean technologies. Please tell us how the sale of patents and intellectual property associated with UES meets the definition of revenue discussed in SAB topic 13A1 and Concepts Statement 5, paragraph 83(b). Tell us how the sale of these specific assets constitutes your ongoing major or central operations.

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As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Praveen Kartholy, Staff Accountant, at (202) 551-3778 or me at (202) 551-3676 if you have questions regarding these comments and related matters. You may also contact Martin F. James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Brian R. Cascio  
Accounting Branch Chief