



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

DIVISION OF
CORPORATION FINANCE

December 3, 2010

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

Re: Ecosphere Technologies, Inc.
Form 10-K for the Year Ended December 31, 2009
Filed March 31, 2010
File No. 000-25663

Dear Mr. Goldfarb:

We have reviewed the October 29, 2010 and November 9, 2010 response letters 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 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.

Item 1. Business, page 1

1. We note your response to prior comment 1. It does not appear that you have provided us with the items requested in the third and fourth bullet points. We therefore reissue those portions of prior comment 1.

Item 10. Directors, Executive Officers and Corporate Governance, page 35

2. We have reviewed the response to prior comment 2 in the letter from your counsel dated November 9, 2010. We note from the response that Mr. McGuire's most recent conviction was in 1987 and that he received an 8 year sentence (5 of which were served) and 5 years or probation. Given this information, it appears that Mr. McGuire was

subject to a pending criminal proceeding until at least 1997. In this regard, we note that the company filed a Form 10SB-12G on March 29, 1999 disclosing that Mr. McGuire was the president and a director of your company. Please provide us with your analysis as to whether you were obligated to disclose that Mr. McGuire was the subject of a criminal proceeding in that initial filing or any subsequent filings, such as your Forms 10-KSB or Forms 10-K, and where such disclosure appears. Also, provide us with your analysis as to whether Mr. McGuire was enjoined or otherwise limited from engaging in any of the activities listed in Item 401(f)(3) of Regulation S-K, or the applicable item requirement for those periods, since the filing of the Form 10SB-12G on March 29, 1999, and if so, where such disclosure appears in your filings.

Also, you have not submitted the fax correspondence dated September 13, 2010 as correspondence on EDGAR. We therefore reissue the final sentence of prior comment 2.

Form 10-Q for period ended June 30, 2010

Liquidity and Capital Resources, page 33

3. We have reviewed your response to prior comment 9. Please file the required Form D or provide us with your analysis as to why the Form D is not required to be filed. For the exemption that you are relying upon, please provide us with the facts and circumstances which make that exemption available for the prior offering.

Form 10-Q for period ended September 30, 2010

Exhibits

4. We note your response to prior comment 11, but it does not appear that have filed the complete agreement in the Form 10-Q for the period ended September 30, 2010. We therefore reissue the comment.

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 connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

Adrian Goldfarb
Ecosphere Technologies, Inc.
December 3, 2010
Page 3

- 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 Joseph McCann, Staff Attorney, at (202) 551-6262 or Tim Buchmiller, Reviewing Attorney, at (202) 551-3635 if you have questions on any of our comments.

Sincerely,

Russell Mancuso
Branch Chief

cc (via fax): Michael Harris, Esq.
Harris Cramer LLP