



DIVISION OF
CORPORATION FINANCE
Mail Stop 3030

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

June 23, 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
Form 10-Q for the Quarterly Period Ended March 31, 2010
Filed May 17, 2010
File No. 000-25663

Dear Mr. Goldfarb:

We have reviewed your filing 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 11. Exhibits, page 52

1. We note your response to prior comment 3 and reissue the portions of the comment contained in bullets 1, 2, 4 and 5. With respect to the contracts referenced in bullets 1 and 2, please provide us with a detailed analysis explaining why you believe that each of these agreements is not a required filing under Item 601(b)(10)(ii)(B) of Regulation S-K. Given your disclosure on page 10 that Mr. McGuire was responsible for assigning your "material intellectual property"

please provide a detailed analysis explaining how you concluded that this agreement was made in the ordinary course of business. Please also analyze why the assignment agreement is not required to be filed pursuant to Item 601(b)(10)(ii)(A). With respect to bullet 5, please identify the specific agreements that you will file in your future filings.

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 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 me at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Joseph McCann, Staff Attorney, at (202) 551- 6262, or Tim Buchmiller, Reviewing Attorney, at (202) 551-3635 if you have questions on any other comments. In this regard, do not hesitate to contact me or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

Brian R. Cascio
Accounting Branch Chief