



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4631

July 19, 2016

Via E-Mail

Randy May
Chief Executive Officer
Ecoark Holdings, Inc.
3333 Pinnacle Hills Parkway I Suite 220
Rogers, AR 72758

**Re: Ecoark Holdings, Inc.
Amendment No. 3 to Registration Statement on Form S-1
Filed July 6, 2016
File No. 333-211045
Amendment No. 3 to Current Report on Form 8-K filed July 6, 2016
File No. 000-53361
Amendment No. 1 to Current Report on Form 8-K filed June 15, 2016
File No. 000-53361**

Dear Mr. May:

We have reviewed your amended registration statement 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our June 30, 2016 letter.

Consolidated Financial Statements, page F-1

Consolidated Balance Sheets, page F-28

1. As previously requested, please retroactively adjust Ecoark, Inc.'s capital structure to reflect Magnolia Solar Corporation's legal capital structure. In this regard, ASC 805-40-45-1 states in part, "...retroactively adjust the accounting acquirer's legal capital to reflect the legal capital of the accounting acquiree. That adjustment is required to reflect the capital of the legal parent (the accounting acquiree). Comparative information

presented in those consolidated financial statements also is retroactively adjusted to reflect the legal capital of the legal parent (accounting acquirer).” In your situation, Ecoark, Inc. is the accounting acquirer, and Magnolia Solar Corporation is the accounting acquirer and the legal parent. Please also refer to ASC 805-40-45-2, which states in part, “...the consolidated financial statements represent the continuation of the financial statements of the legal subsidiary except for its capital structure...”. In your situation, Ecoark, Inc. is the legal subsidiary. Please also address this comment for the consolidated statements of changes in stockholders’ equity (deficit) and your interim financial statements.

Consolidated Statement of Changes in Stockholders’ Equity (Deficit), page F-49

2. Please revise your presentation to reflect the number of shares of common stock held by Magnolia Solar Corporation at the reverse merger as a separate line item in the rollforward and labeled as issued in the transaction. Please also clarify what the merger adjustments line represents. Please consider the need to adjust the exchange ratio used in Ecoark, Inc.’s historical financial statement, so that the number of shares of common stock reflected as outstanding for Ecoark, Inc. at the date of the reverse merger is 27,696,066 per your disclosures on page 1.

Note 12: Subsequent Events, page F-63

3. Please expand your disclosure to include the qualitative description of the factors specific for the acquisition of Sable that make up the goodwill recognized in accordance with ASC 805-30-50-1.a.

Unaudited Pro Forma Consolidated Statements of Operations, page F-87

4. As previously requested in comment 4 in our letter dated June 30, 2016, please include an adjustment to depreciation expense for the increase in fair value of the property and equipment acquired from Sable. In this regard, the adjustment appears to be for the acquired intangible asset with a fair value of \$1 million and a useful life of 3 years. Please also provide sufficient information in the note that explains the adjustment to allow an investor to recalculate the adjustment. Please refer to Article 11-02(b)(6) of Regulation S-X for guidance.

Amendment No. 3 to Current Report on Form 8-K Filed July 6, 2016

5. Please amend your Form 8-K to include an auditor’s consent to the incorporation by reference in the Registration Statement on Form S-8 of Magnolia Solar Corporation of Ecoark Inc.’s auditor’s report dated March 28, 2016 and dated June 15, 2016.

Randy May
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Amendment No. 1 to Current Report on Form 8-K Filed June 15, 2016

6. Please amend your Form 8-K to include an auditor's consent to the incorporation by reference in the Registration Statement on Form S-8 of Magnolia Solar Corporation of Sable Polymer Solutions' auditor's report dated June 13, 2016.

You may contact Tracey Houser (Staff Accountant) at 202-551-3736 or Al Pavot (Staff Accountant) at 202-551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Frank Pigott (Staff Attorney) at 202-551-3570 or me at 202-551-3765 with any other questions.

Sincerely,

/s/ Pamela Long

Pamela Long
Assistant Director
Office of Manufacturing and
Construction

cc: Peter DiChiara, Esq.
Carmel, Milazzo & DiChiara LLP