



DIVISION OF
CORPORATION FINANCE

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

November 8, 2011

Via E-Mail

Ms. Rene A. Schena
Chief Executive Officer
Arrayit Corporation
524 East Weddell Drive
Sunnyvale, California 94089

Re: Arrayit Corporation
Form 10-K for the fiscal year ended December 31, 2010
Filed on April 15, 2011
Form 10-Q for the fiscal quarter ended March 31, 2011
Filed on August 5, 2011
Amendment No. 1 to Form 10-Q for the fiscal quarter ended June 30, 2011
Filed on September 21, 2011
File No. 001-16381

Dear Ms. Schena:

We have reviewed your response letter dated October 19, 2011 and your filing, and have the following additional 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.

Form 10-K for the fiscal year ended December 31, 2010

1. Regarding your response to prior comment 1:
 - The disclosure to which you refer as addressing prior comment 3 in our letter to you dated November 30, 2010 does not appear to describe the sources or nature of the raw materials you use. We note, for example, the raw materials mentioned in your management's discussion and analysis, including the ability to obtain those materials at lower prices;

- Please file the agreement mentioned in your response to prior comment 8 in our letter dated November 30, 2010. Also, it is unclear how the disclosure you mention in that response addresses the restrictive covenants and impact on your liquidity, as discussed in your response letter dated January 13, 2011;
- Contrary to your response to prior comment 19 in our letter dated November 30, 2010, it appears Mr. Sklar has not yet filed the statements required by Exchange Act Section 16;
- It continues to be unclear how the summary compensation table addresses the disclosure requirements of Regulation S-K Item 402(n)(2)(v) and the related instructions. For example, given the lack of footnotes, it is unclear what the amounts in the table regarding stock grants are intended to signify or how those amounts were determined;
- Likewise, it is similarly unclear to what additional tables you are referring in response to prior comment 23 in our letter dated November 30, 2010, given that your Form 10-K for the fiscal-year ended December 31, 2010 appears to have the same tables as the Form 10-K for the prior fiscal year. It also appears you have not yet included the disclosure required by Regulation S-K Item 402(p) including the table specified by that item; and
- Contrary to your responses to our comments, the exhibits you filed with the December 9 and 10, 2009 Form 8-Ks continue to have information redacted from them. Please file those exhibits without the information redacted or file a request for confidential treatment, as previously mentioned.

Please revise your response accordingly.

Item 8. Financial Statements

Note 15 – Commitments and Contingencies, page 31

2. We refer to your response to prior comment 1 from our letter dated March 10, 2011. In an amended filing, please expand to disclose the components of the significant amount accrued for judgments and unpaid legal fees, consistent with the table provided in the response.

Item 9A(T). Controls and Procedures, page 38

3. We refer to your response to prior comment 5 from our letter dated August 31, 2011. As you indicate that you did use COSO in evaluating internal control over financial reporting, in an amendment, please delete the inconsistent language suggesting that you did not use a recognized framework in performing your evaluation.

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Item 15. Exhibits and Financial Statement Schedules, page 44

4. In connection with the amendment, please provide currently dated Sarbanes-Oxley Section 302 and Section 906 certifications signed by the individual(s) currently in the principal executive and principal financial officer positions. Refer also to prior comment 6 from our letter dated August 31, 2011.

Form 10-Q for the fiscal quarter ended March 31, 2011

5. We reissue prior comment 7 in our letter dated August 31, 2011. Given that you have not yet filed a full amendment, including all required exhibits, to this filing, it is unclear why you believe “the discrepancy has been corrected.”

Amendment No. 1 to Form 10-Q for the fiscal quarter ended June 30, 2011

Item 4. Controls and Procedures, page 23

6. Please reconcile your response to prior comment 7 in our letter dated August 31, 2011 with your disclosure here that your chief executive officer is also your acting chief financial officer. Also, if Mr. Sklar is “still” your chief financial officer, as stated in that response, please tell us on what authority you relied to determine that he is not required to sign the exhibits required by Regulation S-K Item 601(b)(31) and (32). We note, in this regard, that he signed those exhibits in prior filings.

You may contact Jeanne Bennett at (202) 551-3606 or Gary Todd, Reviewing Accountant, at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Geoffrey Kruczek, Senior Attorney, at (202) 551-3641 with any other questions. You may also contact me at (202) 551-3676.

Sincerely,

/s/ Gary Todd for

Brian R. Cascio
Accounting Branch Chief