



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

August 17, 2012

Via E-mail

John J. Joyce  
Chief Executive Officer  
Ambient Corporation  
7 Well Avenue, Suite 11  
Newton, MA 02459

**Re: Ambient Corporation  
Item 4.02 Form 8-K  
Filed August 15, 2012  
File No. 001-35259**

Dear Mr. Joyce:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document 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 more 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 comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 8-K

Item 4.02

1. We note that you intend to file restated financial statements. Please tell us and disclose when you will file them.
2. Your disclosures provide little quantitative insight into the significance of your misstatements. Please amend your filing to disclose, at least, an estimated range of the amount of the errors you have discovered to date that resulted in your

determination that your financial statements filed for the periods from 2007 through your most recently filed 10-Q for the quarter ended March 31, 2012 should no longer be relied upon.

As appropriate, please amend your filing and respond to these comments within five business days or tell us when you will respond. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment 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 amendment and responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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;
- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

If you have any questions, please call Joe Cascarano, Staff Accountant, at (202) 551-3376.

Sincerely,

/s/ Terry French for

Larry Spigel  
Assistant Director