



DIVISION OF
CORPORATION FINANCE

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

January 31, 2012

Mr. Kevin Purcell
Chief Financial Officer
Aerosonic Corporation
1212 North Hercules Avenue
Clearwater, Florida 33765

Re: Aerosonic Corporation
Form 10-K for the fiscal year ended January 31, 2011
Filed May 2, 2011
Form 10-Q for the quarterly period ended October 28, 2011
Filed December 12, 2011
File No. 001-11750

Dear Mr. Purcell:

We have reviewed your filings 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 filings, 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 filings and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the fiscal year ended January 31, 2011

Financial Statements

Note 1. Description of Business, Basis of Presentation, Significant Accounting Policies
Research and Development, page F-13

1. Please supplementally reconcile the financial information in this footnote with the balances in the narrative on page 6.
2. We note that approximately 60% of the \$1,227,000 contact loss provision was recorded in the fourth quarter of fiscal 2011. Please explain the events and circumstances that arose during the quarter and that could not have been reasonably estimated or anticipated in prior quarters.

3. As a related matter you state, on page 20, that the three customer-funded programs generating the contract loss provisions are nearing their final stages of development. Please discuss the status of each of the three programs as of October 28, 2011, the losses incurred on each program in fiscal 2012, and the estimated additional losses you anticipate as of your most recent balance sheet date. If losses were incurred on any other customer-funded programs during the current fiscal year, address these programs as well. Explain the new disciplines you have been developing and implementing as discussed on page 18 of your Form 10-Q for the quarterly period ended October 28, 2011. Tell us how you plan to improve the writing, planning and execution of these programs on an ongoing basis.

Note 3. Consolidation Plan and Restructuring Costs, page F-15

4. We see that you classified the Earlysville, Virginia facility as held for sale during fiscal 2008. Based upon the discussion of your properties on page 15, we assume that the \$1,712,000 balance of property held for sale as of January 31, 2008 was comprised of the amortized cost of the property (approximately \$904,000) and capitalized contamination treatment costs of approximately \$808,000. Additional costs for treatment were incurred and capitalized in fiscal 2010 and 2011, resulting in a property held for sale balance of \$2,062,000 as of January 31, 2011. Please confirm our assumptions or advise us of any differences.
5. A long-lived asset to be sold should be classified as held for sale in the period that specific criteria are met. If at any time the criteria are no longer met, the asset should be reclassified as held and used. Please explain how the Earlysville facility continues to qualify as held for sale at January 31, 2011, and provide a similar analysis as of October 28, 2011. Address each of the criteria set forth under ASC 360-10-45-9 in your response as of each balance sheet date. We are particularly concerned with Item (d) thereunder with respect to the expectation of the probable transfer of the asset within one year. We may have further comments upon review of your response.
6. Please provide us with objectively verifiable support for your conclusion that the carrying value of this property does not exceed estimated fair value less costs to sell as of January 31, 2011 and also as of October 28, 2011. If the amortized cost of the property was below \$1 million on January 31, 2008, and depreciation has been discontinued, and if you have capitalized over \$1 million in contamination treatment costs, please explain how the property has consistently retained its value given the general and local economic developments that have occurred subsequent to that date. In addition, supplementally and in detail, address the consideration given to ASC 360-10-45-9 (e). Since this property remains unsold after nearly four years, it is unclear whether the property is being actively marketed for sale at a price that is reasonable in relation to its current fair value. Please advise, supplementally and in detail. We may have further comments upon review of your response.

7. Please describe and quantify any further environmental costs incurred in fiscal 2012 and tell us how they were accounted for.

Form 10-Q for the quarterly period ended October 28, 2011

Note 8. Long-Term Debt, Notes Payable and Revolving Credit Facility, page 11

8. You disclose that you did not comply with a covenant in your credit facility as of July 29, 2011 and as of October 28, 2011. You state that these non-compliances were waived by the bank on September 7, 2011 and December 5, 2011, respectively. Please provide us with support for your conclusion that this debt should continue to be classified as a long-term obligation. In this regard, as the covenant itself does not appear to have been adjusted, it appears that you are relying on quarterly waivers on an ongoing basis. Please explain, supplementally and in detail.

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 filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; 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 Kristin Shifflett at 202-551-3381 or Margery Reich at 202-551-3347 if you have questions regarding comments on the financial statements and related matters. Please contact me at 202-551-3211 with any other questions.

Sincerely,

/s/ David R. Humphrey

David R. Humphrey
Accounting Branch Chief