

Mail Stop 6010

October 6, 2006

By U.S. Mail and Facsimile to (503) 671-5698

Mr. John Metcalf
Senior Vice President of Administration,
Chief Financial Officer and Corporate Secretary
Electro Scientific Industries, Inc.
13900 N.W. Science Park Drive
Portland, Oregon 97229

**RE: Electro Scientific Industries, Inc.
Form 10-K for the year ended June 3, 2006
File No. 0-12853**

Dear Mr. Metcalf:

We have reviewed your filings and have the following comments. We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your future documents 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 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 10-K for the year ended June 3, 2006

Note 1. Summary of Significant Accounting Policies, page 36

Other Assets, page 38

1. We note you carry demo equipment at the lower of standard cost or estimated market value. Please explain why you believe your accounting policy with respect to the demonstration equipment complies with GAAP. Provide references to the authoritative accounting literature that supports your conclusions in your response. Please also explain the contractual terms under which it has been loaned, including any associated requirement that the borrower purchase the equipment. Finally, tell us where depreciation expense, if any, is recorded in your statement of operations for such equipment or why you believe not depreciating the equipment is appropriate. Please revise future filings as necessary based on our comment. We may have further comments after reviewing your response.

Revenue Recognition, page 39

2. We note that you recognize sales to distributors upon title transfer to the distributor. Please tell us and if material, revise future filings to address how you account for price protection, price concessions, allowances, returns, credits/discounts and other sales incentives, as applicable. Please tell us how your current revenue recognition policy complies with SAB 104, SFAS 48 and other relevant literature.

Product Warranty, page 39

3. We note that “inventory credits resulting from the return of repaired parts to inventory and any cost recoveries from the warranties offered by the Company’s suppliers for defective components are recorded as a credit to the warranty accrual.” Please explain to us why it is appropriate to record these amounts as a credit to your warranty accrual, citing any authoritative literature upon which you are relying. Clarify these disclosures in future filings, as necessary.

Mr. John Metcalf
Electro Scientific Industries, Inc.
October 6, 2006
Page 3

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter 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 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 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.

You may contact Eric Atallah, Staff Accountant at (202) 551-3663 or me at (202) 551-3603 regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact, Angela Crane, Branch Chief at (202) 551-3554 with any other questions.

Sincerely,

Jay Webb
Review Accountant

Mr. John Metcalf
Electro Scientific Industries, Inc.
October 6, 2006
Page 4