



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

June 18, 2009

VIA U.S. MAIL and FACSIMILE

Raymond A. Link
Chief Financial Officer
FEI Company
5350 NE Dawson Creek Drive
Hillsboro, Oregon 97124-5793

RE: FEI Company
Form 10-K for the fiscal year ended December 31, 2008
Filed February 20, 2009
File No. 000-22780

Dear Mr. Link:

We have reviewed your response dated June 10, 2009 and related filings and have the following comments. In our comment, 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 fiscal year ended December 31, 2008

Consolidated Financial Statements

Note 1. Summary of Significant Accounting Policies, page 58

Inventories, page 60

1. We reference your response to prior comment 3 in our letter dated May 27, 2008. Please respond to the following additional comments regarding the long-term repairable spare parts inventory:
 - We see that at a service call you remove the parts requiring repair and exchange them for functional spare parts from inventory. Please tell us how you record this exchange of inventory in your financial statements, including how you determine the amount to be recorded for any repairable spare part returned to inventory.
 - We note that you ratably increase the reserve against repairable spare parts over the seven year life of the inventory until the net carrying value is zero at the end of the service life. Please tell us how this apparent amortization of the inventory is consistent with paragraph 8 of Chapter 4 of ARB 43 which states that a loss of utility of inventory is reflected as a charge against the revenues of the period in which it occurs and the measurement of such losses is accomplished by applying the rule of pricing inventories at cost or market, whichever is lower.

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 with your response 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.

You may contact Kristin Lochhead at (202) 551-3664 or me at (202) 551-3605 if you have questions. In this regard, please do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676 with any other questions.

Sincerely,

Gary Todd
Accounting Reviewer

Raymond A. Link
FEI Company
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