



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

Mail Stop 4631

July 14, 2009

Via U.S. mail and facsimile

Mr. Paritosh K. Choksi
Chief Financial Officer
ATEL Capital Equipment Fund VIII, LLC
600 California Street, 6th floor
San Francisco, California 94108

RE: Form 10-K for the fiscal year ended December 31, 2008
Form 10-Q for the period ended March 31, 2009
File No. 0-33103

Dear Mr. Choksi:

We have reviewed these filings and have the following comments. If you disagree with a comment, 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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 on 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 DECEMBER 31, 2008

General

1. Where a comment below requests additional disclosures or other revisions to be made, please show us in your supplemental response what the revisions will look like. With the exception of the comment below that will require an amendment to your Form 10-K, these revisions should be included in your future filings.

Management's Discussion and Analysis

Results of Operations, page 9

2. Please consider presenting your utilization percentages for assets under lease in a similar manner to the presentation included on page 12 of the Form 10-K for the year ended December 31, 2008 for ATEL Capital Equipment Fund X, LLC. You should also consider discussing any significant changes from period to period.

Note 4. Reserves, Impairments and Provisions for Doubtful Accounts, page 24

3. You have recorded a reserve for losses and impairments. Paragraph 15 of SFAS 144 states that the adjusted carrying amount of a long-lived asset shall be its new cost basis if an impairment loss is recognized. For a depreciable long-lived asset, the new cost basis shall be depreciated over the remaining useful life of that asset. Restoration of a previously recognized impairment loss is prohibited. Please confirm in this regard that a new cost basis is assigned for any assets for which an impairment loss is recorded and that impairment losses are not reversed in accordance with SFAS 144.

Note 5. Investments in Equipment and Leases, page 25

4. You disclose on page 20 that you earn revenues from your fleet of marine vessels based on the utilization of the vessels. Such contingent rentals and the associated expenses are recorded when earned and/or incurred. In this regard, please disclose the amount of revenues recorded from contingent rentals during each period presented. Refer to paragraph 23(b)(iii) of SFAS 13.
5. Direct financing leases are generally placed in a non-accrual status when payments are more than 90 days past due. Based upon management's judgment, direct finance lessees with balances less than 90 days delinquent may also be placed in a non-accrual status. Please disclose the amount of investment in direct financing leases placed in non-accrual status as of the end of each period presented. Refer to paragraph 13(g) of SOP 01-06.

Note 6. Related Party Transactions, page 26

6. The Operating Agreement places an annual limit and a cumulative limit for cost reimbursements to ATEL Financial Services, LLC and/or affiliates. Any reimbursable costs incurred by ATEL Financial Services, LLC and/or affiliates during the year exceeding the annual and/or cumulative limits cannot be reimbursed in the current year, though such costs may be reimbursable in future years to the extent of the cumulative limit. Accordingly, you have not recorded an obligation for such contingent reimbursement, which totaled approximately \$1.7 million, as of December 31, 2008. Please further expand your disclosure to clarify whether an

expense is recorded for these amounts as well as further address how you determined that a liability should not be recorded. Please refer to paragraphs 35 and 36 of FASB Concept Statement 6 as well as paragraph 8 of SFAS 5.

Note 7. Non-Recourse Debt, page 27

7. Please clarify whether the note payable to a financial institution contains any material covenants. If so, please disclose here or elsewhere in the filing the specific terms of any material covenants as well as whether you are in compliance with the covenants. For any material covenants, please disclose the required amounts/ratios as well as the actual amounts/ratios as of each reporting date. This will allow readers to understand how much cushion there is between the required amounts/ratios and the actual amounts/ratios. Please consider showing the specific computations used to arrive at the actual amounts/ratios with corresponding reconciliations to US GAAP amounts, if necessary. See Sections I.D and IV.C of the SEC Interpretive Release No. 33-8350 and Question 10 of our FAQ Regarding the Use of Non-GAAP Financial Measures dated June 13, 2003.

Exhibit 31

8. Please file an amended Form 10-K with certifications that are in the exact form shown under Item 601(b)(31) of Regulation S-K. Specifically, the introductory portions of both paragraphs 4 and 5 exclude the reference to internal control over financial reporting. In doing so, please also ensure that the revised certifications are currently dated and refer to the Form 10-K/A. Refer to Section 246.13 of the Division of Corporation Finance—Compliance and Disclosure Interpretations of Regulation S-K, which can be found at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>.

FORM 10-Q FOR THE PERIOD ENDED MARCH 31, 2009

General

9. Please address the above comments in your interim filings as well.

* * * *

Please respond to these comments within 10 business days, or tell us when you will provide us with a response. Please provide us with a supplemental response letter that keys your responses to our comments and provides any requested supplemental information. Detailed letters greatly facilitate our review. Please file your supplemental response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

Mr. Paritosh K. Choksi

July 14, 2009

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We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain 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 their 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 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 regarding these comments, please direct them to Nudrat Salik, Staff Accountant, at (202) 551-3692 or, in her absence, to the undersigned at (202) 551-3769.

Sincerely,

Rufus Decker
Accounting Branch Chief