



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

Mail Stop 4631

August 7, 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
File No. 0-33103

Dear Mr. Choksi:

We have reviewed your response letter filed on July 30, 2009 and have the following additional comments. If you disagree with our 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.

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

Exhibit 31

1. We note your response to prior comment 8. Given that the certifications included in the Form 10-K were not in the exact form shown under Item 601(b)(31) of Regulation S-K, please file an amended Form 10-K with the revised certifications. We remind you that the amended 10-K/A can contain only the cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certifications. Refer to Section 246.13 of the Division of Corporation Finance—Compliance and Disclosure Interpretations of Regulation S-K, which can be found at

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<http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. Please also ensure that the revised certifications are currently dated and refer to the Form 10-K/A.

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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.

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