



DIVISION OF
CORPORATION FINANCE

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

February 10, 2011

Mr. Duane D. Deaner
Chief Financial Officer
Environmental Tectonics Corporation
County Line Industrial Park
Southampton, PA 18966

Re: Environmental Tectonics Corporation
Form 10-K for the fiscal year ended February 26, 2010
Filed May 27, 2010
Form 10-Q for the quarter ended November 26, 2010
File No. 001-10655

Dear Mr. Deaner:

We have reviewed your response dated January 18, 2011 and related 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 filing, 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 filing and the information you provide in response to these comments, we may have additional comments.

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Form 10-K for the fiscal year ended February 26, 2010

Item 8T. Controls and Procedures, page 15

Evaluation of Disclosure Controls and Procedures

1. We refer to your response to comment 1. We see that you have determined material weaknesses existed as of February 26, 2010 as disclosed in the Form 10-Q for the quarter ended November 26, 2010. Please tell us how the subsequent discovery of the material weaknesses will be considered in controls and procedures disclosures presented in the amended Form 10-K.

Exhibit 13. Portions of Environmental Tectonics Corporation 2010 Annual Report..., page 1

Notes to the Consolidated Financial Statements, page 18

Note 7. Long-Term Obligations and Credit Arrangements, page 25

Exchange of Existing Instruments for Series E Preferred Stock, page 26

2. We refer to your response to prior comment 11. In your proposed disclosure, you indicate you determined the “attributes” of the preferred stock were more akin to equity than debt. In future filings please describe the attributes of the instruments you considered in reaching your conclusion.

Form 10-Q for the quarter ended November 26, 2010

Consolidated Statements of Cash Flows, page F-5

3. Similar to our prior comment 13 from our October 29, 2010 comment letter, as provided in FASB ASC 230-10-45, a statement of cash flows presented on the indirect method should begin with net income or loss, which as defined includes non-controlling interests. Your statement of cash flows appears to begin with net income or loss excluding non-controlling interest. In future filings, to better conform with the guidance applicable to non-controlling interests please revise to begin the statement of cash flows with net income or loss. In that regard, please also note that net income or loss attributable to non-controlling interests should not be included as a reconciling item in the operating section of a consolidated cash flow statement.

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You may contact Leigh Ann Schultz at (202) 551-3628 or Gary Todd at (202) 551-3605 if you have questions on the financial statements and related matters. Please contact Louis Rambo at (202) 551-3289 or Timothy Buchmiller at (202) 551-3635 with any other questions. You may also contact me at (202) 551-3676.

Sincerely,

Brian Cascio
Accounting Branch Chief

for