



DIVISION OF
CORPORATION FINANCE

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

October 29, 2010

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 quarterly period ending August 27, 2010
File No. 001-10655

Dear Mr. Deaner:

We have reviewed your filing 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.

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

Item 1. Business, page 1

Customers, page 4

1. Given your level of customer concentration disclosed here, please tell us how you determined that you are not required by Regulation S-K Item 601(b)(10) to file any of your customer agreements as exhibits or alternatively, include the agreements in any future or amended filings.

Item 8T. Controls and Procedures, page 15

Evaluation of Disclosure Controls and Procedures

2. In future or amended filings please revise the first sentence to refer to your responsibility for “disclosure controls and procedures” as opposed to “internal control over financial reporting.” In this regard, please note that disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)) and internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)) are not interchangeable concepts. Accordingly, in future or amended filings, please also revise the structure of the disclosure presented pursuant to Items 307 and 308T of Regulation S-K to clearly and separately present the information required for each of the two control evaluations.
3. As a related matter, you disclose that disclosure controls and procedures are “functioning effectively.” However, your disclosure should indicate whether disclosure controls and procedures are “effective” or are “not effective,” as appropriate. Please apply in future or amended filings.
4. Further, you disclose that disclosure controls and procedures are functioning effectively “and provide reasonable assurance that that the information required to be disclosed by the Company in its periodic reports is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms.” In future or amended filings, if you elect to provide a written definition of disclosure controls and procedures, please ensure that the definition is substantially similar with the full two sentence definition of disclosure controls and procedures as set forth in Exchange Act Rule 13a-15(e).
5. Pursuant to Item 308T(a) of Regulation S-K and Exchange Act Rule 13a-15(c) your filing should present management's annual report on internal control over financial reporting as of the end of each fiscal year. It appears that management either failed to perform or complete its report on internal control over financial

reporting because the required report does not appear in your filing. Please amend your filing to include management's annual report on internal control over financial reporting as of February 26, 2010.

6. In addition, as it appears that management failed to perform or complete its annual report on internal control over financial reporting as of February 26, 2010, please tell us your basis for concluding that disclosure controls and procedures are effective as of that date. In particular, we refer you to the definition of disclosure controls and procedures provided in Exchange Act Rule 13a-15(e), which indicates that effective controls and procedures would ensure that information required to be disclosed by the issuer is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms. In addition, as discussed in Compliance and Disclosure Interpretation 115.02, which you can find at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>, failure to file management's report on internal control over financial reporting would render your annual report materially deficient and would also render the company not timely or current in its Exchange Act Reporting.

Part III, page 16

Long-Term Incentive Compensation, page 21

7. Based on your disclosure in the table on page 23 the options awarded in 2010 are not exercisable. Please provide the information required by Item 402(o)(4) of Regulation S-K and revise the table on page 23 in any future or amended filing to provide the footnote required by Instruction 2 to Item 402(p)(2).

Summary Compensation Table, page 22

8. Refer to your summary and director compensation tables on pages 22 and 24. With a view towards amended disclosure, please tell us how you complied with Item 402(n)(2)(vi) and (r)(2)(iv) of Regulation S-K as amended by Section II.A.2 of Securities Act Release No. 9089 (December 16, 2009), including the footnote disclosure required by Instruction 1 to Item 402(n)(2)(v) and (vi).
9. Please tell us why the bonuses mentioned in footnotes (2), (7), and (12) are not included in columns (d) or (j) of the table, given your disclosure in footnotes (7) and (12) and the second paragraph on page 21 indicating that these bonuses were earned in fiscal 2010, or revise in future or amended filings accordingly. Refer to Item 402(n)(2)(iv) and (n)(2)(x) of Regulation S-K.

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

Management's Discussion and Analysis of Financial Condition.... page 2

Results of Operations, page 7

10. We see that cost of goods sold decreased in fiscal 2010 despite an increase in sales. While we see your disclosure that you achieved higher margins on certain projects during the fiscal 2010, in light of the significant increase in revenues, in future or amended filings, please describe the specific factors leading to reduced cost of sales for the year.

Consolidated Statements of Operations, page 15

11. As provided in FASB Codification Topics 220 and 810, net income or loss includes the results of operations attributed to both controlling and non-controlling interests. Accordingly, in future or amended filings please revise the format of your income statement to better conform to the guidance applicable to non-controlling interests. In this regard, what you label as "Income (loss) before non-controlling interests" appears to be net income (loss) as defined in the Codification. Further, what you label as "Net income (loss)" appears to be income or loss attributed to your shareholders. Refer to FASB ASC 810-10-50-1A(a) and 810-10-55-4J.

Consolidated Statements of Changes in Stockholders' Equity (Deficiency), page 16

12. In future or amended filings, to better conform to the guidance applicable to non-controlling interests, please provide a reconciliation of the carrying amount of total equity, equity attributable to Environmental Tectonics, and equity attributable to the non-controlling interest. Refer to FASB ASC 810-10-50-1A(c) and FASB ASC 810-10-55-4L.

Consolidated Statements of Cash Flows, page F-5

13. 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 or amended 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.

Notes to the Consolidated Financial Statements, page 18

14. Please tell us why you did not include disclosure of recently issued accounting pronouncements. As applicable, please include this disclosure in any future or amended filings as well as in future quarterly reports. Refer to Topic SAB 11-M.

Note 2. Summary of Significant Accounting Policies, page 18

Fair Value of Financial Instrument, page 19

15. Please tell us why your borrowings are included in the table of recurring fair value measurements presented pursuant to FASB Codification Topic 820. In that regard, tell us how you are accounting for changes in the fair value of the debt, including whether the debt is presented in your financial statements at fair value at each period end and the basis in GAAP upon which you are relying. For instance, tell us whether you made a fair value election under FASB ASC 825-10-25. If the debt is not accounted for at fair value at each period end, in future or amended filings please provide fair value disclosures for your debt under FASB Codification Topic 825 as opposed to Topic 820.
16. In that regard, if you made a fair value election with respect to your debt, in future or amended filings please provide disclosure under FASB ASC 825-10-50-24 through 50-32.

Revenue Recognition, page 19

17. Please clarify for us whether you have any post shipment obligations that could impact revenue recognition. For example, we see on pages 2 and 3 of your Form 10-K that in connection with a system delivered in fiscal 2010 you provided a two-year service, support and scenario expansion package and plan to continue to provide enhanced product applications through additional software and increased interactivity. Please tell us how these matters were considered in the accounting for the contract.
18. We see your disclosure here and on page 4 of your Form 10-K regarding recognition of contract claims. If material, please disclose the amount of contract claims receivable you have recorded as of February 26, 2010 and February 27, 2009 in future or amended filings.

19. We note from page 5 of your Form 10-K that you offer warranties on your products ranging from 90 days to two years. Please tell us how your financial statement disclosures provide the information content specified by FASB ASC 460-10-50-7 and 50-8.
20. As a related matter, we see that your products appear to be highly customized to unique customer requirements. Accordingly, please also tell us how you estimate warranty obligations for newly developed or customized products.

Inventories, page 20

21. We see you reclassified \$2.9 million from property, plant and equipment to inventory and are charging the amount to cost of sales over a four quarter period. Please explain to us the basis in the Codification for the accounting for these costs and the related contracts as described in the referenced footnote.

Earnings Per Common Share, page 22

22. In your disclosure, you indicate that the series D and series E preferred stock are participating securities. As you identify the preferred shares as participating, please tell us how the calculation of earnings per share considers the guidance from FASB ASC 260-10-45-59A to 45-70. That is, explain to us how you considered the guidance applicable to the two-class method of calculating earnings per share.

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

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

23. We see that you have two series of convertible preferred shares outstanding. In general, the notes to financial statements should present complete disclosure of all material terms of each series of convertible securities. Please tell us how your footnote disclosures are complete under FASB ASC 505-10-50-3 through 50-6 or revise the footnote disclosure in future or amended filings.
24. With regard to the series D and E preferred stock, you disclose: "With respect to the convertibility of the Series D and E shares, in accordance with standards defined by generally accepted accounting principles on determining whether an instrument (or embedded feature) is indexed to an entity's own stock, and the Company has concluded that the embedded conversion feature did not have a material effect on its stated value." Please tell us what this sentence is intended to convey. In this regard, future or amended filings should present clear disclosure

about your assessment of the conversion feature and the ultimate basis in GAAP for the accounting applied.

25. We see that you issued warrants to H. F. Lenfest in connection with both the \$2 million promissory note dated February 20, 2009 and the amended and restated PNC guaranty dated April 24, 2009. Based on the warrant arrangements filed in EDGAR, it appears that that the warrants may include anti-dilution provisions, including a down-round provision where the exercise price resets in the event you issue securities at prices below the exercise prices of the warrants. Accordingly, please tell us how you considered the guidance from FASB Codification Topic 815-10 in assessing whether the warrants should be accounted for as derivatives and reported as liabilities at fair value. In that regard, please note that a down-round provision may preclude a conclusion that an instrument is indexed to your stock. For guidance, please refer to FASB ASC 815-40-15-5 and 815-40-55-33 and 55-34.
26. As a related matter, in future or amended filings please expand to provide disclosure about all material terms and conditions of the warrants, including a description of any circumstances that might lead to changes in exercise prices or numbers of warrants. Refer to FASB ASC 505-10-50.

Note 10. Income Taxes, page 30

27. In the last sentence on page 31, you indicate you are no longer subject to certain U. S. federal tax examinations for years before 2007. In future or amended filings please also include a similar disclosure related to foreign tax examinations.

Exhibit 10.30

28. We note that you do not appear to have filed the schedules or exhibit I to the credit agreement filed as Exhibit 10.1 to your Form 8-K filed April 27, 2009. Please re-file this agreement with all attachments in future or amended filings.

Exhibit 31.1 Certification

29. With regard to your Chief Executive's certification, in paragraph 4(d) following "recent fiscal quarter", the language "(the registrant's fourth quarter in the case of an annual report)" was omitted. Please include the referenced language in future annual and quarterly certifications, including currently dated certifications filed with any amendments. In this regard, please note that the Sarbanes-Oxley Section 302 certifications should be exactly as specified in Item 601 of Regulation S-K.

Form 10-Q for the quarterly period ending August 27, 2010

Management's Discussion and Analysis of Financial Condition...., page 18

Results of Operations, page 24

Gross Profit, page 25

30. We see that gross profit as a percentage of sales decreased substantially from the twenty-six week period ended August 28, 2009 to the comparable 2010 period. Please revise future filings to describe the underlying business reasons for the factors cited. For example, it is not clear why reductions in the ATS and simulation products resulted in reduced margins.

Item 4T. Controls and Procedures, page 29

Evaluation of Disclosure Control and Procedures, page 29

31. Please consider the comments with respect to disclosure controls and procedures in future Forms 10-Q.

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comments, please provide a written 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.

Mr. Duane Deaner
Environmental Tectonics Corporation
October 29, 2010
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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,

for

Brian Cascio
Accounting Branch Chief