



DIVISION OF
CORPORATION FINANCE

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

August 10, 2012

Via E-mail

Lane J. Castleton
Chief Financial Officer
Abtech Holdings, Inc.
4110 N. Scottsdale Road, Suite 235
Scottsdale, AZ 85251

**Re: Abtech Holdings, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed July 24, 2012
File No. 333-180721**

Dear Mr. Castleton:

We have reviewed your response letter and the amendment to your registration statement, and we have the following comments.

General

1. We note your response to prior comment two, from our letter dated May 10, 2012; however, the change in auditor from Madsen & Associates CPAs, Inc. to Semple, Marchal & Cooper, LLP represents a change in accountant of the legal entity that should have been reported in your Form 8-K. In this regard, since you did not previously provide the required disclosures in your Form 8-K, please revise your registration statement to provide the disclosures required by Item 304 of Regulation S-K.
2. To the extent applicable, please provide updated financial statements and related disclosures as required by Rule 8-08 of Regulation S-X.

Calculation of Registration Fee

3. It is unclear why you reference Securities Act Rule 457(i) in note three to the table. In this regard, we note it appears you are only registering the resale of the common stock that underlies certain convertible securities and not the convertible securities themselves. Please advise, or revise this reference as appropriate.

Prospectus Summary, page 2

Background of the Offering, page 3

4. We note the added language at the bottom of page 3. This language appears to discuss registration of the Secured Notes, issuance of Secured Notes in this offering, and the

registration of the sale of additional Secured Notes in a subsequent registered offering. However, your registration statement does not cover the sale of Secured Notes, and the common stock for which the registration statement covers the resale appears to underlie Secured Notes that were issued in a private placement. Please revise this section to remove any indication that the Secured Notes have been, are currently, or will be part of a registered transaction.

Dilution, page 20

5. Please provide us with your analysis of the calculation of amounts in the dilution table.

Management's Discussion and Analysis . . . , page 21

Results of Operations, page 21

6. We note your response to comment nine of our letter dated May 10, 2012. Specifically, we note you attribute your revenues to sales of your water filtration products, which all contain some form of Smart Sponge filtration media. We further note the different types of Smart Sponge products you identify on pages 32-34. In your results of operations section, please disclose whether any of the products you identify have more of a material impact on your results of operations than the others.

Comparison of the years ended December 31, 2011 and 2010, page 21

Gross Margins, page 22

7. We note your response to prior comment eight of our letter dated May 10, 2012 and the revisions to your registration statement. Please further expand the discussion regarding your primary raw materials to quantify the percentage of your cost of revenues attributable to the polymers you use to manufacture your Smart Sponge material during each period presented.
8. We note your added disclosure on page 22 in response to comment ten of our letter dated May 10, 2012. You now state that your manufacturing capacity could generate \$10-20 million in revenue per year. Please disclose whether this estimate is based off of the prices at which you currently sell your products.

Comparison of the three months ended March 31, 2012 and 2011, page 23

9. In the first paragraph, you state that you believe your revenue figures reflect improvement in economic factors and initial results of expanded business development efforts. Please quantify the extent to which you attribute the change in revenues to improvement in economic factors and the extent to which you attribute the change in revenues to initial results of expanded business development efforts. Additionally, please

explain the reason for the 11% decrease in revenues from the fourth quarter. Refer to Items 303(a)(3)(i) and (iii) of Regulation S-K.

10. Please quantify and discuss how much of the 453% change in net revenues was due to changes in volume sold and/or pricing.
11. Please quantify the underlying factors that you attribute to the significant change in selling, general and administrative expenses between the periods.
12. Please quantify an estimate of the costs you are now incurring as a result of being a public company.
13. Please discuss the loss on valuation of the warrant liability during the three months ended March 31, 2012.

Liquidity and Capital Resources, page 24

Liquidity, page 24

14. Please expand your disclosure to also include a discussion of your liquidity as of the date of your interim financial statements.

Comparison of cash flows for the years ended December 31, 2011 and 2010, page 24

Operating Activities, page 24

15. We note your response to prior comment 11 of our letter dated May 10, 2012 and the revisions to your registration statement. Please further expand your disclosure to explain the reasons for the significant changes comprising the fluctuations in your working capital deficit. Refer to section 501.13 of the SEC Codification of Financial Reporting Policies.

Investing Activities, page 25

16. We note your response to comment 13 of our letter dated May 10, 2012. Specifically, we note your statement that you believe that significant sales growth is possible to the extent that you would exceed your current manufacturing capacity by the end of 2012. We further note your references to significant sales growth in other parts of the prospectus (e.g., pages 21 and 23). Given that you are currently operating at 2% of your manufacturing capacity (see page 22), please provide us with supplemental material supporting your position that you believe you will achieve such significant sales growth by the end of 2012. Additionally, in light of your statement that you expect such significant sales growth, please explain your reference to “*gradual* revenue growth” (emphasis added) on page 21.

Critical Accounting Policies and Estimates, page 26

Fair Value of Warrant Liability and Note Discount, page 27
Stock-based Compensation, page 27

17. Please expand your disclosures to quantify and discuss the assumptions you used in estimating the value of the warrants and options, as applicable.

Our Business, page 28

Sales, Distribution, and Marketing Support, page 37

18. We note the added disclosure on page 37. Specifically, we note your statements that you are re-branding the company as a “full-suite environmental technology solutions company for water treatment” and as a “holistic stormwater technologies company with elite expertise.” Please explain the meaning of each of these “brandings,” and clarify whether these are two separate business endeavors.
19. We note your statement that your ongoing activities include forming strategic alliances. We further note other references to strategic alliances throughout the prospectus (e.g., pages 10, 21, 22, and F-13). Please disclose the current status, the nature, and the material terms of any strategic alliances you have formed or are currently forming.
20. Please define “NGO” as used in item three of this section.

Regulatory, page 43

21. We note the added disclosure on page 43 in response to comments 18 and 22 of our letter dated May 10, 2012. Please discuss the material effects, if any, that may occur if the required data is not submitted to the EPA by August 31, 2012. Additionally, please tell us what consideration you gave to including a risk factor discussing any material adverse effects that may occur if the required data is not submitted to the EPA by August 31, 2012.

Selling Shareholders, page 56

22. We note your response to comment 26 of our letter dated May 10, 2012. However, you do not identify the natural persons who have the shared voting and investment power over shares held by Middlebury Securities. Please revise this section to include this disclosure.
23. For any selling shareholder that is a broker-dealer or an affiliate of a registered broker-dealer, please indicate in this section whether it acquired the securities to be resold in the ordinary course of business. Also indicate here whether at the time of the acquisition it had any agreements, understandings or arrangements with any other persons, either

directly or indirectly, to dispose of the securities. We note the disclosure generally in the second paragraph on page 60.

Financial Statements, page F-1

Note 14 – Private Placements, page F-25

24. We note your responses to prior comments 40 and 41 and your disclosures regarding your debt. Please more fully explain/address the following:
- if/how you impute interest expense for the loans with no stated interest rate;
 - how you determined your shares are not readily convertible into cash;
 - the factors that impacted your valuation of the warrants at each balance sheet date;
 - how you concluded that valuing the warrants using an alternative valuation methodology would not be materially different from the method you used;
 - how you considered the value of the warrants in determining if a beneficial conversion feature was required to be recorded in 2011 and 2012; and how you determined the amount of the beneficial conversion feature you recorded in 2012.

Exhibit 5.1

25. In the third paragraph on page one of the opinion, counsel states that “when the Shares shall have been duly registered on the books of the transfer agent and registrar . . . and have been issued by the Company against payment therefor . . . the issue and sale of the Shares will have been duly authorized . . .” Please explain to us how, under state law, the shares can be duly registered on the books of the transfer agent and registrar and issued by the Company against payment therefor prior to authorization of the shares.

You may contact Dale Welcome, Staff Accountant, at (202) 551-3865 or Anne McConnell, Staff Accountant, at (202) 551-3709 if you have questions regarding comments on the financial statements and related matters. Please contact Jessica Dickerson, Staff Attorney, at (202) 551-3749 or Craig Slivka, Special Counsel, at (202) 551-3729 with any other questions.

Sincerely,

/s/ John Cash, for

Pamela Long
Assistant Director

cc: Jaime Brennan, Squire Sanders LLP (*via e-mail*)