



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

November 18, 2010

Claudio Mannarino
Chief Financial Officer
API Technologies Corp.
555 Leggett Drive, Suite 304
Ottawa, Ontario K2K2X3 Canada

**Re: API Technologies Corp.
Form 10-K for the fiscal year ended May 31, 2010
Filed August 10, 2010
File No. 000-29429**

Dear Mr. Mannarino:

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 May 31, 2010

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 32

Liquidity and Capital Resources, page 37

1. While you indicate that you believe your sources of liquidity are sufficient for the next 12 months, it is unclear from your disclosure how you reached this conclusion. For example, it is unclear:

- where you described the credit facilities you mention here, including the amounts you have available to borrow under it, and how those facilities will allow you to meet your cash requirements;
- how cash flows from operations will enable you to satisfy your cash requirements, given your disclosure of cash used by operations on page F-7; and
- what your “cash requirements” are, such as your outstanding debt, or how you intend to satisfy them. For example, how do you intend to pay off the \$10 million debt that matures on December 31, 2010 given the amounts of cash you hold and historical amounts of cash used by operations?

Please tell us and revise future filings.

Summary of Critical Accounting Policies, page 38

Goodwill and Intangible Assets, page 39

2. You disclose that your goodwill impairment testing revealed that “future cash flows significantly exceeded the carrying value of the assets and the Company has determined there was no impairment in goodwill.” Based on your disclosure, both here and on page F-10 of the financial statements, it is not clear whether you performed the two-step method as described in FASB Codification Topic 350-20. In that regard:
 - Please describe to us how you applied the two-step goodwill impairment testing model.
 - Tell us whether the fair values of the relevant reporting units exceeded their respective carrying amounts.
 - Tell us whether as of May 31, 2010 you had any reporting units at risk of failing step one of the impairment model based on a comparison of the fair values of the individual reporting units to their respective carrying amounts.

Item 11. Executive Compensation, page 47

3. We note your disclosure in the “Summary Compensation Table for Fiscal Year 2010 and 2009” on page 22 of the definitive proxy statement, which has been incorporated by reference, that Martin Moskovits received a cash bonus of \$200,000 in 2009. Please tell us how this disclosure is consistent with your

disclosures on pages 20 and 25, which indicate that Mr. Moskovits received a \$20,000 cash bonus in 2009.

4. We note your disclosure on pages F-32 and F-35 regarding the modification of options awarded to Martin Moskovit during your last completed fiscal year. With a view toward amended disclosure, please tell us:
- how this modification of your stock option awards is reflected in your “Summary Compensation Table for Fiscal Year 2010 and 2009” on page 22 of your definitive proxy statement, which has been incorporated by reference. Refer to Regulation S-K Item 402(n)(2)(v) and Instruction 2 to Regulation S-K Item 402(n)(2)(v) and (vi); and
 - how your disclosure on those pages is consistent with your disclosure of the March 14, 2011 expiration date of 33,333 options granted to Martin Moskovits on page 23 of your definitive proxy statement.

Item 13. Certain Relationships and Related Transactions . . . , page 47

5. Please tell us, and revise future filings to describe clearly, the nature of the “consulting services” provide by Jason DeZwirek. Also tell us where the document governing that arrangement is filed as an exhibit.

Exhibits, page 48

6. If you elect to incorporate exhibits by reference in future filings, please ensure that your disclosure refers to the correct location of those exhibits. For example, you indicate that Exhibits 10.1-10.3 are incorporated by reference from an amended Form S-1 filed on February 6, 2006. However, no such filing was made on that date. You also indicate that Exhibits 10.1-10.2 were dated February 6, 2006. However, no such agreements appear to have been filed.

Item 8. Financial Statements

Note 2. Summary of Significant Accounting Policies, page F-8

Goodwill and Intangible Assets, page F-10

7. We note the increase in goodwill as a result of recent acquisitions. In future filings please enhance your discussion of the goodwill impairment testing model to describe the reporting unit concept and the two-step method as set forth in FASB Codification Topic 350-20. Please also identify your reporting units, disclose how you identified those reporting units and disclose the date you

perform the goodwill impairment test. Please provide us proposed revised disclosure for inclusion in future filings.

Definitive Proxy Statement on Schedule 14A

Board Leadership Structure . . . , page 10

8. Given the information in the Form 8-K you filed on September 13, 2010, please tell us how you determined you were not required to file revised preliminary proxy materials. See Exchange Act Rule 14a-6. Cite all authority on which you rely.

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 all information required under 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.

Claudio Mannarino
API Technologies Corp.
November 18, 2010
Page 5

You may contact Praveen Kartholy at (202) 551-3778 or Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Aslynn Hogue at (202) 551-3841 or Geoffrey Kruczek at (202) 551-3641 with any other questions. You may also contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676 with any other questions.

Sincerely,

Brian Cascio
Accounting Branch Chief