



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

March 2, 2007

Ms. Dana M. Kelly
Vice President, Chief Financial Officer and Treasurer
American Pacific Corporation
3770 Howard Hughes Parkway, Suite 300
Las Vegas, Nevada 89169

RE: Form 10-K for the Fiscal Year ended September 30, 2006
Form 10-Q for the Fiscal Quarter ended December 31, 2006
File No. 1-8137

Dear Ms. Kelley:

We have reviewed these filings and have the following comments. If you disagree with a 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. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

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 September 30, 2006

General

1. Where a comment below requests additional disclosures or other revisions, please show us what the revisions will look like in your response. These revisions should be included in your future filings, including your interim filings where applicable.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 34

2. Please enhance your management's discussion and analysis disclosures for each business segment by quantifying the individual reasons for significant changes in revenues and gross margins in terms of the amount of increase or decrease due to prices and volume and include an explanation of the underlying reasons for the changes. Please also quantify the amount of increases or decreases in operating expenses for each segment and include a quantification of the underlying reasons for the changes where practicable. Please refer to Item 303 of Regulation S-K.

Item 9A. Controls and Procedures, page 51

3. You state that disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports that you file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms. Please note that you have provided an incomplete definition of disclosure controls and procedures per Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Please revise your definition to clarify, if true, that your disclosure controls and procedures were effective to ensure that information required to be disclosed by you in the reports that you file or submit under the Exchange Act is accumulated and communicated to management, including your principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Alternatively, you may simply conclude that your disclosure controls and procedures were effective or ineffective, whichever the case may be, without providing any part of the definition.

Financial Statements

Note 2 – Acquisitions, page F-10

4. Please present a condensed balance sheet that discloses the amount assigned to each major asset and liability acquired from the AFC business of GenCorp. Please refer to paragraph 51 (e) of SFAS 141.

Note 10 – Employee Benefit Plans, page F-19

5. You refer to investment advisors with whom you consulted in developing the assumed expected long-term rate of return on plan assets. Please identify the investment advisors. Alternatively you may delete this reference. Please make similar revisions to the pension benefit disclosures in your critical accounting policies.
6. You have a target allocation of 70% equities and 30% debt securities in your defined benefit pension plans. However, your actual allocations as of September 30, 2006 and 2005 included 11% and 24%, respectively of other assets. Please disclose what the other assets represent and the risks associated with other assets. Please refer to paragraph 5(d) of SFAS 132 (R).

Note 11 – Commitments and Contingencies, page F- 21

7. You have recorded \$26 million in environmental remediation reserves to date related to the Henderson site. You disclose that your environmental remediation reserve estimates may be subject to material adjustment upward or downward in future periods. We remind you that SAB Topic 5:Y states that environmental liabilities are of such significance that detailed disclosures regarding the judgments and assumptions underlying the recognition and measurement of the liabilities are necessary to inform readers fully regarding the range of reasonably possible outcomes that could have a material effect on your financial condition, results of operations, or liquidity. If applicable, please disclose any reasonably possible additional loss or a range of reasonably possible additional losses. Please refer to Question 4 in SAB Topic 5:Y.
8. You disclose that you completed the construction of an environmental remediation facility in December 2006. Please tell us whether you have recorded an asset retirement obligation for the projected costs to retire this asset. Please also provide the disclosures required by SFAS 143 and FIN 47.

Note 12 – Segment Information, page F-26

9. On page 23 you disclose that the top five customers of Ampac Fine Chemicals accounted for 97% of its revenues in 2006. Please disclose the amount of revenues for each customer that accounts for 10% or more of your enterprises revenues. Please refer to paragraph 39 of SFAS 131.

* * * *

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 response letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please submit your response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed decision. 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 connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in their filings;
- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Dana M. Kelley
American Pacific Corporation
March 2, 2007
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If you have any questions regarding these comments, please direct them to Gus Rodriguez, Staff Accountant, at (202) 551-3752 or, in his absence, Scott Watkinson, Staff Accountant, at (202) 551-3741.

Sincerely,

Rufus Decker
Branch Chief