



DIVISION OF  
CORPORATION FINANCE

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

January 19, 2011

Mitcham Industries, Inc.  
Robert P. Capps, Executive Vice President – Finance and Chief Financial Officer  
8141 SH 75 South  
P.O. Box 1175  
Huntsville, TX 33742

**Re: Mitcham Industries, Inc.  
Form 10-K for the year ended January 31, 2010 filed April 9, 2010  
Form 10-Q for the quarter ended October 31, 2010 filed December 8, 2010  
File No. 0-25142**

Dear Mr. Capps:

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 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, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the year ended January 31, 2010

Item 7 Management's Discussion and Analysis of financial Condition and Results of Operations

Overview, page 21

1. We note your disclosure in footnote (1) to your operating information that EBITDA and Adjusted EBITDA are important for assessing your performance and as indicators of your ability to make capital expenditures, service debt and finance working capital requirements and that these measures allow investors to meaningfully trend and analyze performance of your core cash operations. Based on these disclosures it appears that you are not only utilizing these measures as performance measures, but also as liquidity measures. If you are using these measures as liquidity measures, please revise future disclosures to clearly state such and reconcile the measures to the most comparable liquidity measure, operating cash flow. If you are not using these measures as liquidity measures, please revise your future disclosures to remove references to cash liquidity. Please provide to us your proposed future disclosures.

Critical Accounting Policies

Revenue Recognition, page 33

2. With a view toward future disclosure, please clarify whether you have multiple element arrangements. If so, expand your disclosures to address your accounting for these arrangements. In this regard, we note that you design, manufacture and sell seismic equipment and your disclosure on page 25 which indicates that you provide on-going support activities. If appropriate, please also discuss how you have established fair value for each of your elements. Please refer to ASC Topic 605-25.

Long-Lived Assets, page 33

3. We note that demand for your lease-pool assets has declined in the periods presented. In future filings, please expand your disclosures to provide a more specific and comprehensive discussion of the changes in circumstances which would cause you to perform an impairment analysis of your long-lived assets. Also, please disclose whether you were required to perform an impairment analysis during any of the periods presented.

Goodwill and Other Intangible Assets, page 34

4. We note that your results of operations could be adversely affected as a result of goodwill impairments. Please tell us what your reporting units are and how you determined them and to the extent that any of your reporting units have estimated fair values that are not substantially in excess of the carrying value and to the extent that goodwill for these reporting units, in the aggregate or individually, if impaired, could materially impact your operating results or total shareholders' equity, please provide the following disclosures for each of these reporting units in future filings:
  - Identify the reporting unit;
  - The percentage by which fair value exceeds the carrying value as of the most-recent step-one test;
  - The amount of goodwill;
  - A description of the assumptions that drive the estimated fair value;
  - A discussion of the uncertainty associated with the key assumptions. For example, to the extent that you have included assumptions in your income approach that materially deviates from your historical results, please include a discussion of these assumptions;
  - A discussion of any potential events and/or circumstances that could have a negative effect to the estimated fair value.

If you have determined that the estimated fair value substantially exceeds the carrying value for all of your reporting units, please disclose this determination in future filings. Please refer to Item 303 of Regulation S-K.

Notes to the Consolidated Financial Statements

11. Income Taxes, page F-15

5. We note your disclosure on page F-16 indicating that you had Canadian net operating loss carryforwards that begin to expire in 2011 and your disclosure on page 8 which indicates that your Canadian revenues have decreased significantly. Please explain to us and include in future disclosures the evidence which led you to conclude that these net operating loss carryforwards are realizable.

14. Segment Reporting, page F-20

6. Please provide to us a tabular presentation of your reconciliation of Segment to Consolidated Income (loss) before taxes for all periods presented and in future filings please ensure that all significant reconciling items are separately identified and described. Please refer to ASC Topic 280-10-50-30.

Form 10-Q for the quarter ended October 31, 2010

Notes to the Condensed Consolidated Financial Statements

4. Acquisition, page 4

7. We note that your acquisition of AES resulted in a bargain purchase gain. Please provide to us a more comprehensive discussion explaining how you determined that this gain is appropriate. Please refer to ASC Topic 805-30-25-4.

6. Balance Sheet, page 6

8. Your disclosure indicates that you still in the process of repossessing equipment related to a defaulted contract receivable. Please tell us and disclose in future filings the status of this repossession and when you expect the process to be complete. Due to the length of time it has taken for the repossession, please tell us whether you have reassessed the value of the equipment.

Liquidity and Capital Resources, page 20

9. We note that you have extended the terms on your revolving credit facility which is now due May 31, 2012 and you have increased the limit to \$35 million. We also note that you may convert outstanding balances on your credit facility to 48-month notes. If you expect to utilize this option, please discuss the impacts it may have on your liquidity and your results, including interest expense. Additionally, please revise future annual and quarterly filings to disclose and discuss average borrowing levels under your credit facility during each period presented.

Mr. Robert P. Capps  
Mitcham Industries, Inc.  
January 19, 2011  
Page 4

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.

You may contact Mindy Hooker at (202) 551-3732, Jeanne Baker at (202) 551-3691 or me at (202) 551-3768 with any questions.

Sincerely,

John Cash  
Branch Chief