March 23, 2006

VIA EDGAR AND FACSIMILE

Mr. John Cash Branch Chief Securities and Exchange Commission Division of Corporation Finance 100 F Street, NE Washington, D.C. 20549-0405

Re: Mitcham Industries, Inc. Form 10-K for the fiscal year ended January 31, 2005 Form 10-Q for the quarter ended October 31, 2005 File No. 0-25142

Dear Mr. Cash:

On February 28, 2006, Mitcham Industries, Inc. (the "<u>Company</u>") received the comments of the staff of the Division of Corporation Finance (the "<u>Staff</u>") of the Securities and Exchange Commission (the "<u>Commission</u>") to Form 10-K for the fiscal year ended January 31, 2005 (the "<u>2005 Form 10-K</u>") and Form 10-Q for the quarter ended October 31, 2005 (the "<u>Form 10-Q</u>").

With respect to the comments, for the reasons stated in the Company's response letter dated January 31, 2006, the Company believes that any revised or supplemental disclosure would not be material to the Company's overall historical disclosure. Accordingly, the Company respectfully requests that the Staff permit the Company to address any of these revised or supplemental disclosures in its Annual Report on Form 10-K for the year ended January 31, 2006 (the "2006 Form 10-K"), rather than amending or supplementing the disclosure in the 2005 Form 10-K or the Form 10-Q.

The following responses are for the Staff's review. For your convenience, we have repeated in bold type each comment of the Staff exactly as given in the Staff's comment letter.

Form 10-K for the fiscal year ended January 31, 2005

Lease pool equipment and new equipment sales

1. We note your responses to prior comments one, seven, eight and nine with regard to your accounting and disclosures surrounding your lease pool equipment and new equipment sales and have the following concerns.

You indicate that you have not historically differentiated equipment sales as new equipment versus used equipment. Demonstrate how you are able to appropriately classify the cash receipts from the sale of used lease pool equipment within your Statements of Cash Flows. In this regard, we believe that the cash receipts from the sale of used lease pool equipment should be consistently classified and presented with the related cash payments for the purchase of such equipment. Given your response to prior comment two that your primary source of revenues is derived from short-term leasing of equipment and given the fact that you have reflected the purchases of seismic equipment held for lease within financing activities, tell us why you have not presented the cash receipts from the sale of used lease pool equipment within financing activities. Refer to paragraphs 16c and 24 of SFAS 95.

Response: The Company has not historically differentiated cash receipts from the sale of lease pool equipment from cash receipts from the sale of new and used equipment. Beginning with the 2006 Form 10-K, we will classify cash received from the sale of used lease pool equipment as an investing activity in the statement of cash flows for all periods presented. We assume your reference to "financing activities" in the last sentence of your comment was intended to be "investing activities."

You indicate in your response to prior comment seven that your cash flow caption "Net book value of equipment sold" should be "Net book value of lease pool equipment sold". However, it is still unclear to us what this line item represents. Is this line item actually the net book value of your lease pool equipment? If so, why is it reflected within cash flows from operating activity and why does it not agree to your cost of equipment sales in your consolidated statements of operations?

Response: The cash flow statement for all periods presented will be modified to remove this caption and to reflect the gross profit from the sale of lease pool equipment as a reduction of income from operations and the cash receipts from the sale of lease pool equipment as investing activities.

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Demonstrate how you have appropriately reflected your cash receipts and cash payments related to your new equipment sales within your Statements of Cash Flows pursuant to paragraphs 21, 22a and 23a of SFAS 95. In this regard, we note that in your response to prior comment one you indicate that it would take an extraordinary amount of time and resources to review the information within your fixes [*sic*] asset ledger for lease pool equipment to attempt to isolate the sales of new equipment from those of used equipment.

Response: The Company reflects cash payments for purchases of new and used equipment and cash receipts from the sales of new and used equipment that were acquired for resale, including receipts and payments under short-term financing agreements, in cash flows from operating activities in accordance with the paragraphs 22a and 23a of SFAS 95. Please note that the Company does not include new equipment acquired for resale in its lease pool.

We note your response to prior comment eight that you only buy equipment for resale for specific customer orders. Tell us why, then, you include new equipment purchases that have been purchased for resale for specific customer orders within your fixed asset ledger for lease pool equipment. Given the fact that you do not appear to have historically maintained inventory and cost of sales information for new equipment sales, help us to understand how you were able to conclude as you did in your response to prior comment eight that you did not have new equipment on hand at any balance sheet date primarily because you sell everything FOB shipping point and sales of new equipment are sporadic.

Response: We do not include new equipment acquired for resale in our lease pool. Our prior response to comment 1 pertained to the difficulty of separating new and used equipment sales from equipment sales from our lease pool and was not intended to suggest equipment acquired for resale is included in the lease pool. As previously stated, new equipment, and occasionally used equipment acquired for resale is purchased to fulfill a specific customer order. However, with respect to such purchases of new equipment for resale, we have not held such equipment at a balance sheet date and therefore, no such equipment has been reflected on our balance sheet. As sales of new and/or used equipment are sporadic and are sold FOB shipping point, the probabilities of the Company having new equipment held for resale in inventory at a given quarter end are low.

You indicate in your response to prior comment nine that you do not take title to equipment on consignment. Tell us the amount of equipment on hand of third parties for which you have not taken title as of each balance sheet date as well as the amount of gross and net consignment sales

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recognized during each period presented. Tell us how you track and differentiate for reporting purposes inventory held by you on consignment versus inventory purchased by you for resale to your customers. Clarify what commitments you have as a consignee of this inventory.

Response: The Company had no consignment sales during the periods covered in the 2005 Form 10-K.

Occasionally a customer will ask us to assist them in selling certain of their equipment. If we agree, then we will attempt to find a buyer for the equipment. We do not take title to the equipment to be sold. Any equipment requiring any transfer of title is handled between the seller and the buyer. Additionally, we do not record equipment held for consignment sale in our financial records. Usually the purchase price is not fixed, but rather the seller establishes a minimum price that they are willing to accept for the equipment. When the equipment is sold, the buyer will pay Mitcham directly and Mitcham in turn pays the seller the minimum price. The difference between the amount received from the buyer and the amount paid to the seller is recognized by Mitcham as commission income at the time we finalize the sale and are entitled to receive the commission from the seller. If the equipment to be sold is physically delivered to us, then we physically separate that equipment from our lease pool equipment. Consignment sales are on a "best efforts" basis and we are under no obligation to buy or sell the equipment. Note that equipment sales on behalf of customers are infrequent and immaterial.

You discuss the appropriateness of gross revenue reporting in your response to prior comment nine. We assume that this analysis relates to your SAP equipment sales and not your sales you make as a consignee. Please clarify and separately assess the appropriateness of your revenue presentation of consignment sales.

Response: The appropriateness for gross revenue reporting in our prior response is related to SAP equipment sales and not to consignment sales. See the above response regarding our revenue recognition relating to consignment sales.

Management's Discussion and Analysis — Liquidity, page 15

2. Your response to prior comment four indicates that the increase in your cash flows from operations was principally impacted by the increased demand for your equipment (e.g. income from operations). We note however that there were also significant changes in working capital accounts that you should also fully discuss in order to provide a comprehensive discussion of your cash flows from operating activities for each period presented.

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Response: Our principal sources of cash have been cash flows from our short-term leasing operations. During fiscal 2005 and 2006, our cash flows from operating activities were affected by several significant factors. The principal factor was a marked increase in oil and gas exploration and development activities. Increases in the price of oil and natural gas, combined with the maturation of the world's hydrocarbon producing basins, have improved market conditions and have increased demand for our equipment.

Our working capital significantly increased due primarily to the increase in cash and cash equivalents as a result of an increase in revenues while receivables remained relatively flat. Additionally, capital expenditures for equipment purchases were lower thus allowing us to retain a higher level of cash. Current maturities of long-term debt and equipment notes payable reflected substantial decreases because of payment on these obligations.

Although we believe these factors are inherent in the Company's discussion of its results of operations, the Company will expand its discussion regarding changes in working capital accounts and will address the foregoing and any other reasons for changes in cash flows from operations in its 2006 Form 10-K.

Note I — Organization and Summary of Significant Accounting Policies — Seismic Equipment Lease Pool, page F-8

3. We reviewed your response to our prior comment 11 and have the following additional comments.

You disclosed in Management's Discussion and Analysis that depreciation expense had decreased significantly during the past three fiscal years because certain equipment had reached the end of its depreciable life coupled with sales of assets with remaining depreciable life. Based on your response, it is unclear to us how you were able to provide these bases for the decrease in depreciation expense. Specifically, how do you know that depreciation decreased because certain equipment had reached the end of its depreciable life, if, as you indicate in your response, you are unable to identify and disclose the cost basis of the seismic equipment pool that has been fully depreciated? How do you know when fully depreciated equipment is still generating lease revenue and thus positively impacting your results of operations? In addition, how were you able to represent that you sold equipment with remaining depreciable life? How do you identify the net book value of the used leased equipment sold if your revenue system is not integrated with your fixed asset system?

Response: We are able to determine that depreciation expense has decreased as of the end of a reporting period as certain groups of equipment reach the end of their depreciable lives. We are able to determine that a group of

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equipment has reached the end of its depreciable life based on the time that elapsed since the equipment was first used. For example, when we purchase geophones in a given year, we know from historical experience that they have a three-year depreciable life. When the three-year period has passed, we know that the group of geophones has reached the end of its depreciable life. The same analysis applies to other types of equipment with variable depreciation lives, such as channel boxes, which have a five-year depreciable life. When we purchase geophones or any other equipment, we purchase large quantities (totaling several thousands units) of any given item at one time. Our purchases of equipment are generally sporadic and we generally do not purchase the same equipment every year. As a result, we are able to determine when large groups of equipment have become fully depreciated.

To further clarify, historically we have generally tracked asset sales by assigning a "book number" to a "lot" of equipment. The "lot" could represent several thousand units of equipment. Certain types of equipment had individual serial numbers assigned to each unit; however, we did not have the ability to track the serial numbers for individual items of equipment in our system. During the time that we own and lease the equipment, all or a portion of it may be transferred to one of our subsidiary companies, and that subsidiary would then assign a new book number to the equipment that they received. Additionally, each time the same equipment was transferred to another of Mitcham's subsidiaries, that item of equipment was given a new book number. The end result was that an item of equipment could be assigned multiple book numbers. Each successive book number bore no relationship to any previous book number that had been assigned. The original acquisition date was the key component by which we could track an individual asset. Once the asset was located, then the original cost and accumulated depreciation could be ascertained. But as the number of book numbers for our assets multiplied, the process of locating a particular asset became increasingly difficult. In addition, determining net book value for assets sold was very time consuming due to our systems limitations. We have, however, recently installed new software that allows us to more easily track individual assets, but only from the software installation date forward.

We also believe that we need to clarify our previous response to item 11. When we stated that "[t]he Company is unable to disclose the cost basis of the seismic equipment lease pool that has been fully depreciated as of each balance sheet date," the statement was not meant to imply that we could not determine that value at all with respect to particular pieces of equipment. But, rather, as described above it is very difficult for us to determine the cost basis for an individual item of equipment within our lease pool, which currently contains approximately 158,000 items. We are able to determine the cost basis for each item of equipment that is sold, but the process to accomplish that task is quite difficult and time consuming.

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We have not historically tracked when fully depreciated equipment is still generating lease revenue because that information is not available from our current or former accounting systems.

Tell us supplementally and expand your accounting policy to clarify when fully depreciated seismic equipment lease pool assets are removed from your books. If you are not able to track lease revenues on a per item basis, how are you able to appropriately determine when to remove fully depreciated equipment from your books?

Response: Historically, due to limitations in our accounting software, we have not removed fully depreciated lease pool assets from our books. Due to systems upgrades, we now have the capability to determine which assets should be removed from our lease pool because they have become fully depreciated beginning with our fiscal year ended January 31, 2006, and have been able to create a program in response to the Staff's comment, which will allow us to determine the amount of lease pool assets that were fully depreciated at January 31, 2005. Accordingly, we will revise our disclosure in our 2006 Form 10-K as appropriate.

Given the fact that "the Company has not historically tracked individual assets that have been leased" please explain to us how you have determined that you are depreciating these assets over their useful lives. Your response indicates that "industry trends" do not warrant an increase in the depreciable lives of the equipment in your lease pool. Do you only look to industry trends when determining the appropriate depreciable lives for your equipment lease pool? What is the average total period of time your channel boxes and other peripheral equipment are under lease? Are these periods longer than that suggested by the industry trends you use to assess the appropriateness of the useful lives of your lease pool? If so, please explain.

Response: We look closely at industry trends in determining the appropriate useful life for our equipment, as we must consider technological obsolescence, in addition to actual useful service life. We also consider our historical experience. In 1999, the equipment in our lease pool was subject to longer depreciable lives. Channel boxes, for example, were subject to a seven-year depreciable life. Based on our evaluation at that time, we recorded a \$15 million impairment charge, a significant portion of which was attributable to channel boxes. Since that time, we have attempted to establish depreciable lives for our lease pool equipment that are sustainable through the periods of both high and low leasing demand, which regularly permeate our industry.

The manufacturers of channel boxes produce a new generation of a channel box approximately every five years. When new technology is available, often our customers request the newer equipment instead of leasing older technology. Our channel boxes may have useful life remaining after five years, but market demand could drop significantly if newer technology is

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available. The period of time we use for determining depreciable lives of our equipment is not longer than that suggested by industry trends, but is consistent with those trends.

When we purchase new equipment for our lease pool, we begin to depreciate it upon its first use and depreciation continues each month until the equipment is fully depreciated, whether the particular item of equipment is in use during all of that time period. As a result, during the years leading up to fiscal 2005 and 2006, the Company had high levels of depreciation expense relative to its revenues, which gave rise to losses in those years. It is our belief that depreciable lives are not solely a function of the demand for our equipment, rather it is the functional utility of our equipment as determined by market forces. The depreciable lives we assign to our equipment are intended to reflect the prime revenue generating years for that equipment. We don't believe it appropriate to adjust depreciable lives up and down with each trend in the oil and gas industry. Rather, we look at the long-term view of the industry.

Our business primarily involves leasing our equipment on a short-term basis to our customers. Those leases generally have three to nine month terms. We lease our equipment multiple times until the end of its useful life or its sale. However, we are not able to provide the average total period of time any particular type of equipment is under lease. That calculation would depend on a number of variables, including, among others, customer demand and investment in equipment by us.

Based on the significant impact the depreciation of your equipment lease pool can have on your results of operations, it appears necessary for you to identify this management estimate as a critical accounting policy. Please provide us with your proposed disclosures.

Response: Beginning with our 2006 Form 10-K we will include the following or similar disclosure in the "Long-Lived Assets" critical accounting policy:

"We review and consider industry trends in determining the appropriate useful life for our lease pool equipment, including technological obsolescence, market demand and actual historical useful service life of our lease pool equipment. When we purchase new equipment for our lease pool, we begin to depreciate it upon its first use and depreciation continues each month until the equipment is fully depreciated, whether the equipment is actually in use during that entire time period."

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Lease Pool, page F-8

4. We note your response to prior comment 12 and have the following additional comments.

• As previously noted, your discussion within Critical Accounting Policies indicated that the company "...is not assured that their net deferred tax assets will be realized...". We asked you to confirm that an assessment of your deferred tax assets in accordance with paragraph 17c of SFAS 109 would not change the valuation allowance you have recorded as of each balance sheet date presented. That is, did you appropriately reduce your deferred tax assets by a valuation allowance for the portion of your deferred tax assets, which based on the weight of available evidence, is "more likely than not (a likelihood of 50 percent) will not be realized?"

Response: We confirm that an assessment of our deferred tax assets in accordance with paragraph 17c of SFAS 109 would not change the valuation allowance we have recorded as of each balance sheet date presented. Our assessment was that it was more likely than not that some portion or all of our deferred tax assets would not be realized.

• As previously requested, expand Management's Discussion and Analysis to address the positive and negative available evidence that led you to conclude that a valuation allowance was necessary to reduce your deferred tax assets to zero. Refer to paragraphs 21 through 24 of SFAS 109.

Response: Beginning with our 2006 Form 10-K, we will expand Management's Discussion and Analysis to address the positive and the negative evidence that lead us to increase or decrease the remaining valuation allowance associated with our deferred tax assets by including the following or similar disclosure:

"Deferred tax assets and liabilities are determined based on temporary differences between income and expenses reported for financial reporting and tax reporting. We are required to record a valuation allowance to reduce our net deferred tax assets to the amount that we believe is more likely than not to be realized. In assessing the need for a valuation allowance, we have considered all positive and negative evidence, including scheduled reversals of deferred tax liabilities, prudent and feasible tax planning strategies, projected future taxable income and recent financial performance.

In years leading up to 2005, we had substantial consecutive net losses which were indicative of the oil and gas industry at that time. The oil and gas industry is cyclical in nature and historically the oil and gas service industry and our business follows the trends of the oil and gas production and

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exploration industry. When oil and gas prices were suppressed, our industry and our business suffered. This is evidenced by the losses mentioned above. As of January 31, 2005, the industry was experiencing more positive trend, but based on our history of losses through fiscal 2004 and the difficulties faced by the oil and gas industry over the past several years, we were unable to confidently predict how long this trend would last and as such we were not prepared to, and we were not able to conclude that it was more likely than not that the Company would be able to realize the deferred tax assets subject to a 100% valuation allowance.

We intend to maintain the recorded valuation allowances until sufficient positive evidence (for example, cumulative positive earnings or additional source income) exists to support a reversal of the tax valuation allowances. As of January 31, 2006, a large portion of the Company's net operating losses in the United States and Canada will be used to offset taxable income in fiscal 2006."

The Company anticipates that a material amount of deferred tax assets will continue to remain as January 31, 2006 and will have to make a determination as to whether all or a portion of the remaining valuation allowance should be removed.

Additional Comments

Based on your overall response to our prior comment letter, we have the following additional comments:

5. We note that your equipment leasing revenues have increased 66% from 2003 to 2004 and 24% from 2004 to 2005. Please tell us supplementally and expand your disclosures to discuss the utilization rates for your equipment lease pool for each period presented as well as the underlying reasons for the changes in these rates. In addition, discuss the impact the changes in these rates had on changes in your revenues recognized from period to period.

Response: Although we do not compute utilization rates for our equipment lease pool, we believe that the increase in our leasing revenues and the relatively constant size of our lease pool can be attributed to an increase in utilization of our lease pool equipment. The Company has relatively fixed costs within certain revenue ranges and, as a result, earnings are particularly sensitive to changes in utilization and demand for our lease equipment. Accordingly, we will expand our disclosure in our 2006 Form 10-K to address such utilization trends.

6. We also note that your depreciation decreased 7% from 2003 to 2004 and 23% from 2004 to 2005. Given the fact that depreciation is the most significant expense related to your leasing revenues, your current disclosures within the Costs and Expenses section of your MD&A regarding depreciation expense is not sufficient enough to provide your investor with a comprehensive

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understanding of these significant fluctuations and the impact they have had on your business. Please provide enhanced disclosures explaining why depreciation expense has continued to decrease even in light of the significant increase in your leasing revenues. In this regard, we note from one of your responses that the cost basis of your equipment has been declining due to quantity purchase arrangements. Have there been any other reasons for the decrease in the cost basis for your equipment? Is the market price of the equipment declining? If so, indicate if this decrease in the cost of leasing equipment could have any impact on the amount of leasing revenue you will be able to generate from that equipment.

Response: Beginning with our 2006 Form 10-K we will include the following or similar disclosure:

"Our business generally parallels trends in the oil and gas industry. When the oil and gas industry was depressed over the period from 1998 to 2004, we experienced net losses for those periods. As the oil and gas industry is on an upward trend and we are experiencing increased demand for our equipment, including equipment that has been fully depreciated. Increased demand for our equipment results in higher revenues and generally has no impact on depreciation in the short term as our equipment is depreciated from the first month it is placed in service until it is fully depreciated. Depreciation expense is recorded monthly whether or not the equipment is actually generating revenue on a lease contract. During periods of high demand, such as the one we are currently experiencing, our ability to lease older equipment, (including fully depreciated equipment) is enhanced; whereas in periods of low demand, the opposite is true. As a result, revenues and depreciation expense will not necessarily directly correlate. Over the long-term, depreciation expense is impacted by increases in equipment purchases to meet growing demand for our leased equipment. For example, we have been able to purchase equipment at discounts through volume purchase arrangements. A lower purchase price results in lower depreciation expense than in previous periods. These lower purchase prices are the sole reasons for the decrease in our cost basis as the total number of units of lease pol equipment have not materially decreased. On the other hand, although some of the equipment in our lease pool has reached the end of its depreciable life, given the increased demand that equipment obselsecence than by usage or wear and tear, some of our equipment, although fully depreciated, is still capable of functioning appropriately. Currently, in our industry, higher demand is generating more leasing revenue and older equipment is more in demand than in times past.

In the years preceding fiscal 2005, when the industry was in a downward trend, demand for our equipment was lower than it is currently. Now that the industry is in an upward trend, any attempt to adjust depreciable lives so that depreciation expense can be paired with revenues generated from the equipment now that it is fully depreciated would be inconsistent with our prior practice and reporting. We feel it is

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more prudent to determine appropriate depreciable lives for our lease pool equipment that will endure through frequent fluctuations in the industry.

Finally, we do not believe that the market price of our equipment has decreased; rather, due to our volume purchasing arrangements, our costs have decreased.

7. Revise your statements of operations to include in direct costs — seismic leasing the appropriate portion of your depreciation expense associated with your seismic equipment lease pool. Alternatively, parenthetically include in direct costs — seismic leasing line item on the face of your statements of operations, the amount of depreciation expense excluded from such line item, which is included in depreciation and amortization. Refer to SAB Topic 11:B.

Response: Beginning with the 2006 Form 10-K, we will separate depreciation expense related to our lease pool assets from all other depreciation expense and will include such amounts in direct costs — seismic leasing.

Form 10-Q for the quarter ended October 31, 2005

Note 3 — Acquisitions, page 6

8. We note your response to prior comment 14. We note that upon the completion of your valuation study on the intangible assets acquired, you will make an appropriate allocation from goodwill to the intangible assets acquired. It was fully clear from your disclosures that the purchase price had not been finalized. Please confirm that if your final purchase price allocation results in a significant portion of the purchase price being allocated to goodwill that you will provide a description of the factors that contributed to the goodwill being recorded.

Response: We confirm that there will be a portion of the purchase price allocated to goodwill and that we will provide a description of the factors that contributed to the goodwill being recorded in our 2006 Form 10-K

Should the Staff have any questions or comments, please contact the undersigned at 281.353.4475 or Michael A. Pugh, Chief Financial Officer of Mitcham Industries, Inc. at the same number.

Very truly yours,

MITCHAM INDUSTRIES, INC.

By: /s/ Billy F. Mitcham, Jr.

Billy F. Mitcham, Jr. President

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