



September 7, 2016

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F. St., N.E.
Washington, D.C. 20549
Attention: Christopher Ronne
Staff Attorney

Re: Request for Acceleration of Effectiveness of Registration Statement on Form S-3
(File No. 333-212949) of Mitcham Industries, Inc. (the "Company")

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, and on behalf of the Company, we hereby request that the effectiveness of the above-captioned Registration Statement (the "Registration Statement") be accelerated so that such Registration Statement will become effective on Friday, September 9, 2016, at 3:30 p.m., Eastern Time, or as soon thereafter as practicable, unless the Company notifies you otherwise prior to such time.

The Company hereby acknowledges that the disclosure in the Registration Statement is the responsibility of the Company. The Company hereby further acknowledges that:

- should the Securities and Exchange Commission (the "Commission") or the staff of the Division of Corporation Finance (the "Staff") of the Commission, acting pursuant to delegated authority, declare the Registration Statement effective, it does not foreclose the Commission from taking any action with respect to the Registration Statement;
- the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the Registration Statement effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement; and
- the Company may not assert Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please direct any questions that you have with respect to the foregoing or if any additional supplemental information is required by the Staff, please contact Gillian A. Hobson of Vinson & Elkins L.L.P. at (713) 758-3747.

Very truly yours,

MITCHAM INDUSTRIES INC.

By: /s/ Robert P. Capps

Name: Robert P. Capps

Title: Co-Chief Executive Officer and
Chief Financial Officer

cc: Gillian A. Hobson (Vinson & Elkins L.L.P.)