



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

August 29, 2017

Via E-mail

Scott A. Bibaud
Chief Executive Officer
Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, California 95032

**Re: Atomera Incorporated
Registration Statement on Form S-3
Filed August 8, 2017
File No. 333-219782**

Dear Mr. Bibaud:

We have limited our review of your registration statement to those issues we have addressed in our 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. Provide us your analysis of how you comply with the requirement in General Instruction I.A.3 of Form S-3. For guidance, see the Division of Corporation Finance's Securities Act Forms Compliance and Disclosure Interpretation 115.06

Calculation of Registration Fee

2. Please revise the table to include the units being offered. In this regard, we note your disclosure on page 3 that you may offer units.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

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Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3617 with any questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief
Office of Electronics and Machinery

cc: Daniel K. Donahue