

July 1, 2021

Alex Slusky
Chief Executive Officer
Vector Acquisition Corp
One Market Street
Steuart Tower, 23rd Floor
San Francisco, CA 94105

Corp
Statement on Form S-4
25, 2021

Re: Vector Acquisition
Registration
Filed June 25, 2021
Response dated June
File No. 333-257440

Dear Mr. Slusky:

We have reviewed your registration statement 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 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.

Form S-4 filed June 25, 2021

General

1. We note your response to comment 1 and defer resolution at this time. If the PIPE investors are receiving shares of Vector Delaware, it is not clear how they will then obtain the shares of the registrant if, as you state in your response, the shares received by the PIPE investors will not be exchanged for shares of New Rocket Lab in the registered offering.

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

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action by the staff.

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.

You may contact Kevin Stertzell at 202-551-3723 or John Cash at 202-551-3768 if you have questions regarding comments on the financial statements and related matters. Please contact Perry Hindin at 202-551-3444 or Jay Ingram at 202-551-3397 with any other questions.

FirstName LastNameAlex Slusky
Comapany NameVector Acquisition Corp
Corporation Finance
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Manufacturing
FirstName LastName

Sincerely,
Division of
Office of