



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3561

August 1, 2017

Charles V. Magro
President and Chief Executive Officer
Agrium Inc.
13131 Lake Fraser Drive S.E.
Calgary, Alberta T2J 7E8 Canada

Re: Agrium Inc.
Form 40-F for the fiscal year ended December 31, 2016
Filed March 2, 2017
File No. 001-14460

Dear Mr. Magro:

We have reviewed your July 18, 2017 response to our comment letter and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this comment within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to this comment, we may have additional comments.

Form 40-F for the fiscal year ended December 31, 2016

Phosphate Operations, page 50

1. We note your potash reserve tables disclose K₂O percent equivalent grade, instead of a percentage of Muriate of Potash (MOP). Please tell us whether the conversion factor to K₂O from MOP would be required under Part 2.3 (d) to clarify your disclosure.

Charles V. Magro
Agrium Inc.
August 1, 2017
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You may contact Theresa Brilliant at 202-551-3307 or me at 202-551-3380 with any questions.

Sincerely,

/s/ Lyn Shenk

Lyn Shenk
Branch Chief
Office of Transportation and Leisure