



DIVISION OF
CORPORATION FINANCE

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

June 12, 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 Fiscal Year Ended December 31, 2016
Filed March 2, 2017
File No. 001-14460

Dear Mr. Magro:

We have limited our review of your filing to the financial statements and related disclosures 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 these comments 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 comments apply to your facts and circumstances, please tell us why in your response.

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

Form 40-F for Fiscal Year Ended December 31, 2016

Phosphate Operations, page 50

1. Proven and probable reserves are disclosed for your Rasmussen Valley and Lanes Creek properties. Please forward to our engineer as supplemental information and not as part of your filing, your information that establishes the legal, technical, and economic feasibility of your materials designated as reserves, as required by Industry Guide 7(c). The information requested includes, but is not limited to:
 - Property and geologic maps
 - Description of your sampling and assaying procedures
 - Drill-hole maps showing drill intercepts
 - Representative geologic cross-sections and drill logs

- Description and examples of your cut-off calculation procedures
- Cutoff grades used for each category of your reserves and resources
- Justifications for the drill hole spacing used to classify and segregate proven and probable reserves
- A detailed description of your procedures for estimating reserves
- Copies of any pertinent engineering or geological reports, and executive summaries of feasibility studies or mine plans which including the cash flow analyses
- A detailed permitting and government approval schedule for the project, particularly identifying the primary environmental or construction approval(s) and your current location on that schedule.

To minimize the transfer of paper, please provide the requested information on a CD, formatted as Adobe PDF files and provide the name and phone number for a technical person our engineer may call, if he has technical questions about your reserves.

In the event your company desires the return of this supplemental material, please make a written request with the letter of transmittal and include a pre-paid, pre-addressed shipping label to facilitate the return of the supplemental information. Please note that you may request the return of this information pursuant to the provisions of Rule 12b-4 of the Exchange Act.

If there are any questions concerning the above request, please phone Mr. George K. Schuler, Mining Engineer at (202) 551-3718.

2. We note your potash and phosphate reserves are not updated annually by deducting your production from the previous technical report tabulation or by commissioning an updated technical report. We also note, you do not report your annual mine production from your mining operations. Please tell us if you intend to revise your disclosures prospectively to clarify.

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.

Charles V. Magro
Agrium Inc.
June 12, 2017
Page 3

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