



DIVISION OF  
CORPORATION FINANCE

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

May 14, 2015

Dennis P. Kelleher  
Senior Vice President and Chief Financial Officer  
CF Industries Holdings Inc.  
4 Parkway North, Suite 400  
Deerfield, IL 60015-2590

**Re: CF Industries Holdings Inc.  
Form 10-K for the Year Ended December 31, 2014  
Filed February 25, 2015  
File No. 001-32597**

Dear Mr. Kelleher:

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.

Notes to the Financial Statements

Note 4. Phosphate Business Disposition, page 75

1. We note from your disclosure in Note 4 that subsequent to the sale of the phosphate business to Mosaic, you now re-sell ammonia sourced by PLNL, your 50% owned joint venture, to Mosaic, and the revenue from these sales to Mosaic and costs to purchase the ammonia from PLNL are included in your ammonia segment. Please explain to us why you believe that gross revenue recognition is appropriate for this arrangement. As part of your response please address each of the indicators set forth in ASC 605-45-45. Also, please tell us the business purpose for serving as an intermediary in this transaction, rather than having PLNL sell the ammonia directly to Mosaic.
2. We note your disclosure that because of the significance of the continuing supply practice between PLNL and the disposed entity (now owned by Mosaic), in accordance with U.S. GAAP, the phosphate mining and manufacturing business is not reported as

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discontinued operations in your consolidated statements of operations. Please provide us details as to how you evaluated your accounting treatment under the guidance in ASC 205-20-55-3. In this regard, in light of your disclosure in Note 10 that the ammonia sold to Mosaic represented 3% of total revenues in 2014, please tell us why you believe the cash flows are significant.

Note 9. Goodwill and Other Intangible Assets, page 80

3. We note as a result of your change in segments during the third quarter of 2014, you have reallocated goodwill amongst the new segments. Please explain to us your method and basis for allocating the goodwill to each of the new segments in 2014 under the guidance in ASC 350-20-35.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Melissa Gilmore at (202) 551-3777 or Claire Erlanger at (202) 551-3301 with any questions.

Sincerely,

/s/ Melissa Raminpour

Melissa Raminpour  
Branch Chief