



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3561

April 14, 2016

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 Fiscal Year Ended December 31, 2015
Filed February 25, 2016
File No. 001-32597**

Dear Mr. Kelleher:

We have completed our review of your filing. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or 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. 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 rules require.

Sincerely,

/s/ Lyn Shenk for

Melissa Raminpour
Branch Chief
Office of Transportation and Leisure