



DIVISION OF
CORPORATION FINANCE

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

June 13, 2014

Via E-Mail

Mr. Michael F. Doolan
Chief Financial Officer
Molycorp, Inc.
5619 Denver Tech Center Parkway, Suite 1000
Greenwood Village, CO 80111

**Re: Molycorp, Inc.
Form 10-K for the Year Ended December 31, 2013
Filed March 3, 2014
Response dated May 21, 2014
File No. 001-34827**

Dear Mr. Doolan:

We have reviewed your response 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 letter within ten business days by amending your filings, by providing the requested information, or by advising us when you will provide the requested response. 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 filings and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended December 31, 2013

Notes to Consolidated Financial Statements, page 81

(16) Stockholder's Equity, page 107

1. We note your response to comment five from our letter dated May 9, 2014 and understand that you have used the nominal lending fees you received as a proxy to measure the fair value of the share -lending arrangements. However, we are not persuaded that your determination of fair value complies with ASC Topic 820. Please measure the fair value of the share-lending arrangements at the date of issuance using a method that complies with ASC Topic 820 and record the transaction in accordance with FASB ASC subparagraph 470-20-25-20A. Also,

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explain to us the fair value methodology you use and the underlying assumptions,
and provide the related disclosures required by ASC 470-20-50-2A.

You may contact Joanna Lam at (202) 551-3476 or Craig Arakawa, Accounting Branch
Chief at (202) 551- 3650 if you have questions regarding comments on the financial statements
and related matters.

Sincerely,

/s/Tia L. Jenkins

Tia L. Jenkins
Senior Assistant Chief Accountant
Office of Beverages, Apparel, and
Mining