



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

DIVISION OF  
CORPORATION FINANCE

September 9, 2010

Angelo C. Brisimitzakis  
President and Chief Executive Officer  
Compass Minerals International, Inc.  
9900 West 109th Street, Suite 600  
Overland Park, KS 66210

**Re: Compass Minerals International, Inc.  
Form 10-K for Fiscal Year Ended December 31, 2009  
Filed February 22, 2010  
File No. 1-31921**

Dear Mr. Brisimitzakis:

We have reviewed your response letter dated August 3, 2010, and have the following additional comments.

Form 10-K for Fiscal Year Ended December 31, 2009

Definitive Proxy Statement on Schedule 14A

Compensation Discussion & Analysis, page 34

Base Salary, page 37

1. We note your response to comment 5 of our letter dated July 6, 2010 and reissue the comment. The changes in the named executive officers' base salaries are important in your company's case because other elements of compensation are multiples or percentages of base salary. For instance, the Annual Incentive Plan awards and the profit-sharing contributions under your Savings Plan are two other compensation elements affected. Highlighting the salary increases in your narrative disclosure would help readers understand more clearly how even modest changes to base salary can have larger ripple effects in total compensation.

2. Comment 5 of our letter dated July 6, 2010 also asked that you discuss how the company's salary levels compared with the peer company salary levels. Your disclosure on page 37 that your "executive total compensation program targets are intended to stand near the median of total executive compensation programs of [your] peer companies" is not only a broader statement, it describes your compensation committee's intent without describing how your program actually compared to your peer companies' programs in 2009. Your disclosure that the committee considered "the relationship between Compass Minerals' salary levels and peer company levels with a view towards recruiting and retaining talent" indicates that the committee benchmarked against peer company salaries. If the committee also benchmarked against total compensation amounts, then you should also disclose how your total compensation amounts actually compared to your peers' in 2009.

#### Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

Please contact Alexandra M. Ledbetter, Staff Attorney, at (202) 551-3317 or me at (202) 551-3611 with any questions.

Sincerely,

Anne Nguyen Parker  
Branch Chief