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Roselyn R. Bar

Senior Vice President, General Counsel and Corporate Secretary

June 6, 2011

Mr. H. Roger Schwall U. S. Securities and Exchange Commission Division of Corporate Finance, Mail Stop 7010 100 F Street, N.E. Washington, D.C. 20549-7010

Re: Martin Marietta Materials, Inc.

Dear Mr. Schwall:

On behalf of Martin Marietta Materials, Inc. (the "Company"), this correspondence responds to the comments of the Staff of the Commission (the "Staff") contained in your letter dated May 19, 2011 regarding the Company's Form 10-K for fiscal year ended December 31, 2010 filed February 25, 2011 (the "10-K") and Schedule 14A filed April 8, 2011 (the "Schedule 14A"). The Company's responses to the Staff's comments are set forth below under "RESPONSE" and correspond to the numbered comments in the Staff's letter, which are also included below.

Please note that in both the reviewed filings and in our responses below, the Company has provided information related to management's sensitivity analysis that management believes is helpful to the reader and makes the Company's financial statements more transparent, but is not indicative of management's judgment as to the materiality of such information.

COMMENTS AND RESPONSES

Form 10-K for Fiscal Year Ended December 31, 2010

Exhibit 13.1

Consolidated Financial Statements

Notes to Financial Statements

Note I — Income Taxes, page 23

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1. We note your deferred tax asset related to inventories increased from \$28.0 million at December 31, 2009 to \$59.6 million at December 31, 2010. We also note your disclosure stating that deferred tax assets attributable to inventories relate to the deduction of estimated cost reserves and various period expenses for financial reporting purposes that are deductible in a later period for income tax purposes. With reference to the applicable accounting guidance, please provide us with a discussion of the causal factors underlying the increase in this deferred tax asset.

RESPONSE TO COMMENT 1:

In accordance with Internal Revenue Code § 471, the Company filed a change in accounting method for the valuation of inventory for income tax purposes with the Internal Revenue Service during the fourth quarter of 2010. The change in accounting method for income tax purposes was automatically effective, retroactively to January 1, 2010, and resulted in the increase in the deferred tax asset.

Management's Discussion & Analysis of Financial Condition & Results of Operations

Other Business Considerations, page 41

2. Your disclosure states that you have entered into fixed-price supply contracts for coal and natural gas to help mitigate the risk from price fluctuations. Please describe the nature and terms of these fixed-price supply contracts. In addition, please tell us your considerations in determining whether these fixed-price supply contracts should be accounted for as derivative instruments. Refer to FASB ASC 815-10-15.

RESPONSE TO COMMENT 2:

The Company has contracts to purchase coal and natural gas for use in its Specialty Products business' manufacturing process. The terms of the contracts include the Company receiving a fixed amount of coal and natural gas at a specified price over a specified period.

In accordance with ASC 815-10-15, the Corporation evaluated each of these contracts and concluded that all of them meet the normal purchase and normal sales contract scope exception. Factors considered in reaching this decision include:

- The contracts require a quantity of products to meet the Company's normal operational requirements;
- The Company is taking physical delivery of the products;
- Product delivery is at the location where they will be utilized;
- The fixed price is tied to the asset being purchased;
- The Company documented its evaluation of the contracts as normal purchase and normal sales agreements;
- The contracts are in effect and do not have to be exercised;
- The contracts do not include optionality features; and
- The contracts do not relate to power.

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Financial Overview

Gross Profit, page 45

3. We note that the gross margin for your Southeast Group decreased from 13.0% in 2009 to 6.9% in 2010 which is partially attributed to your water distribution network. We also note that you have stated that the development of water and rail distribution yards continues to be a key component of your strategic growth plan. Please expand your disclosure to provide additional quantified explanations for changes in your gross margins including the impact of your water distribution network.

RESPONSE TO COMMENT 3:

The decrease in the gross margin for the Southeast Group from 2009 to 2010 is attributable to the 3.7 percent decrease in heritage aggregates shipments (disclosed on page 45), and the 2.0 percent decline in average selling price for heritage aggregates shipments (disclosed on page 44).

Management provides the statement that the Southeast Group includes the water distribution network (which produces lower gross margins) to assist a reader in understanding why the gross margin for the Southeast Group is lower compared with the other reportable segments. This disclosure was not an explanation for the change in gross margin for the Southeast Group in 2010 versus 2009.

The section "Analysis of Gross Margin" on pages 47 and 48 of Management's Discussion & Analysis of Financial Condition & Results of Operations quantifies the impact of embedded freight, which are costs incurred to transport products internally via the Company's water and rail distribution network, on the Aggregates Business gross margin for the years 2010, 2009 and 2008.

Definitive Proxy Statement on Schedule 14A

Compensation Discussion and Analysis, page 26

Grants of Plan-Based Awards, page 43

4. It appears that your Grants of Plan-Based Awards Table is missing disclosure under column (l), with respect to the grant date fair values of various equity awards. Refer to Item 402(d)(2)(viii) and Instruction 8 to Item 402(d) of Regulation S-K. Please show us how you intend to comply with this comment in the future by providing us with draft disclosure based on information and data from 2010.

RESPONSE TO COMMENT 4:

The Company inadvertently omitted column (l) and will include column (l) data in future Proxy Statements. The following presents the Grants of Plan-Based Awards Table showing the data, inclusive of column (l), for 2010:

GRANTS OF PLAN-BASED AWARDS TABLE

	Grant Date (b)	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards ¹			Estimated Future Payouts Under Equity Incentive Plan Awards						
Name (a)		Threshold (\$) (c)	Target (\$) (d)	Maximum (\$) (e)	Threshold (#) (f)	Target (#) (g)	Maximum (#) (h)	All Other Stock Awards: Number of Shares of Stock or Units (#) (i)	All Other Option Awards: Number of Securities Underlying Options (#) (j)	Exercise or Base Price of Option Awards (\$/Sh) (k)	Grant Date Fair Value of Stock and Option Awards6 (I)
C. Howard Nye	1/28/10 _{1,2} 5/27/10 ₃ 5/27/10 ₄ 5/27/10 ₅							2,810 3,099 5,598	11,196	95.27	224,182 262,516 533,321 382,008
Anne H. Lloyd	1/28/10 _{1,2} 5/27/10 ₃ 5/27/10 ₄ 5/27/10 ₅		363,600	545,400				1,581 805 1,897	3,794	95.27	126,132 68,192 180,727 129,451
Daniel G. Shephard	1/28/10 _{1,2} 5/27/10 ₃ 5/27/10 ₄ 5/27/10 ₅		355,520	533,280				1,546 1,511 1,897	3,794	95.27	123,340 127,997 180,727 129,451
Bruce A. Vaio	1/28/10 _{1,2} 5/27/10 ₃ 5/27/10 ₄ 5/27/10 ₅		355,520	533,280				1,546 1,181 1,897	3,794	95.27	123,340 127,997 180,727 129,451
Stephen P. Zelnak, Jr.	1/28/101,2							3,951			315,211

The amounts shown in column (d) reflect the target level of annual bonus that could have been earned in 2010 that was paid in 2011 pursuant to the Executive Incentive Plan. The amounts shown in column (e) reflect the maximum level of annual bonus that could have been earned in 2010. There is no threshold amount since the program does not provide for an amount to be paid if performance falls below the performance goals. These amounts shown in columns (d) and (e) have not been reduced by the amounts that were mandatorily and voluntarily invested

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- pursuant to the Incentive Stock Plan, which are also reported in column (i) of this table corresponding to footnote 2. The amount earned in cash and voluntarily deferred is also included in column (c) of the Summary Compensation Table. In accordance with FASB ASC Topic 718, for mandatory deferrals of payments under the Incentive Stock Plan into common stock units is included in column (e) of the Summary Compensation Table on page 42. Mr. Nye and Mr. Zelnak do not participate in the Executive Incentive Plan.
- The amounts shown in column (i) reflect the restricted stock unit awards granted in 2010 pursuant to the Stock-Based Award Plan, which are based on the previous three-year performance cycle and are subject to vesting after an additional three years of continued employment. The awards are discussed under the heading Performance-Based Stock Purchase Awards on page 35 and the dollar amount is included in column (e) of the Summary Compensation Table on page 42.
- The amounts shown in column (i) reflect the amount of cash bonus earned in 2010 but paid in 2011 that was deferred in units of common stock under the Incentive Stock Plan. Participants in this program for 2010 were approved on May 27, 2010. These awards are discussed under the heading Performance-Based Stock Purchase Awards on page 35. These awards are also included in columns (d) and (e) of this table and the Summary Compensation Table on page 42.
- The amounts shown in column (i) reflect the number of shares of restricted stock units granted in 2010 to each of the named executive officers pursuant to the Stock-Based Award Plan. These awards are discussed under the heading LTIP Awards on page 36. These awards are also included in column (e) of the Summary Compensation Table on page 42.
- The amounts shown in column (j) reflect the number of options to purchase shares of the Corporation's common stock granted in 2010 to each of the named executive officers pursuant to the Stock-Based Award Plan. These awards are discussed under the heading LTIP Awards on page 36. These awards are also included in column (f) of the Summary Compensation Table on page 42.
- The amounts shown in column (l) reflect the grant date fair value of each equity award computed in accordance with FASB ASC Topic 718. The components of these amounts are included in columns (e), (f) and (j) of the Summary Compensation Table on page 42.

Engineering Comments

Form 10-K for Fiscal Year Ended December 31, 2010

Specialty Products Business, page 10

5. In this section of your filing, we note your statement that management believes that its reserves of dolomitic limestone and brine are sufficient to permit production at the current operational levels for the foreseeable future. Please explain to us how management has made this determination. In addition, please tell us why you do not report reserves for dolomitic limestone and brine.

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RESPONSE TO COMMENT 5:

The Company quantifies its dolomitic limestone reserves annually and includes those reserves in the table presented on page 30 of the Form 10-K. The Company's drilling process is described in Management's Discussion & Analysis of Financial Condition & Results of Operations, on pages 73 and 74 in the Critical Accounting Policies and Estimates discussion on Property, Plant and Equipment. Beginning with the Company's Form 10-K for the year ending December 31, 2011, management will add a footnote to the table indicating that the Company's reserves presented for the state of Ohio include dolomitic limestone. Based on current production levels, the Company estimates that it has 40 years of dolomitic limestone reserves remaining at December 31, 2010.

The Company operates 18 permitted mineral wells that contain brine. Based on the proven capacity of the wells and considering historical operating performance, the average life of these permitted wells exceeds 15 years. The Company also owns additional sites with probable capacity that is expected to significantly extend the estimated years of brine reserves.

The brine used as a raw material at the Company's Manistee, Michigan operation is extracted from a sandstone interval referred to as filer sand. This sandstone has been mapped and verified by the Geological Survey Division of the Michigan Department of Environmental Quality in the region where the Company's plant is located. The Company owns additional sites where these filer sand resources have been identified. This resource of possible additional capacity would further extend the estimated years of brine reserves.

Based on these facts, management believes the Company has available reserves of dolomitic limestone and brine sufficient to meet operating needs for the foreseeable future.

Aggregates Business, page 28

6. Please disclose the name of the individual responsible for your reserve estimates and the nature of their relationship with your Company as required by Section (B)(5)(2) of Industry Guide 7. Additionally, please tell us if your reserves are reviewed by an independent third party and, if so, the frequency of these reviews.

RESPONSE TO COMMENT 6:

The Company advises that pages 73 and 74 of Management's Discussion & Analysis of Financial Condition & Results of Operations of the Form 10-K disclose the Company's process for drilling and estimating aggregates reserves.

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The Company also includes the following disclosure on page 29 of the Form 10-K:

The Company estimates proven and probable reserves based on the results of drilling. Proven reserves are reserves of deposits designated using closely spaced drill data, and based on that data the reserves are believed to be relatively homogenous. Proven reserves have a certainty of 85% to 90%. Probable reserves are reserves that are inferred utilizing fewer drill holes and/or assumptions about the economically mineable reserves based on local geology or drill results from adjacent properties. The degree of certainty for probable reserves is 70% to 75%. In determining the amount of reserves, the Company's policy is to not include calculations that exceed certain depths, so for deposits, such as granite, that typically continue to depths well below the ground, there may be additional deposits that are not included in the reserve calculations. The Company also deducts reserves not available due to property boundaries, set-backs, and plant configurations, as deemed appropriate when estimating reserves.

The Company uses internal personnel to estimate its existing reserves. The employee team is led by a licensed professional geologist who has 37 years of experience in estimating reserves with Martin Marietta. The team of employees is well trained and properly supervised. The Company's reserve estimates are not reviewed by an independent third party. In future filings, the Company will add a footnote to the table of reserves indicating that the amounts represent internally-estimated proven and probable reserves.

7. Please report your proven and probable reserves separately as required by Section (A) of Industry Guide 7.

RESPONSE TO COMMENT 7:

The Company discloses on page 29 of the Form 10-K that proven reserves have a certainty of 85% to 90% and probable reserves have a certainty of 70% to 75%. The aggregates material that the Corporation mines is abundant throughout the United States. As disclosed in the 2010 Annual Report in Management's Discussion & Analysis of Financial Condition & Results of Operations, there is no scarcity of the material, and once found, it exists in a relatively large area. By contrast, precious minerals (e.g., gold and silver) are relatively scarce and typically are found in veins that have limited supply.

In the table of reserves presented on page 30 of the Form 10-K, the Company discloses that there are more than 100 years of reserves remaining at current production levels. Management also narratively discloses on page 28 of the Form 10-K that existing reserves exceed more than 50 years at normal production levels. Due to the long remaining life of the Company's reserves, management believes the distinction between proven and probable reserves would not be deemed material by the Company's shareholders and potential investors.

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In accordance with the Staff's comments in your letter dated May 19, 2011, the Company hereby states as follows: (1) the Company is responsible for the adequacy and accuracy of the disclosure in the Company's filing; (2) the Staff's comments or changes to disclosure in response to the Staff's comments do not foreclose the Commission from taking any action with respect to the Company's filing; and (3) the Company may not assert the Staff's comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please let us know if you need any additional information or if you would like to discuss any of these matters further. You can contact me directly at (919) 783-4603.

Sincerely,

/s/ Roselyn R. Bar

Roselyn R. Bar Senior Vice President, General Counsel & Corporate Secretary

c: Suying Li
Ethan Horowitz
John Coleman
Parker Morrill
Timothy Levenberg