



DIVISION OF
CORPORATION FINANCE

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

August 26, 2010

Mr. Hudson La Force III
Senior Vice President and Chief Financial Officer, W.R. Grace & Co.
7500 Grace Drive
Columbia, MD 21044

Re: W.R. Grace & Co.
Form 10-K for the fiscal year ended December 31, 2009
Filed February 25, 2010
File No. 1-13953

Dear Mr. La Force:

We have reviewed your response to our comment letter dated June 30, 2010 and have the following comment.

Please respond to this letter within ten business days 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, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the year ended December 31, 2009

MD&A

Adjusted Operating Cash Flow, page F-75

We note your response to prior comment 11. We continue to believe that titling a non-GAAP measure "Adjusted Operating Cash Flow" and disclosing that it is a performance measure does not comply with Item 10(e)(ii)(E) of Regulation S-K and is potentially confusing since operating cash flow is a widely used liquidity measure. We do not believe that the additional disclosures you provided or your reference to the measure as a cash flow performance measure alleviate the potential confusion. Please be advised that:

- If you continue to believe "Adjusted Operating Cash Flow" is a performance, provide us a comprehensive explanation regarding how you reached that conclusion, particularly in light of the nature of each adjustment to this measure, including capital expenditures, changes in balance sheet accounts, and defined benefit pension expense. Also, revise the title of this measure in all future filings and releases.

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- If you believe “Adjusted Operating Cash Flow” is a liquidity measure, provide us a comprehensive explanation regarding how you determined this measure complies with Item 10(e)(ii)(A) of Regulation S-K based on each adjustment. Also, revise all future filings and releases to: reconcile this measure to net cash provided by operating activities; present operating, investing and financing cash flows with equal or greater prominence; and disclose and discuss this measure in the context of your liquidity disclosures.

You may contact Mindy Hooker at (202) 551-3732, Anne McConnell at (202) 551-3709 or me at (202) 551-3768 with any questions.

Sincerely,

John Cash
Branch Chief