



DIVISION OF  
CORPORATION FINANCE

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

December 30, 2011

Via E-mail

C. Brig Miller  
Vice President and Chief Accounting Officer  
Core Laboratories N.V.  
Herengracht 424  
1017 BZ Amsterdam  
The Netherlands

**Re: Core Laboratories N.V.  
Form 10-K for Fiscal Year Ended December 31, 2010  
Filed February 22, 2011  
Form 8-K  
Filed April 19, 2011  
File No.: 1-14273**

Dear Mr. Miller:

We have reviewed your response letter dated November 10, 2011 and have the following comments.

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 amendments to your filings and the information you provide in response to these comments, we may have additional comments.

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

Financial Statements

Note 15: Segment Reporting, page F-25

1. Your response to prior comment 1 indicates that you believe to provide additional information with respect to your products and services would be administratively burdensome given that it is information which is not used by the CODMs. However, it appears that you frequently refer to the impact of products and services at a more granular level than the product and service groupings provided in your segment footnote to help explain fluctuations in your operating results in the Management's Discussion and

Analysis section of your periodic filings. For example, in your Form 10-Q for the fiscal quarter ended June 30, 2011, you state:

- [The Reservoir Description] segment continued to realize increased demand of 12% for reservoir fluids phase-behavior studies, and of 6% for crude oil testing, inspection, distillation, assay, fractionation and characterization projects worldwide.
- The revenue increase [of the Production Enhancement operating segment] was due to increased sales of our completion products and gun systems particularly in markets relating to horizontal well developments of gas-shale and oil-shale reservoirs of 33% and 30% for the three and six months ended June 30, 2011, respectively, when compared to the same periods in 2010.
- The increase in operating income from 2010 to 2011 [of the Production Enhancement operating segment] was primarily driven by increased revenue from services related to our proprietary and patented diagnostic technologies, such as SpectraChem<sup>®</sup> Plus+, SpectraScan<sup>®</sup>, ZeroWash<sup>®</sup>, our HERO<sup>™</sup> line of perforating charges and gun systems and our HTD-Blast<sup>™</sup> perforating system which is used for the perforation of extended-reach horizontal completions.

And in your Form 10-K for the fiscal year ended December 31, 2010, you state:

- Revenues for our Production Enhancement segment increased by \$83.3 million, or 36.1% in 2010 compared to 2009, primarily due to the increased acceptance by our clients of our high margin completion products as well as our fracture diagnostic services, and an increased market share of our perforating charges and gun systems particularly in the North American markets relating to horizontal well developments of gas-shale and oil-shale reservoirs and for high margin completion and recompletion technologies used in the reworking of major, giant, and super-giant fields in southern Iraq.

Please explain to us why the need to reference these products and services in explaining your results of operations is consistent with your judgments and conclusions related to your evaluation of the requirements of FASB ASC 280-10-50-40.

#### Form 8-K

2. We have reviewed your response to prior comment 2 and we note that you will exclude the measure of Free Cash Flow per share from your future documents filed or furnished with the SEC or in subsequent earnings calls. Please similarly do not utilize the annualized per share yield on your free cash flow in your earnings calls.

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You may contact Michael Fay at (202) 551-3812 or Mark Shannon at (202) 551-3299 if you have questions regarding the comments and related matters. Please contact me with any other questions at (202) 551-3489.

Sincerely,

/s/ Ethan Horowitz *for*

Brad Skinner  
Senior Assistant Chief Accountant