



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4628

August 7, 2009

Mr. Robert D. Scherich
Vice President and Chief Financial Officer
Horsehead Holding Corp.
4955 Steubenville Pike, Suite 405
Pittsburgh, PA 15203

Re: Horsehead Holding Corp.
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed March 16, 2009
Form 10-Q for the Fiscal Quarter Ended March 31, 2009
Filed May 11, 2009
Schedule 14A Filed April 8, 2009
File No. 001-33658

Form S-3 Filed July 16, 2009
File No. 333-160625

Dear Mr. Scherich:

We have reviewed your filings and have the following comments. With regard to your Form S-3 filing, we have limited our review of your filing to those issues we have addressed in our comments. Please provide a written response to our comments. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form S-3 filed July 16, 2009

Exhibit 5.1, Opinion of Kirkland & Ellis LLP

1. With regard to the limitations in the paragraph of the opinion beginning with the words “We express no opinion with respect to the enforceability of ...,” please obtain an explanation from counsel as to why they believe these limitations are necessary and appropriate. We may have further comments after reviewing counsel’s explanation.
2. Each time that you do a takedown of any of the securities from this shelf registration, you must file a “clean” opinion of counsel as an exhibit for any securities you are taking down. See Securities Act Rules Compliance and Disclosure Interpretation Question 212.05 (available on the SEC website at <http://www.sec.gov/divisions/corpfin/guidance/securitiesactrules-interps.htm>). Please confirm that you will file the appropriate clean opinions.

Form 10-Q for the Fiscal Quarter Ended March 31, 2009

Financial Statements

Note L – Subsequent Events

3. We note you disclosed that on April 20, 2009 you signed a definitive agreement to acquire the EAF dust collection business of Envirosafe Services of Ohio, Inc. and that you expect to close the purchase during the second quarter of 2009. Please provide a status update including whether you have closed this transaction.

If you have closed this transaction, tell us why you have not filed Form 8-K pursuant to Item 2.01 of Form 8-K, also noting the financial statement requirements under Item 9.01 of Form 8-K. Additionally, please be sure to file all pertinent agreements as exhibits and provide an updated disclosure in your next Form 10-Q, including the total purchase price and all other key terms of the transaction.

Schedule 14A Filed April 8, 2009

4. Please confirm in writing that you will comply with the following comments in all future filings. Provide us also with an example of the disclosure you intend to use. Please understand that after our review of your responses, we may raise additional comments.

General

5. We note that you have included disclosure with regard to only three named executive officers instead of five, although it appears that you have seven executive officers. Please explain why you have only included three named executive officers.

Compensation Discussion and Analysis, page 15

Annual Cash Bonus Incentives, page 17

6. We note that you disclose and quantify your net income performance measure, and your performance against that measure. However, we note that you did not disclose the targets for all operational performance measures identified by your board of directors for each named executive officer, or the performance against such measures. Please revise to disclose all qualitative and quantitative performance measures and performance against those measures. See Items 402(b)(2)(v)-(vi) and Instruction 2 to Item 402(b) of Regulation S-K. To the extent that you believe that disclosure of the measures would result in competitive harm such that they could be excluded properly under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation supporting your conclusion. Please also note that to the extent disclosure of the measures would cause competitive harm, you are required to discuss how difficult it was or will be to achieve them. Please see Instruction 4 to Item 402(b) of Regulation S-K.

Long-Term Incentive Awards, page 18

7. We note your disclosure with regard to performance-vesting restricted stock units (RSUs). You describe the performance measures for these RSUs, but you do not quantify the measures at the Threshold, Target and Distinguished levels. Please revise to disclose all qualitative and quantitative performance measures. See Items 402(b)(2)(v)-(vi) and Instruction 2 to Item 402(b) of Regulation S-K. To the extent that you believe that disclosure of the measures would result in competitive harm such that they could be excluded properly under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation supporting your conclusion. Please see Instruction 4 to Item 402(b) of Regulation S-K.
8. Please disclose how you determined the number of restricted stock units granted to each named executive officer in 2008. See Item 402(b)(1)(v) of Regulation S-K.

Grants of Plan-Based Awards, page 24

9. Please provide the disclosure required by Item 402(d) of Regulation S-K with respect to your annual cash bonus incentive awards granted in 2008.

Compensation of Directors, page 26

10. Please disclose how you determined the number of restricted stock units granted to each director in 2008.
11. For each director, please disclose by footnote to the appropriate column in your director compensation table the grant date fair value of the restricted stock units granted in 2008. See Instruction to Item 402(k)(2)(iii) and (iv) of Regulation S-K.

Closing Comments

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filings or in response to our comments on your filings.

You may contact Craig Arakawa at (202) 551-3650 or Lily Dang at (202) 551-3867 if you have questions regarding comments on the financial statements and related matters. Please contact Norman Gholson at (202) 551-3237, Laura Nicholson at (202) 551-3584 or me at (202) 551-3745 with any other questions.

Sincerely,

H. Roger Schwall
Assistant Director