



DIVISION OF  
CORPORATION FINANCE

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

December 17, 2012

Via E-mail

Mr. Robert M. McLaughlin  
Chief Financial Officer  
Airgas, Inc.  
259 North Radnor-Chester Road, Suite 100  
Radnor, Pennsylvania 19087

**Re: Airgas, Inc.  
Form 10-K for the Year Ended March 31, 2012  
Filed May 29, 2012  
Response dated December 6, 2012  
File No. 1-9344**

Dear Mr. McLaughlin:

We have reviewed your response letter dated December 6, 2012 and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

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 March 31, 2012

General

1. Where a comment below requests additional disclosures or other revisions to be made, please show us in your supplemental response what the revisions will look like. These revisions should be included in your future filings, including your interim filings, if applicable.

Management's Discussion and Analysis

Results of Operations, page 18

2. We note your response to comment two in our letter dated October 17, 2012. In regards to the second proposed example with pro forma sales information, please address the following:

- Please include a discussion of historical net sales in MD&A which compares historical net sales for each period presented and correspondingly provides a quantified discussion of the factors which led to fluctuations from period to period;
- Your proposed disclosures refer to organic sales on a pro forma basis. Please discuss pro forma net sales rather than referring to organic sales or the extent to which acquisitions contribute to fluctuations in net sales. You should discuss and correspondingly quantify the factors that resulted in changes in pro forma net sales from period to period and remove the reference to organic sales. Please also correspondingly remove the portion of your proposed disclosures which states that pro forma net sales amounts would provide meaningful insight into your underlying (organic) business growth without acquisitions; and
- Please discuss in MD&A that your sales growth comes from acquisitions as well as organic growth. In a similar manner to your response to comment two of your letter dated October 10, 2012, please disclose your integration strategy upon the consummation of an acquisition, which may result in acquired customers being served by your existing facilities and existing customers being served by acquired facilities. Please also disclose that you may close acquired facilities and/or existing facilities and may have already been serving some of the acquired customers.

Note 21. Summary by Business Segment, page F-43

3. We note your response to comment four in our letter dated October 17, 2012. We continue to have difficulty understanding how the markups over cost included in the gross margin and operating margin amounts associated with transactions between operating segments in the Distribution reportable segment have been eliminated in the reconciliations that you have provided between the total gross margins and operating margins of all operating segments in the Distribution reportable segment as provided in Exhibit A of your letter dated September 6, 2012 and the amounts reported in your segment note to the financial statements related to the Distribution reportable segment. Tickmarks 'I' and 'K' to Exhibit A indicate that the gross margins and operating margins provided in Exhibit A are not adjusted for intercompany sales which leads to the inflated gross margins and operating margins presented in Exhibit A. Therefore, it would appear that the totals for the Exhibit A gross margin and operating margin amounts, which are reflected in your reconciliation in the Distribution operating segments line item, may still include the markups over cost. Please clearly show us in the gross margin and operating margin reconciliations the eliminations of these markups for each year included in the March 31, 2012 Form 10-K and for each interim quarter and year to date period included in your subsequent Forms 10-Q. Please also tell us separately for each operating segment included in the Distribution reportable segment the amounts of markup in gross margin and operating margin related to transactions with other operating segments inside the Distribution reportable segment and ensure that it agrees to the markup amount shown as being eliminated in the reconciliation. Alternatively, please confirm that the Distribution reportable segment amounts presented for gross margin and operating margin in your Form 10-K still include these markups and explain to us your basis for not eliminating them, since they relate to transactions inside the same reportable segment.

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December 17, 2012  
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If you have any questions regarding these comments, please direct them to Nudrat Salik, Staff Accountant, at (202) 551-3692 or, in her absence, to the undersigned at (202) 551-3769.

Sincerely,

/s/ Rufus Decker

Rufus Decker  
Accounting Branch Chief