



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4631

Mail Stop 4631

August 5, 2010

Charles D. McLane, Jr.  
Executive Vice President and Chief Financial Officer  
Alcoa, Inc.  
390 Park Avenue  
New York, New York 10022-4608

**Re: Alcoa, Inc.  
Form 10-K for Fiscal Year Ended December 31, 2009  
File No. 1-3610**

Dear Mr. McLane:

We have reviewed your responses and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. 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 10-K FOR FISCAL YEAR ENDED DECEMBER 31, 2009

MD&A – Critical Accounting Policies and Estimates  
Pension Plans and Other Postretirement Benefits, page 70

1. We note your response to prior comment two. With a view to enhanced disclosures in future filings, please address the following regarding your determination of pension assumptions:
  - Tell us your 10 year and 20 year moving averages of actual performance during each of the last three years;

- Tell us your 5 year average market value of plan assets during each of the last three years. Also, clarify your disclosure that the expected rate of return is “generally” applied to a 5 year average market value of plan assets. If you applied the expected rate of return to something other than the 5 year average market value of plan assets, tell us what you applied it to and explain why.
- Based on your response it is not clear to us if you determine expected rates of return by plan asset type or only for total plan assets. If you determine expected rates of return by plan asset type, provide those expected rates of return during each of the last three years. If you only determine the expected rate of return for total plan assets, provide us a more comprehensive explanation regarding how you consider the impact of changes in plan asset allocations on your expected rate of return.
- It appears to us that your expected rate of return is high relative to the average of other registrants and that the allocation of your plan assets to equity securities is low relative to other registrants’ allocations. Provide us a more comprehensive explanation detailing why your expected rate of return is high relative to other registrants, particularly in light of the allocation of your plan assets.
- In regard to your discount rate, we note your disclosure related to the refinement of your yield curve model in 2008 and 2009 to exclude certain corporate bonds severely impacted by the global economic downturn. Provide us a more comprehensive explanation of those refinements, including what you included and excluded and how you made those determinations.

FORM 8-K FILED ON JULY 13, 2010

2. We note you present the non-GAAP measures EBITDA and EBITDA Margin in your earnings releases. Since the measures you present are adjusted for items in addition to what these acronyms suggest, please revise the titles of the measures you present in future earnings releases and filings. See our response to Question 103.01 in the C&DIs related to Non-GAAP Financial Measures.

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.

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August 5, 2010  
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You may contact Bret Johnson at (202) 551-3753, Anne McConnell at (202) 551-3709, or me at (202) 551-3768 if you have questions regarding our comments.

Sincerely,

John Cash  
Accounting Branch Chief