

Via EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington D.C. 20549-7010

Attention: John Cash,
Accounting Branch Chief

**Re: Alcoa Inc.
Form 10-K for the Fiscal Year Ended December 31, 2009
File No. 1-3610
Filed February 18, 2010**

Dear Mr. Cash:

On behalf of Alcoa Inc. (the "Company"), set forth below are responses to the comments of the Staff (the "Staff") of the Securities and Exchange Commission (the "Commission") contained in the Staff's letter dated July 13, 2010 (the "Comment Letter"), relating to the Form 10-K for the fiscal year ended December 31, 2009 (file no. 1-3610) (the "2009 10-K"), filed by the Company on February 18, 2010. The headings and numbered paragraphs of this letter correspond to the headings and paragraph numbers contained in the Comment Letter, and to facilitate your review, we have reproduced the text of the Staff's comments in boldfaced print below.

FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 31, 2009

Critical Accounting Policies and Estimates

Goodwill, Page 68

- 1. Based on your disclosures related to goodwill, it is not clear to us if you have concluded that the estimated fair values of your reporting units are substantially in excess of their carrying values. It appears to us that your disclosures imply that the estimated fair value of your Primary Metals reporting unit may not be substantially in excess of its carrying value. If that is accurate, please revise future filings to disclose the percentage by which the estimated fair value of that reporting unit exceeds its carrying value as of the most recent step one test and clarify that the estimated fair values of your**

other reporting units are substantially in excess of their carrying values. If that is not accurate, please revise future filings to clarify the reporting units that have estimated fair values substantially in excess of their carrying values and the reporting units that do not. For each reporting unit that has an estimated fair value not substantially in excess of its carrying value, please revise future filings to disclose: the percentage by which the estimated fair value of the reporting unit exceeds its carrying value as of the most recent step one test; the assumptions that drive the estimated fair value; any uncertainties associated with the key assumptions; and potential events and/or circumstances that could have a negative effect on the estimated fair value. Also, please revise future filings to address if and how you reconcile the estimated fair values of your reporting units to your market capitalization.

Response: In response to the Staff's comment, management respectfully advises the Staff that based on the results of our annual impairment analyses, all of the Company's reporting units had fair values that were substantially in excess of their respective carrying values. Notwithstanding this fact, the Company included additional discussion on the Primary Metals reporting unit in its 2009 10-K (as well as its 2008 10-K) due to the fact that the excess of the estimated fair value of the Primary Metals reporting unit over its carrying value was lower than it had been historically, for the reasons cited therein. However, in neither period had management concluded a future goodwill impairment for the Primary Metals reporting unit was reasonably likely.

In future annual filings, the Company will clarify which reporting units have a fair value substantially in excess of their carrying value, and, for those reporting units with an excess that management deems is not substantial, if any, we will include the enhanced disclosures requested by the Staff.

In response to the Staff's reference to market capitalization, for reasons previously communicated to the Staff in our letter dated May 7, 2009 (in response to the Staff's letter dated April 23, 2009), management believes the quoted market price of our common stock does not consistently fully reflect the underlying value of the future cash flows of the Company. As part of the Company's annual goodwill impairment analysis, management does look at the Company's market capitalization; however, we believe that the discounted cash flows model provides a better indicator of the fair value of the Company's reporting units. In future annual filings, if our market capitalization is significantly less than our total shareholders' equity, which may indicate our inability to recover goodwill, the Company will provide our market capitalization as of the period end, make a statement as to whether the aggregate fair value of our reporting units determined under our discounted cash flow models exceeds our market capitalization, and address the significant factors we believe give rise to the differences.

Pension Plans and Other Postretirement Benefits, page 70

2. **We note your disclosures related to the expected long term rate of return of plan assets, including your discussion of 10 year and 20 year historical moving averages. We also note the disclosures in your financial statements regarding a recent change in the allocation of plan assets between equity and debt securities. With a view to future disclosure, please help us better understand how you determined the expected long term rate of return of plan assets, including the differences between the estimated rates of return by plan asset type.**

Response: In response to the Staff's comment, management evaluates the assumption for expected long-term rate of return on plan assets annually based upon actual plan asset returns, historical moving average rates of return (including ten-year and twenty-year moving averages), and the composition of the investment portfolio, all with a view to the long term nature of the assumption. The Company respectfully directs the Staff's attention to the discussion included on page 70 of the 2009 10-K, which explains the results of management's analysis for the periods presented therein. As mentioned in this discussion, during recent years, the actual returns had been trending downward to some extent, and in 2009 the twenty-year moving average rate of return fell below 9.0%. As a result of this trend, and in light of the Company's decision to modify nominally its pension plan investment strategy by reducing equity securities and increasing debt securities both by 5%, the Company reduced the expected rate of return on plan assets by 25 basis points to 8.75% to reflect management's best estimate.

Absent significant changes in the level of actual returns or in the nature of the investment portfolio, we would not anticipate significant volatility in this assumption from period to period.

Income Taxes, Page 71

3. **Please revise future filings to address the positive and negative evidence you considered in determining an appropriate tax valuation allowance, including, if applicable, the amount of taxable income required to be generated to fully realize your deferred tax assets.**

Response: In response to the Staff's comment, management evaluates the realizability of deferred tax assets based on applicable tax law for the relevant jurisdictions. In future annual filings, we will include additional qualitative discussion regarding significant positive and negative evidence considered in determining the need for a valuation allowance for deferred tax assets. This evidence may include positive factors such as a strong earnings history or existing contracts that are likely to generate future taxable income. Additionally, all potential sources of income will be considered, including taxable income available in carryback periods, future reversals of existing taxable temporary

differences, taxable income from tax planning strategies, and projected future taxable income exclusive of reversing taxable temporary differences. Negative evidence may include items such as cumulative losses in recent years or a loss carryforward period that is not sufficient to allow full realization of the deferred tax asset based on projections of future taxable income.

* * * * *

The Company acknowledges the following:

- 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.

If you have any questions with respect to the foregoing, please contact me at (212) 836-2689 or Tony Thene at (412) 553-4521.

Very truly yours,

/s/ Charles D. McLane, Jr.

Charles D. McLane, Jr.

Executive Vice President and Chief Financial Officer