



DIVISION OF
CORPORATION FINANCE

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

March 16, 2012

Via Facsimile

Mr. Charles D. McLane, Jr.
Chief Financial Officer
Alcoa Inc.
390 Park Avenue
New York, NY 10022-4608

**Re: Alcoa Inc.
Form 10-K for Fiscal Year Ended December 31, 2011
Filed February 16, 2012
File No. 1-03610**

Dear Mr. McLane:

We have reviewed your filing 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 amending your filing, 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 amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for Fiscal Year Ended December 31, 2011

Business

Sources and Availability of Raw Materials, page 15

1. In future filings, please disclose the approximate amount of each of your key raw materials needed to produce a ton of alumina and, similarly, a ton of aluminum. While the amount of raw materials needed on a per ton basis will fluctuate based on the type and specifications of the final products and other factors, estimates or ranges of these amounts would provide useful information to an investor regarding your use of key raw materials. Please also revise future filings to disclose the approximate amount of natural gas consumed per ton at your facilities' normal operating levels and consumption rates of key sources of electricity, where not already provided.

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Legal Proceedings, page 31

Litigation

General

2. We note that in many instances you disclose that you believe the outcome of your contingencies is uncertain and you are unable to reasonably estimate your range of possible loss. It appears in many cases these matters have been on-going for extended periods. We would expect that as contingencies progress, the range of possible loss would become clearer with the passage of time and developments arising from the proceedings. For each matter you discuss in your filing where you present the above conclusion, please provide us with an analysis of why you believe a range of possible loss is not reasonably estimable.

European Commission Matters, page 34

3. We note your disclosure regarding the electricity tariff matter in Italy, which states you expect a payment in the range of \$300 to \$500 million will be required. You further state that you recorded a charge of \$250 million for this matter in 2009, which included the write-off of a \$20 million receivable. Please tell us the full amount of the liability you have recorded for this matter as of each balance sheet date presented. To the extent your accrual is less than the minimum range of your expected payment, please explain to us why you believe the amount of your accrual is appropriate.

Environmental Matters, page 35

4. In future filings, please expand your disclosure to provide a clear status update regarding the matter of Dany Lavioe vs. Alcoa Canada, et al. Your current disclosure indicates that certain motions of the company were denied in late 2010 with no indication of proceedings since that time period. Please provide a current status of this litigation or otherwise state that no further proceedings have occurred.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Segment Information

Alumina, page 54

5. In future filings, please significantly expand your discussion of this segment's operating results to provide a robust discussion of the results of operations related to bauxite mining activities and power generation. Your discussion should include items such as tons mined, average selling price and mining costs per ton, electricity generation costs per unit and quantities sold to other segments as well as total sales to third parties. Please provide us your proposed disclosure revisions as part of your response.

Liquidity and Capital Resources, page 61

6. We note you have substantial sales and operations outside the U.S., including jurisdictions that appear to have lower tax rates. In future filings, please quantify and disclose the total amount of cash held in foreign jurisdictions compared to U.S. cash holdings and also disclose the range of possible tax consequences associated with repatriating cash from foreign sources.

Critical Accounting Policies and Estimates, Goodwill, page 69

7. We note you adopted the new accounting guidance for testing goodwill for impairment in September, 2011. We also note that for six of your reporting units you determined it was not more likely than not that their fair values were less than their carrying values based on a qualitative assessment. Please help us more fully understand the specific factors you considered in your qualitative assessments. Also, please help us more fully understand the significant assumptions you used in estimating the fair value of your Primary Metals segment.

Financial Statements

Note A – Summary of Significant Accounting Policies

Property Plants and Equipment, page 81

8. We note your disclosure that indicates for "greenfield assets", you use the units of production method to determine depreciation. In future filings, please clarify what this term means and the nature of the assets this method is being applied to. In addition, please tell us how you depreciate brownfield assets, if different.

9. Please expand your accounting policy disclosures in future filings to discuss your accounting for: mineral rights, mineral exploration costs, mine development costs, overburden removal in both the development and production stage and your methods of amortizing any such costs that are capitalized. Please also explain to us your policy disclosure that states “mineral reserves” are depleted using the unit of production method. It appears you may mean mineral rights and mine development costs. Otherwise, please advise. Please provide us your proposed disclosure revisions as part of your response.

10. It appears in your tabular presentation of useful lives; you are grouping your bauxite mines and power generation facilities within the Alumina segment and are referring to them as “structures.” In future filings, please separately disclose the average useful lives of your mines, power generation facilities, and alumina refineries.

Note H – Property Plants and Equipment, net, page 103

11. We note your line item that presents “land and land rights including mines.” It is unclear what costs are included in this category. Please tell us the amounts you have capitalized for the following items:
 - Mineral rights
 - Capitalized mine development costs including development stage overburden removal

To the extent material, given the disparate nature of your many fixed assets, it would facilitate investor understanding of your fixed assets if you presented a breakout of the asset class you refer to as “structures”. A suggested breakout might include capitalized mine development costs, power generation facilities, refineries, smelters, and rolling mills, at a minimum.

Note J – Other non-current assets page 106

12. Please explain to us the nature of the line item referred to as “deferred mining costs, net”. Please explain why this amount is not presented with your fixed assets and also tell us the method you are using to amortize this cost.

Note Q – Segment and Geographic Area Information, page 120

13. Please revise future filings to disclose revenues by product line for each reportable segment as required by ASC 280-10-50-40. Please provide us your proposed disclosure revisions with your response.
14. Please provide us, on a supplemental basis, with a copy of the monthly financial information received by your CODM. Please also provide us with an understanding of your organizational structure, including how you currently define your CODM, operating segments, and reporting units.

Engineering Comments

Bauxite Interests, page 6

15. We note your table of bauxite mining rights/lease expiration dates for some of your operating mines in your filing. This information implies you have sufficient raw materials for the assured economic and reliable supply for both your integrated bauxite mining and related alumina processing operations. At your present mining/consumption levels, please modify your filing and provide the estimated duration for your mining activities at these locations along with the actual annual production for each of your mines.
16. We also note your statement that your present resources are sufficient to supply your operations for the foreseeable future and in footnote 11, you added 1.6 Mt of reserves to your current concession in 2011. As an integrated aluminum producer, bauxite mining and the associated alumina operations have a significant role in your continued operations, overall profitability, and consequent stock price, and are material to investors. Please revise your filing and state your proven and probable reserves for your mining properties. In the event you do not have proven and/or probable reserves, please provide a clear statement, within your filing, that your properties do not have proven and probable reserves.
17. We note your disclosure of reserve additions in Suriname. Please forward to our engineer as supplemental information and not as part of your filing, the geologic reports that established the legal, technical, and economic feasibility of your materials designated as reserves, as required by Section C of Industry Guide 7 pursuant to Rule 12b-4 of the Exchange Act. The information requested, generally is contained in an executive

summary report that is commonly prepared in conjunction with other geologic documents that includes:

- Property and geologic maps
- Description of your sampling and assaying procedures
- Drill-hole maps showing drill intercepts
- Representative geologic cross-sections and drill logs
- Description and examples of your cut-off calculation procedures
- Cutoff grades used for each category of your reserves and resources
- Justifications for the drill hole spacing used to classify and segregate proven and probable reserves
- A detailed description of your procedures for estimating reserves
- Copies of any pertinent engineering or geological reports, and executive summaries of feasibility studies or mine plans which including the cash flow analyses
- A detailed permitting and government approval schedule for the project, particularly identifying the primary environmental or construction approval(s) and your current location on that schedule.

To minimize the transfer of paper, please provide the requested information on a CD, formatted as Adobe PDF files and provide the name and phone number for a technical person our engineer may call, if he has technical questions about your reserves.

In the event your company desires the return of this supplemental material, please make a written request with the letter of transmittal and include a pre-paid, pre-addressed shipping label to facilitate the return of the supplemental information. Please note that you may request the return of this information pursuant to the provisions of Rule 12b-4 of the Exchange Act.

If there are any questions concerning the above request, please phone Mr. George K. Schuler, Mining Engineer at the number provided below.

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Closing Comments

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comments, please provide a written 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.

You may contact Kevin Stertzel at (202) 551-3723, or Anne McConnell at (202) 551-3709 if you have questions regarding comments on the financial statements and related matters. You may contact George K. Schuler, Mining Engineer, at (202) 551-3718 with questions about engineering comments. Please contact me at (202) 551-3768 with any other questions.

Sincerely,

/s/ W. John Cash

W. John Cash
Branch Chief