Exhibit No.:

Issue: Noranda Rate
Witness: Thomas N. Harris
Type of Exhibit: Surrebuttal Testimony
Sponsoring Party: Noranda Aluminum, Inc.

Case No.: ER-2014-0258
Date Testimony Prepared: February 6, 2015

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase its Revenues for Electric Service

Case No. ER-2014-0258

Surrebuttal Testimony of

Thomas N. Harris

On behalf of

Noranda Aluminum, Inc.

February 6, 2016

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase its Revenues for Electric Service)) Case No. ER-2014-0258))							
STATE OF CALIFORNIA) COUNTY OF SAN MATEO)	SS							
Affidavit of Thomas N. Harris								
Thomas N. Harris, being first duly sworn, on his oath states:								
 My name is Thomas N. Harris. Attached hereto, and made a part hereof for all purposes, is my surrebuttal testimony, which was prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2014-0258. I hereby swear and affirm that the testimony is true and correct. 								
-	Thomas N. Harris							
Subscribed and sworn to before me thisth day of February 2015.								
Ī	Notary Public							

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase its Revenues for **Electric Service**

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Case No. ER-2014-0258

Surrebuttal Testimony of Thomas N. Harris

- 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS. 2 Α Thomas N. Harris. My address is 10 Woodhill Drive, Redwood City, CA 94061. 3 4 Q HAVE YOU FILED DIRECT TESTIMONY IN THIS PROCEEDING? Α Yes. 5 6 7 WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY? Q 8 The purpose of this testimony is to reinforce and clarify points made in my Α
- 9 testimony, particularly in regard to Mr. Mudge's characterizations of conclusions in 10 my testimony what I believe are inaccurate. I also intend to call into question Mr. 11 Mudge's conclusions in his rebuttal testimony.
- PLEASE DESCRIBE THE ISSUES RAISED IN MR. MUDGE'S TESTIMONY 13 Q THAT YOU INTEND TO ADDRESS? 14

A There are several.

First, Mr. Mudge suggests that lenders are likely to assume higher aluminum prices than those assumed in Mr. Boyle's financial model, simply because Noranda has relied upon certain industry analyst forecasts in the past, in its discussions with rating agencies and equity investors, that assume higher prices. This is incorrect. While reasonable people can agree that many scenarios for aluminum prices and required capital investment could come to pass for Noranda, this is precisely why banks and institutional lenders use conservative forecasts and downside cases to determine the creditworthiness of a borrower. In fact, regardless of what scenario Noranda presents to lenders, they are likely to discount anything they view as an overly positive assumptions for factors such as prices and required capital investment.

In prior financings, such as the 2007 LBO to which Mr. Mudge refers in his testimony, the banks and institutional lenders did exactly this. They looked at scenarios with low aluminum prices, much lower, in fact, than what was suggested by industry analysts, such as CRU, in their forecasts at the time. Furthermore, as is publicly disclosed in Noranda's filings with the SEC, the company relied upon forward sales for aluminum to protect its cash flows from declining to a level where Noranda could not service its debt in the event that aluminum prices were lower than the financing base case for a prolonged period.

Underlying my conclusion that Noranda is highly unlikely to be able to refinance absent getting electric rate relief, is the fact that lenders are highly unlikely to do what Mr. Mudge is doing - conveniently assuming a better forecast than Noranda's management. If anything, their independent forecasts in their credit process will be worse.

Second, Mr. Mudge expresses his opinion that it is reasonable to expect that I would view Noranda's financing prospects and viability in positive terms, just because Noranda presented me with a different forecast that was somewhat more positive in its assumptions. This is also incorrect, and belies a lack of understanding of how lenders and practitioners view credit risk for a company such as Noranda. Lenders do not just take a company's forecast at face value and neither did I, in asserting that Noranda is highly unlikely to be able to refinance its debt if it does not get electric rate relief. If Noranda had provided me with the financial model in Table 3 in Mr. Mudge's testimony, my view would be the same.

Third, Mr. Mudge attempts to draw on my testimony to make the point that, so long as Noranda's leverage is 5x range, which can be achieved by assuming better aluminum prices, the Company will be able to refinance its debt. This is incorrect. In making the assertion that the Noranda's requested rate relief would likely allow it to refinance its debt, I was taking into account not only leverage ratios at any point in time, but also what is driving cash flow and the corresponding leverage ratios.

Without a sustainable power rate, Noranda's cost structure is highly unlikely to allow the Company to refinance. For example, if Noranda was at less than 5x leverage due to a period of high prices, but without a competitive cost structure (the biggest driver for which is power), lenders would likely still question the long-term viability of the company because they will assume downward volatility in the future. If they felt that price alone was responsible for the Company's healthier cash flows, the lenders would be unwilling to commit to 5 or more years of credit risk because prices can go back down. Conversely, with the long term rate relief requested by Noranda, even at 5x leverage, but perhaps in a period of lower aluminum prices, lenders would be much more likely to refinance Noranda's debt. The lenders would realize that the healthier cash flows were caused by a sustainable cost structure and long-term rate relief, despite a period of lower prices.

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MUDGE SUGGESTS THAT YOU RELY "ENTIRELY" UPON BOYLES'S ASSUMPTIONS FOR YOUR CONCLUSION THAT NORANDA WILL NOT BE IN A POSITION TO REFINANCE ITS DEBT FACILITIES IN 2017 AND 2019. DID YOU DO SO? IF NOT, UPON WHAT DID YOUR BASE YOUR CONCLUSIONS?

19 CONCLUSIONS?20 A As mentioned about

As mentioned above, I base my conclusion on the fact that lenders might view Mr. Boyles' assumptions and forecast as a conservative and reasonable base case, but they would still sensitize his model with more negative assumptions. Mr. Mudge's model, on the other hand, is more aggressive than Mr. Boyle's and would likely be sensitized even more by lenders. The requested rate relief and its

implicati	ons on Norai	nda's lo	ng-term	cost str	uct	ure would a	allow the	Company	y to
perform	significantly	better	during	periods	of	downward	pricing	pressure	for
aluminu	m, which lend	lers wou	uld quicl	kly realize	e in	their downs	side case	e sensitivit	ies.

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ALUMINUM PRICE ASSUMPTIONS? WAS THAT NECESSARY? WHY NOT? While I am familiar with many experts' forecasts and analysis for the price of aluminum, I am not an aluminum price expert or industry analyst, so no, I didn't conduct an independent analysis of aluminum prices. That said, it was not necessary for me to attempt such an analysis in order to arrive at my conclusion that Noranda is highly unlikely to be able to refinance absent long term rate relief such as it is requesting.

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MUDGE SUGGESTS THAT FOR ITS PLANNING PURPOSES THAT NORANDA SHOULD USE THE CRU FORECAST FOR ALUMINUM PRICES, SHOULD IT? WHY NOT?

While Mr. Mudge conveniently points to the industry analyst CRU and suggests Noranda should simply take those assumptions and everything will be fine, I do not agree. When a CFO does budgeting and planning, particularly in relation to a Company's very ability to refinance its debt and remain viable in the long-term, it is prudent to be conservative. The reason why I say this is that when lenders evaluate Noranda's credit-worthiness, they will likely discount any assumptions they see as overly rosy or aggressive and give more credibility to a financing base case with more conservative assumptions, such as Mr. Boyle's.

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MUDGE SUGGESTS YOU ARE "VAGUE" AS TO THE THRESHOLD FINANCIAL METRICS FOR NORANDA TO BE VIABLE. DO YOU BELIEVE SO?

There are derivative levels of analysis including what are the company's long-term prospects given its debt load? However, based on many years of experience, I do say that, with the long-term power rate relief requested, Noranda is significantly more likely to be able to refinance. Also, there are certain financial metrics such as Debt to EBITDA and Debt to Total Capitalization that are relevant for lenders in good times and bad. I cited all of these in my testimony. Mr. Mudge may call them "vague", but I didn't notice him allege these metrics to be irrelevant or to even question my assertions about what these financial metrics will suggest to lenders. The reasons that my threshold financial metrics for Noranda could be called vague is because market conditions change, as do factors such as underlying interest rates and even lender requirements and the availability of credit to sub-investment grade rated corporations such as Noranda. Without being able to know what these many factors look like in the future, it is impossible for anyone to say that, in 2017, Noranda can absolutely refinance if it has a specific leverage ratio, for example, and I don't believe that Mr. Mudge could do it either.

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What I do say is that, from a lenders perspective, without long-term power rate relief, Noranda's metrics are extremely challenged and the company is unlikely to be able to obtain financing when required. Conversely, with rate relief as

requested, I believe Noranda is highly likely to be able to obtain financing when required.

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BASED ON YOUR EXPERIENCE WITH LENDERS, WOULD LENDERS CALCULATE LEVERAGE RATIOS BASED ON CRU FORECASTS FOR ALUMINUM PRICES IN ORDER TO MAKE A CREDIT DECISION ON WHETHER TO REFINANCE EXISTING DEBT LIKE NORANDA'S? WHY NOT? Lenders will typically take a management view of a "base case" forecast and then sensitize factors such as aluminum prices. Lenders may consider expert forecasts, as well as market forecasts for aluminum prices, such as the forward curve for the price of aluminum, when making their credit decisions. However, lenders often also run downside cases that have price assumptions below the prices forecasted by the experts and the markets. To the extent that lenders view management's forecast as conservative relative to expert forecasts, such as CRU's, lenders will typically discount the driving assumptions to a lesser extent and be more willing to rely on management guidance. In other words, many lenders get comfort that the expert projected prices are higher than those forecasted by management. Again, my experience with corporate CFOs and lenders, suggests that conservative forecasts are most appropriate when examining a Company's very ability to refinance its debt and remain viable.

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MUDGE SUGGESTS HEDGING MAY BE A PANACEA FOR NORANDA. DO
YOU BELIEVE THAT NORANDA CAN MANAGE RISK THROUGH HEDGING
THE SALE OF ITS ALUMINUM?

No. For multiple reasons, hedging is not going to solve Noranda's problems. Hedging is beneficial when a company can lock in market prices for its output that will allow it to whether periods of much lower prices. Mr. Mudge on one hand suggests that Noranda should use a more aggressive price assumptions in its model, but on the other hand, seems to suggest they should hedge. Having handled debt financings that were underpinned by hedges in the past, this seems like contradictory logic from Mr. Mudge. I should also point out that, at a B3 corporate rating, Noranda is unlikely to have access to hedging without having to post prohibitive amounts of capital, further eroding its liquidity. At a low-single B rating, hedging counterparties are unlikely to want to enter into a contract with Noranda for the same reason that Noranda is likely to be unable to refinance without rate relief. Hedging counterparties don't want to deal with companies whom they feel may not be viable in the long term.

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GIVEN NORANDA'S CURRENT ECONOMIC CONDITION, CAN NORANDA HEDGE IN THE MARKETPLACE?

Based on prior experience doing financings underpinned by output hedges, I do not believe that Noranda can hedge without having to post prohibitive amounts of capital, if at all. So no, I don't believe hedging is an option for Noranda.

DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

22 A Yes. Thank you.