

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

August 18, 2022

Marcos Gradin
Chief Financial Officer
Loma Negra Compania Industrial Argentina Sociedad Anonima
Cecilia Grierson 355, 4th Floor
Zip Code C1107CPG – Ciudad Autónoma de Buenos Aires
Republic of Argentina

Re: Loma Negra Compania Industrial Argentina Sociedad Anonima Form 20-F for the year ended December 31, 2021 Filed April 29, 2022 File No. 1-38262

Dear Mr. Gradin:

We have reviewed your August 11, 2022 response to our comment letter 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our July 28, 2022 letter.

Form 20-F for the year ended December 31, 2021

Business Overview, page 31

1. We note your response to comment 1, which included a materiality analysis concluding that you do not have material mining operations. Please confirm your valuation of the mining assets consisted of the quarry and all processing operations to the point of material external sales. This definition of mining assets for vertically integrated mining companies, became effective with S-K 1300. Mining assets would normally include the quarry, crushing/screening facilities, kiln, transportation, packaging, shipping and warehousing to the point of material external sales. Additional downstream facilities could be added depending on the extent of your vertical integration and dependence on your limestone/cement operations. See Item 1301 (c)(3) of Regulation S-K.

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Mineral Reserves, page 38

2. We note you do not report any measured, indicated or inferred mineral resources from which reserves are determined. Please explain.

If you have questions regarding mining comments, please contact Ken Schuler, Mine Engineer at (202) 551-3718 or Craig Arakawa at (202) 551-3650. You may contact Mindy Hooker at (202) 551-3732 or Kevin Stertzel at (202) 551-3723 with any other questions.

Sincerely,

Division of Corporation Finance Office of Manufacturing