

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

October 19, 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 Response dated September 1, 2022 File No. 1-38262

Dear Marcos Gradin:

We have reviewed your September 1, 2022 response to our comment letter and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this comment 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 comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to this comment, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our August 18, 2022 letter.

Form 20-F for the Year Ended December 31, 2021

General

1. We note your response to our comment indicating you will prepare and file the appropriate technical reports and provide additional disclosures in your Form 20-F for the fiscal year ended December 31, 2022 to comply with Item 1300 of Regulation S-K. We believe that the omitted information is material, and that an amendment to your Form 20-F for fiscal year ended December 31, 2021 is appropriate. Additionally, in light of the omission of S-K 1300 disclosures and related technical reports, please reassess your conclusion that your disclosure controls and procedures were effective as of December 31, 2021.

Marcos Gradin Loma Negra Compania Industrial Argentina Sociedad Anonima October 19, 2022 Page 2

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