August 23, 2021

RueAnn Thomas
Georgia-Pacific Gypsum LLC
2374 Mill Road
Fort Dodge, IA 50501

Re: Georgia-Pacific Gypsum LLC- North Recycle Pile
2020 Semi-Annual and Annual Water Quality Reports, and the 2020 Annual Inspection Report
DNR ID #94-SDP-18-09

Dear Ms. Thomas:

The Iowa Department of Natural Resources (IDNR) has reviewed the *2020 Semi-Annual and Annual Water Quality Reports, and the 2020 Annual Inspection Report*, dated January 28, 2021; as prepared on your behalf by MER Engineering, Inc.

Based on our review of the referenced submittal, the IDNR has the following comments:

2020 Annual Inspection Report

The responsible official shall follow the recommendations of the report, as follows:

1. Continue to monitor and repair all settled areas (including sink holes) as they occur and maintain site drainage per the final grading plan approved by the IDNR in 2003.

2. Reseed as necessary to maintain dense vegetative cover.

3. Mow site once annually.

Also, it appears that the annual inspection report was submitted separately from the AWQR. As such, please exclude a reference to this report from the title of the AWQR unless it is actually included.

2020 Semi-Annual Water Quality Report

Please see the comments below in regard to the 2020 Annual Water Quality Report.

Also, it appears that semi-annual water quality reports are submitted separately from the AWQR. As such, please exclude references to these reports from the title of the AWQR unless they are actually included.

2020 Annual Water Quality Report

1. The permit holder shall continue to conduct semiannual water quality analysis at all currently approved monitoring points as defined in the Closure Authorization issued on October 6, 2011, and/or any subsequent amendments.

2. The responsible official shall continue to conduct groundwater sampling and analysis on a semiannual basis for **1)** Field parameters consisting of temperature, pH, and specific conductance; **2)** Paragraph IAC 567-115.26(4)e parameters consisting of ammonia nitrogen, chemical oxygen demand, and total iron, and **3)** Additional parameters consisting of calcium, magnesium, potassium, sodium, and alkalinity.

3. Paragraph IAC 567-115.21(2)d requires that in-situ permeability tests be conducted on monitoring wells every five years to compare test data with those collected originally to determine if well deterioration is occurring. This was not completed during original sampling or during closure activities. Therefore, as requested, the responsible official is authorized to conduct recharge rate measurements in lieu of in-situ permeability testing. Recharge rates shall be measured and reported biannually in the corresponding AWQR.

4. In previous hydrogeological investigation findings at the site, it was determined that groundwater flowed from the west to the east. Since then, groundwater level evaluations have indicated that there appears to be no monitoring locations that can be used as an upgradient background monitoring location due to the lack of a continuous water bearing strata beneath the gypsum pile. As such, all maps and/or figures must be revised to eliminate the designations of upgradient/downgradient monitoring well positions.

5. The 2020 AWQR states that the 2020 sampling and analysis events marked only the fourth and fifth testing events for total metals in lieu of dissolved metals. As such, there is currently not enough data to complete a meaningful statistical analysis for those parameters tested by the total metals analysis method.

   The IDNR acknowledges that additional rounds of groundwater testing will be required to compile enough data for the total metals tests in order to complete a meaningful intrawell statistical analysis.

If you have any questions, you may contact me at (515) 537-4051.

Sincerely,

Nina M. Booker

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Date: 2021.08.23 19:12:13 -05'00'

Nina M. Booker
Environmental Engineer Senior
Land Quality Bureau

cc: Field Office 2

MER Engineering, Inc.
109 Regency West Court
Fort Dodge, Iowa 50501