

Part 98 Mandatory Greenhouse Gas Reporting
Subpart RR – Geologic Sequestration of Carbon Dioxide

Annual Monitoring Report

Reporting Period: January 1 – December 31, 2017

Archer Daniels Midland Company (ADM)
Decatur Corn Processing Plant
4666 Faries Parkway
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March 16, 2018

40 CFR Part 98, Section 446, Paragraph (f)(12)

- (i) A narrative history of the monitoring efforts conducted over the previous calendar year, including a listing of all monitoring equipment that was operated, its period of operation, and any relevant tests or surveys that were conducted.

ADM is operating under a Monitoring, Reporting, and Verification (MRV) Plan CCS2 for carbon capture and sequestration at its ADM Decatur location. The plan lists several monitoring efforts with associated monitoring equipment and its period of operation. It also lists tests and/or surveys that must be conducted in the previous calendar year. The monitoring and testing efforts conducted over the previous calendar year include:

- Continuous monitoring of injection pressure, annulus pressure, and temperature monitoring at the injection well;
- Groundwater quality monitoring in the local drinking water strata, the lowermost underground source of drinking water (USDW), and the strata immediately above the Eau Claire confining zone;
- External mechanical integrity testing (MIT) and pressure fall-off testing at the injection well;
- Plume and pressure front monitoring in the Mt. Simon using direct and indirect methods (i.e., brine geochemical monitoring, pulse neutron / RST logs, VSP and 3D seismic surveys).

ADM began injection of carbon dioxide on April 7, 2017 and has continued to operate the monitoring equipment for the duration of injection. ADM utilizes equipment that is recommended by the manufacturers of the equipment for this particular operation and the equipment is calibrated and maintained based on the manufacturer's recommendations. The methodologies utilized for mechanical integrity testing and plume and pressure front monitoring have been approved by the Agency.

Per section 9.1 of the Monitoring, Reporting, and Verification Plan CCS2 required by this subpart, ADM is required to complete monthly visual inspections of surface components from the flow meter to the injection wellhead. ADM identified in March 2018 that monthly visual inspections had not been documented since the commencement of CO2 injection in April 2017. However, a substantial amount of equipment for the carbon dioxide injection system is on ADM property and in areas that can be observed by plant personnel on a daily basis. There have been no reports of any leaks on this equipment and there have been no documented maintenance activities associated with this equipment and therefore there is no reason to believe that the integrity of the equipment has been compromised. ADM has since developed an automated task email reminder to complete a visual inspection of the surface

components on at least a monthly basis. The first inspection of the surface components was completed on March 7, 2018 and no issues or leaks were identified.

- (ii) A description of any changes to the monitoring program that you concluded were not material changes warranting submission of a revised MRV plan under §98.448(d).

ADM has reviewed the MRV Plan and has concluded that the only non-material change was a correction in section 11.0 which referenced a wrong section number within the same MRV plan. The correct section number was updated in the text of section 11.0 and the new version has been approved.

- (iii) A narrative history of any monitoring anomalies that were detected in the previous calendar year and how they were investigated and resolved.

ADM has determined that no anomalies were detected in the previous calendar year.

- (iv) A description of any surface leakages of CO₂, including a discussion of all methodologies and technologies involved in detecting and quantifying the surface leakages and any assumptions and uncertainties involved in calculating the amount of CO₂ emitted.

As discussed in section (i) of this report, ADM has not detected any surface leakage of CO₂ from components in the previous calendar year. ADM will continue to monitor equipment and all other pathways for leakage for the duration of injection.