ATTACHMENT A: SUMMARY OF REQUIREMENTS

CLASS VI OPERATING AND REPORTING CONDITIONS

Facility name: Archer Daniels Midland, CCS#2 Well
IL-115-6A-0001

Facility contact: Mr. Steve Merritt, Plant Manager
4666 Faries Parkway, Decatur, IL
(217) 424-5750, steve.merritt@adm.com

Well location: Decatur, Macon County, IL;
39º53'09.32835", -88º53'16.68306"

Injection Well Operating Conditions

PARAMETER/CONDITION	LIMITATION or PERMITTED VALUE	UNIT
Maximum Injection Pressure - Surface	2284	psig
Minimum Annulus Pressure	100	psig
Minimum Annulus Pressure/Tubing Differential (directly above and across packer)	100	psig

The injection pressure will be measured at the wellhead.

The maximum injection pressure, which serves to prevent confining-formation fracturing, was determined using the fracture gradient obtained from injectivity data from the nearby CCS#1 well multiplied by 0.9 (146.88 (a)).

Routine Shutdown Procedure:
Under routine conditions (e.g., for well workovers), the permittee will reduce CO_2 injection at a rate of 500 tons per day over a 6 day period to ensure protection of health, safety, and the environment. (Procedures that address immediately shutting in the well are in Attachment F (Emergency and Remedial Response Plan) of this permit).

Class VI Injection Well Reporting Frequencies

ACTIVITY	MINIMUM REPORTING FREQUENCY
CO_2 stream characterization	Semi-annually
Pressure, flow, rate, volume, pressure on the annulus, annulus fluid level and temperature	Semi-annually
Corrosion monitoring	Semi-annually
External MIT	Within 30 days of completion of test
Pressure fall-off testing	In the next semi-annual report

Note: All testing and monitoring frequencies and methodologies are included in Attachment C (the Testing and Monitoring Plan) of this permit.

Class VI Project Reporting Frequencies

ACTIVITY	MINIMUM REPORTING FREQUENCY
Ground water quality monitoring	Semi-annually
Plume and pressure front tracking	In the next semi-annual report
Surface air and/or soil gas monitoring	In the next semi-annual report
Monitoring well MITs	Within 30 days of completion of test
Financial Responsibility updates pursuant to H.2 and H.3(a) of this permit	Within 60 days of update

Note: All testing and monitoring frequencies and methodologies are included in Attachment C (the Testing and Monitoring Plan) of this permit.

Start-up Monitoring and Reporting Procedures

These additional procedures describe how ADM will: A) initiate injection as detailed in the table below and conduct start-up specific monitoring of the CCS#2 site pursuant to 40 CFR 146.90 and B) submit monthly reports during the first six months of injection.

A) Multi-stage (step-rate) start-up procedure and start-up period[1]:

1) This procedure will be done using the existing surface and downhole pressure and temperature gauges in CCS#2, CCS#1, VW#1, VW#2, and GM#2.

2) During the start-up period the permittee will submit a daily report summarizing and interpreting the operational data. At the agency's request, the permittee will schedule a daily conference call to discuss the operational data.

3) A series of successively higher injection rates have been determined as shown in the table below, and the elapsed time and pressure values are read and recorded for each rate and time step. Each rate step will last 24 hours. At no point during the procedure will the injection pressure exceed the maximum injection pressure (2284 psig) measured at the wellhead.

4) A spinner log will be conducted during each change (step) in rate.

5) Planned Injection Rates:

Rate (Tonnes per day)	Duration (hrs.)	Percent of Permit Maximum Injection Rate (%)
550	24	16.7%
1100	24	33.3%
1650	24	50.0%

[1] Applies only to the initial start of injection operations until the well reaches full injection rate.

Rate (Tonnes per day)	Duration (hrs.)	Percent of Permit Maximum Injection Rate (%)
2200	24	66.7%
2750 (or max. available CO_2)	24	83.3%

6) Injection rates will be controlled by starting an additional compressor (fix volume with no spillback); thus, the flow will remain constant throughout the duration of the step rate period.

7) Injection rates will be measured (using the Coriolis flow meter) and data will be recorded.

8) Surface and downhole pressure and temperatures will be measured and data will be recorded at CCS#2, CCS#1, VW#1, VW#2, and GM#2.

9) During the startup period, a plot of injection rates and the corresponding stabilized pressure values will be graphically represented. During the start-up period, the project team will look for any evidence of anomalous pressure behavior.

10) If during the start-up period, anomalous pressure behavior is observed, the project team may conduct additional logging and modify the injection rate to better characterize the anomaly.

11) If during the start-up period, the project team determines that anomalous pressure behavior indicates formation fracturing, injection will be stopped and the line valve closed allowing the pressure to bleed-off into the injection zone.

a. The instantaneous shut-in pressure (ISIP), will be measured and the microseismic data will be reviewed for event signatures.

b. The permittee will notify the agency within 24 hours of the determination.

c. The permittee will consult with the agency before initiating further injection.

B) Additional Start-up Monthly Monitoring and Reporting[2]:

On a monthly basis, during the first six (6) months of injection, the permittee will provide the agency with a report that summarizes and provides interpretation of the microseismic and operating data described above in Part A of this section. The report shall be submitted within 30 days after the end of the reporting period.

[2] During the first six months of injection.