## ATTACHMENT A: SUMMARY OF REQUIREMENTS OPERATING AND REPORTING CONDITIONS

## **Facility Information**

Facility name: One Carbon Partnership, LP

CCS1

Facility address: 1554 N. 600 E. Union City, IN 47390

Well location: Section 17, Township 20 N, Range 15 E

40.1874°, -84.8646°

**Table 1: Injection Well Operating Conditions, Parameters, and Limits** 

PARAMETER/CONDITION	LIMITATION	UNIT
Maximum Injection Pressure - Surface	2,015	psi
Maximum Injection Pressure -	2,325	psi
Injection Zone at 3,100 feet bgl		
Minimum Annulus Pressure	100	psi
Minimum Annulus Pressure above Tubing Differential (directly above and across packer)	100	psi
Carbon Dioxide Purity (minimum)	98.75	percent
Maximum Injection Rate	450,000	metric tons/year
Maximum cumulative mass of injected CO <sub>2</sub>	13,500,000	metric tons

Table 2: Operational emergency shut down set points

ALARM TYPE		SET POINT	UNIT
Maximum Injection Pressure,	Shutdown Point: 5% less than maximum	1,910 <sup>1</sup>	PSI
Surface	allowable injection pressure (MAIP)		
Maximum Injection Pressure,	Shutdown point:	2,200 <sup>2</sup>	PSI
Bottomhole	5% less than maximum allowable BHFP		
Annulus Pressure	High alarm	1,250	PSI
	Shutdown point: Maximum	1,500	PSI
	Low alarm	300	PSI
	Shutdown point: Minimum	100	PSI
	Shutdown point: Less than minimum allowable annulus over tubing differential	100	PSI

During operation, the injection pressure will be measured at the wellhead and at the injection zone.

<sup>&</sup>lt;sup>1</sup> Rounded down to the nearest 10

<sup>&</sup>lt;sup>2</sup> Rounded down to the nearest 10

The maximum injection pressure of the injection zone, which serves to prevent confining-formation fracturing, was determined using a fracture gradient of 0.75 psi/ft estimated from mini frac and step-rate tests performed at nearby Class I well facilities. The injection zone maximum injection pressure is calculated as 90% of the depth to the top of the injection zone multiplied by the fracture gradient. The surface maximum injection pressure is the injection zone maximum injection pressure minus the static head.

After the well is constructed, the Maximum Injection Pressure (MIP) will be recalculated, the MIP limit in the table above will be revised, using a fracture gradient measured from step rate tests that will be conducted in the injection well and the actual depth of the top of the injection zone.

Table 3: Summary of Measurement, Assessment or Update, and Reporting Frequencies<sup>3</sup>

ACTIVITY	MINIMUM RECORDING FREQUENCY	MINIMUM REPORTING FREQUENCY
CO2 stream characterization	Quarterly	Semi-annually
Flow rate, mass, annulus pressure, annulus fluid level, and temperature	Continuous	Semi-annually
Injection Pressure at the Wellhead	Continuous	Semi-annually
Injection Pressure at the Injection Zone	Continuous	Semi-annually
Injection Zone Fluid Monitoring	Annually	Annually
Corrosion monitoring	Quarterly	Semi-annually
External MIT	Annually	Annually
Fall-off Test	Every 5 years	Every 5 years
Above Confining Zone Monitoring – Knox Formation	Semi-annually	Annually
Above Confining Zone Monitoring–Maquoketa Shale	Annually	Annually
Pulse Neutron Logging	Annually	Annually
Area of Review/Corrective Action Plan Assessment and Financial Responsibility Update	NA	Annually

<sup>&</sup>lt;sup>3</sup> Note: All testing and monitoring frequencies and methodologies are included in Attachment C (the Testing and Monitoring Plan) of this Permit.

The report submittal schedule is (determined on a calendar basis):

- Semiannual Reports due on or before July 31st for first reporting period and January 31st for second reporting period
- Annual Reports due on or before January 31st
- 5-year reports due on or before February 15th of the end of the 5-year reporting cycle (from January 1st year 1 to December 31st year 5)

Start-up specifications and monitoring are outlined in the Testing and Monitoring Plan in Attachment C of this Permit.