ATTACHMENT I: FINANCIAL RESPONSIBILITY COST ESTIMATE AND DOCUMENTS

Facility Information

Facility name: Marquis Biocarbon Project
MCI CCS 3

Facility address: 10000 Marquis Drive
Hennepin, IL 61327

Well location: S2, T32N, R2W
41.27026520° N, 89.30939322° W

Pursuant to the requirements in 40 C.F.R. § 146.85, Marquis has demonstrated adequate financial responsibility to cover the costs of the four geologic sequestration activities included in 40 C.F.R. § 146.85(a)(2), as determined by third-party estimates, using financial instruments as listed in 40 C.F.R. § 146.85(a)(1). The standby trust, letter of credit, and third-party insurance are part of the Administrative Record for this permit.

FINANCIAL RESPONSIBILITY SCHEDULE

Funding provided to the trust account through the letter of credit and the assurance provided by the third-party insurance will be adjusted according to when the financial risks are incurred on the Marquis Project. At the time of the following activities, Marquis will provide the adjustments stated below:

1. Pre-Injection: Costs associated with injection well plugging are covered by a letter of credit and standby trust. Once an injection or monitoring well is drilled, plugging cost will eventually be incurred. Therefore, the trust account will be funded with the cost of plugging injection and monitoring wells prior to drilling the wells.

2. Injection: Costs associated with post-injection site care and site closure are covered by a letter of credit and standby trust. As soon as injection of CO_2 begins in the Class VI well, certain activities related to post-injection site care and site closure will necessarily need to occur. Therefore, the trust account will be funded with the costs associated with these activities. Marquis estimates the cost of these activities at $8,727,806.

3. Post-Injection: For the reason stated above, post-injection site care and site closure will be funded by Marquis by the start of the injection phase. The trust account may phase out these costs as the activities are completed (with approval from the Director). For example, once wells have been plugged, their corresponding plugging costs may be

subtracted from the total value of the trust account.

4. Emergency and Remedial Response: Costs associated with emergency and remedial response activities are covered by a third-party insurance policy. Prior to well construction must be prepared to undertake any emergency or remedial response actions, although such actions are unlikely to be needed.

Within seven calendar days after the effective date of the final Class VI UIC permit for the Marquis Project, Marquis will ensure that $642,364 is in the trust fund to cover the cost of plugging injection and monitoring wells in the Pre-Injection Period. In addition, Marquis will ensure that there is an active third-party insurance policy valued at $7,342,390 to cover the cost of Emergency and Remedial response prior to well construction

On or before the one-year anniversary of the effective date of the final Class VI UIC permit for the Marquis Project, and at least seven calendar days prior to EPA authorization for the start of the CO_2 injection in the well (whichever is earlier), Marquis will ensure that an additional $8,727,806 is in the trust fund to cover the costs of the Post-Injection Site Care tasks. The total value of the trust at the beginning of the Injection Period will be $9,370,170.

As specified under 40 C.F.R. § 146.85(b)(1), Marquis will maintain financial responsibility until the EPA approves the completed Post-Injection Site Care and Site Closure Plan and approves site closure. Marquis must certify to the EPA that all geologic sequestration activities have been completed in accordance with the Post-Injection Site Care and Site Closure Plan.

Table 1: Total Financial Responsibility Cost Estimates.

Financial Responsibility Element	Cost Estimate	When Funded	Financial Instrument
Injection Well Plugging	$344,503	Prior to well construction	Letter of Credit
Total Cost	**$344,503**		
PISC and Site Closure			
Monitoring Wells Plugging	$297,861	Prior to well construction	Letter of Credit
PISC Testing & Monitoring	$6,776,819	Prior to authorization to inject	Letter of Credit
Site Closure (Seismic Data Acquisition, Updated Modeling, and Reporting)	$1,917,987		
Monitoring Well O&M during PISC	$33,000		
Total Cost	**$9,370,170**		
Emergency and Remedial Response – Site Remediation/Restoration	$6,840,000	Prior to well construction	Third-Party Insurance
Emergency and Remedial Response – Other	$502,390		
Total Cost	**$7,342,390**		
Total Financial Responsibility	**$16,723,057**		

Table 2: Breakdown of Cost Elements.

Injection Well Plugging		
Item	Contractor	Cost
Flush injection well with a buffer fluid	Drilling Contractor	Included in plugging costs below
Tests to measure bottomhole reservoir pressure	Third Party Service Provider	Included in project testing and monitoring costs
Final external mechanical integrity test to evaluate the integrity of the existing casing and cement that will remain after the well is plugged		
Plug injection well (CCS 3) - Mobilization of drill rig and demobilization	Drilling Contractor- Mobilization of drill rig and demobilization	$82,817.28
Plug injection well (CCS 3) - $12.5k per day for 7 days	Drilling Contractor	$90,581.40
Cement/gel	Haliburton cement provider	$156,611.00
Plugging oversight & report preparation	$200 per hour for 7 days at 10 hours per day	$14,493.02
Total		$344,502.70

Table 3a: PISC Cost Breakout – Post Injection Site Care.

PISC Time Period Years	12

Post-Injection Site Care		
Event	Frequency	Total Cost over PISC Duration
5 Shallow Groundwater Wells Sampling & Isotope Analysis	Annually for 12 years	$208,000
Annular Pressure Analysis & Fluid Volume of injection well (CCS 3)	Continuous	$22,361
Annular Pressure Analysis of deep monitoring well MW-2	Weekly	$22,361
Pressure-Temperature Sensors in Injection Well (CCS 3) Upper Mt. Simon Formation and ACZ-1 Monitoring Well in Gunter & Galesville Formations	Continuous	$89,443
Temperature Profile of Storage Formation of injection well (CCS 3), and deep monitoring wells – MW-1 and MW-2 (Distributed Temperature Sensing (DTS) System-Fiber Optic)	Annually	$124,226
Fluid sampling and isotope analysis of ACZ 1 monitoring well in Gunter & Galesville Formations, and deep monitoring well. MW-2 in Upper Mt. Simon Formation	Annually = 12 sampling/analysis events	$268,328
Pulsed Neutron Capture (PNC) Logging of ACZ-1 monitoring well and deep monitor well MW-2	Once per year	$447,213
Data Analysis/Updated CO_2 Plume/AoR Dynamic Modeling	Every 5 years	$144,102
Microseismic Monitoring of 5 Surface Stations	Continuous	$15,901
Time-Lapse 3D Surface Seismic Data of Surface	Every 5 years	$5,031,150
PISC Monitoring Reports to US EPA	Semi-Annual for 1st Year and Annually for Remaining 11 Years = 13 Reports @ 150 hours/ $30,000 per report	$403,734

Wellhead Valve Greasing	Annually	$9,000
Painting Well Heads	Annually	$4,000
Well Pad Maintenance	Annually	$4,000
Calibration of Temperature & Pressure Gauges	Annually	$6,000
Rebuilding Valves (8)	Once during PISC Period	$10,000
Total PISC Costs		**$6,809,819**

Table 3b: PISC Cost Breakout – Site Closure.

Site Closure		
Item	Contractor	Cost
Prior to plugging wells, check external integrity by temperature & PNC logging	Third Party	See oversight cost estimate below
Plug ACZ-1 Well and Deep Monitoring Wells – MW-1 and MW-2 (Service Rig Mobilization & Demobilization)	Drilling Contractor	$62,113
Plug ACZ-1 Well and Deep Monitoring Wells MW1 and MW-2 (Service Rig & pump)	Drilling Contractor	$85,405
Plug ACZ-1 Well and Deep Monitoring Wells MW-1 and MW-2 (Cement/gel)	Drilling Contractor	$123,013
Plugging Oversight & Remove above ground infrastructure (e.g., wellheads and monitoring equipment)	Third Party (44 hours per well @ $200 per hour = 132 hours)	$27,330
Time-Lapse 3D Surface Seismic Data of Surface (Once)		$1,677,050
Corrosion Monitoring – Multi-Finger Caliper Logging or Ultrasonic Casing Evaluation – Injection Well (CCS 3) 25Cr Casing & Tubing	Every 6 years after Start of Post-Closure Period Until Well is Closed (Baker Hughes 2025)	$184,000
Data Analysis/ Updated Modeling (Once - Following well closure)		$41,409
Site Closure Report to US EPA	Third Party	$15,528
Total		**$2,215,848**

Table 3c: PISC Cost Breakout – Emergency and Remedial Response.

Emergency and Remedial Response		
Item	Contractor	Cost
Implement Shutdown (Alarm DCS System)		[no cost]
Conduct Site / Cause of Emergency Review	Third Party with Marquis	$8,282
Mechanical Integrity Concern	Service Rig	$323,298
Equipment Failure	Third Party	$155,282
Report of Corrective Action to US EPA	Third Party	$15,528
USDW Remediation – Total Costs: (*Breakdown of costs is below in italics)*		$6,840,000
Leak Investigation / Hydrogeological Study/ 10 Well Installation/Conversion	Third Party	*$2,000,000*
Extraction Well Installation/Conversion (4 wells) & Pump Installation & Electrical Connection to Onsite Electric Service	Third Party	*$1,960,000*
Electrical Service to 4 Existing Onsite Water Wells & Existing Building Housing Treatment System	Marquis	*$50,000*
Onsite Groundwater Treatment System & Media Change Out	Third Party	*$255,000*
Trenching and Piping from Existing Water wells to CO_2 Leakage Area & Electrical (Using Onsite Trenching Equipment)	Third Party & Onsite Trenching Equipment	*$130,000*

Permitting & Project Planning	Third Party and Marquis	*$760,000*
Operational & Maintenance Period	Third Party (2.25 Years)	*$1,400,000*
Close Out / Removal of Treatment System	Third Party	*$285,000*
Total		**$7,342,390**