

CLASS VI INJECTION FINANCIAL RESPONSIBILITY PLAN

40 CFR 146.85

TRILLIUM CARBON STORAGE COMPLEX (TCSC)

Facility Information

Facility Name: Trillium Carbon Storage Complex (TCSC)
TCSC-1, TCSC-2, TCSC-3, TCSC-4, TCSC-5

Facility Contact: **Claimed as PBI** [REDACTED]

Claimed as PBI

Facility Address: **Claimed as PBI**

Well Location: **Claimed as PBI** [REDACTED]

Claimed as PBI

Well Name	Latitude	Longitude
TCSC-1	Claimed as PBI	[REDACTED]
TCSC-2	Claimed as PBI	[REDACTED]
TCSC-3	Claimed as PBI	[REDACTED]
TCSC-4	Claimed as PBI	[REDACTED]
TCSC-5	Claimed as PBI	[REDACTED]

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Abbreviations and Acronyms

AoR	Area of Review
CCS	Carbon capture, and storage
CO ₂	Carbon dioxide
DOE	Department of Energy
EPA	Environmental Protection Agency
PISC	Post-Injection Site Care
UIC	Underground Injection Control
USD	Underground Source of Drinking Water
U.S.	United States

3. FINANCIAL RESPONSIBILITY

3.1. EXECUTIVE SUMMARY

Pursuant to 40 CFR 146.85, TCSC has prepared this **Financial Responsibility** (FR) document which describes the cost of covering corrective action, emergency response, post-injection monitoring, injection well conversion, and site closure activities that will be conducted as part of TCSC. This document also describes TCSC's approach to securing the adequate and appropriate financial instruments required to cover the expenses outlined herein. The approach to financial responsibility described in this document is broken into two phases – each phase detailing the associated FR costs and timing (Table 3-1) for pre-injection (Phase I) and injection/post-injection (Phase II).

A financial surety bond will be utilized for both Phase I and Phase II to cover the total FR cost estimates of \$**Claimed as PBI** and \$**Claimed as PBI** respectively. In the unlikely case TCSC cannot establish a surety bond for both phases or all risks for the whole project duration, then TCSC will work down a prioritized list of financial instruments with **Claimed as PBI** [REDACTED].

TCSC will work with the provider to ensure that U.S. EPA Region 05 has authority to notify the trustee of the need for payments from the fund to cover costs of activities covered under the agreement in accordance with 40 CFR 146.85(a)(6)(iii). Information on third-party carrier financial strength and commitment to covering the cost of each phase will be provided prior each phases instrument review by the EPA (Table 3-1).

3.2. ESTIMATED PHASED COSTS

TCSC is taking a phased approach to financial responsibility that splits the overall timeline of the geologic sequestration project into two FR phases. A phased approach to financial responsibility will allow TCSC to decrease financial risk through implementation of appropriate financial instruments based on updated interpretations from the project well data collection. Currently, risks for each phase have been identified and associated costs calculated (Table 3-1) and explained in the subsequent sections. Refer to the appendix attached at the end of this document for more granular cost breakdowns of each phase and associated risks. TCSC commits to delivering documents showing the financial instruments to be used for Phase I and Phase II costs **Claimed as PBI** [REDACTED]

[REDACTED] (Table 3-1). These documents will show the specified instrument to be effective before each risk is incurred during each phase.

All cost estimates are based on quotes and technical data available during the permit application development process and are projected to cover the cost of employing an independent third-party subcontractor to perform the services or procurement of requisite goods. These estimates are based upon historic price data from other projects managed by TCSC and its project partners, cost quotes from third-party companies, regulatory guidance documents, and TCSC's best judgment about the level of effort required to complete an activity. These values may change during the project. If there are significant changes, TCSC will reevaluate the value of the financial instruments, and any adjustment will be submitted for approval.

Table 3-1. TCSC Phased Approach Risks and Cost Estimates

FA Phase	Cost Categories	Instrument In-Place	Instrument Effective	Estimated Costs	Instrument
Phase I	Site Closure Costs for All Wells	Claimed as PBI	Claimed as PBI	\$ [REDACTED]	Claimed as PBI
	ERRP	[REDACTED]	[REDACTED]		[REDACTED]
	Corrective Action	[REDACTED]	[REDACTED]		[REDACTED]
Phase II	Site Closure Costs for All Wells	Claimed as PBI	Claimed as PBI	\$ [REDACTED]	Claimed as PBI
	Injection Well Conversion and Plugging	[REDACTED]	[REDACTED]		[REDACTED]
	ERRP	[REDACTED]	[REDACTED]		[REDACTED]
	PISC Costs	[REDACTED]	[REDACTED]		[REDACTED]
	Corrective Action	[REDACTED]	[REDACTED]		[REDACTED]

3.2.1. Phase I: Claimed as PBI

FR Phase I begins Claimed as PBI

Projects risks for this phase include pre-injection Claimed as PBI

Claimed as PBI

(Table 3-2).

Table 3-2. TCSC Financial Responsibility Costs for Phase I

Claimed as PBI

3.2.2. Phase II: **Claimed as PBI**

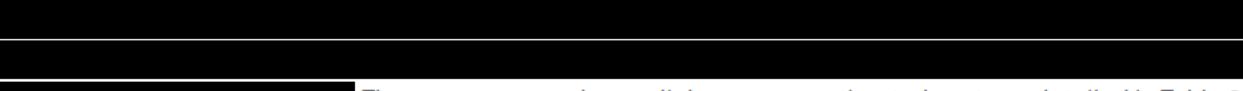
FR Phase II begins at **Claimed as PBI** by U.S. EPA Region 05 UIC Program Director. Project risks for this phase include corrective action, conversion of injection wells to monitoring wells, post-injection site care activities, site closure, and injection and post-injection emergency and remedial response.

TCSC will routinely monitor the AoR **Claimed as PBI**

Claimed as PBI, if necessary. After injection cessation, two injection wells, one in the **Claimed as PBI** and one in the **Claimed as PBI**, will be converted into in-zone monitoring wells; the remaining three injection wells will be plugged and abandoned. Post-injection site care activities are comprised of periodic maintenance of wells, AoR reevaluations as required, and monitoring of plumes through a variety of tests and equipment (refer to *Post-Injection Site Care Plan* for more information). Site closure costs include plugging and abandoning all drilled injection and monitoring wells and site restoration. Wells will be plugged as detailed in the *Plugging Plan*. CO₂ resistant cement will only be used for well in contact with CO₂ or wells with high potential for contact with CO₂ in the subsurface. **Claimed as PBI**



The total estimated FR cost in 2024 dollars for Phase II is \$ **Claimed as PBI** (Table 3-3). The post-injection site care cost estimate is comprised of the estimated costs **Claimed as PBI**



Claimed as PBI The emergency and remedial response estimated costs as detailed in Table 3-8.

Table 3-3. TCSC Financial Responsibility Costs for Phase II

Claimed as PBI



3.3. FINANCIAL INSTRUMENTS

An administratively complete EPA Class VI permit application is a **Claimed as PBI** [REDACTED]. **Claimed as PBI**, TCSC will begin work to obtain financial instruments for both project phases in which each financial instrument will have agreements in place **Claimed as PBI** [REDACTED] on which the coverage will start. **Claimed as PBI** [REDACTED] TCSC's financial instruments will be in place **Claimed as PBI** prior to the estimated dates for EPA **Claimed as PBI** [REDACTED] and **Claimed as PBI** [REDACTED] prior to the **Claimed as PBI** [REDACTED] for phase I and II, respectively (Table 3-1). Collaboration with EPA Region 05 during this process will ensure that the provider will comply with requirements established in 40 CFR 146.85(a)(6)(ii), that the instrument's protective conditions of coverage adequately meet standards defined in 40 CFR 146.85(a)(4)(i), **Claimed as PBI** [REDACTED]. Instrument coverage will be periodically reassessed and adjusted to account for inflation, additional data, or changes in risk that could change the costs of activities.

3.3.1. Phase I: Pre-Injection

TCSC plans to use a **Claimed as PBI** [REDACTED] during the pre-injection phase of the project. This instrument will cover the cost of **Claimed as PBI** [REDACTED]. Should TCSC fail to fulfill financial responsibility actions **Claimed as PBI** [REDACTED] the total value available will be no less than \$ **Claimed as PBI** [REDACTED]. Information on third-party carrier financial strength and commitment to covering the \$ **Claimed as PBI** [REDACTED] face value cost of Phase I will be finalized **Claimed as PBI** [REDACTED] (Table 3-2). **Claimed as PBI** [REDACTED]

3.3.2. Phase II: Injection and Post-Injection

TCSC will pursue a **Claimed as PBI** [REDACTED] in Phase II, for the **Claimed as PBI** [REDACTED]-year injection and **Claimed as PBI** [REDACTED]-year post-injection phases of the project. **Claimed as PBI** [REDACTED] TCSC will work to identify suitable insurance carriers and bond providers that meet requirements listed under 40 CFR 146.85(a)(6)(ii) and 40 CFR 146.85(a)(6)(iii), where applicable. TCSC will provide requisite documentation establishing coverage for these instruments to the U.S. EPA Region 05 UIC Program Director prior to **Claimed as PBI** [REDACTED]. The combination will seek to cover no less than \$ **Claimed as PBI** [REDACTED] for the costs shown in Table 3-3. TCSC will finalize the details of the third-party carriers for Phase II and provide detailed information on their financial strength and commitment to covering the face value listed in this document prior to receiving a permit for injection. FA instruments will be reviewed and reevaluated throughout the project if any changes in relevant project aspects occur **Claimed as PBI** [REDACTED].

3.4. LIABILITY

TCSC will assume financial responsibility and liability for the costs listed in Table 3-2 **Claimed as PBI** [REDACTED] with approval from the UIC Director. TCSC will assume financial responsibility and liability for the costs listed in Table 3-3 from the **Claimed as PBI** [REDACTED] by the UIC Program Director.

Pursuant to 40 CFR 146.84, TCSC will annually reevaluate the costs listed in Table 3-2 prior to injection, and the costs listed in Table 3-3 once injection begins, during the active life of the project. Under the circumstances where changes occur in the project and consequent amendments to relevant project plans are approved by the Director, TCSC will revise the cost estimates for financial responsibility. Applicable project plans include:

- Corrective Action Plan
- Injection Well Plugging and Abandonment Plan
- Post-Injection Site Care and Site Closure Plan
- Emergency and Remedial Response Plan

The revised cost will be adjusted for inflation.

Appendix

Table 3-4. Phased Rollup

Claimed as PBI

Table 3-5. Phase II **Claimed as PBI** **Cost Estimates** **Claimed as PBI**

Claimed as PBI

Table 3-6. Phase I & II **Claimed as PBI** Cost Estimates

Claimed as PBI

Table 3-7. Phase II **Claimed as PBI** Cost Estimates

Claimed as PBI

Table 3-8. Phase II **Claimed as PBI** Cost Estimates

Claimed as PBI

Table 3-9. Phase II Well **Claimed as PBI** **Cost Estimates** **Claimed as PBI**

Claimed as PBI

Table 3-10. Phase II **Claimed as PBI** **Cost Estimates**

Claimed as PBI

Table 3-11. Phase II **Claimed as PBI** **Cost Estimates**

Claimed as PBI

Table 3-12. Phase I Claimed as PBI Cost Estimates

Claimed as PBI

Table 3-13. Phase I **Claimed as PBI** **Cost Estimates**

Claimed as PBI

Table 3-14. Phase I Claimed as PBI Cost Estimates

Claimed as PBI