SECTION 7 – POST-INJECTION SITE CARE AND SITE CLOSURE PLAN

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7.1. Overview

This Post-Injection Site Care (PISC) and Site Closure Plan is prepared to meet the requirements of 16 Texas Administrative Code (TAC) **§5.206(k)** [Title 40, U.S. Code of Federal Regulations (40 CFR) **§146.93**]. This section provides a comprehensive overview of (1) the anticipated plume and pressure front behavior at the end of the injection phase, (2) post-injection monitoring plans, (3) a discussion demonstrating non-endangerment to the Underground Source of Drinking Water (USDW), and (4) site closure plans. This plan provides the activities that Orchard Storage Company LLC (Orchard Storage) will perform once injection has ceased. The program will conclude with the site closure activities once it is demonstrated that no additional monitoring is needed to ensure that this project does not endanger the USDW. This plan will be maintained during the life of the project and reevaluated every five years and submitted to the Director.

[redacted]

To meet the requirements of 16 TAC **§5.203(m)(2)** [40 CFR **§146.93(a)(2)**], Table 7-1 and Figure 7-1 show the expected pressure differential between pre-injection and post-injection pressures in the injection zone, as determined by the plume model described in *Section 2 – Plume Model*.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

7.3. CO_2 Plume Position and Pressure Front at End of Injection and at Closure

To meet the requirements of 16 TAC **§5.203(m)(3)** [40 CFR **§146.93(a)(2)**], Figure 7-2 shows the predicted position of the carbon dioxide plume and associated pressure front at site closure. Figures 7-3 and 7-4 present the cross-sectional views of the stabilized plume at the end of injection and at the time of site closure.

[redacted]

[redacted]

[redacted]

[redacted]

7.4. Post-Injection Monitoring Plan

As required by 16 TAC **§5.206(k)(2)** [40 CFR **§146.93(b)**], Orchard Storage will continue to monitor the site until the project no longer poses an endangerment to USDWs.

7.4.1. Post-Injection Monitoring Activities

Post-injection monitoring will be utilized to track the movement of the plume and pressure front per 16 TAC **§5.206 (k)(2)** [40 CFR **§146.93(b)**]. The Testing and Monitoring Plan will be extended and used to confirm not only that the injection project is continuing to conform to the permit conditions, but also that any unexpected USDW endangerment is identified and mitigated. Testing and monitoring activities, as described in *Section 5 – Testing and Monitoring Plan*, will be performed and reported at the frequency shown in Table 7-2.

Table 7-2 – Post-Injection Monitoring and Reporting Frequency

Testing/Monitoring Activity	Frequency	Reporting Schedule
Groundwater Monitoring Well Geochemical Analysis	Every five years	Within 30 days after data collection and analysis
Soil Gas Monitoring	Annually	Within 30 days after data collection and analysis
Seismic Monitoring	Continuously	Annually
Pressure and Temperature Monitoring (Monitor Wells)	Continuously	Annually
Indirect Plume and Pressure Front Monitoring (Vertical Seismic Profile (VSP))	Every five years	Within 30 days after data collection and analysis
Direct Plume Calculations Based on Pressure and Temperature Data	Annually	Annually

All testing and monitoring activities listed will be performed and analyzed as discussed in *Section 5*, including quality assurance/quality control measures.

7.4.2. Demonstration of Non-Endangerment of USDW

Before the approval of the site closure authorization, Orchard Storage will provide documentation that the USDW is not at risk of endangerment from the CO_2 plume, as required by 16 TAC **§5.206(k)(3)** [40 CFR **§146.93(c)**]. Orchard Storage will submit a report to the Director demonstrating the non-endangerment of the USDW, including site-specific conditions, updated plume model, predicted pressure decline within the injection zone, and any updates to the underlying geological assumptions used in the original model.

7.5. Site Closure Plan

Orchard Storage will perform site closure activities to meet the requirements of 16 TAC **§5.203(m)(3)** [40 CFR **§146.93(e)**]. These activities include removing surface equipment, plugging all wells, site restoration, and submission of final site-closure reports.

7.5.1. Pre-closure

Notice of intent to close the site will be submitted to the Underground Injection Control (UIC) Director at least 120 days before closing operations, per 16 TAC **§5.206(k)(4)** [40 CFR **§146.93(d)**]. If any changes have been made to the original PISC and Site Closure Plan, a revised plan must also be submitted. Relevant notifications and applications, such as plugging requests, must be submitted

to and approved by the Texas Railroad Commission (TRRC) before commencing such activities. No facility closure activities will be executed until the Director has authorized closure.

7.5.2. Plugging Activities

Orchard [redacted] and the related monitoring well [redacted] will be plugged as discussed in *Section 6 – Injection Well Plugging Plan*. The plugging and abandonment procedures are designed to prevent the migration of CO_2 or formation fluids from the injection interval to the USDW. Before plugging the wells, their mechanical integrity will be determined by an annulus pressure test, casing inspection log, and temperature log as described in *Section 5*. Plugging schematics and procedures are provided in [redacted]

7.5.3. Site Restoration

Once the injection well and the monitoring well are plugged and capped below grade, all surface equipment will be decommissioned and removed from the site. The sites will be restored as agreed with the surface owners.

7.5.4. Documentation of Site Closure

Within 90 days of site closure, a final report must be submitted to the Director, per 16 TAC **§5.206 (k)(6)** [40 CFR **§146.93(f)**], and include the following:

- Documentation of appropriate injection and monitoring well plugging, including a copy of the survey plats
- Documentation of well-plugging report
- Records of the nature, composition, and volume of the CO_2 stream over the injection period

A record of notation in the facility property deed will be added to provide, in perpetuity, any potential purchaser of the property the following information:

- A complete legal description of the affected party;
- The fact that the land was used to sequester CO_2;
- That the survey plat has been filed with the TRRC/Environmental Protection Agency (EPA);
- The address of the office of the EPA, to which the operator sent a copy of the survey plat; and
- The total volume of fluid injected, the injection zones into which it was injected, and the period over which the injection occurred.

Orchard Storage will retain all records collected during the PISC period for 10 years following site closure. At the end of the retention period, Orchard Storage will deliver all records to the Director, which will thereafter be retained at a location designated by the Director for that purpose.