

APPENDIX F

INJECTION WELL PLUGGING PLAN 40 CFR 146.92(b); 146.82(a)(16) Jasper County Storage Facility

1. FACILITY INFORMATION

Facility Name: Jasper County Storage Facility

Facility Contact: 501 Westlake Park Blvd., Houston, Texas 77079

Well Location: Jasper County, TX

2. INTRODUCTION

BP Carbon Solutions LLC (BP) will conduct injection well plugging and abandonment (P&A) in accordance with the requirements of 40 Code of Federal Regulations (CFR) 146.92 for the Jasper County Storage Facility (Site). The injection wells will be P&A at the end of life of the well or upon completion of the project. The plugging program and plug cement design are tailored to protect all Underground Sources of Drinking Water (USDW) zones while ensuring there is no movement of unwanted fluids, such as carbon dioxide (CO₂) and water mixtures, in the wellbore.

3. PLUGGING PROGRAM

This plugging program will be updated after wellbore construction if there is new data collected from the logging and testing program that indicates that there is a material change from the initial assumptions. After these updates, the final P&A program will be submitted to the Underground Injection Control (UIC) Program Director.

At the end of life of the well and prior to abandonment, the well will be displaced with kill fluid.

The production casing will be logged and pressure-tested internally and externally to ensure adequate mechanical integrity prior to proceeding with the plugging procedure. The well will be remediated if any mechanical integrity issues are identified prior to plugging operations.

[REDACTED]

4. PLANNED TESTS OR MEASURES TO DETERMINE BOTTOM-HOLE RESERVOIR PRESSURE

[REDACTED]

[REDACTED]

[REDACTED]

See Testing and Monitoring Plan ([Appendix E](#)) for procedural details of [REDACTED]

[REDACTED]

5. PLANNED EXTERNAL MECHANICAL INTEGRITY TEST(S)

BP will conduct at least one of the tests listed in **Table 1** to verify external mechanical integrity and ensure there is no leakage or upward migration due to channeling outside of the casing from the injection zone prior to plugging the injection well as required by 40 CFR 146.92(a).

[REDACTED] Data from the logging will be used to evaluate for abnormalities in the temperature curve, which could be indicative of fluid migration along the well bore. The temperature log data will be compared to pre-operational temperature log data from before injection of CO₂ into the well. Deviations between the temperature logs before and after CO₂ injection may indicate issues related to the integrity of the well casing or cement. [REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]

6. INFORMATION ON PLUGS

BP will use the materials and methods noted in **Table 2** to plug the injection well. The volume and depth of the plugs will depend on the final geology and downhole conditions of the well as assessed during construction. The cement(s) formulated for plugging will be compatible with the CO₂ stream. The cement formulation and required certification documents will be submitted to the agency with the well plugging plan. The owner or operator will report the wet density and will retain duplicate samples of the cement used for each plug.

[REDACTED]	[REDACTED]	[REDACTED]

7. DESCRIPTION OF PLUGGING PROCEDURES

7.1 Notifications, Permits, and Inspections

In compliance with 40 CFR 146.92(c), BP will notify the UIC Program Director at least 60 days before plugging the well and provide an updated Injection Well Plugging Plan, if applicable. In addition, the following notifications, permits, and inspections will be performed or acquired as needed:

- In accordance with 16 Texas Administrative Code (TAC) 5.203(k)(3)(B), notify Railroad Commission of Texas (RRC) five days prior to commencing operations. Ensure proper notifications have been given to all applicable regulatory agencies for rig movement.
- Ensure all permits have been duly executed by all applicable local, state, and federal agencies and have written permission to proceed with planned ultimate procedure.

- Ensure in advance that a pre-site inspection has been performed and the rig company has visited the site and is capable of transporting rigs, tanks, and ancillary equipment to perform operations.
- Notify all key stakeholders of expected work scope and ensure third-party contracts for work are in place prior to move in.
- Hold copies of all required government permits prior to initiating operations and maintain copies at the Site at all times. Ensure that all conditions of approval have been met.
- Ensure relevant agency approvals have been obtained if applicable.
- Ensure that all necessary records are on the rig, including the National Pollutant Discharge Elimination System permit, safety meeting forms, trip sheets, etc.

7.2 Plugging Design

The abandoned wellbore volume will be calculated for the specific environment based on desired plug diameter and length requirements. The volume calculation is the same for plug and abandonment as during construction and post-injection.

2. Determine the following:

3. Field cementing and wellsite supervisor will both review calculations prior to any plugging.

7.3 Plugging Procedures

1. Conduct wellsite verification and hazard identification on the injection well site.
2. Move-in and rig-up a drilling rig on the injection well site and conduct inspections.

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Plan revision date: June 2023

The final plugging procedure will be updated based on actual well conditions.

8. PLUGGING REPORT

In accordance with 40 CFR 146.92(d), BP will develop and submit a Plugging Report, including associated MIT test data, cement pump charts, cementing labs results, and post-job reports, to the UIC Program Director within 60 days after plugging an injection well. The report will be retained for ten years following site closure.