

Application Number: 45054  
Plan Revision: December 2025

Certified 12/1/2025 by:  
Lonquist Sequestration, LLC  
Louisiana Firm No. EF7423

*Ben H. Bergman P.E.*

## ATTACHMENT G

### INJECTION WELL PLUGGING PLAN [LAC 43:XVII.3631.A.3, and 40 CFR 146.92(b)]

#### 1. FACILITY INFORMATION

Facility name: River Parish Sequestration – RPN 1

Facility contact: Andrew Chartrand, VP, Regulatory and Environmental  
1333 West Loop South, Suite 810, Houston, TX 77027  
832-696-0052, andrew.chartrand@blueskyinfrastructure.com

Well name/location:



| Well Name | Parish/State  | Latitude (NAD27) | Longitude (NAD27) |
|-----------|---------------|------------------|-------------------|
| RPN-1-INJ | Ascension, LA | 30° 6' 9.04" N   | 91° 3' 45.37" W   |

River Parish Sequestration, LLC (RPS), will conduct injection well plugging and abandonment according to the procedures below.

Well plugging activities will be completed iteratively because the well will be injected and completed in stages starting at the deepest sand interval, moving upward towards the surface. Once RPS has injected sufficient CO<sub>2</sub> to use the available pore space within the AoR in each injection zone, the well will be mechanically plugged back to isolate that zone. The next sand interval above that zone will then be perforated. This process will be repeated six times, until the uppermost injection layer below the upper confining layer is reached. The final plugging event will consist of placement of Plugs #8, #9 and #10 (as described in **Table 4-1**) to isolate the gross injection interval, surface casing, and USDWs.

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

Bottom-hole reservoir pressure will be measured using discrete pressure gauges permanently installed on the outside of the tapered production casing string and ported to the formation through the cement. Should there be failure of the permanent pressure gauges over the life of the well, down-hole reservoir pressure measurements will be collected via a wire line tool.

#### 3. PLANNED EXTERNAL MECHANICAL INTEGRITY TEST(S)

RPS will conduct a pre-abandonment mechanical integrity test (MIT) of the injection well before the final plug and abandonment. At least one of the tests listed in **Table 3-1** will be conducted to verify external mechanical integrity before plugging of the injection well, as required by the State of Louisiana Department of Natural Resources, LAC 43:XVII.3631.A.2, and 40 CFR 146.92(a). If the fiber optic cable fails over the life of the well, conventional temperature wireline logging

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tools will be used. Following the results of the test, any anomalous results will be evaluated to determine if the plugging procedure needs to be modified. Specific details for the MITs are given in the Testing and Monitoring Plan, **Attachment F**.

**Table 3-1: Planned MITs**

| Test Description   | Location   |
|--|--|
| Distributed temperature sensing (DTS)/ Temperature log       | Along long-string casing via fiberoptic or wireline well log |
| Noise log  | Wireline well log  |
| Pulse neutron-capture/residual saturation tool (PNC/RST) log | Wireline well log  |

#### **4. INFORMATION ON PLUGS**

RPS will use the materials and methods described in **Table 4-1** and **Figure 1** 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 Acid Resistant Cement formulated for plugging will be compatible with the carbon dioxide stream. The material formulations and required certification documents will be submitted to the agency with the well plugging plan. RPS will report the wet density and will retain duplicate samples of the cement/resin used for each plug.

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**Table 4-1: Plugging details**

| Plug Information   | Plug #1                                  | Plug #2                                  | Plug #3                                  | Plug #4                                  | Plug #5                                  | Plug #6                                  | Plug #7                                  |
|--|--|--|--|--|--|--|--|
| Diameter of boring in which plug will be placed (in. ID) | 6.184                                    | 6.184                                    | 6.184                                    | 6.184                                    | 6.184                                    | 6.184                                    | 6.184                                    |
| Depth to bottom of tubing or drill pipe (MD, ft.)        | 9,753                                    | 9,311                                    | 8,756                                    | 8,124                                    | 7,291                                    | 6,539                                    | 4,800                                    |
| Volume of Acid Resistant Cement (bbls)                   | 0.841                                    | 0.841                                    | 0.841                                    | 0.841                                    | 0.841                                    | 0.841                                    | 0.841                                    |
| Sacks of cement to be used                               | 4  | 4  | 4  | 4  | 4  | 4  | 4  |
| Slurry volume to be pumped (ft <sup>3</sup> )            | 4.72                                     | 4.72                                     | 4.72                                     | 4.72                                     | 4.72                                     | 4.72                                     | 4.72                                     |
| Slurry weight (lb./gal)                                  | 13.0                                     | 13.0                                     | 13.0                                     | 13.0                                     | 13.0                                     | 13.0                                     | 13.0                                     |
| Calculated top of plug (MD, ft)                          | 9,733                                    | 9,291                                    | 8,736                                    | 8,104                                    | 7,271                                    | 6,519                                    | 4,780                                    |
| Bottom of plug (MD, ft)                                  | 9,753                                    | 9,311                                    | 8,756                                    | 8,124                                    | 7,291                                    | 6,539                                    | 4,800                                    |
| Type of cement or other material                         | CRA Plug with 20ft Acid Resistant Cement | CRA Plug with 20ft Acid Resistant Cement | CRA Plug with 20ft Acid Resistant Cement | CRA Plug with 20ft Acid Resistant Cement | CRA Plug with 20ft Acid Resistant Cement | CRA Plug with 20ft Acid Resistant Cement | CRA Plug with 20ft Acid Resistant Cement |
| Method of emplacement                                    | Wireline & dump bailor                   | Wireline & dump bailor                   | Wireline & dump bailor                   | Wireline & dump bailor                   | Wireline & dump bailor                   | Wireline & dump bailor                   | Wireline & dump bailor                   |

in. ID: inches, Inner Diameter

MD: Measured depth

ft: foot or feet

ft<sup>3</sup>: cubic feet

bbls: barrels

N/A: Not applicable

TBD: To be determined

CRA Plug with [X]ft Acid Resistant Cement: Corrosion-resistant alloy bridge plug with the specified Acid Resistant Cement

lb/gal: pounds per gallon

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**Table 4-1: Plugging details (Cont.)**

| Plug Information   | Plug #8                                  | Plug #9   | Plug #10  |
|--|--|---|---|
| Diameter of boring in which plug will be placed (in. ID) | 8.681                                    | 8.681   | 8.681   |
| Depth to bottom of tubing or drill pipe (MD, ft)         | 4,590                                    | 2,850   | 860   |
| Volume of Acid Resistant Cement (bbls)                   | 3.72                                     | N/A   | N/A   |
| Sacks of cement to be used                               | 19                                       | 35  | 300   |
| Slurry volume to be pumped (ft <sup>3</sup> )            | 22.42                                    | 41.3  | 354   |
| Slurry weight (lb./gal)                                  | 13.0                                     | 14.5  | 14.5  |
| Calculated top of plug (MD, ft)                          | 4,540                                    | 2,750   | 0   |
| Bottom of plug (MD, ft)                                  | 4,590                                    | 2,850   | 860   |
| Type of cement or other material                         | CRA Plug with 50ft Acid Resistant Cement | Cast iron bridge plug with 100ft of Portland cement above | Cast iron bridge plug with 860ft of Portland cement above |
| Method of emplacement                                    | Wireline & dump bailor                   | Wireline  | Circulation   |

in. ID: inches, Inner Diameter

MD: Measured depth

ft: foot or feet

ft<sup>3</sup>: cubic feet

bbls: barrels

N/A: Not applicable

TBD: To be determined

CRA Plug with [X] ft Acid Resistant Cement alloy bridge plug with the specified Acid Resistant Cement

lb/gal: pounds per gallon

## 5. NARRATIVE DESCRIPTION OF PLUGGING PROCEDURES

The following procedures will be implemented during each plugging event.

### *Notifications, Permits, and Inspections*

In compliance with LAC 43:XVII.3631.A.4, and 40 CFR 146.92(c), RPS will notify the regulatory agencies before each plugging event and provide updated Injection Well Plugging Plan, if applicable.

- The UIC Director and EPA will be notified 60 days in advance of planned plugging efforts (LAC 43:XVII.3631.A.4, and 40 CFR 146.92[c]).

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- Notice of Intent to Plug will be communicated to the UIC Director and EPA by submitting Form UIC-17 with detailed plans (LAC 43:XVII.3631.A.4).

### ***Pre-Plugging Activities***

1. Bottom-hole reservoir pressure will be measured using discrete pressure gauges permanently installed behind the tapered production casing string (casing string dimensions will be 9 5/8 inches by 7 inches) (LAC 43:XVII.3631.A.2; 40 CFR 146.92[a]).
2. External mechanical integrity will be demonstrated through approved logging methods (LAC 43:XVII.3631.A.2; 40 CFR 146.92[a]).
3. The injection well will be flushed with a buffer fluid before pulling the injection tubing and packer (LAC 43:XVII.3631.A.2; 40 CFR 146.92[a]).
4. All uncemented, nonpermanent components of the well will be removed.

### ***Plugging Activities (Plug #1 through Plug #7)***

1. CRA bridge plugs will be set within the 7-inch production casing above each injection interval, at depths corresponding with internal shale baffles of the injection zone.
2. A 20-foot plug of Acid Resistant Cement will be placed on top of the permanent bridge plug.
3. The plug will be qualified by tagging the top and conducting a successful pressure test to 1500 psi for a minimum of 30 minutes.

### ***Plugging Activities (Final Plugging Event)***

1. Tubing and packer will be removed.
2. Final isolation of gross injection interval:
  - a. A permanent CRA bridge plug will be set at approximately the same depth where the tubing packer was previously set within the 9-5/8" production casing (4,620 ft BGL).
  - b. A 50-foot plug of Acid Resistant Cement will be placed on top of the permanent bridge plug.
  - c. The plug will be qualified by tagging the top and conducting a successful pressure test to 1500 psi for a minimum of 30 minutes.
3. Treated drilling mud will be circulated at least once to achieve a state of static equilibrium.
4. Final isolation of the surface casing:

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- a. A permanent cast iron bridge plug will be set 50 ft below the bottom of the 13-3/8" surface casing (2,850 ft BGL).
  - b. A 100-foot plug of Portland cement will be placed on top of the permanent bridge plug.
  - c. The plug will be qualified by tagging the top and conducting a successful pressure test to 1500 psi for a minimum of 30 minutes.
5. Treated drilling mud will be circulated at least once to achieve a state of static equilibrium.
6. Final isolation of the USDW:
- a. A permanent cast iron bridge plug will be set 51 ft (CIBP @860' & USDW @809') below the bottom of the lowermost USDW (809 ft BGL).
  - b. A plug of Portland cement will be placed from the top of the permanent bridge plug to ground surface.
7. Casing will be cut 5' below ground level and capped with a welded 1/2" steel plate.

Significant deviations from the plan outlined above will be discussed with the UIC Director. If any plugs do not pass the pressure test, a sample of the Acid Resistant Cement will be evaluated by the manufacturer's laboratory. All cementing equipment will be examined for any malfunctions, contamination pathways, etc. Any issues discovered will be promptly corrected, including any failed plugs, which will be drilled out and a new plug will be set using updated resin or cement slurry, according to the cement laboratory recommendations.

### ***Reporting***

Final plugging reports, certified by RPS and the person who performed the plugging operation, will be submitted to the UIC Director thirty (30) days and the EPA within 60 days after plugging.

In accordance with the requirements of LAC 43:XVII.3629.A.6, and 40 CFR 146.91(f), RPS will retain all data collected for and in support of this Class VI permit application, including plugging records, throughout the life of the project and for 10 years following site closure or as otherwise requested by the UIC Director or EPA.

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## **Figures**