Plan revision number: 1
Plan revision date: 10/31/2024

INJECTION WELL STIMULATION PLAN
40 CFR 146.82(a)(9)

South Texas Sequestration Project (Kleberg Hub)

1.0 Facility Information

Facility name: South Texas Sequestration Project (Kleberg Hub)
Well Names: Becerra_CCS_01_01, Becerra_CCS_01_02, Becerra_CCS_02_01, Becerra_CCS_02_02, Garcias_CCS_01_01, Garcias_CCS_01_02

Facility contact: [redacted], Project Manager
5 Greenway Plaza, Suite 110, Houston, TX 77046
[redacted]

Well location: Kleberg County, Texas

WELL_NAME	LAT_NAD27	LONG_NAD27
[redacted]		

2.0 Stimulation and Cleanout Plan

Pursuant to 40 CFR §146.82 (a)(9), this CO2 Injection Well Stimulation Plan describes the operations that Kleberg Sequestration Hub, LLC would execute in the CO2 Injector Wells, Becerra_CCS_01_01, Becerra_CCS_01_02, Becerra_CCS_02_01, Becerra_CCS_02_02, Garcias_CCS_01_01, and Garcias_CCS_01_02 to enhance or regain injection capabilities.

Stimulations and cleanouts to enhance or regain the injectivity potential of the [redacted] in the CO_2 Injector Wells include but are not limited to: [redacted].

Kleberg Sequestration Hub, LLC (1PointFive) will notify and submit proposed stimulation or cleanout procedures in writing to the Director at least 30 days in advance of performing the stimulation or cleanout in accordance with 40 C.F.R. § 146.91(d)(1) and 40 C.F.R. § 146.91(d)(2). 1PointFive will carry out the stimulation according to the EPA approved procedures. The procedures will describe all fluids being pumped and demonstrate that there will be no loss of containment due to the stimulation or cleanout.

While this Injection Well Stimulation Plan sets forth the intended procedures for stimulation of the injection wells at the Kleberg Hub, changes to the plan may be required based on technical, operational, or safety conditions encountered during operations. 1PointFive will notify the Director in the event that substantial deviations from this Plan are required.

2.1 Stimulation and Cleanout Procedures

If injection rates decline below or injection pressures increase above expected values during the project's life, the Kleberg Hub will investigate the cause to determine if a stimulation or cleanout may be required. Investigation activities include, without limitation, the following:

- Logging operations, including but not limited to, evaluation of the injection profile, mechanical spinner surveys, caliper logging, gauge runs, downhole camera investigation, distributed temperature sensing (DTS), distributed acoustic sensing (DAS), tracers and injection profile logging (IPL), etc.
- Collecting downhole samples when necessary or feasible with wireline, slickline, or coiled tubing conveyed sampling equipment, to be followed by analytical testing, as appropriate to determine remediation options.

The equipment to implement the stimulation procedures or cleanouts include, but is not limited to, coil tubing units, workover units, snubbing units, pumping units, wireline, and slickline, amongst others.

The following are standard procedures for matrix acid stimulations, water flush, and sand and solids clean out.

[redacted]

Plan revision number: 1

Plan revision date: 10/31/2024

[redacted]

Plan revision number: 1
Plan revision date: 10/31/2024

[redacted]

2.2 Stimulation and Cleanout Fluids

The Kleberg Hub project team may use acid blends for matrix stimulation or perforation cleanouts that are typical of the industry. These include, but are not limited to, [redacted]. These blends have been historically proven to remove near-wellbore damage caused by mineral scales, drilling muds, completion fluids, and clay fines while minimizing negative impacts to permeability.

There is also potential for near-wellbore [redacted] in the CO2 Injector Wells, which may require remediation by periodic flushes with less saline water.

During cleanout operations, the project team may use brines that might include a [redacted] to control the well along with a gelling additive to increase viscosities in the fluids and remove the sand from the wellbore.

All chemical treatments will be evaluated and selected for compatibility with the formation and installed equipment downhole.

Additives may be utilized with the stimulation fluids to aid matrix stimulation while mitigating corrosion of tubulars and potential damage to the sequestration zone. These additives include, but are not limited to, corrosion or acid inhibitors, scale inhibitors, clay stabilizers, biocides, demulsifiers, chelating agents, mutual solvents, iron sequestrants, retarders, and/or surfactants.

Brines and gelling additives will be included during wellbore cleanouts to improve efficiency while cleaning solids out of the wellbores.

Compatibility of these additives and stimulation fluids, with the installed tubulars and reservoir, will be confirmed prior to their use in any stimulation activities.