

Attachment C: Stimulation Plan

SYD Denova 1

Carbon America

[40 CFR 146.82(a)(9)]

Revision	Date	Notes	Written By	Approved By
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1. Facility Information

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Stimulation to enhance the injectivity potential of the injection zone may be necessary. Stimulation may involve, but is not limited to, flowing fluids into or out of the well, increasing or connecting pore spaces in the injection formation, or other activities that are intended to allow the injectate to move more readily into the injection formation. Advance notice of all proposed stimulation activities must be provided to the Underground Injection Control (UIC) Program Director, as detailed below, prior to conducting the stimulation. The permittee must describe any fluids to be utilized for stimulation activities and the permittee must demonstrate that the stimulation will not interfere with containment. The permittee must submit proposed procedures for all stimulation activities to the UIC Program Director in writing at least 30 days in advance, per 40 CFR 146.91(d)(2). Within the 30-day notice period, the U.S. Environmental Protection Agency (EPA) may: deny the stimulation, approve the stimulation as proposed, or approve the stimulation with conditions. The permittee must carry out the stimulation procedures, including any conditions, as approved or set forth by EPA.

2. Introduction/Purpose

Well stimulation to enhance the injectivity of the injection zone is not anticipated to be needed at this time. If it is determined that stimulation procedures are needed, a detailed stimulation plan will be submitted to the UIC Program Director at least 30 days in advance for review and approval prior to conducting any such activities, per 40 CFR 146.91(d)(2).

[REDACTED]

3. Stimulation Fluids

The stimulation fluids summarized below are for example purposes only. A detailed stimulation plan will be submitted to the UIC Program Director at least 30 days in advance of the planned stimulation procedure, if necessary.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. Additives

[REDACTED] has the option to employ various combinations of the following additives to enhance matrix stimulation while preventing corrosion of tubulars and damage to the injection zone. These additives include, but are not limited to, [REDACTED]

Before utilization, chemical additives intended for stimulations will undergo testing and confirmation to ensure compatibility with tubulars, injection and confining zones, as well as reservoir fluids.

5. Diverters

The need for diverters varies based on the stimulation design, anticipated pump rates, the length of the perforated interval, perforation density, and the chosen method for delivering acid to the formation (e.g., pumping through regular stick tubing or pumping down coiled tubing).

6. Stimulation Procedures

The stimulation procedure summarized below is for example purposes only. A detailed stimulation procedure will be submitted to the UIC Program Director at least 30 days in advance of the planned stimulation procedure, if necessary.

Acid stimulation procedure:

