



LOCATION: Front Range 2

DOCUMENT: Odor Mitigation Plan

Section 23, Township 6 North, Range 67 West

Lat: 40.466418°, Long: -104.859778°

Form 2A Doc No. 403691333

Weld County, Colorado

Background

Carbon Storage Solutions seeks to develop wells that will support a Class VI Carbon Capture Sequestration program. This EPA required well will monitor pressure, temperature, and formation fluid sampling.

Introduction

This Odor Mitigation Plan is intended to facilitate compliance with the Front Range 2 ECMC Rules and Regulations, Rule 304.c.(4). This document serves as the Odor Mitigation Plan for Form 2A.

Area of Impact

Upon gaining all required approvals, Carbon Storage Solutions and their contractors will create a well-pad location and access way on fee property. A drilling rig will be brought to location to drill to a depth of approximately 9,154 feet below the land surface. The well will be drilled and managed according to all rules and regulations set forth by the ECMC. During the drilling operations, rock, water, and geophysical well logs will be collected from the wellbore.

The project area topography is relatively flat, with slopes varying from 1-5 percent. The surrounding area is comprised primarily of industrial infrastructure and setting. The area to the east is comprised of cropland used for corn and barley.

General

Carbon Storage Solutions will employ Best Management Practices (BMPs) and mitigation measures for handling and disposing of E&P waste, including drilling mud and cuttings. Waste stored onsite will be stored in compatible containers that are regularly inspected to ensure they are in good condition and free of excessive wear, structural issues or other defects that may impact their effectiveness. A closed-loop system will be used during drilling operations. No pits will be used on drilling locations.

Mitigation Practices 426.a.

Mitigation measures will be applied to the subject location in accordance with rule 426.a. when appropriate through one or more proposed methods. Carbon Storage Solutions will monitor compliance with the odor Mitigation Plan through periodic reviews.

BMPs and Mitigation Measures include, but are not limited to:

a. All Phases

- Carbon Storage Solutions will not allow burning of debris to occur on the proposed site as per applicable codes. This provision does not include emergency flares.
- Carbon Storage Solutions will require all non-essential vehicles to be shut off to prevent excessive idling.

b. Drilling

- Drilling rig engine exhaust will be directed up and away from the occupied buildings located to the approximate vicinity of the location.
- Carbon Storage Solutions will utilize a freshwater mud system for the drilling of the monitor well(s).
- The need for odor neutralizer is not anticipated.
- A catch can system will be mounted around the BOP to catch any mud that falls through the rotary table preventing any spillage and source of odor.

c. Completion

- Carbon Storage Solutions is drilling this well for monitoring purposes of an offsetting well already drilled by the Operator.
- Carbon Storage Solutions does not plan to hydraulically fracture the well once it is drilled and cased.
- Carbon Storage Solutions does not anticipate any flowback fluids from this well as it is not being completed the way in which the Oil & Gas Industry “completes” a well.

d. Production

- Carbon Storage Solutions does not plan to produce this well, therefore there will be no odors associated with production activities at this location.

e. Testing

- The monitoring that will occur includes periodic fluid sampling. The fluids sampled are anticipated to be brine, therefore no odors associated with the testing of this well are anticipated.

Odors within Oil & Gas Location 426.b.

Carbon Storage Solutions will conduct all operations at the stratigraphic well site in a manner that minimizes odors outside the boundaries of the location. Sealed tanks with pressure relief valves and emissions control devices will be utilized throughout operations.

Oil & Gas Locations within 2,000 feet of a building unit or DOAA 426.c.

The anticipated well pad is located within 2,000 feet of a “Building Unit” (as defined by ECMC). There are six (6) building units, based on the square footage determination per the ECMC definition of “Building Units” within 2,000 feet of the site. There are only six (6) physical buildings that qualify as a “Building” per ECMC definition within 2,000 feet of the location. All proximate Building Units and parcels within the vicinity of the proposed location are zoned as Industrial: I-1. There are one (1) Residential Building Units within 2,000 feet of the Monitor

Pad Site. CSS will use current and appropriate BMPs, and mitigation measures as described in Section I.A-D to minimize odors from the proposed location.

Complaint System 426.d.

If Carbon Storage Solutions is notified of a complaint, the community relations department will dispatch a Carbon Storage Solutions employee to further investigate. The team member contacted will depend on which phase of operations the site is currently in. Once the team member is able to investigate, they will report their findings back to the community relations department. If it is determined that additional mitigation is needed, Carbon Storage Solutions will work to complete the mitigation measures. Timing will depend on which mitigation measures are needed. If requested, within 24 hours of receiving a complaint, Carbon Storage Solutions will provide the Director, the Relevant and/or Proximate Local Government, and the complainant (should the complainant request notification) with a complete description of all activities occurring at the facility during the timeframe specified in the complaint. Carbon Storage Solutions understands that the Director may require necessary and reasonable actions to reduce odors including, but not limited to, conducting air sampling to measure volatile organic compounds.

Cumulative Orders 426.e.

Carbon Storage Solutions understands that the Commission may require the operator to adopt additional BMPs and mitigation measures as conditions of approval or through guidance to minimize odors in areas with high concentrations of oil and gas activities that may expose one or more Building Units or Designated Outside Activity Areas to odor from oil and gas sources.

a. **Minimization and Mitigation BMPs**

- Drilling rig engine exhaust will be directed up and away from the occupied buildings located to the approximate vicinity of the location.
- Carbon Storage Solutions will utilize a freshwater mud system for the drilling of the well.
- The need for odor neutralizer is not anticipated.
- A catch can system will be mounted around the BOP to catch any mud that falls through the rotary table preventing any spillage and source of odor.
- Carbon Storage Solutions does not plan to hydraulically fracture the well once it is drilled and cased.
- Carbon Storage Solutions does not plan to produce this well.