Underground Injection Control
Carbon Sequestration
Class VI Permit Application

EMERGENCY AND REMEDIAL RESPONSE PLAN
40 CFR 146.94(a)
Section 11.0

Four Corners Carbon Storage, LLC
San Juan Basin, New Mexico Carbon Sequestration Project

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Prepared by:

Kevin Bush (Subsurface Director)
Katy Larson (UIC Coordinator)
Four Corners Carbon Storage, LLC
4200 West 115th Street
Leawood, KS 66211

Numeric Solutions, LLC.
1536 Eastman Ave., Suite D
Ventura, CA 93003

EMERGENCY AND REMEDIAL RESPONSE PLAN
40 CFR 146.94(a)

Four Corners Carbon Storage, LLC – Injector 1

Facility Information

Facility name: **San Juan Basin, New Mexico Carbon Sequestration Project**
Injector 1

Facility contacts:

Kyle Quackenbush | Segment President – Liquids
Four Corners Carbon Storage, LLC
370 Van Gordon Street
kyle.quackenbush@tallgrass.com

Kevin Bush | Director Subsurface
Four Corners Carbon Storage, LLC
370 Van Gordon Street
kevin.bush@tallgrass.com

Katy Larson | UIC Coordinator
Four Corners Carbon Storage, LLC
370 Van Gordon Street
katy.larson@tallgrass.com

Well location: San Juan County, New Mexico
[redacted]

[1] North American Datum 1983

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ACRONYMS AND ABBREVIATIONS

A	
AoR	area of review
APS	Arizona Public Service
C	
CFR	Code of Federal Regulations
CO_2	carbon dioxide
E	
EHS	environmental health and safety
ERRP	emergency and remedial response plan
I	
ICS	incident command system
L	
LOC	loss of containment
M	
mg/L	milligrams per liter
N	
NPS	National Park Service
P	
P&A	plugging and abandonment
Project	San Juan Basin, New Mexico Carbon Sequestration Project
S	
SCADA	supervisory control and data acquisition
T	
TDS	total dissolved solids
TVD	true vertical depth
U	
UIC	underground injection control
USDW	underground source of drinking water
USGS	U.S. Geological Survey

11 EMERGENCY AND REMEDIAL RESPONSE PLAN [40 CFR 146.94(A)]

Well location: The proposed Class VI injection well is in San Juan County, New Mexico. Locations of proposed individual wells are listed in **Table 11.1**.

Table 11.1—Well locations.

Well Name	Use	Latitude*	Latitude*	PLSS
Injector 1	Injection	[redacted]	[redacted]	[redacted]
Monitor 1	Monitoring			
Strat 1	Characterization			

* NAD83

11.1 Introduction

Four Corners Carbon proposes drilling and completing a carbon sequestration injection well (Injector 1) and monitoring well (Monitor 1) for the safe sequestration of carbon dioxide (the "Project") in northern San Juan County, approximately [redacted]. Strat 1[2] is utilized as the project characterization well. This Emergency and Remedial Response Plan (ERRP) meets the requirements of 40 CFR 146.94(A) and describes actions that Four Corners Carbon shall take to address movement of the injection fluid or formation fluid in a manner that may endanger an underground source of drinking water (USDW) during the construction, operation, or post-injection site care/monitoring periods.

Additionally, a list of potential emergency events has been generated and provided in **Table 11.2**. The procedures in this plan outline the responses to coordinate among the emergency teams, local resources, surface owners, mineral claimants, mineral owners, lessees, owners of record with subsurface interests, and governmental authorities. The ERRP's objectives are to minimize the impact of the potential for loss of life and maximize the protection of the USDW, environment, the surrounding community, and company property.

Four Corners Carbon is developing a site-specific ERRP to detail further the Four Corners Carbon San Juan Basin Sequestration Project (Project) procedures that will be followed during an emergency event. A sample of a Four Corners Carbon ERRP is included in Appendix D.

This plan incorporates the Testing and Monitoring Plan to verify that the geologic sequestration project is operating as permitted, and not endangering any USDW(s).

11.2 Identification of Potential Emergency Events

An emergency event would be considered to have occurred when an event endangers an USDW(s) or threatens human health, safety, or the environment during the construction, operation, closure, and post-closure periods due to the movement of the injectate, formation, or other fluids. Other

[redacted]

events include the risk of accidental release of CO_2 into the atmosphere. Potential emergency events and the methods that will be used to identify such an event are included in Table 11.2.

Table 11.2—Potential Project emergency events and their detection.

Potential Emergency Events	Detection of Emergency Event
Well control event while drilling or completing the well with the loss of containments.	Sudden increase in drilling rate. Increase in flow rate at the surface. Changes in pump pressure. Reduction in drill pipe weight. Increase in gas, oil, or water-cut mud.
Movement of brine between formations during drilling.	Indication of lost circulation.
Presence of hydrogen sulfide (H_2S) while drilling or completing the well.	H_2S monitors located on the well site during operations.
Loss of mechanical integrity (flowlines, injection, monitoring wells, disposal well).	Deviation of expected surface and downhole pressure/temperature gauges detects leaks in CO_2 flowline, injection well, and monitoring wells. Wellhead pressure monitoring measurement exceeds maximum injection wellhead pressure. Annular pressure monitoring exceeds expected pressure.
Loss of containment (LOC): vertical migration of CO_2/brines via injection wells, monitor wells, plugging and abandonment (P&A) wells, and undocumented wells.	Sampling and analysis indicate deviations of baseline values of groundwater wells, monitoring wells, and soil gas measurements. CO_2 detectors at injection facilities indicate increased levels of CO_2 release.
LOC: lateral migration of CO_2 outside of defined AoR.	Sampling and analysis indicate deviations of baseline values of groundwater wells, monitoring wells, and soil gas measurements. Indications of lateral migration on time-lapse 2D seismic survey.
LOC: vertical migration due to failure in the confining zones, faults, and fractures	Changes in down-hole pressure and temperature, CO_2 measurements, and water chemistry analysis.
External impact on flowlines, wells, and infrastructure.	Indication of CO_2 leak from detection systems in place. Deviation of expected line and injection pressures.
Monitoring equipment failure or malfunction.	Monitoring systems will alert site personnel if one or more portions of the system fail. Site personnel will also be reviewing data for anomalous data.
Induced seismicity.	Seismic monitoring station.
Seismic event.	Seismic monitoring station.
Other natural disasters.	Tornados and severe storms, including lightning strikes, are additional risks that create the potential for the release of CO_2 due to possible injection well and facility damage and may disrupt surface and subsurface operations. Monitoring systems will alert personnel to changes in operating parameters that may indicate the impact of such an event.

If Four Corners Carbon obtains evidence that the injected CO_2 stream and/or associated pressure front may cause an endangerment to a USDW, Four Corners Carbon shall perform the following actions:

1. Initiate shutdown plan for the injection well.
2. Take all steps reasonably necessary to identify and characterize any release.

3. Notify the permitting agency (Underground Injection Control [UIC] Program Director) of the emergency event within 24 hours.
4. Implement applicable portions of this approved ERRP.

Where the phrase "initiate shutdown plan" is used, the following protocol will be employed: Four Corners Carbon will immediately cease injection. However, in some circumstances, Four Corners Carbon will, in consultation with the UIC Program Director, determine whether gradual cessation of injection (using the parameters set forth in the Summary of Requirements of the Class VI permit) is appropriate.

11.3 Local Resources and Infrastructure

This section includes descriptions of resources and infrastructure in the vicinity of the Four Corners Carbon San Juan Basin Sequestration Project that may be affected as a result of an emergency event.

11.3.1 Resources

11.3.1.1 Underground Sources of Drinking Water

There are two USDWs within the AoR: [redacted] (**Figure 11.1**). [redacted] There are [redacted] well locations with fluid analyses in the [redacted] that support this zone as a USDW within a 20-mile buffer of the Injector 1 well (**Figure 11.2**). The measured total dissolved solids (TDS) content for [redacted] ranges from [redacted] milligrams per liter (mg/L) to [redacted] mg/L within this area. The deepest [redacted]. The [redacted] ranges in depth from [redacted]. There are [redacted] locations with fluid analyses in [redacted] that support this zone as a USDW within a 20-mile buffer of the Injector 1 well (**Figure 11.3**). The measured TDS content for the [redacted] ranges from [redacted] mg/L to [redacted] mg/L within this area.

[redacted]

Figure 11.1—AoR specific stratigraphic column and UIC significance.

[redacted]

Figure 11.2— [redacted] TDS values within 20 miles of Injector 1. Structural contours end because the [redacted] outcrops throughout the study area.

[redacted]

Figure 11.3— [redacted] TDS values within 20 miles of Injector 1. Structural contours [redacted]

11.3.1.2 Surface Water Bodies

[redacted] water bodies exist within the AoR: [redacted] (**Figure 11.4**). The [redacted]

[redacted]

Figure 11.4—Surface geologic map highlighting the extent of [redacted]

11.3.1.3 Recreation Areas

The Injector 1 well is located [redacted] a.

11.3.1.4 National Historic Sites

According to the National Park Service (NPS) National Historic Landmarks Program, there are no National Historic Landmarks within the AoR. The closest historic places are located [redacted] the AoR boundary (Figure 11.5).

11.3.2 Infrastructure

The Project area and well locations were selected to minimize the potential impact of the surrounding oil, gas and water wells (**Figure 11.6**) landowners, farming areas, nearby communities, livestock, and wildlife. The infrastructure in the vicinity of the AoR that may be impacted as a result of an emergency at the Project site includes: wellheads and flowlines of oil and gas wells that are within the AoR, [redacted] the Injector 1 well). To reduce environmental or safety impacts, assistance from local resources will be activated based on the type and severity of the event.

[redacted]

Figure 11.5—Recreational and historical places in the vicinity of the AoR.

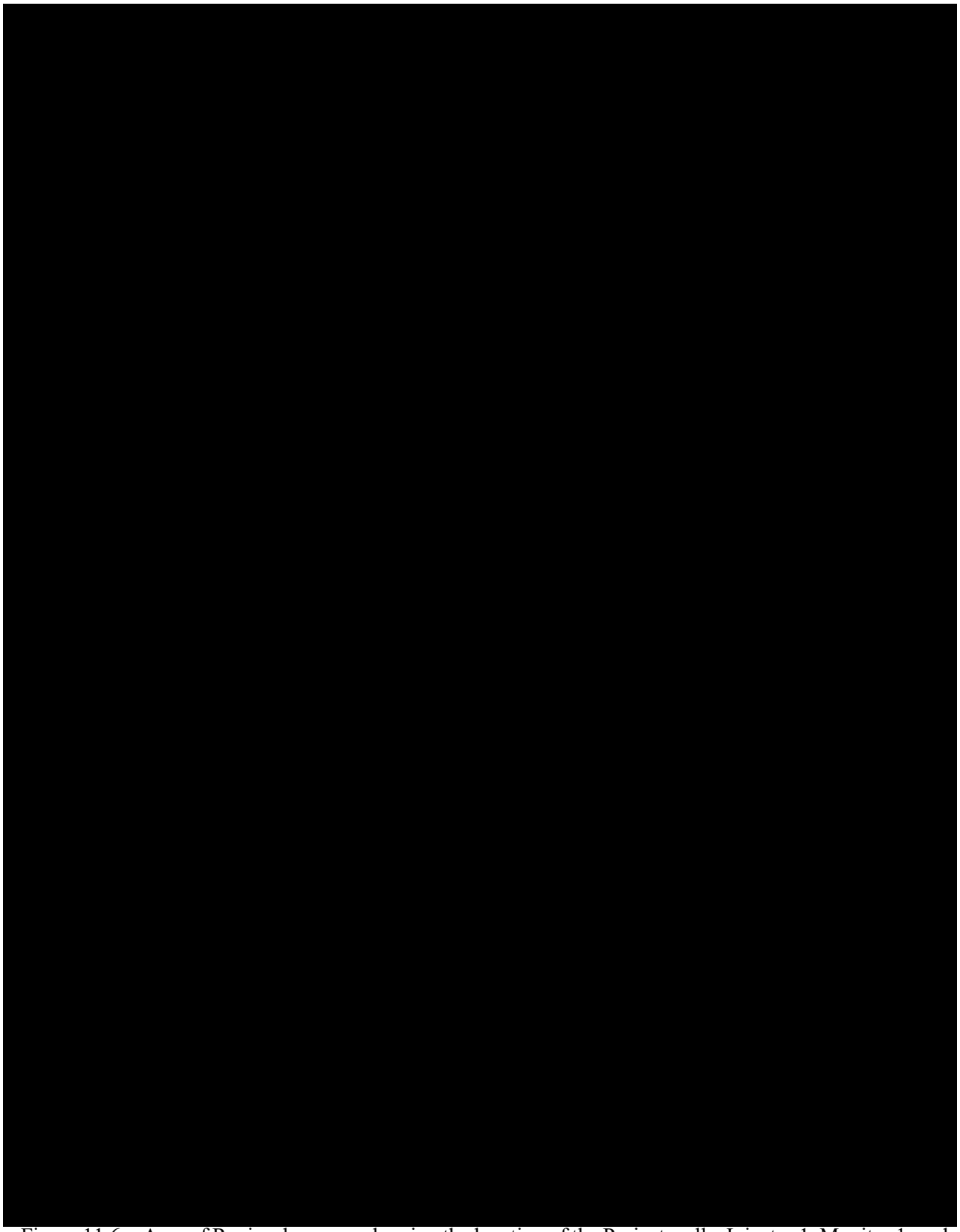

Figure 11.6—Area of Review basemap showing the location of the Project wells: Injector 1, Monitor 1, and the Strat 1 and existing artificial penetrations in the mapped area, including oil and gas wells, water wells, and mines.

11.4 Potential Risk Scenarios

The following are potential events related to the operation of the Four Corners Carbon Injector 1 well that could potentially result in an emergency response:

- Injection or monitoring (verification) well integrity failure
- Injection well monitoring equipment failure (e.g., may include but is not limited to shut-off valve or pressure gauge)
- Fluid (e.g., brine) or CO_2 leakage to a USDW or the surface
- A natural disaster (e.g., earthquake, tornado, lightning strike); or
- Induced or natural seismic event.

Response actions will depend on the severity of the event(s) triggering an emergency response. Emergency events are categorized in **Table 11.3**.

Table 11.3—Degrees of risk for emergency events.

Emergency Condition	Definition
Major emergency	Event poses immediate substantial risk to human health, resources, or infrastructure. Emergency actions involving local authorities (evacuation or isolation of areas) should be initiated.
Serious emergency	Event poses potential serious (or significant) near term risk to human health, resources, or infrastructure if conditions worsen or no response actions taken.
Minor emergency	Event poses no immediate risk to human health, resources, or infrastructure.

11.5 Emergency Identification and Response Actions

Steps to identify and characterize the event will be dependent on the specific issue identified, and the severity of the event.

11.5.1 Well Integrity Failure

During the pre-injection and injection phases, integrity loss of the injection well and/or verification well may endanger USDWs. Integrity loss may have occurred if the following events occur:

- Automatic shutdown devices are activated:
  - Wellhead pressure exceeds the shutdown pressure specified in the permit.
  - Annulus pressure indicates a loss of external or internal well containment.
  - Pursuant to 40 CFR 146.91(c)(3), Four Corners Carbon must notify the UIC Program Director within 24 hours of any triggering of a shut-off system (i.e., down hole or at the surface).
- Mechanical integrity test results identify a loss of mechanical integrity.

Response Actions

- Notify the UIC Program Director within 24 hours of the emergency event, per 40 CFR 146.91(c).
- Determine the severity of the event, based on the information available, within 24 hours of notification.

Major or Serious Emergency

1. Initiate shutdown plan.
   a. Shut in well (close flow valve).
   b. Vent CO_2 from surface facilities.
   c. Limit access to wellhead to authorized personnel only.
2. Communicate with Four Corners Carbon personnel and local authorities to initiate evacuation plans, as necessary.
3. Monitor well pressure, temperature, and annulus pressure to verify integrity loss and determine the cause and extent of failure; identify and implement appropriate remedial actions to repair damage to the well (in consultation with the UIC Program Director).
4. If contamination is detected, identify and implement appropriate remedial actions (in consultation with the UIC Program Director).

Minor Emergency

1. Conduct assessment to determine whether there has been a loss of mechanical integrity.
2. If there has been a loss of mechanical integrity, initiate shutdown plan.
   a. Shut in well (close flow valve).
   b. Vent CO_2 from surface facilities.
3. Reset automatic shutdown devices.
4. Monitor well pressure, temperature, and annulus pressure to verify integrity loss and determine the cause and extent of failure; identify and, if necessary, implement appropriate remedial actions (in consultation with the UIC Program Director).

11.5.2 Injection Well Monitoring Equipment Failure

During the pre-injection and injection phases, the failure of monitoring equipment for wellhead pressure, temperature, and/or annulus pressure may indicate a problem with the injection well that could endanger USDWs. Pressure and temperature gauges will be continuously monitored, and the well's Supervisory Control and Data Acquisition (SCADA) system will alert personnel of any monitoring equipment failure.

Response Actions

- Notify the UIC Program Director within 24 hours of the emergency event, per 40 CFR 146.91(c).

- Determine the severity of the event, based on the information available, within 24 hours of notification.

Major or Serious Emergency

1. Initiate shutdown plan.
   a. Shut in well (close flow valve).
   b. Vent CO_2 from surface facilities.
   c. Limit access to wellhead to authorized personnel only.
2. Communicate with Four Corners Carbon personnel and local authorities to initiate evacuation plans, as necessary.
3. Monitor well pressure, temperature, and annulus pressure to determine the cause and extent of failure.
4. Identify and, if necessary, implement appropriate remedial actions (in consultation with the UIC Program Director).

Minor Emergency

1. Conduct assessment to determine whether there has been a loss of mechanical integrity.
2. If there has been a loss of mechanical integrity, initiate shutdown plan.
   a. Shut in well (close flow valve).
   b. Vent CO_2 from surface facilities.
3. Reset or repair automatic shutdown devices.
4. Monitor well pressure, temperature, and annulus pressure to determine the cause and extent of failure.
5. Identify and, if necessary, implement appropriate remedial actions (in consultation with the UIC Program Director).

Avoidance Measures

According to the Testing and Monitoring Plan, all monitoring equipment will be calibrated as required or, at a minimum, at a frequency recommended by the manufacturer. This will ensure that all shut-off devices, automatic alarms, and surface shut-off systems will work within planned operational limits and will shut-in when injection or annulus pressures exceed limits to prevent fracturing of the confining zone or damaging the well.

Detection Methods

According to the Testing and Monitoring Plan, well pressure, temperature, and annulus pressure will be monitored continuously.

11.5.3 Potential Brine or CO_2 Leakage to USDW or the Surface

During the pre-injection, injection, and post-injection phases, elevated concentrations of indicator parameter(s) in groundwater sample(s) or other evidence of fluid (brine) or CO_2 leakage into a USDW. Analysis of data from the monitoring wells plus the proposed groundwater and soil monitoring systems, per the Testing and Monitoring Plan, will indicate the release of CO_2 of the injection interval.

If measurements indicate the risk of CO_2 leakage, injection operations will cease until the root cause is identified.

Response Actions

- Notify the UIC Program Director within 24 hours of the emergency event, per 40 CFR 146.91(c).
- Determine the severity of the event, based on the information available, within 24 hours of notification.

For all Major, Serious, or Minor Emergencies

1. Initiate shutdown plan.
   a. Shut in well (close flow valve).
   b. Vent CO_2 from surface facilities.
2. Collect a confirmation sample(s) of groundwater and analyze for indicator parameters. Potential indictors are listed in the approved Testing and Monitoring Plan.
3. If the presence of indicator parameters is confirmed, develop (in consultation with the UIC Program Director) a case-specific work plan to:
   a. Install additional groundwater monitoring points near the affected groundwater well(s) to delineate the extent of impact; and
   b. Remediate unacceptable impacts to the affected USDW.
4. Arrange for an alternate potable water supply, if the USDW was utilized and the emergency caused the drinking water to exceed drinking water standards.
5. Proceed with efforts to remediate USDW to mitigate any unsafe conditions (e.g., install system to intercept/extract brine or CO_2 or pump and treat to aerate CO_2 rich water).
6. Continue groundwater remediation and monitoring on a frequent basis (frequency to be determined by Four Corners Carbon and the UIC Program Director) until unacceptable adverse USDW impact has been fully addressed.
7. If CO_2 is released to the surface in excess of predetermined parameters, an evacuation plan will be initiated.

Avoidance Measures

All injection parameters will be adhered to and not exceeded and as per the testing and monitoring plan, all monitoring equipment will be calibrated as required or, at a minimum, at a frequency

recommended by the manufacturer. This will ensure that all shut-off devices, automatic alarms, and surface shut-off systems will work within planned operational limits and will shut-in when injection or annulus pressures exceed limits to prevent fracturing of the confining zone or damaging the well.

Detection Methods

According to the Testing and Monitoring Plan, well pressure, temperature, and annulus pressure will be monitored continuously.

11.5.4 Natural Disaster

During all phases of the Project, well problems (integrity loss, leakage, or malfunction) may arise as a result of a natural disaster affecting the normal operation of the injection well. An earthquake may disturb surface and/or subsurface facilities; and weather-related disasters (e.g., tornado or lightning strike) may affect surface facilities.

If a natural disaster occurs that affects normal operation of the injection well, perform the following:

Response Actions

- Notify the UIC Program Director within 24 hours of the emergency event, per 40 CFR 146.91(c).
- Determine the severity of the event, based on the information available, within 24 hours of notification.

Major or Serious Emergency

1. Initiate shutdown plan.
   a. Shut in well (close flow valve).
   b. Vent CO_2 from surface facilities.
   c. Limit access to wellhead to authorized personnel only.
2. Communicate with Four Corners Carbon personnel and local authorities to initiate evacuation plans, as necessary.
3. Monitor well pressure, temperature, and annulus pressure continuously to verify well status and determine the cause and extent of any failure.
4. Determine if any leaks to ground water or surface water occurred.
5. If contamination or endangerment is detected, identify and implement appropriate remedial actions (in consultation with the UIC Program Director).

Minor Emergency

1. Conduct assessment to determine whether there has been a loss of mechanical integrity.
2. If mechanical integrity is lost, initiate shutdown plan.
   a. Shut in well (close flow valve).

b. Vent CO_2 from surface facilities.

3. Limit access to wellhead to authorized personnel only.
4. Monitor well pressure, temperature, and annulus pressure to verify integrity loss and determine the cause and extent of any failure.
5. Identify and, if necessary, implement appropriate remedial actions (in consultation with the UIC Program Director).

Avoidance Measures

N/A

Detection Methods

N/A

11.5.5 Induced or Natural Seismic Event

No significant seismic hazards have been identified within the AoR and there have been no recorded earthquakes with epicenters within the [redacted] (**Figure 11.8**).

[3] https://earthquake.usgs.gov/earthquakes/search/
[4] https://geoinfo.nmt.edu/repository/index.cfml?rid=20020001
[5] http://ds.iris.edu/spud/event

[redacted]

Figure 11.7—Map of the San Juan Basin showing seismic events from the USGS Earthquake Catalogue. Seismic events due to mining explosion and shown with grey circles.

[redacted]

Figure 11.8—Earthquake hazard based on USGS estimation[6]. The proposed injection site (red star) has low earthquake hazard, showing low peak ground accelerations (PGA) with a 2% probability of exceedance in 50 years.

Basement faults were mapped by [redacted] no faults were mapped within the AoR (**Figure 11.9**). [redacted] it is highly unlikely that injection operations would ever induce a seismic event within the AoR. Therefore, this portion of the response plan is developed for any seismic event with an epicenter within a 50-mile radius of the injection well.

[6] https://www.usgs.gov/programs/earthquake-hazards/science/national-seismic-hazard-model

[redacted]

Figure 11.9—Locations and strikes of the [redacted]

To monitor the area for seismicity, Four Corners Carbon will install a [redacted] in the characterization and monitoring well (Monitor 1), and a series of three component seismometers at the surface. Seismometers will be installed near the [redacted] while others will surround the AoR, providing complete monitoring coverage of the area of interest. The seismometers will be installed within the region of interest to monitor before, during, and after injection of CO_2. Based on quarterly analysis of the monitoring data, observed level of seismic activity, and local reporting of felt events, the site will be assigned an operating state (**Table 11.4)**. The operating state is determined using threshold criteria which correspond to the site's potential risk and level of seismic activity. The operating state provides operating personnel information regarding the potential risk of further seismic activity and guides them through a series of response actions.

Table 11.4—Seismic monitoring system, for seismic events greater than a magnitude of 1.0 with an epicenter within a 50-mile radius of the injection well.

Operating State	Threshold Condition[7,8,9]	Response Action[10]
Green	Seismic events less than or equal to M1.5[5]	• Continue normal operation within permitted levels.
Yellow	5 or more seismic events within a 30 day period having a magnitude greater than M1.5[5] but less than or equal to M2.0[5]	• Continue normal operation within permitted levels. • Within 24 hours of the incident, notify the UIC Program Director of the operating status of the well.
Orange	Seismic event greater than M1.5[5] and local observation or felt report. Seismic event greater than M2.0[5] and no felt report.	• Continue normal operation within permitted levels. • Within 24 hours of the incident, notify the UIC Program Director, of the operating status of the well. • Review seismic and operational data. • Report findings to the UIC Program Director and issue corrective actions.
Magenta	Seismic event greater than M2.0[5] and local observation or report.	• Initiate rate reduction plan. • Vent CO_2 from surface facilities. • Within 24 hours of the incident, notify the UIC Program Director, of the operating status of the well. • Limit access to wellhead to authorized personnel only. • Communicate with facility personnel and local authorities to initiate evacuation plans, as necessary. • Monitor well pressure, temperature, and annulus pressure to verify well status and determine the cause and extent of any failure; identify and implement appropriate remedial actions (in consultation with the UIC Program Director). • Determine if leaks to ground water or surface water occurred. • If USDW contamination is detected: • Notify the UIC Program Director within 24 hours of the determination. • Review seismic and operational data. • Report findings to the UIC Program Director and issue corrective actions.

[7] https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale. Accessed April 2023.
[8] Specified magnitudes refer to magnitudes determined by USGS seismic monitoring stations or reported by the USGS National earthquake Information Center using the national seismic network.
[9] "Felt report" and "local observation and report" refer to events confirmed by local reports of felt ground motion or reported on the USGS "Did You Feel It?" reporting system.
[10] Reporting findings to the UIC Program Director and issuing corrective action will occur within 25 business days (five weeks) of change in operating state.

Operating State	Threshold Condition[7,8,9]	Response Action[10]
Red	Seismic event greater than M2.0[5], and local observation or report, and local report and confirmation of damage[11] Seismic event greater than a M3.5[5]	• Initiate shutdown plan. • Vent CO_2 from surface facilities. • Within 24 hours of the incident, notify the UIC Program Director of the operating status of the well. • Limit access to wellhead to authorized personnel only. • Communicate with facility personnel and local authorities to initiate evacuation plans, as necessary. • Monitor well pressure, temperature, and annulus pressure to verify well status and determine the cause and extent of any failure; identify and implement appropriate remedial actions (in consultation with the UIC Program Director). • Determine if leaks to ground water or surface water occurred. • If USDW contamination is detected: • Notify the UIC Program Director within 24 hours of the determination. • Review seismic and operational data. • Report findings to the UIC Program Director and issue corrective actions.

[11] Onset of damage is defined as cosmetic damage to structures, such as bricks dislodged from chimneys and parapet walls, broken windows, and fallen objects from walls, shelves, and cabinets.

11.6 Response Personnel and Equipment

Site personnel, project personnel, and local authorities will be relied upon to implement this ERRP (**Table 11.5**).

Site personnel to be notified (not listed in order of notification):

- Four Corners Carbon Project Engineer(s)
- Four Corners Carbon Plant Safety Manager(s)
- Four Corners Carbon Environmental Manager(s)
- Four Corners Carbon Plant Manager
- Four Corners Carbon Plant Superintendent

A site-specific emergency contact list will be developed and maintained during the life of the Project. Four Corners Carbon will provide the current site-specific emergency contact list to the UIC Program Director.

Table 11.5—Contact information for key local, state, and other authorities.

Agency	Phone Number
San Juan County NM Sheriff's Office	505-334-6107
San Juan County Fire Department Administration	505-334-1180
New Mexico State Police	505-325-7547
New Mexico Department of Homeland Security & Emergency Management	505-476-9600
Environmental services contractor	312-269-2318 / TBD
UIC Program Director	214-665-8473
EPA National Response Center (24 hours)	800-424-8802
U.S. Environmental Protection Agency, Region 6	800-887-6063
National Parks Service, Region 7	303-969-2500
New Mexico Energy, Minerals, and Natural Resources Department	505-564-7600
New Mexico Bureau of Geology & Mineral Resources	575-835-5490
New Mexico Oil Conservation Division (Aztec)	505-320-0243
New Mexico Environment Department	505-566-9741
Bureau of Land Management (Farmington, NM)	505-564-7600
Bureau of Indian Affairs	970-565-8471
Navajo Nation Department of Emergency Management	928-871-6892
Navajo Nation Reservation–Environmental Protection Agency	928-871-7692
Ute Mountain Reservation	970-565-3751

Four Corners Carbon will use an Incident Command System (ICS) response structure (**Figure 11.10**) when an emergency event has been detected. This structure identifies the individuals designated as team members and the responsibilities required.

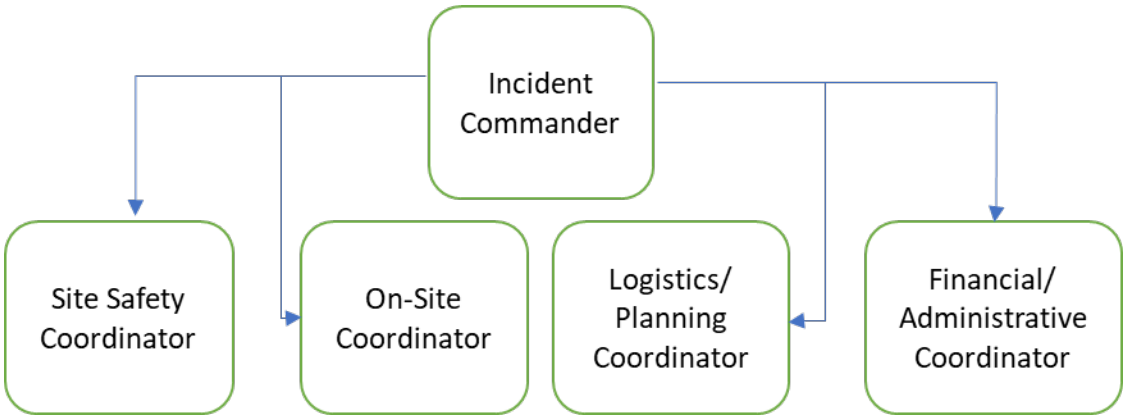

Figure 11.10—Incident command system response structure.

Incident Commander: is responsible for managing emergency events and will coordinate emergency response activities. The Incident Commander must be fully briefed and have a written delegation of authority. Initially, assigning tactical resources and overseeing operations will be under the direct supervision of the Incident Commander.

The Incident Commander is responsible for ensuring incident safety, providing information services to internal and external stakeholders, and establishing and maintaining liaison with other agencies participating in the incident. These responsibilities include the following:

- Meet with the Site Safety and On-Site Coordinators for a briefing on the situation and current activities of on-site personnel;
- Work on-scene with state and federal officials in a support and advisory role;
- Prepare for post-emergency operations to make repairs and return the facility to service;
- Conduct containment and cleanup operations to minimize personnel and community exposure; and
- Communicate with the media.

Site Safety Coordinator: ensures site, public, and employee safety; establishes the site safety plan; coordinates environmental response; maintains contact with the area/region Environmental, Health and Safety (EHS) Project Manager and other EHS personnel as required; and maintains contact with local, state, and Federal emergency response organizations or other agencies as necessary.

On-Site Coordinator: manages on-site activities.

Logistics/Planning Coordinator: obtains the necessary response equipment, materials, contractors, other company personnel.

Financial/Administration Coordinator: arranges for humanitarian assistance, lodging, meals, and manages purchase orders, contracts.

Equipment

Equipment needed in the event of an emergency and remedial response will vary, depending on the triggering emergency event. Response actions (cessation of injection, well shut-in, and evacuation) will generally not require specialized equipment to implement. Where specialized equipment (such as a drilling rig or logging equipment) is required Four Corners Carbon shall be responsible for its procurement.

Four Corners Carbon will coordinate with local and county personnel to discuss the ERRP and coordinate response actions, including annual drills.

11.7 Emergency Communications Plan

In consultation with the UIC Program Director, Four Corners Carbon will communicate with the public about any event which requires an emergency response to ensure that the public understands what happened and whether or not there are any environmental or safety implications. The amount of information, timing, and communications method(s) will be appropriate to the event, its severity, whether any impacts to drinking water or other environmental resources occurred, any impacts to the surrounding community, and their awareness of the event.

Four Corners Carbon will describe what happened, any impacts to the environment or other local resources, how the event was investigated, what responses were taken, and the status of the response. For responses that occur over the long-term (e.g., ongoing cleanups), Four Corners Carbon will provide periodic updates on the progress of the response action(s).

Four Corners Carbon will communicate with entities who may need to be informed about or act in response to the event, including local water systems, CO_2 source(s) and pipeline operators, landowners, and Regional Response Teams (as part of the National Response Team).

11.8 Plan Review

This ERRP shall be reviewed:

- At least once every five years following its approval by the permitting agency;
- Within one year of an AoR reevaluation;
- Within a prescribed period (to be determined by the permitting agency) following any significant changes to the injection process or the injection facility, or an emergency event; or
- As required by the permitting agency.

If the review indicates that no amendments to the ERRP are necessary, Four Corners Carbon will provide the permitting agency with the documentation supporting the "no amendment necessary" determination. If the review indicates that amendments to the ERRP are necessary, amendments shall be made and submitted to the permitting agency within six months following an event that initiates the ERRP review procedure.

11.9 Staff Training and Exercise Procedures

Four Corners Carbon will integrate the ERRP into the plant specific standard operating procedures and training program as described in the SOP entitled 180.60.ENV.130 "Environmental Training, Awareness and Competence." Periodic training will be provided, not less than annually, to well operators, plant safety and environmental personnel, the plant manager, plant superintendent, and corporate communications. The training plan will document that the above listed personnel have been trained and possess the required skills to perform their relevant emergency response activities described in the ERRP.

References

Scholle, P. A. 2003. *Geologic Map of New Mexico* (9/7/2022 ed.) [Open-File Geologic Map #304]. New Mexico Bureau of Geology & Mineral Resources. https://geoinfo.nmt.edu/publications/maps/geologic/ofgm/details.cfml?volume=304

Taylor, D. J., & Huffman Jr., A. C. (1998). Map showing inferred and mapped basement faults, San Juan Basin and vicinity, New Mexico and Colorado (Report No. 2641; IMAP). USGS Publications Warehouse. https://doi.org/10.3133/i2641