Underground Injection Control Carbon Sequestration
Class VI Permit Application

TESTING AND MONITORING PLAN
40 CFR 146.90
Section 8.0

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

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Four Corners Carbon Storage, LLC – Injector 1

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Injector 1

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[1] North American Datum 1983

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ACRONYMS AND ABBREVIATIONS

A	
AoR	area of review
ASTM	American Society for Testing Materials
B	
BHL	bottom hole location
C	
CBL	cement bond log
CFR	Code of Federal Regulations
CO_2	carbon dioxide
E	
EOS	equation-of-state
EPA	U.S. Environmental Protection Agency
M	
MFL	Magnetic Flux Log
P	
PNL	pulsed neutron log
R	
RCA	routine core analyses
S	
SCAL	special core analyses
SP	spontaneous potential log
T	
TCS	triaxial compressive strength
TD	total depth
TEC	tubing encapsulated conductor
TVD	true vertical depth
TVDSS	true vertical depth subsea
U	
UIC	Underground Injection Control
USDW	underground source of drinking water
USIT	ultra sonic imager tool
V	
VDL	variable density log

8 TESTING AND MONITORING PLAN

This following Testing and Monitoring Plan describes Four Corners Carbon Storage, LLC (Four Corners Carbon) approach to monitor the (the "Facility") and, further, how the Facility is designed to meet any local and state requirements and those of 40 CFR 146.82(a)15 and 146.90. In addition to demonstrating that the well is operating as planned, the carbon dioxide (CO_2) plume and pressure front are moving as predicted, and that there is no endangerment to underground source of drinking waters (USDW), the monitoring data will be used to validate and adjust the geological and engineering models used to predict the distribution of pressure and CO_2 within the storage zone to support area of review (AoR) reevaluations and a non-endangerment demonstration.

This plan incorporates Section 11 and the results of the testing and monitoring activities described below may trigger actions according to the Emergency and Remedial Response Plan.

8.1 Overall Strategy and Approach for Testing and Monitoring

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 in [redacted], New Mexico. Strat 1[2] is utilized as the project characterization well. The testing and monitoring plan outlined in this section is designed to meet the requirements of 40 CFR 146.82(a)15 and 146.90 and to provide data to confirm the Project is performing as predicted by the models and USDWs remain protected. Should deviations from the model predictions be observed, data collected in this plan will be used to update the plan, and revise projections accordingly. The injectate composition would be monitored to confirm its composition remains within the range of expected values, and contaminants such as water and sulfur compounds, are absent or within design limits. Operational data including pressure, temperature, flow rate, and volume (CFR §146.90[b]) would be continuously monitored during the active injection phase until well abandonment. Corrosion levels would be monitored for all types and grades of metal that contact the injectate (CFR§146.90[c]). Groundwater quality above the confining zone would be monitored and compared with baseline water quality data for the first permeable zone which lies stratigraphically above the injection and confining zone but below the lowermost USDW (CFR §146.90[d], §146[b]). Mechanical testing of the injection well components would occur routinely and compared with baseline surveys to highlight any areas of concern before they lead to potential failures of mechanical integrity (CFR §146.87[a][4], §146.89, §146.90[e], §146.92[a]). Pressure fall-off testing will be conducted to quantify any possible degradation of injectivity of the injection zone (CFR §146.90[f]). Direct monitoring of the injectate plume would be conducted via periodic sampling of the injection zone in monitoring well(s). The extent of the plume would indirectly be monitored with periodic two dimensional (2D) seismic surveys. All gathered surveillance data would be compared to baseline and previous surveillance logs and provide indicators of plume development, which would be

[redacted]

compared to initial simulations and inform if modifications to the static or dynamic models are warranted (CFR §146.90[g], §146.93[b]). The pressure front would be monitored with pressure gauges in the monitoring well(s) in the injection zone. If required, sites would be selected for soil gas monitoring to provide additional information that isolated leakage may be occurring and escaping detection via other methods. **Table 8.1** provides a summary of the monitoring program, target, and frequency of data collection.

Table 8.1—Monitoring program summary.

Regulatory Requirement	Monitoring Type	Monitoring Program	Monitoring Target	Frequency
146.90 (a)	CO_2 Injection Stream Composition	[redacted]	[redacted]	[redacted]
146.90 (b)	Continuous Recording of Injection Pressure, Rate, and Volume	[redacted]	[redacted]	[redacted]
146.90 (b)	Direct Reservoir Monitoring	[redacted]	[redacted]	[redacted]
146.90 (b)	Well Annulus Pressure Between Tubing and Casing	[redacted]	[redacted]	[redacted]
146.90 (c)	CO_2 Flow Line	[redacted]	[redacted]	[redacted]
146.90 (c)	Corrosion Monitoring	[redacted]	[redacted]	[redacted]
146.90 (d)	Near-Surface Monitoring	[redacted]	[redacted]	[redacted]
146.90(d)(1)	Above Confining Zone Monitoring	[redacted]	[redacted]	[redacted]
146.90 (e)	Internal and External Mechanical Integrity	[redacted]	[redacted]	[redacted]
146.90 (e)	Internal and External Mechanical Integrity	[redacted]	[redacted]	[redacted]
146.90 (g)(2)	Reservoir Monitoring	[redacted]	[redacted]	[redacted]
146.90 (g)(2)	Indirect Reservoir Monitoring	[redacted]	[redacted]	[redacted]
146.90 (g)(2)	Seismicity Monitoring	[redacted]	[redacted]	[redacted]
146.90 (h)	Atmospheric Monitoring	[redacted]	[redacted]	[redacted]

8.1.1 Quality Assurance Procedures

Four Corners Carbon will provide a Quality and Surveillance Plan (QASP) for all testing and monitoring activities, pursuant to CFR §146.90(k) once final facility and equipment designs are approved.

8.1.2 Reporting Procedures

Four Corners Carbon will report the results of all testing and monitoring activities to U.S. Environmental Protection Agency (EPA) in compliance with the requirements under 40 CFR §146.91.

8.2 Carbon Dioxide Stream Analysis [40 CFR146.90(a)]

Four Corners Carbon will collect continuous samples from the CO_2 injection stream and perform analysis to meet the requirements of 40 CFR 146.82(a)15 and 146.90 to obtain data representative of the injectate stream's chemical and physical characteristics. The purpose of analyzing the CO_2 stream is to evaluate potential interactions of CO_2 and other components of the injectate. The CO_2 stream must meet Four Corners Carbon's pipeline specifications and will be approximately 95% CO_2. Four Corners Carbon would compare this data to the baseline, predicted, and average values monthly, for any deviation from original values. Four Corners Carbon will analyze the CO_2 for the constituents identified in **Table 8.2** using the methods listed. Sampling frequency will be continuous with records stored every year.

Table 8.2—Summary of analytical parameters for carbon dioxide stream.

Parameter	Analytical Method(s)
CO_2	Gas chromatograph
Methane	Gas chromatograph
Ethane	Gas chromatograph
Propane	Gas chromatograph
n-Butane	Gas chromatograph
Hydrogen	Gas chromatograph
Nitrogen	Gas chromatograph
Sulfur	Gas chromatograph
Oxygen	Gas chromatograph
Water	Gas chromatograph

8.2.1 Sampling Methods

Following all appropriate QASP requirements the CO_2 stream samples will be continuously collected from the CO_2 pipeline using a gas chromatograph on the flowline, before the injection flowmeter.

8.2.2 Laboratory to be Used/Chain of Custody and Analysis Procedures

Four Corners Carbon will analyze samples on-site with calibrated gas chromatographs, on a continuous basis. If additional lab testing is required, Four Corners Carbon will select a certified lab and follow all required chain of custody and analysis procedures as outlined in the QASP.

8.3 Continuous Recording of Operational Parameters [40 CFR 146.88(e)(1), 146.89(b) and 146.90(b)]

Four Corners Carbon will install and use continuous recording devices to monitor injection pressure, rate, and volume; the pressure on the annulus between the tubing and the long casing string; the annulus fluid volume added; and the temperature of the CO_2 stream, as required at 40 CFR 146.88(e)(1), 146.89(b), and 146.90(b). The monthly average, maximum, minimum values for injection pressure, flow rate and volume will be reported to the UIC Program director by the owner or operator in semi-annual reports as required by CFR 146.91(a)(2).

8.3.1 Monitoring Location and Frequency

Four Corners Carbon will perform the activities identified in **Table 8.3** to monitor operational parameters and verify internal mechanical integrity of the injection well. All monitoring will take place at the locations and frequencies shown in the table.

Table 8.3—Sampling devices, locations, and frequencies for continuous monitoring.

Parameter	Device(s)	Location	Min. Sampling Frequency	Min. Recording Frequency
Injection Pressure	Pressure transducer	Wellhead	Continuous	Under Review
Injection Rate	Flowmeter	Flowline	Continuous	Under Review
Injection Volume	SCADA	Flowline	Continuous	Under Review
Annular Pressure	Pressure transducer	Wellhead	Continuous	Under Review
Annulus Fluid Volume	Pressure transducer/ Visual Inspection	Wellhead	Continuous	Under Review
CO_2 Stream Temperature	Flowmeter	Flowline	Continuous	Under Review

Notes:
Sampling frequency refers to how often the monitoring device obtains data from the well for a particular parameter. For example, a recording device might sample a pressure transducer monitoring injection pressure once every two seconds and save this value in memory.
Recording frequency refers to how often the sampled information gets recorded to digital format (such as a computer hard drive). For example, the data from the injection pressure transducer might be recorded to a hard drive once every minute.

8.3.2 Monitoring Details

Injection stream parameters will be monitored initially at the flow line between the supply pipeline and the wellhead for quality, pressure, and temperature. The site's supervisory control and data acquisition system will track injection volume. Downstream, a pressure transducer will monitor

the annular pressure of the injection well. In the injection zone, pressure monitoring will take place at the Injection well, and in two monitoring wells; Monitor 1 located approximately 1 mile from Injector 1 and within the expected plume. Details on instrumentation, calibration standards, conversion formulas, will be provided as instrumentation details are finalized.

8.4 Corrosion Monitoring

To meet the 40 CFR 146.90(c) requirements, Four Corners Carbon will monitor well materials during the operation period for loss of mass, thickness, cracking, pitting, and other signs of corrosion to ensure that the well components meet the minimum standards for material strength and performance.

The minimum composition of the injectate stream is shown in **Table 8.4**. Impurities in the final injectate stream will be less than, or equal to the limits shown in **Table 8.4**. The injection formation fluids will be considered in determining the appropriate metallurgy for the tubing and long casing string. Additionally, cement and packer fluids resistant to CO_2 corrosion will be used to minimize corrosion in the injection well.

Table 8.4—Composition of the injectate stream.

Constituent	Limit
CO_2	[redacted]
CO	[redacted]
H_2	[redacted]
H_2S	[redacted]
Total Sulfur	[redacted]
Total NO_x	[redacted]
O_2	[redacted]
H_2O	[redacted]
Hydrocarbons	[redacted]
Glycol	[redacted]
Maximum dew point at 400 psig	[redacted]
Non condensable gases	[redacted]

Four Corners Carbon will monitor corrosion coupons and collect samples according to the methods described in the following text. This monitoring will occur quarterly, by the following dates each year:

- three months after the start of injection
- six months after the start of injection
- nine months after the start of injection
- 12 months after the start of injection

In addition to routine coupon inspection, a [redacted], when tubing is removed for workovers, to monitor for inner metal loss and a [redacted] tool will be run to

monitor any metal loss to the casing. Both measurements will be compared to baseline logs and any subsequent monitoring logs.

8.4.1 Monitoring Location and Frequency

To ensure samples are exposed to representative conditions, corrosion coupons, made of the same material as the production casing and the injection tubing, will be placed in the CO_2 injection pipeline upstream of any processing equipment. The coupons will be removed quarterly by the following dates each year:

- three months after the start of injection,
- six months after the start of injection,
- nine months after the start of injection,
- and 12 months after the start of injection.

8.4.2 Monitoring Details

When the coupons are removed, they will be inspected visually for any signs of corrosion, including pitting. The weight and size of the coupons will be measured each time they are removed. They will be assessed for corrosion using American Society for Testing and Materials (ASTM) standards at a certified laboratory and the corrosion rate will be calculated using a weight loss method where the rate equals the weight loss during the exposure period divided by the duration of the period. Baseline mass and imagery of all samples will be recorded for comparison with appearance and mass during quarterly checks. Should any tangible deviations in the corrosion rate be identified, the quarterly monitoring will be supplemented with additional samples collected based on forecasted injection volumes.

Table 8.5—List of equipment with material of construction.

Equipment Coupon	Material of Construction
Pipeline	Under Review
Production Casing	[redacted]
Stainless Production Casing	[redacted]
Tubing	[redacted]

To meet the 40 CFR 146.90 (c)(1) and (2) requirements Four Corners Carbon will also conduct corrosion monitoring of the well's pipeline materials using a corrosion coupon monitoring system. Table 8.5 lists the materials that will be monitored for corrosion. This process will monitor for loss of mass and thickness, cracking, pitting, and other signs of corrosion, and ensure that the well components meet the minimum material strength and performance standards as specified 40 CFR 146.86 (b).

8.5 <u>Injection Zone and Above Confining Zone Monitoring</u>

[redacted] will be performed every year to monitor for changes in the near-wellbore environment that could indicate the presence of a subsurface leak via changes in saturation from previous surveys. Surface monitoring, groundwater evaluation, and continuous

pressure and temperature data from the injection well and monitoring wells will all be used to analyze any leak detections above the confining interval.

Table 8.6 shows the planned monitoring methods, and locations of the monitoring plan. [redacted] is the first permeable zone above the confining zone [redacted] Monitoring above the confining zone will be performed yearly with [redacted] of the Injection well.

Table 8.6—Monitoring of groundwater quality and geochemical changes above the confining zone.

Target Formation	Monitoring Activity	Monitoring Location(s)	Spatial Coverage	Frequency
[redacted]	[redacted]	Injector 1, Monitor 1	wellbore	Annual

The monitoring well network is provided in **Figure 8.1** showing the Injector 1, two monitoring wells, and maximum plume extent.

[redacted]

Figure 8.1—Monitoring well network.

Injection zone monitoring will be accomplished via a monitoring well (Monitor 1) located approximately [redacted] from the injection well (Injector 1) and is within the predicted extent of the plume. Monitor 1 will be completed in the injection zone [redacted]) to provide a means of directly sampling injection zone fluids and [redacted] to indirectly monitor CO_2 saturation and identify any potential leakage above the confinement zone. As described in the QASP, pressure and temperature gauges will be installed on [redacted]. These gauges will monitor for changes in pressure and/or temperature that would indicate movement of CO_2 outside of any of the confining zones. Additional [redacted] logs will be recorded for Injector 1 and compared with baseline and yearly surveys to provide an additional means of anomaly detection. Early detection of CO_2 migration outside of injection zone would allow time for mitigation measures to be put in place prior to contact with any USDW. Furthermore, the monitoring data will provide additional data to validate and calibrate the plume and pressure-front model. Multiple points of injection zone monitoring will provide additional data from which to confirm if injection response is developing as predicted or if revisions are warranted.

Pressure monitoring [redacted] will provide independent confirmation of a potential leak and mitigation plans would be developed in response to the nature and extent of the leak.

As surveillance monitoring data are recorded, routine evaluation and re-evaluation of the data will be conducted in order to determine if changes to the monitoring program are warranted in order to better track movement, and CO_2 concentration changes within the plume. Conversely, the collected surveillance data may indicate regions where the plume is stable and not changing and therefore could warrant a reduction in the frequency of logging or surveying.

8.5.1 Analytical Parameters

To determine the possibility of CO_2 migration from the injection zone above the confinement zone, Four Corners Carbon will utilize [redacted] logging for Injector 1 to provide early identification of potential leaks in the location with the highest-pressure gradient between the injection zone and above confinement zone. These programs will include baseline and then regular sampling at monitoring locations above the plume to allow for early detection of loss of containment from within the storage formation.

8.6 External Mechanical Integrity Testing

Four Corners Carbon will conduct at least one of the tests presented in **Table 8.7** periodically during the injection phase to verify external MI as required at CFR146.89(c) and 146.90.

8.6.1 Testing Location and Frequency

MITs will be performed annually, up to 45 days before the anniversary date of authorization of injection each year and will cease after the injection phase is completed and the well is abandoned.

Table 8.7—MITs.

Test Description	Location
Downhole temperature logging	Injector 1, Monitor 1
Magnetic flux log	Injector 1, Monitor 1
Annulus pressure monitoring	Injector 1

8.6.2 Testing Details

The injection well will have a temperature log run annually to monitor for indicators of potential leaks. The temperature profiles will be compared to previous surveys and any anomalies will be investigated. The resulting data will be submitted annually to meet permit regulations under CFR 146.89(c) and CFR 146.90.

Testing Procedure:

- The well will be shut in until the temperatures have stabilized, approximately 36 hours before running the temperature log. Correlation between the baseline and subsequent logs will demonstrate mechanical integrity.
- Temperature logs will be provided to the UIC Director within 30 days after the log is run.

8.7 Pressure Fall-Off Testing

Four Corners Carbon will perform pressure fall-off tests during the injection phase as described in the following text to meet the requirements of 40 CFR 146.90(f).

A baseline pressure fall-off test on Injector 1 will be conducted prior to injection, and every five years after injection begins, to estimate injectivity and any change to the near wellbore environment.

The time-lapse pressure fall-off tests will provide information regarding changes in reservoir pressure and injectivity, by quantifying near wellbore skin, that may impede injection rates.

Two BHP gauges will be used (primary and backup) to continuously monitor pressure with the well shut in. Monitoring will continue until radial flow conditions are observed on a semi-log plot of pressure versus time. The results will be submitted to the administrator within 30 days of testing.

8.7.1 Testing Location and Frequency

Four Corners Carbon will perform a pressure fall-of-test before the start of the injection phase and then every five years until the well is no longer used for injection and is abandoned.

8.7.2 Testing Details

The data gathered from these tests will be used to monitor any changes in the permeability of the injection zone in the near wellbore environment that may impact injectivity. The pressure fall-off tests can also be used to provide an additional indicator of injection zone pressure.

8.8 Carbon Dioxide Plume and Pressure Front Tracking

Four Corners Carbon will employ direct and indirect methods to track the extent of the CO_2 plume and the presence or absence of elevated pressure during the operation period to meet the requirements of 40 CFR 146.90(g). Monitor 1 will be used for monitoring pressure front and plume growth within the AoR.

8.8.1 Plume Monitoring Location and Frequency

Table 8.8 presents the methods that Four Corners Carbon will use to monitor the position of the CO_2 plume over time, including the activities, locations, and frequencies Four Corners Carbon will employ. The parameters to be analyzed as part of fluid sampling in the injection zone and associated analytical methods are presented in **Table 8.9**.

Quality assurance procedures for these methods are presented in Section 8.9 of the QASP.

8.8.2 Plume Monitoring Details

Table 8.8—Plume monitoring activities.

Target Formation	Monitoring Activity	Monitoring Location(s)	Spatial Coverage	Frequency
DIRECT PLUME MONITORING				
[redacted]	[redacted]	Injector 1, Monitor 1	Inside of AoR	Every 5 years
[redacted]	[redacted]	Monitor 1,	Inside and outside of AoR	Annually
INDIRECT PLUME MONITORING				
[redacted]	[redacted]	[redacted]	AoR	Every 5 years

Table 8.9—Summary of analytical and field parameters for fluid sampling in the injection zone.

Parameters	Analytical Methods[1]	Detection Limit/Range	Typical Precisions	QC Requirements
Cations: Al, Ba, Mn, As, Cd, Cr, Cu, Pb, Sb, Se, and Tl	ICP-MS, EPA Method 6020	0.001 to 0.1 mg/L (analyte, dilution and matrix dependent)	±15%	Daily calibration; blanks, duplicates and matrix spikes at 10% or greater frequency
Cations: Ca, Fe, K, Mg, Na, and Si	ICP-OES, EPA Method 6010B	0.005 to 0.5 mg/L (analyte, dilution and matrix dependent)	±15%	Daily calibration; blanks, duplicates and matrix spikes at 10% or greater frequency
Anions: Br, Cl, F, NO3, and SO4	Ion Chromatography, EPA Method 300.0	0.02 to 0.13 mg/L (analyte, dilution and matrix dependent)	±15%	Daily calibration; blanks and duplicates at 10% or greater frequency
Dissolved CO_2	Coulometric titration, ASTM D513-11	25 mg/L	±15%	Duplicate measurement; standards at 10% or greater frequency
Total Dissolved Solids	Gravimetry; APHA 2540C	12 mg/L	±10%	Balance calibration, duplicate analysis
Alkalinity	APHA 2320B	4 mg/L	±3 mg/L	Duplicate analysis
pH (field)	EPA 150.3	2 to 12 pH units	±0.2 pH unit	User calibration per manufacturer recommendation
Specific conductance (field)	APHA 2510	0 to 200 mS/cm	±1% of reading	User calibration per manufacturer recommendation
Temperature (field)	Thermocouple	-5 to 50°C	±0.2°C	Factory calibration

EPA Method 150.3[3]—A bench-top, portable, or continuous monitoring pH meter is used to measure the pH of drinking water using pH probes that include, but are not limited to, glass electrodes in combination with a reference potential, ion-selective field-effect transistor (ISFET) electrodes in combination with a reference potential, combination electrodes, and molecular sensors. Calibration and calibration verification can be performed directly or indirectly. Direct calibration and calibration verification involve measurement of reference pH buffers with the instrumentation. Alternatively, continuous monitoring pH meters may be calibrated or verified indirectly by using a grab sample from the sample stream and measuring the pH of the grab sample with a calibrated bench-top or portable pH meter. The continuous monitoring analyzer accuracy is verified or adjusted based on results from grab sample analyses.

EPA Method 300.0[4]—A small volume of sample, typically 2-3 mL, is introduced into an ion chromatograph. The anions of interest are separated and measured, using a system comprised of a guard column, analytical column, suppressor device, and conductivity detector.

EPA Method 6010B[5]—This method describes multi-elemental determinations by ICP-AES using sequential or simultaneous optical systems and axial or radial viewing of the plasma. The instrument measures characteristic emission spectra by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Element-specific emission spectra are produced by a radio-frequency inductively coupled plasma. The spectra are dispersed by a grating spectrometer, and the intensities of the emission lines are monitored by photosensitive devices. Background correction is required for trace element determination. Background must be measured adjacent to analyte lines on samples during analysis. The position selected for the background-intensity measurement, on either or both sides of the analytical line, will be determined by the complexity of the spectrum adjacent to the analyte line. In one mode of analysis the position used should be as free as possible from spectral interference and should reflect the same change in background intensity as occurs at the analyte wavelength measured. Background correction is not required in cases of line broadening where a background correction measurement would actually degrade the analytical result. The possibility of additional interferences named in Section 3.0 should also be recognized and appropriate corrections made; tests for their presence are described in Section 8.5. Alternatively, users may choose multivariate calibration methods. In this case, point selections for background correction are superfluous since whole spectral regions are processed.

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[3] https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100SFNI.txt
[5] https://www.epa.gov/sites/default/files/2015-08/documents/method_300-0_rev_2-1_1993.pdf
[6] https://www.epa.gov/sites/default/files/documents/6010b.pdf
[7] https://www.nemi.gov/methods/method_summary/9694/
[4] https://www.epa.gov/sites/default/files/2015-08/documents/method_300-0_rev_2-1_1993.pdf
[5] https://www.epa.gov/sites/default/files/documents/6010b.pdf

EPA Method SM2320B[6]—Hydroxyl ions present in a sample as a result of dissociation or hydrolysis of solutes react with additions of standard acid. Alkalinity thus depends on the end-point pH used.

8.8.3 Pressure-Front Monitoring Location and Frequency

Table 8.10 presents the methods that Four Corners Carbon will use to monitor the position of the pressure front over time, including the activities, locations, and frequencies Four Corners Carbon will employ.

Quality assurance procedures for these methods are presented in the QASP (Section 8.9).

8.8.4 Pressure-Front Monitoring Details

If deemed necessary by the UIC Program Director, Four Corners Carbon will develop a grid of sample stations and a baseline sampling program to reference routinely gathered samples against in order to detect any loss of containment of the plume.

[6] https://www.nemi.gov/methods/method_summary/9694/

Table 8.10—Pressure-front monitoring activities.

Target Formation	Monitoring Activity	Monitoring Location(s)	Spatial Coverage	Frequency
DIRECT PRESSURE-FRONT MONITORING				
[redacted]	[redacted]	Monitor 1	Inside AoR	Continuous, recorded annually.
INDIRECT PRESSURE-FRONT MONITORING				
[redacted]	[redacted]		AoR	Every 5 years

8.8.5 Soil Gas Monitoring/Other Testing and Monitoring

If deemed necessary by the UIC Program Director, Four Corners Carbon will develop a soil gas monitoring program, the details including the spatial extent, frequency of sampling, and baseline determination are pending finalization of the AoR. Sample locations will be developed such that any elevated risk site features (e.g., fracture networks, abandoned wellbores, faults) are adequately monitored.