Class VI Injection Well Application

Attachment 05: Pre-operational Formation Testing Program

40 CFR 146.82(a)(8), 146.87

Linden Project

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Prepared by:

VAULT 44.01

Project Information

Project Name: Linden

Project Operator: Vault Alliance CCS, LP

Project Contact: Sensitive, Confidential, or Privileged Information [redacted]

Linden Sassafras Hill Injection Well 1 (LSH INJ1) Location:

Latitude 40.210756º
Longitude -86.865219º

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List of Acronyms

ACZ	above confining zone
APT	annular pressure test
BHA	bottomhole assembly
CBL	cement bond log
CBL-VDL	cement bond log-variable density log
DST	drill stem test
ECS	Elemental Capture Spectroscopy
EPA	Environmental Protection Agency
FOT	fall-off test
LA OBS1	Linden Antilles Deep Observation Well 1
LB USDW1	Linden Beru USDW Monitoring Well 1
LR ACZ1	Linden Ralter Above Confining Zone Monitor Well 1
LSH INJ1	Linden Sassafras Hill Injection Well 1
MIT	mechanical integrity test
MWD	measurement while drilling
NMR	nuclear magnetic resonance
OAL	oxygen activation logging
PVC	polyvinyl chloride
RAT	radioactive tracer log
SRT	step-rate testing
TD	total depth
TDS	total dissolved solids
UIC	Underground Injection Control
USDW	Underground Source of Drinking Water
ZVSP	zero offset vertical seismic profile

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1. Introduction

This document details the proposed Pre-operational Formation Testing Program that will be implemented to characterize the chemical and physical features of the lithology at the Linden Project site. The formations of note include, but are not limited to, the following:

- Mt. Simon Sandstone (injection zone),
- Eau Claire Formation (confining zone),
- Ironton-Galesville Sandstones (above confining zone (ACZ) monitoring interval).

The Pre-operational Formation Testing Program laid out in this document is designed to meet the testing requirements of Title 40 of the U.S. Code of Federal Regulations Section 146.87 (40 CFR 146.87) and the well construction requirements of 40 CFR 146.86. Attachment 04: Injection Well Construction Plan, 2023 details the plan for the Linden Sassafras Hill Injection Well 1 (LSH INJ1). Attachment 05: Pre-operational Formation Testing Program, 2023 details how depth, thickness, mineralogy, lithology, porosity, permeability, and geomechanical information of the injection zone, confining zone, and other relevant geologic formations will be determined and verified (Figure 1 and Figure 2). The Program includes a combination of logging, coring, fluid sampling, and formation hydrogeologic testing that will be completed during the drilling of the:

- Linden Sassafras Hill Injection Well 1 (LSH INJ1)
- Linden Antilles Deep Observation Well 1 (LA OBS1)
- Linden Beru USDW Monitoring Well 1 (LB USDW1)
- Linden Ralter Above Confining Zone Monitoring Well 1 (LR OBS1)

The Linden Antilles Deep Observation Well (LA OBS1) is expected to be the first well drilled. A minimal logging suite will be run to establish depths and thicknesses of formations at the site. This initial logging suite will be used to identify zones suitable for core acquisition and well testing in the Linden Ralter Above Confining Zone Monitoring Well (LR ACZ1) and LSH INJ1.

The Ironton-Galesville Sandstones will be the ACZ monitoring interval for the project; this is the same unit used in other Illinois projects such IL-ICCS in Decatur, Illinois. LA OBS1 will allow the project to determine the behavior of various intervals in the Knox Group, such as the Potosi Formation, which have caused lost circulation issues while drilling other wells in the Illinois Basin.

The lowermost underground source of drinking water (USDW) at the Linden site is in the Borden Group within the undifferentiated Mississippian sediments and its base is the top of the New Albany Shale (Attachment 01: Narrative, 2023) (Figure 1). The United States Environmental Protection Agency (EPA) defines a USDW as an aquifer with less than 10,000 milligrams per litre (mg/L) total dissolved solids (TDS).

Fluid samples will be collected and used to complete the baseline geochemical analysis for the lowermost USDW and the ACZ monitoring intervals to which future measurements may be compared after injection operations begin.

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Figure 1: Site-specific Illinois Basin stratigraphic column with age, nomenclature, generalized lithology, and zone of use.

A more extensive logging suite will be planned for LSH INJ1 to assist with characterization of the main formations of interest. The logs from LA OBS1 will be used to pick coring intervals in LSH INJ1 as well as intervals for further fluid sampling and step-rate testing.

LA OBS1 will be drilled during Q2 2024, pending receipt of a well permit. After the data acquired in LA OBS1, LR ACZ1, and LSH INJ1 has been analyzed, a permit modification will be submitted that will provide updated data along with updated static and computational models that will incorporate the data from the testing program.

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Figure 2: Site map of Linden Project wells with cross section B-B'.

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Figure 3: Cross section B-B' (Figure 2) through the Linden wells.

2. LA OBS1 Testing Program (146.87 (a))

LA OBS1 is expected be the first well drilled for the project. A combination of mudlogging and well logging will be used to establish depths to formation tops, ACZ fluid sampling zones, potential coring, and well testing intervals in LA OBS1. The well will also confirm that the Ironton-Galesville Sandstones will provide a suitable ACZ monitoring interval.

Table 1 summarizes the open and cased hole logs that will be run before and after casing is set for the surface, intermediate, and long string casing, as well as the purpose of each well log. Intermediate casing will be installed in the injection and deep observation wells in the event that lost circulation zones are encountered in the Knox Group when the wells are drilled (Attachment 04: Injection Well Construction Plan, 2023). As such logging runs in the intermediate casing string have been labelled as contingency.

Table 1: LA OBS1 summary of wireline logs and associated parameters of logging tools to be run for the surface, intermediate (contingency), and long string casing.

Log	Log Type	Parameters Obtained	Surface	Intermediate (contingency)	Long
Openhole Logging	Gamma Ray	Lithology		X	X
	Density	Porosity, density		X	X
	Neutron Porosity	Porosity		X	X
	Spontaneous Potential	Permeability		X	X
	Resistivity	Fluid saturation, permeability		X	X
	Caliper	Borehole diameter, stress		X	X
Special Openhole Logging	Sonic Log	Porosity, formation velocities		X	X
Casing string will be installed and cemented					
Cased Hole Logging (required)	CBL – with radial arms	Cement integrity, external mechanical integrity	X	X	X
	Temperature	Temperature, external mechanical integrity	X	X	X
Cased Hole Logging (optional)	Ultrasonic Cement Evaluation	Cement integrity, external mechanical integrity			X
	Pulsed Neutron	Lithology, baseline fluid saturation, porosity			X

3. LR ACZ1 Testing Program (146.87 (a))

LR ACZ1 will be drilled after LA OBS1. Fluid samples will be obtained from the Ironton-Galesville Sandstones. Cased hole logs will be acquired in LR ACZ1 to assess cement integrity and obtain baseline temperature and PNL logs for future reference (Table 2). This well and the associated data will be used to establish baseline aqueous geochemistry of the Ironton-Galesville Sandstones for comparison to future monitoring data.

Table 2: LR ACZ1 summary of wireline logs and associated parameters of logging tools to be run for the surface and long string casing.

Log	Log Type	Parameters Obtained	Surface	Long
Openhole Logging	Gamma Ray	Lithology		
	Density	Porosity, density		
	Neutron Porosity	Porosity		
	Spontaneous Potential	Permeability		
	Resistivity	Fluid saturation, permeability		
	Caliper	Borehole diameter, stress		
Cased Hole Logging (Required)	CBL – with radial arms	Cement integrity, external mechanical integrity	X	X
	Temperature	Temperature, external mechanical integrity	X	X
Cased Hole Logging (Optional)	Pulsed Neutron	Lithology, baseline fluid saturation, porosity		X

4. LSH INJ1 Pre-Operational Formation Testing Program (146.87 (a))

LSH INJ1 will be the CO_2 injection well, and the primary well used for pre-operational data collection that will include but not be limited to:

- Wireline logs, core, fluid samples, and well test data,
- Well integrity data that will ensure that the well will not serve as an upward conduit for CO_2 migration to the overlying USDWs.

4.1. Deviation Surveys (146.87 (a)(1))

Deviation surveys will be obtained as the injection well is drilled to determine the wellbore path from the surface to the total depth of the wells. A wireline survey tool will be used to measure the inclination. The tool has an electronic timer that is set at the surface to allow enough time to run the tool in the drill pipe to the desired depth. Following the set time, the tool is removed from the well, and the results are reviewed prior to the continuation of drilling.

An alternative way to measure these deviation surveys is done by placing a measurement while drilling (MWD) tool on the bottomhole assembly (BHA) just above the drill bit. This tool records the inclination (deviation) and azimuth (direction), and then transmits this information to surface in real-time.

Hole deviation will be maintained at less than five degrees, as the planned maximum allowable deviation in the well is 5 degrees. If necessary, the wellbore will be steered back to an acceptable deviation with directional tools such as a downhole motor or rotary steerable system added to the BHA. Surveys will be taken at the frequency shown in Table 3. In general, a survey will be performed every 500 ft while drilling unless deviation of the borehole becomes apparent.

Should the deviation increase, more frequent surveys will be performed, and remedial actions will occur as necessary to bring the well within specification. More frequent surveys will also be performed while drilling through zones that are likely to cause the bit to "walk" creating a greater risk for deviation. Surveys will be repeated at the intervals specified in Table 3 until the wellbore has less than 1° of inclination.

Table 3: LSH INJ1 Deviation survey frequencies to be taken.

Range of Deviation	Frequency of Survey
<1 degree	1 survey per every 500 feet of hole
>1 degree, but < 2 degrees	1 survey per every 250 feet of hole
>2 degrees	1 survey per every 100 feet of hole

4.2. Well Logging Before and After Surface Casing (146.87 (a)(2))

Table 4 summarizes the open and cased hole well logs that will be acquired before for the surface casing section of the well. The bottom of the surface casing will be [redacted] as per (Attachment 04: Injection Well Construction Plan, 2023).

4.3. Well Logging Deep Section (146.87 (a)(3))

Table 4 and Figure 3 summarize the open and cased hole logs that will be run before and after casing is set for the surface, intermediate, and long string casing, and the purpose of each well log. Intermediate casing will be installed in injection well in the event that lost circulation zones are encountered in the Knox Group when the well is drilled, as such logging runs in the intermediate casing string have been labelled as contingency (Attachment 04: Injection Well Construction Plan, 2023). The cased hole well logs will be acquired after the well is cemented and completed (Table 4).

In addition to the well logs listed in Table 4, the project may run other specialty well logs over the injection zone and confining interval to further characterize these formations. Specialty logs may include, but are not limited to, elemental capture spectroscopy (ECS), dipole sonic in multiple modes, or zero offset vertical seismic profiles (ZVSP).

Table 4: LSH INJ1 summary of wireline logs and associated parameters of logging tools to be run for the surface, intermediate, and long string casing.

Log	Log Type	Parameters Obtained	Surface	Intermediate (contingency)	Long
Openhole Logging	Gamma Ray	Lithology	X	X	X
	Density	Porosity, density		X	X
	Neutron Porosity	Porosity		X	X
	Spontaneous Potential	Permeability	X	X	X
	Resistivity	Fluid saturation, permeability	X	X	X
	Caliper	Borehole diameter, stress	X	X	X
	Image Log	Lithology, porosity, borehole diameter, fracture characterization, stress			X
Special Openhole Logging	Sonic Log	Porosity, formation velocities		X	X
Casing string will be installed and cemented					
Cased Hole Logging (required)	CBL-with radial arms	Cement integrity, external mechanical integrity	X	X	X
	Temperature	Temperature, external mechanical integrity	X	X	X
Cased Hole Logging (optional)	Ultrasonic Cement Evaluation	Cement integrity, external mechanical integrity		X	X
	Pulsed Neutron	Lithology, baseline fluid saturation, porosity		X	X

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Figure 4: LSH INJ1 Summary of wireline logs and associated parameters of logging tools to be run before and after surface casing (surface to TD)

4.4. LSH INJ1 Well Core Program (146.87 (b)(d))

After LA OBS1 has been drilled, the well logs will be analyzed and used to pick the optimal intervals to obtain core from the confining zone and the injection zone in LSH INJ1 (Figure 4). Up to [redacted] will be acquired in both the Eau Claire Shale and the Mt. Simon Sandstone. Figure 4 and Table 5 summarize the plans for whole core acquisition and testing from LSH INJ1.

Table 5: Whole core collection plan. Whole core plugs will be taken from the whole core at regular intervals. Sidewall core collection will be contingent on the results of the well logging and the success of the whole core acquisition.

Core Type	Target Interval MD (feet)	Formation	Core Size
Whole Core	[redacted]		
Whole Core			
Sidewall Core			
Note: Whole core plugs will be taken from the whole core at regular intervals. Sidewall core collection will be contingent on the results of the well logging and the success of the whole core acquisition.			

Sidewall core intervals will be used as contingency to infill zones where the project would like to acquire additional data or in zones where the project was not able to obtain the desired whole core intervals. Using well logs, a neural network will be run to determine the heterogeneous rock types. This will be used to determine the sidewall core locations and to fill any gaps in the whole core program. Sidewall cores collected will provide a comprehensive set of routine rock property data for calibrating geophysical wireline logs and to supplement formation property data where whole core data are not available.

Additional core will be collected if:

- Interpretation of the characterization well data indicates that additional data are needed to meet Class VI permit requirements.
- As required by the Director.

Once the whole core is collected, preserved, and transported to a core lab, the following will be completed:

1. The core will be slabbed.
2. High resolution core photography will be completed.
3. Core viewing and core descriptions will be completed by project geologists.
4. Using well logs, a neural network will be run to determine the heterogeneous rock types.
5. To best capture the heterogeneity, present in the core, the core viewing and heterogeneous rock type analysis will be used to select whole core plug locations.
6. Whole core plugs will be taken from the whole core at regular intervals.

7. Core analysis will be completed. Core testing will provide information on rock properties (e.g., porosity, permeability, petrology, and mineralogy) that are representative of the injection and confining zones near the injection well. Table 5 contains details of the planned laboratory testing for the whole core sections.
8. The details in Table 5 are a preliminary plan only and are expected to change once site-specific data is acquired. Core plugs, sidewall plugs, and core analysis will be adjusted based on the drilling and log data acquired.

If sidewall core is collected, preserved, and transported to a core lab, the following will be completed:

1. High resolution core photography.
2. Core viewing and core descriptions by project geologists, and
3. Core analysis. Core testing will provide information on rock properties (e.g., porosity, permeability, petrology, and mineralogy) that are representative of the injection and confining zones near the injection well.

Core samples from LSH INJ1 will provide information on geologic properties in the immediate area. The laboratory-derived core measurements will be integrated with wireline logs and used for petrophysical calibration. The integrated dataset will then be correlated with wireline logs from offset wells to support the correlation and confirmation of stratigraphy, rock properties, and site characterization.

Formal core plans and numbers of cores to be used for each analysis listed in Table 6 will be provided once finalized with a coring contractor prior to well installation.

Table 6: Summary of potential core analyses and associated parameters

Core Analysis Type	Parameters Obtained	Formations
Routine Core Analysis	Porosity, Permeability, Grain Density	Mt. Simon Sandstone Eau Claire Shale Intervals TBD
Tight Rock Analysis	Porosity, Permeability, Grain Density	Eau Claire Shale Intervals TBD
Thin-Section Petrography	Mineralogy, Lithology, Porosity, Grain size, Textural maturity, Oil Staining	Mt. Simon Sandstone Eau Claire Shale Intervals TBD
X-Ray Diffraction	Mineralogy, clay identification	Mt. Simon Sandstone Eau Claire Shale Intervals TBD
Core Gamma Ray Log	Lithology, Porosity, Grain Size, Geologic Contacts	Both Whole Core Intervals
Relative Permeability	Relative permeability, Wettability	Mt. Simon Sandstone Intervals TBD
Mercury Injection Capillary Pressure	Capillary Pressure	Mt. Simon Sandstone Eau Claire Shale Intervals TBD
Triaxial Tests	Rock Strength, Ductility, Poisson's Ratio, Young's Modulus	Mt. Simon Sandstone Eau Claire Shale Intervals TBD
Rock Compressibility	Rock Compressibility	Mt. Simon Sandstone Eau Claire Shale Intervals TBD

4.5. CCS1: Fluid Sampling and Analysis (146.87 (b – d))

Characterization of formation fluids will be based on analysis of fluid samples acquired from LR ACZ1 and LSH INJ1. These samples will be collected through swabbing, drill stem tests (DSTs), or downhole pumps and will provide information on the baseline geochemistry of the subsurface fluids. The sampled formations will include, but are not limited to, the injection formation and the ACZ monitoring interval. All fluid samples will be analyzed for TDS, other major analytes, and stable isotopes. This list of analytes is provided in Table 7. The static fluid level of the injection zone will also be established in LSH INJ1.

Table 7: Summary of analytical and field parameters for groundwater samples

Parameters	Analytical Methods *
Cations: Ca, Fe, K, Mg, Na, Si	EPA 6010B
Cations: Al, Sb, As, Ba, Cd, Cr, Cu, Pb, Mn, Hg, Se, Tl	EPA 200.8, EPA 245.1
Anions: Br, Cl, F, NO_3, and SO_4	EPA 300.0
Alkalinity	SM 2320B
Total Dissolved Solids (TDS)	SM 2540C
Total Organic Carbon (TOC)	SM 5310C
Dissolved Inorganic Carbon (DIC)	SM 5310C
Total and Dissolved CO_2	ASTM D513-06B
Stable Isotopes of δ13C	Isotope Ratio Mass Spectrometry **
pH	Field with multi-probe system
Conductivity/Resistivity	Field with multi-probe system
Temperature	Field with multi-probe system

*: An equivalent method may be employed with the prior approval of the Underground Injection Control (UIC) Program Director.
**: Gas evolution technique by Atekwana and Krishnamurthy (1998) with modifications made by Hackley et al. (2007)

4.6. Geomechanical Testing (146.87 (d – e))

The geomechanical characterization of the injection and confining zones for the project will be assessed by analyzing one or more of the following data sets: core analyses, log data, and in-situ field tests. These analyses may include, but are not limited to, triaxial compressive strength tests of core samples, dipole sonic and image logs, and step rate testing (SRT). The results of these analyses will provide information on the direction and magnitude of the three principal components of the stress field as well as the fracture gradient.

4.6.1. Step-Rate Testing

An SRT will be performed on the Mt. Simon Sandstone interval by analyzing the pressure response to increasing rates. This is done to determine:

- Fracture opening pressure (to determine the fracture gradient),
- Fracture propagation pressure,
- Fracture closure pressure.

Injection at each of the rates will be performed on LSH INJ1 for the same period as detailed in the high-level procedure following. (A formal procedure will be provided to the EPA prior to the running of the SRT.)

1. Record static pressure and temperature for a minimum of one hour.
2. Rig-up pump truck, ensure sufficient volume of fluid is present at location to begin testing.

3. Pressure test lines above maximum anticipated operating pressure, but below equipment rating.
4. Begin SRT.
    a. Pump first step of test at first desired rate (e.g., 0.5 bpm) for a defined time (e.g., 0.5 hours)
    b. After the first step is completed, increase rate to next step (e.g., 1.0 bpm) for the same defined step time (0.5 hours).
    c. Repeat until the end of the test.
5. Shut-in well at the wing valves(s). Record the time of shut-in, the rate prior to shut-in and the shut-in pressure.
6. Rig-down pump truck.
7. Monitor pressure falloff for minimum of 24-hours.

The data from this test will be analyzed using appropriate analysis software, and the results will be included in the post installation reporting. Gauge calibration records will also be provided at this time.

4.6.2. Pressure Fall-off Testing (146.87 (e))

A pressure fall-off test (FOT) will be run on LSH INJ1. The purpose of this test is to further characterize the injection zone. During this test, fluid will be injected at a constant rate for a predetermined length of time, after which the well is shut in, and the FOT monitored for an equal amount of time as the injection lasted.

The data from this test will be evaluated using rate superposition analysis to determine injection zone information such as: permeability, skin factor (damage), and flow regimes present. This test analysis will act as a "baseline" measurement to determine the change in overall effectiveness and injectivity of the injection zone over time, among other things.

A high-level procedure is provided below. (Note that a formal procedure will be provided to the EPA prior to the running of the FOT.)

1. Record static pressure and temperature for a minimum of one hour.
2. Rig-up pump truck, ensure sufficient volume of fluid is present at location to begin testing.
3. Begin injection. Inject at constant rate for predetermined duration.
4. At the end of the injection period, shut the well in at the wing-valve(s). Record the time of shut-in, rate prior to shut-in, and the shut-in pressure.
5. Secure the well.
6. Rig-down pump truck.
7. After the pressure has been allowed to decline for approximately the same duration as the injection the test can conclude.

The data from this test will be analyzed using pressure transient analysis software and the results will be included in the post-installation reporting. Gauge calibration records will also be provided at this time.

4.7. CCS1 Mechanical Integrity Testing (146.87 (a)(4))

4.7.1. Internal Mechanical Integrity Testing (146.87 (a)(4)(i))

Internal mechanical integrity refers to the integrity of the seal between the long string casing, injection tubing, wellhead, and packer as well as the integrity of the individual components. In this subsection, annulus refers to the casing-tubing annulus. The effectiveness of this seal can be confirmed with an annulus pressure test (APT) and annular pressure monitoring.

Internal mechanical integrity will be demonstrated by way of an APT as is standard for UIC wells. A baseline APT will be performed to 1,500 psi after the tubing, packer, downhole equipment, and the wellhead have been installed as outlined in Attachment 04: Injection Well Construction Plan, 2023. 1,500 psi has been designated as the maximum operating pressure for the annulus as outlined in Attachment 06: Well Operations, 2023,

In addition to this standard internal integrity monitoring, inspection of the tubing will be performed as it is being installed to monitor the tubing for corrosion as outlined in Attachment 07: Testing and Monitoring Plan. Once injection commences, injection pressure, annular pressure, and annular fluid volumes will be monitored continuously to ensure internal well integrity and proper annular pressure is maintained (Attachment 07: Testing and Monitoring, 2023).

4.7.2. External Mechanical Integrity (146.87 (a)(4)(ii – iv))

External mechanical integrity refers to the absence of fluid movement through channels in the cement between the long string casing and the borehole. The external integrity of LSH INJ1 will be confirmed throughout the project. The frequency of the testing to determine external mechanical integrity will be performed following the schedule defined in Attachment 07: Testing and Monitoring, 2023.

Generally accepted methods for evaluating external mechanical integrity includes:

- Temperature or noise log,
- Oxygen-activation logging (OAL) or radioactive tracer (RAT) logging (during operation).
- Or other logs the operator deems appropriate.

After completion, a baseline temperature log will be run from surface to the bottom of the long string casing to provide initial temperature conditions over the well. Temperature logging performed after injection has started will be performed at regular intervals based on the schedule provided in the testing and monitoring plan. The results of these logs will be compared to the baseline log to determine if anomalies that suggest CO_2 is migrating up the well bore are present.

If the temperature logging data suggests an issue with external well integrity exists, a RAT log will be performed to evaluate external well integrity with greater sensitivity. In addition to the baseline temperature log, a cement bond log (CBL), and advanced ultrasonic cement evaluation log will be run across the entire long casing string after completion of the injection well to confirm that the casing string was properly cemented. Cement Bond Logs-Variable Density Logs (CBL-VDLs) are recorded with sonic tools that detect the bond of the casing and formation to the cement between the casing and wellbore to identify damage. Ultrasonic tools provide higher accuracies and resolutions for cement evaluation.

4.8. LSH INJ1 Well Schedule (146.87 (f))

Linden will provide Region 5 with the opportunity to witness all logging and testing detailed in this section. Linden will submit a schedule of such activities to the Director 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test, as much as reasonably possible.

Table 8 provides a tentative schedule based on the numbers of days to complete each well and the associated data to be collected. It is anticipated that the drilling schedule can be updated once LSH INJ1 has been drilled, and once again when the Class VI permit is received.

Table 8: Tentative schedule for pre-operational testing

Well	Depth (feet)	Days Required	Data Sets
LA OBSI	Sensitive, Confidential, or P [redacted]	30	• Open hole logs • Cased hole logs
LR ACZ1	[redacted]	15	• Fluid sampling (Ironton-Galesville Sandstones) • Openhole logs • Cased hole logs
LSH INJ1	[redacted]	38	• Whole core acquisition • Openhole logs • Special open hole logs • Cased hole logs • Mt. Simon Sandstone fluid sample(s) • Geomechanical and reservoir testing

5. References

Attachment 01: Narrative, 2023: Linden.

Attachment 04: Injection Well Construction Plan, 2023: Linden.

Attachment 05: Pre-operational Formation Testing Program, 2023: Linden.

Attachment 06: Well Operations, 2023: Linden.

Attachment 07: Testing and Monitoring, 2023: Linden.