5. PRE-OPERATION LOGGING AND TESTING PROGRAM
40 CFR 146.82(a)(8), 146.87
HEARTLAND GREENWAY SOTRAGE PROJECT

5.1. Overview of Pre-Operational Testing Program

During drilling and construction of the injection wells at the Heartland Greenway Storage Site (HGSS), the Heartland Greenway Carbon Storage, LLC (HGCS) plans to run appropriate logs, surveys, and tests to:

(1) Determine or confirm the depth, thickness, porosity, permeability, and lithology of all relevant geologic formations,
(2) Measure the salinity and TDS of any formation fluids in all relevant geologic formations,
(3) Ensure conformance with the well construction requirements under § 146.86 (Well Construction), and
(4) Establish accurate baseline data against which future measurements will be compared (See Baseline Testing and Monitoring Appendix).

The pre-operational program will include a combination of logging and formation geohydrologic testing (e.g., a pump test and injectivity tests), and other activities during the drilling and construction of the injection wells located northeast of Taylorville, Illinois, (**Figure 5-1**). The proposed injection and monitoring wells for the Heartland Greenway Storage Project summarized in **Table 5-2**. Deviations surveys will be collected in the injection to determine the location of the borehole and to ensure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling.

The pre-operational logging and testing program will determine or verify the depth, thickness, composition, and geomechanical information of the Mt. Simon Sandstone (CO_2 injection interval), the overlying Eau Claire Formation (confining zone), and other relevant geologic formations. In addition, formation fluid characteristics will be obtained from the Mt. Simon Sandstone to establish baseline data against which future measurements may be compared after the start of injection operations. The results and interpretations of the testing activities will be documented in a report and submitted to the Director after the well drilling and testing activities have been completed but before the start of CO_2 injection operations.

HGCS will incorporate geologic and petrophysical data that will be collected and analyzed during the extensive characterization effort at the HGSS. The data collection in the injection wells will commence with the drilling of the NCV-1 well. The well prognoses for NCV-1 and the additional HGSS injection wells are listed in **Table 5-2**. Above-zone shallow groundwater monitoring wells will be located in the same well nests as either an injector or an in-zone monitoring well, hence their prognoses will be approximately the same (see **Figure 5-1).**The casing depths for all monitoring wells are summarized in **Table 5-3** and illustrated in **Figure 5-2**.

Table 5-1. Summary of formation testing and well logging program wells at HGSS. Additional data will be collected as needed. Note: the numbers in the table identify what phase if the project the data are collected where: 1 is during construction, 2 is during the injection period, and 3 is during post injection site care.

	Basic Log Suite	Advanced Logging				Whole Coring[a]	Fluid Sampling	Formation Testing			Mechanical Integrity Testing
	(GR, SP, NPHI, RHOB, RES, PE)	FMI	ECS	NMR	Dipole Sonic			MDT	DST	PFOT	USI, CBL
NCV-1	1	1								1	1
NCV-2	1	1								1	1
NCV-3	1	1				1				1	1
NCV-4	1	1								1	1
NCV-5	1	1								1	1
NCV-6	1	1								1	1
NCV OB MS 1	1	1	1	1	1	1		1	1	1	1
NCV OB MS 2	1										1
NCV OB MS 3	1										1
NCV OB MS 4	1										1
NCV OB MS 5	1										1
NCV OB MS 6	1										1
NCV OB I 1	1						1, 2[b], 3[b]				1
NCV OB I 2	1						1, 2[b], 3[b]				1
NCV OB I 3	1						1, 2[b], 3[b]				1
NCV OB I 4	1						1, 2[b], 3[b]				1
NCV OB I 5	1						1, 2[b], 3[b]				1
NCV OB I 6	1						1, 2[b], 3[b]				1
NCV OB SP [1-6]							1, 2[b], 3[b]				1
NCV OB SG [1-17]							1, 2[b], 3[b]				

[a] Whole core collection will be supplemented with sidewall coring as needed.

[b] Dependent on baseline fluid testing results

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Figure 5-1. The HGSS showing the locations of injection wells (yellow circles) , in-zone monitoring wells (white squares with red labels), above-zone monitoring wells (white squares with blue labels), shallow groundwater monitoring wells (white squares with green labels), maximum CO_2 plume extent (solid yellow line), and maximum area of review (AoR) “pressure plume extent” (dashed yellow line), within the storage site.

Table 5-2. Measured depth prognosis for HGSS caprock and reservoir, depth in feet. Estimated well KBs are from mean sea level (msl), approximately 15 feet above local ground level.

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Table 5-3. Well casing zones for the HGSS injection wells. Depth below ground level (ft), except for top of Eau Claire Precambrian basement which are with respect to the well's KBs.

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5.2. <u>Wireline Logging</u>

Open-borehole logs will be run to obtain in situ, stratigraphic, physical, chemical, and geomechanical information for the Mt. Simon Sandstone (injection interval), Eau Claire Formation (confining zone), and other key formations. Open-borehole characterization logs will be obtained after reaching the surface casing point, the intermediate casing point, and at the long-string casing point (i.e., total borehole depth) in the vertical stratigraphic borehole, (**Figure 5-2**). Open-borehole wireline logs will not be run in the 30-in.-diameter conductor casing borehole because logging tools are not suited for this large-diameter hole size. See **Table 5-4** for a list of the various open-hole and close-hole wireline logging tools that are proposed for deployment in the injection wells.

A **description** of each logging method that HGCS could include in its logging program at HGSS NCV-1 through NCV-6 are as follows:

- **Triple Combo** – Gamma-ray, porosity, and resistivity logs
- **Sonic Scanner** – This tool is an acoustic scanning tool that measures elastic properties axially, radially, and azimuthally to support geomechanical, geophysical, fractures, and petrophysical modeling. Furthermore, sonic logs like compressional sonic (DT) can be used along with density logs for preparing synthetic seismic logs.
- **Fullbore Formation Microimager (FMI)** – Provides microresistivity formation images in water-based mud. Borehole images can reveal bedding planes and associated contacts, fractures (open, healed, and induced), and reservoir textures.
- **Combinable Magnetic Resonance (CMR)** – Makes nuclear magnetic resonance (NMR) measurements of the buildup and decay of the polarization of hydrogen nuclei (protons) in the liquids contained in the pore space of rock formations. One primary measurement is the total formation porosity. Permeability can be estimated from the free-fluid to bound-fluid ratio and the shape of the pore-size distribution. NMR measurement can also be used for fluid identification because of it is a hydrogen index measurement.
- **Elemental Capture Spectroscopy Sonde (ECS)** – This is a pulsed neutron spectroscopy logging tool that is used for complex reservoir analysis, enabling accurate measurements and definitions of mineralogy and matrix properties of each respective zone. The data from ECS logging can be used to estimate mineral-based permeability, determine well-to-well correlations from geochemical stratigraphy, determine sigma matrix for case hole and open hole sigma saturation analysis, among others. Elemental analysis (ELAN) or similar processing of these logs yields the volumetric proportions of mineral composition and pore fluids. For example, these logs can reveal the relative proportion of clay minerals, quartz, calcite, and fluid volume.
- **Modular Formation Dynamics Tester (MDT) –** This wireline tool provides fast and accurate pressure measurements, collects high-quality fluid samples that can be kept at formation pressure for analysis representative of downhole conditions. Testing and sampling can be done in low permeability, laminated, fractured, unconsolidated and heterogeneous formations. The MDT can also be run to conduct a mini-frac test. These tests provide: fracture pressure, fracture closure fracture, and far field stress directions (in conjunction with FMI). MDT data can be used as calibration for other stress measurements (sonic logs).

- **Ultrasonic Cement Image Tool (USIT)** – (cased-hole) The logs can provide estimates of well integrity and zonal isolation through measurement of cement acoustic impedance. USITs create maps of the casing and cement that can identify corrosion or casing damage and can determine if there is solid (cement), liquid, or gas in between the casing and formation. Modern acoustic cement-evaluation (bond) devices are comprised of monopole (axisymmetric) transmitters (one or more) and receivers (two or more). They operate on the principle that acoustic amplitude is rapidly attenuated in good cement bond but not in partial bond or free pipe. These cased-hole wireline tools measure compressional-wave travel time (transit time), amplitude (first pipe arrival), attenuation per unit distance. Cement-bond logs may vary over time as the cement cures and its properties change.
- **Cement Bond Log (CBL) Tool** – (cased-hole) CBL tools using sonic waves to interrogate the integrity of the well. CBLs use acoustic transmitters and receivers to measure the signal attenuation to provide a measure of how well the casing and cement are bonded. CBLs and provide an indication of the cement-to-formation bond in the form of a variable density log. Typically, CBLs provide an average measurement but they can also provide maps where logging tools with multiple transmitters and receivers on pads are used.
- **Pulsed Neutron Capture (PNC)** – (cased-hole) Facilitates CO_2 saturation evaluations for the near wellbore monitoring of oil, gas, and water saturation. Does not differentiate between CH_4 and CO_2, however, in formations such as the Mt Simon where there is no CH_4 any changes identified will be due to CO_2 allowing the PNC log can estimate the proportion of CO_2 to brine fluids near the borehole.
- **Temperature Logging Surveys** – (cased-hole) Yields a subsurface temperature profile necessary for characterizing in situ conditions. Temperature logging is used to identify the top of cement after cementing to help ensure wellbore integrity.

Table 5-4. Wireline logging program. Interval depths summarized in Table 5-2.

Depth Interval[(a)]	Log	Purpose/Comments
Conductor Casing Interval	No open-borehole logs	NA/ Hole diameter too large.
	No cement-bond log	NA/ No cement – conductor will be driven into the ground
Surface Casing Interval	No open-borehole logs	NA/ Hole diameter too large.
	Cement-bond log only if permissible by logging tool.	Hole diameter may be too large to enable proper measurement with the CBL tool.
Intermediate Interval	Basic log suite (gamma ray[(b)], formation density, neutron porosity, resistivity[(b)], spontaneous potential[(b)], photoelectric factor, caliper[(b)])	• Characterize basic geology (lithology, mineralogy, porosity) • Evaluate borehole condition prior to cementing

Depth Interval[a]	Log	Purpose/Comments
	Enhanced log suite (spectral gamma, dipole sonic shear log, resistivity-based and/or acoustic-based image log[b], nuclear magnetic resonance log, elemental capture spectroscopy log)[c]	• Enhanced characterization of geologic and geomechanical properties that control injectivity and caprock/seal integrity • Dipole sonic log will also provide data to calibrate surface seismic and other purposes
	USIT and Cement-bond log[b][d]	• Evaluate well integrity
Long-String Casing Interval	Basic log suite (gamma ray,[b] formation density,[b] neutron porosity,[b] resistivity,[b] spontaneous potential,[b] photoelectric factor, caliper,[b])	• Characterize basic geology (lithology, mineralogy, porosity) • Evaluate borehole condition prior to cementing
	Enhanced log suite (spectral gamma, dipole sonic shear log, resistivity-based and/or acoustic-based microimage log,[b] nuclear magnetic resonance log, elemental capture spectroscopy log)[c]	Enhanced characterization of geologic and geomechanical properties that control injectivity and caprock/seal integrity. Dipole sonic log will also provide data to calibrate surface seismic and other purposes
	USIT and Cement-bond log[b][d]	Evaluate well integrity
	Baseline temperature log[b][d]	• Determine natural geothermal gradient outside well for comparison to future temperature logs for external mechanical integrity evaluations. Baseline log is run as long as possible after drilling and casing/cementing the well because temperature anomalies due to circulation of drilling fluid and/or open-borehole injection testing will persist for several weeks to months.

(a) Well design is described in the Injection Well Construction Plan; borehole/casing depths are approximate and preliminary.
(b) Required by EPA UIC Class VI permit requirements, 10 CFR 146.87.
(c) **Optional logs:** one or more of these logs may be run across selected intervals of this section of the well.
(d) Cased-hole log
NA = not applicable

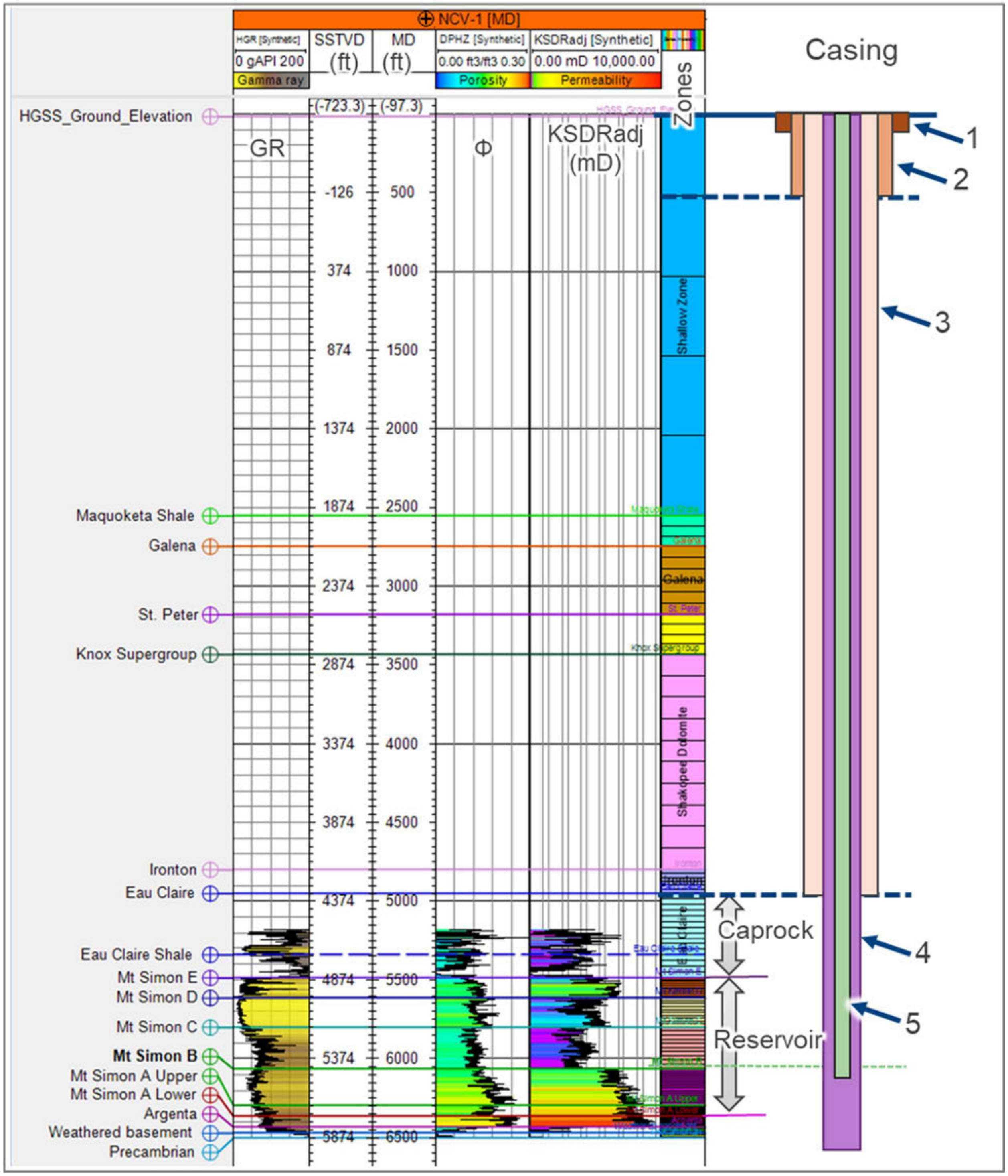

Figure 5-2. Casing intervals for the HGSS NCV-1. Casing depths in Table 5-3. Casing: 1) Conductor. 2) Surface. 3) Intermediate. 4) Long-string. 5). Tubing.

5.3. <u>Coring</u>

At a minimum, whole core collection for the HGSS will include the Mt. Simon Sandstone CO_2 injection zone and the overlying Eau Claire Formation confining zone during drilling of both the NCV OB MS 1 monitoring well and the NCV-3 injection well. Sidewall coring (SWC) will supplement whole coring and shall be performed before FMI logging. The proposed whole coring intervals for NCV OB MS 1 are summarized in **Table 5-5** and are shown in **Figure 5-3**. Whole and/or SWC intervals for NCV-1 will be determined after coring NCV OB MS 1.

Table 5-5. Proposed whole core intervals for the NCV OB MS 1 well.

Whole Coring Run	Interval (ft) Measured Depth from Kelly Bushing (KB)	Length* (ft)	Comment
1	Sensitive, Confidential, or Privileged Information [redacted]	[redacted]	Eau Claire: straddle a carbonate and shale zone
2	[redacted]	[redacted]	Eau Claire/ Mt. Simon E: straddle a potential sandstone in the caprock
3	[redacted]	[redacted]	Mt. Simon B: key proposed injection zone
4	[redacted]	[redacted]	Mt. Simon B/ Mt. Simon A upper: straddle key proposed injection zones

* Core run length is dependent on geological conditions observed in the field and actual lengths may vary.

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Figure 5-3. Proposed whole and sidewall coring plan for the monitoring well NCV OB MS 1, subject to change pending well logging.

The core analysis will involve core slabbing, basic core analysis, petrographic analysis, and advanced analysis as summarized in **Table 5-6**. Core data will be used to refine the geologic characterization at HGSS.

Table 5-6. Preliminary core analysis program.

Core	Test	Frequency
Whole core	Full core slabbing, gamma log, over-view slab photo (visible light or ultraviolet fluorescence)	100% of whole core
	Basic Core Analyses: porosity, grain density, horizontal permeability to air (horizontal), lithology and fluorescence description. Plugs will include both horizontal and vertical orientations.	1 plug per 2 ft of core or similar for all whole core
	Petrographic Analyses: thin section description,[a] core description,[b] X-ray diffraction (XRD)[c]	Selected samples/core from caprock and reservoir
	Geomechanical properties: triaxial testing for Young's Modulus, Poisson's Ratio, and compressive strength; triaxial ultrasonic velocities; pore volume compressibility.	Selected samples from caprock and reservoir
	Advanced Core Analyses: capillary pressure, wettability, relative permeability, threshold entry pressure, trapped gas.	Selected samples from caprock and reservoir
Sidewall core	Porosity, grain density, horizontal permeability to air (horizontal), lithology and fluorescence description.	All sidewall core samples

(a) Detailed thin section analysis including descriptions of the framework grain composition, type and distribution of macroporosity, textural characteristics (including sorting, framework grain size, nature of grain contacts), and the fabric (e.g., gradational bedding, lamination, bioturbation, etc.) of the rock.
(b) Detailed description of slabbed core describing lithology, texture, inorganic and biogenic structures, fossils, and grain size trends; interpretation of depositional environment based on lithologic characteristics and sedimentary relationships identified in the core.
(c) Bulk composition and identification of clays minerals. Identification of all inorganic crystalline compounds occurring in significant amounts, as well as all of the various clay minerals species.

5.4. Fluid Sampling

HGCS will collect in-zone fluid samples from the Mt. Simon formation from the NCV OB MS 1 Well via Modular Formation Dynamic Tests (MDTs) and Drill Stem Tests (DSTs) to establish baseline hydrogeologic properties. As such, fluid temperature, pH, conductivity, reservoir pressure and static fluid level of the injection zone will be measured and recorded prior to injection.

The fluid sampling parameters to be analyzed as part of fluid sampling in the injection zone and associated analytical methods are presented in **Table 5-7**, which are consistent with the fluid sampling analysis and processes that are detailed in the Testing and Monitoring Plan and the Quality Assurance and Surveillance Plan sections of this permit.

Table 5-7. Summary of analytical and field parameters for fluid sampling in the Mt. Simon.

Parameters	**Analytical Methods**
Mt. Simon (Injection Interval)	
Cations: Al, Ba, Mn, As, Cd, Cr, Cu, Pb, Sb, Se, and Tl	ICP-MS, EPA Method 6020
Cations: Ca, Fe, K, Mg, Na, and Si	ICP-OES, EPA Method 6010B
Anions: Br, Cl, F, NO_3 and SO_4 Dissolved CO_2 Isotopes: S13C of DIC	Ion Chromatography, EPA Method 300.0 Coulometric titration, ASTM D513-11 Isotope ratio mass spectrometry
Total Dissolved Solids Water Density Alkalinity pH (field) Specific conductance (field) Temperature (field)	Gravimetry, APHA 2540C Oscillating body method APHA 2320B EPA 150.1 APHA 2510 Thermocouple

5.5. Mechanical Integrity Testing

HGCS will conduct tests and run logs as needed to demonstrate the internal and external mechanical integrity as detailed in **Table 5-8**. Internal mechanical integrity refers to the absence of leaks in the tubing, packer, and casing above the packer. External mechanical integrity refers to the absence of fluid movement/leaks through channels adjacent to the injection wellbore that could result in fluid migration into an underground source of drinking water (USDW).

After each injection well is completed, including the installation of tubing, packer, and annular fluid, a test of the well's internal mechanical integrity will be performed by conducting an annular pressure test. The annular pressure test is a short-term test wherein the fluid in the annular space between the tubing and casing is pressurized, the well is shut-in (temporarily sealed up), and the pressure of the annular fluid is monitored for leak-off. EPA Region 5 (EPA 2008) requires comparison of the pressure change throughout the test period to 3 percent of the test pressure (0.03 x test pressure).[1] If the annulus test pressure decreases by this amount or more, the well has failed to demonstrate internal mechanical integrity. If the annulus pressure changes by less than 3 percent during the test period, the well has demonstrated internal mechanical integrity. If the well fails the annular pressure test, the tubing and packer may need to be removed from the well to determine the cause of the leak. During the active CO_2 injection phase, internal mechanical integrity will be continuously monitored by the well annular pressure maintenance and monitoring system, as discussed in more detail in the *Testing and Monitoring Plan*.

HGCS will also employ various methods to demonstrate external mechanical integrity upon the completion of the injection wells and prior to the start of injection operations. Upon the completion of the CO_2 injection well, HGCS will run PNC and temperature logs to demonstrate external mechanical integrity. PNC logs will serve as a baseline to identify any fluid saturation changes in the future that could indicate a well integrity concern. HGCS will run an ultrasonic cement bond log to provide additional confidence that there are no pathways for potential CO_2 migration through the wellbore, casing, or cement prior to injection operations.

Prior to installing the long-string casing HGCS will use the MDT tool conduct formation fracture tests to measure the fracture pressure of the injection formation and/or the sealing formation. If the MDT is used, a minifrac test will be used to locally pressure up the formation to the point where it just starts to fracture. This provides the fracture pressure without causing significant damage to the formation being tested.

HGCS intends to run a dipole sonic log (Stoneley wave analysis), which will enable HGCS to calculate the reservoir fracture pressure of the injection zone (Mt. Simon) and the primary confining seal (Eau Claire Shale).

5.6. <u>Hydrogeologic Testing</u>

HGCS intends to use the extensive wireline logging and formation testing program to support and corroborate the hydrogeologic properties that are collected via direct fluid sampling from the injection zone. HGSS will conduct step-rate testing followed by pressure fall-off testing to verify

[1] USA EPA Region 5, 2008, Determination of the Mechanical Integrity of Injection Wells, https://www.epa.gov/sites/production/files/2015-09/documents/r5-deepwell-guidance5-determation-mechanical-integrity-200802.pdf

hydrogeologic characteristics of the injection zone. The hydrogeologic testing program is detailed in **Table 5-8**.

Table 5-8. Open borehole hydrogeologic testing program.

Test	Description	
Reservoir Test 1 – Composite Mount Simon Sandstone Flow **Meter Logging Survey**	Objectives	**Primary objective**: to identify permeable, fluid-producing zones within the Mount Simon Sandstone that may be candidate horizons for CO_2 injection. The test can be conducted either as a composite interval extraction (pumping) or injection test. **Secondary objective**: If the test is conducted as an extraction test, formation fluid samples may be obtained from the composite Mount Simon Sandstone.
	Test/Depth Zone(s)	The entire Mount Simon Sandstone (as specified in table caption) within 12-1/4-in. open borehole.
	Test Activity/ Summary	An initial ambient, "static" flow meter logging survey is conducted within the open-borehole section prior to the "dynamic" phase. The dynamic flow meter survey provides information concerning the location of permeable intervals within the open Mount Simon Sandstone borehole section capable of either producing or accepting fluid during the test. The dynamic survey is conducted after steady pumping or injection rates have been established within the borehole. After the drawdown rate (or pressure buildup during an injection test) has stabilized within the borehole, the flow meter logging tool is repeatedly raised and lowered at a specified constant-logging speed (e.g., 30 ft/min) across the entire open-borehole section. After termination of pumping (or injection), additional monitor time will be provided to observe pressure recovery to pre-test static conditions. The analysis of the recovery period can be used to determine the composite transmissivity of the open borehole.
Reservoir Test 2 – Composite Mount Simon Sandstone **Permeability Profile Testing**	Objectives	**Primary objective:** To determine the vertical distribution of hydrogeologic properties (e.g., permeability) within the Mount Simon Sandstone storage reservoir. The characterization objective is realized by assessing the permeability of multiple, individual, discrete depth test intervals that have been identified based on results of wireline logging of the open-borehole section and the flow meter logging survey (Reservoir Test 1). For selected test zones, slug/drill-stem test (DST) (withdrawal and/or injection) testing will be performed for small-scale (i.e., near well bore) hydrogeologic property characterization and test zone integrity assessment. This testing will also provide a basis of comparison with the composite transmissivity of the Mount Simon Sandstone determined from the recovery analysis of the flow meter logging survey and the composite constant-rate injection/withdrawal test (Reservoir Test 3). **Secondary objectives:** 1) Collect representative formation fluid samples by swabbing or pumping from selected permeable horizons for detailed hydrochemical analysis (this will not be possible if injection tests are conducted); 2) determine static test zone pressure/hydraulic head conditions by projection of DST recovery response. This will only be possible if the DST phase of the test is conducted (not always possible in formations that recovery very quickly).
	Test/Depth Zone(s)	Selected test/depth intervals within the entire Mount Simon Sandstone storage reservoir (as specified in table caption); 17-1/2-in. or 12-1/4–in. open borehole (depending on setting depth of the intermediate casing).

Test	Description	
	Test Activity/Summary	Selected test/depth intervals within the Mount Simon Sandstone will be isolated using a straddle or tandem single-packer system for detailed hydraulic property characterization. Each discrete test/depth interval will be characterized conducting multiple-stress, slug/DSTs to assess hydraulic properties of the test interval. The test length of the intervals selected for detailed hydrogeologic characterization will be determined from borehole wireline logging results, but will likely be on the order of 20 ft to 100 ft in length.
Test 3 – Mount Simon Sandstone **Composite Injectivity Evaluation**	Objectives	**Primary objective:** To determine the large-scale composite injectivity (transmissivity) of the entire Mount Simon Sandstone and possible presence of nearby hydrogeologic boundaries. This test will provide corroboration of results of the open-borehole flow meter logging survey (Reservoir Test 1) and the discrete test/depth interval slug/DST results (Reservoir Test 2), and will provide direct information about the injectivity potential of the composite Mount Simon Sandstone or a selected portion of it. **Secondary objective:** Collect representative composite formation fluid samples by swabbing or pumping on selected permeable horizons for detailed hydrochemical analysis (this will not be possible if injection tests are conducted).
	Test/Depth Zone	The entire composite Mount Simon Sandstone section (as specified in table caption); 12-1/4-in. open borehole. Alternatively, this test may be conducted on one or more discrete depth intervals within the Mount Simon Sandstone.
	Test Activity/ Summary	A single packer would be placed at the top of the Mount Simon Sandstone or inside the 13-3/8–in. intermediate casing string, near the bottom of the casing. After the packer is in place, a constant-rate injection or pumping test will be conducted for an extended test period (e.g., 12 to 24 hours). At the end of injection, the downhole shut-in tool will be closed and the recovery pressure for the composite zone monitored for a period $\geq$1.5 times the injection or pumping period. If this test is conducted on a discrete depth interval within the Mount Simon Sandstone, a straddle-packer or tandem single-packers will be used for test zone isolation.

5.7. Stimulation Program

The need for stimulation to enhance the injectivity potential of the Mt. Simon Sandstone is not anticipated at this time. The need for stimulation will be determined once the characterization data from the CO_2 injection wells are available and have been evaluated (i.e., results of geophysical logs, core analyses, hydrogeologic testing). If it is determined that stimulation techniques are needed, a stimulation plan will be developed and submitted to the Director for review and approval prior to conducting any stimulation.

5.8. Schedule

HGCS will provide the UIC Program Director with the opportunity to witness all logging and testing by this subpart. HGCS will submit a schedule of such activities to the UIC Program

Director 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test.