

**OPERATIONS PERMIT
TUTTLE CLASS V GEOTHERMAL WELL**

**Blue Cedar Geothermal, LLC
PO Box 7506
Edmond, Oklahoma 7083**

Permit Number:

IW-V-26001-OP

Effective Date:

November ??, 2023

Expiration Date:

November ??, 2026

Having complied with the requirements of the law as stated below, Blue Cedar Geothermal, LLC (BCG) is hereby granted permission to operate, maintain and monitor the Class V Geothermal Injection Well (Leon 1-11) with appurtenances described in the Permit Application and all subsequent revisions and submissions incorporated by reference. The well is located in Section 11, Township 09 North, Range 06 West, Grady County, Oklahoma. The Class V injection well is part of the Tuttle Geothermal Well Project (Project) as described below. The location of the Class V injection well is positioned at the following latitude and longitude (Geodetic Coordinates):

Injection Well:	latitude:	35 degrees, 15 minutes, 53.85 seconds, North
Leon 1-11	longitude:	97 degrees, 48 minutes, 03.96 seconds, West

This permit allows the testing and operation of an injection well that will be converted / repurposed from a retired oil and gas (O&G) well, as part of the operation of an open circuit geothermal well project. A separate retired O&G well, regulated by the Oklahoma Corporation Commission (OCC), will be utilized as an extraction well. The two wells will be operated together for geothermal energy recovery from the Haskell geologic unit for use at public schools in Tuttle. This non-profit research project to transform / repurpose abandoned and retired O&G wells into geothermal wells to provide direct-use geothermal energy to public schools in Oklahoma is being funded by a Department of Energy Grant (#DEEE0009962) to the University of Oklahoma (OU). The request for an injection well permit (Application) was submitted jointly by OU and Blue Cedar Energy (BC). As the owner of the O&G wells, BCG will be the sole permittee for the injection well.

The Department of Environmental Quality (DEQ) has determined the proposed injection well is a Class V well that will follow the Tier II permitting process as well as federal procedures. The basic design involves plugging off the lower O&G producing zones in the existing wells and recompleting in the shallower non-O&G producing Haskell formation, from which water at elevated temperature will be pumped to the surface and run through a heat exchanger to remove the geothermal energy for use at City of Tuttle public schools, followed by injection of the cooled water back into the Haskell formation reservoir from which it originated at the same rate as the withdraw rate. The injection well will come under the DEQ Underground Injection Control (UIC) Program jurisdiction once the deeper O&G zones are plugged off, while the recovery well will remain under OCC jurisdiction. The project objective is initially to test the concept followed by full implementation, if feasible.

The injection zone is defined as, and limited to, the strata of the Haskell formation or its geological equivalents at 6,480 feet to 6,635 feet as indicated by geophysical log data from the Leon 1-11. There are confining layers composed of shale formations between the top of the Haskell formation and the

base of the underground source of drinking water (USDW), i.e., from 6,480 feet up to 400 feet below ground level. The upper confining layer is defined as the base of the Heebner Shale at 6,330 feet down to the top of the Haskell at 6,480 feet. The lower confining layer is composed of shales in the zone below the Haskell from 6,635 feet to 6,738 feet. The base of fresh water is approximately 400 feet below ground level and the uppermost USDW is protected with surface casing extending to 1,066 feet in the Leon 1-11 that has been cemented from the bottom of the casing up to the ground surface.

DEQ is authorized to issue permits for Class V geothermal wells pursuant to its authority under the Oklahoma Environmental Quality Act (27A O.S. § 1-1-101, *et seq.*), the Oklahoma Environmental Quality Code (27A O.S. § 2-1-101, *et seq.*), the federal Safe Drinking Water Act (42 U.S.C. §§ 300f-300j-26), and rules promulgated thereunder at 40 Code of Federal Regulations (C.F.R.) Parts 144, 145 and 146, and Oklahoma Administrative Code (OAC) Title 252, Chapters 4 and 652. DEQ incorporates by reference the federal requirements for its underground injection control (UIC) program at OAC 252:652-1-3. DEQ has determined the geothermal injection well is a Class V UIC well and has established project criteria that include any conditions DEQ deems necessary or appropriate for protection of the USDW aquifer quality and is issuing this permit following the state Tier II permitting process and federal procedures.

The permittee is authorized to operate in conformity with this permit, its conditions, and the application including revisions incorporated by reference. Commencing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

Hillary Young, P.E.,
Chief Engineer
Land Protection Division

Date

Kelly Dixon,
Director
Land Protection Division

Date

Preamble

The Permittee must operate the facility in compliance with the terms and conditions of this permit, the provisions of the Oklahoma Environmental Quality Act (27A O.S. §1-1-101 *et seq.*), the Oklahoma Environmental Quality Code (27A O.S. § 2-1-101 *et seq.*), the federal Safe Drinking Water Act (42 U.S.C. §§ 300f-300j-26), and rules promulgated thereunder at 40 Code of Federal Regulations (C.F.R.) Parts 144, 145 and 146, the Oklahoma Administrative Code (OAC) Title 252, Chapters 4 and 652, and with the permit application and revisions hereby incorporated by reference. DEQ incorporates by reference the federal requirements for its underground injection control program at OAC 252:652-1-3. The provisions herein are severable. If any provision of this permit or its application to a given circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected.

Incorporation By Reference:

The Permit Application submitted to DEQ on April 27, 2023, and revisions provided on August 2nd, September 13th, and October 23rd, 2023, by the University of Oklahoma (OU) and Blue Cedar Energy (BC) are herein referred to as the Application and are hereby incorporated by reference.

A. Conditions Specific to this Facility:

- 1. Well Location:** The injection well, Leon 1-11, is located in the NW1/4 of Section 11-T09N-R06W-IM, in Grady County, Oklahoma, at a latitude and longitude of:

Injection Well:	latitude:	35 degrees, 15 minutes, 53.85 seconds, North
Leon 1-11	longitude:	97 degrees, 48 minutes, 03.96 seconds, West
- 2. Maximum Allowable Injection Pressure:** The maximum allowable injection pressure (MAIP) will be calculated using site-specific reservoir characteristics obtained as required in Conditions A7, A8 and A9 of this Permit. The MAIP must be calculated so that the maximum total pressure gradient does not exceed 0.65 psi/ft of depth from ground surface to the top of the disposal zone. The permitted maximum injection pressure that can be applied at the well head may be adjusted to account for pressure loss due to friction in piping or tubing.
- 3. Injection Rate:** The maximum operating injection rate must be calculated using site-specific reservoir characteristics obtained as required in Conditions A7, A8 and A9 of this permit and shall not cause an exceedance of the MAIP calculated in Condition A2 of this Permit.
- 4. Testing Injection Rate:** Injection test rates shall not cause an exceedance of the MAIP calculated in Condition A2 of this Permit.
- 5. Annulus Pressure:** The pressure in the annulus between the tubing and the long string casing (tubing annulus) must be maintained at a minimum positive pressure of 10 pounds per square inch (psi) at the well head and the annulus must be filled with a corrosion

inhibiting fluid. The wellhead must be equipped with a pressure tank to maintain tubing annulus pressure that is equipped with sensors or measuring devices to enable monitoring of the fluid level in the tank; clearly displayed design pressure and test pressure ratings; and bursting discs and/or relief valves vented to the atmosphere, as appropriate.

- 6. Continuous Monitoring:** The Permittee must continuously monitor flow rate, temperature, injection pressure, tubing annulus pressure, and casing annulus (Bradenhead) pressure. An alarm system must be installed with a design to sound and shut-in the well when pressures or flow rates exceed permitted operating conditions.
- 7. Pre-Injection Well Work:** The following procedures are required prior to initiating injection operations:
 - a. Enter O&G well to remove downhole equipment and evaluate (and verify) casing quality for conversion to geothermal injection well;
 - b. Plug off (and verify) the depleted deeper O&G formations with bridge / cement plug(s);
 - c. Establish / place a minimum of at least two hundred fifty (250) feet of cement above the Haskell formation to establish a cement seal in the annulus behind the casing (annular seal) that extends across the Haskell injection zone and upper and lower confining layers, and verify the quality and placement of the annular seal by running a cement bond log (CBL) and providing the log to DEQ for review and approval;
 - d. Upon DEQ approval of annular seal, perforate the casing across the injection zone, measure reservoir pressure, and collect samples of reservoir fluids for analyses;
 - e. Install tubing and packer and assemble the wellhead including filling and pressurizing the tubing annulus as required in Condition A5; and
 - f. Conduct well tests (e.g., production tests, pressure fall-off tests, internal and external mechanical integrity tests) specified in Condition A8 below.
- 8. Pre-Injection Well Tests:** Prior to injection, the following tests must be performed in order to calculate the MAIP, maximum injection rate, and wellhead pressures generated from injection rates based on actual measured reservoir properties and formation fluid characteristics, and to verify the calculated maximum allowable injection rates are appropriate. The following results must be provided to DEQ for review and approval:
 - a. External Mechanical Integrity Test (MIT);
 - b. Initial Internal MIT;
 - c. Tests to establish Haskell injection zone reservoir properties and formation fluid characteristics (physical and chemical) with sampling and test results; and
 - d. Initial Pressure Fall-off Test (PFT).

Note: Work plans for items a, b, and d of the above cited testing must be provided to DEQ for review and approval prior to conducting the tests.

- 9. Determine Reservoir Properties and Chemical / Physical Characteristics of Haskell Formation Fluid:** The reservoir and injection well properties must be established prior to initiating normal injection operations. These parameters are needed to conduct a pressure fall-off test at stabilized injection rate and appropriate times of injection and shut-in periods to determine the formation permeability and well skin factor, in addition

to pressure loss due to skin, time to 'start of radial flow', radius of investigation, and distance to waste front. Additionally, the following Haskell injection zone reservoir fluid chemical and physical characteristics must be determined with analytical tests of samples collected from the injection zone. These include:

- a. **Wellbore and Reservoir Properties:** the wellbore radius, formation fluid viscosity and specific gravity, total formation compressibility, formation porosity and injection interval thickness, formation volume factor, and reservoir (bottomhole) pressure, along with the injection fluid viscosity and specific gravity.
- b. **Haskell Formation Fluid Characteristics:** specific gravity, total dissolved solids, specific conductance, temperature, pH, viscosity, compressibility, chlorides, nitrate, sulfate, alkalinity, RCRA metals, metals with primary drinking water standards, major cations (calcium, magnesium, sodium and potassium), total organic carbon, and hydrocarbons. Note: total dissolved solids must be determined initially using wet chemistry analytical methods to establish a correlation to specific conductivity.

10. Injectate Type and Analysis of Injection Water: The specific conductivity, pH, temperature, specific gravity, viscosity, total dissolved solids, and chloride concentration of the injection fluid must be determined monthly and reported quarterly. The injection water will be pumped from the Haskell formation at the Leon 4-11 recovery well and run through a heat exchanger for capture of geothermal energy, then piped to the Leon 1-11 for injection back into the Haskell formation from which it originated. As a result, compatibility with the injection zone formation need not be demonstrated. If additives are included, they would need to be shown to be compatible with the reservoir formation and not for disposal, which is prohibited by this permit.

11. Annual Pressure Fall-off Test: The permittee must conduct an initial pressure fall-off test (PFT) prior to the beginning of normal injection operations to establish well and reservoir conditions during injection. Annual pressure fall-off tests shall also be conducted to monitor pressure buildup in the reservoir. A work plan must be submitted to DEQ detailing the PFT procedures, including: proposed stabilized injection rate, pressure monitoring gauge specifications and setting depths, duration of injection, and shut-in period; along with the name of the company conducting the test and interpreting the results. The permittee must submit a report of the pressure fall-off test results to DEQ within thirty (30) days of conducting the test along with an electronic copy of the pressure gauge data.

12. Well Testing - Mechanical Integrity (MIT)

- a. **Internal MIT:** Initial and annual internal mechanical integrity tests (MITs) are to be conducted in coordination with DEQ. The initial internal MIT must be conducted during the well workover period after installation of the wellhead and tubing annulus equipment. The well must be shut-in and the tubing annulus must be pressurized to 300 psi or 125% (whichever is greater) of the highest annular pressure of the tubing annulus for two hours. Pressure loss or gain exceeding -5 % or +10 % respectively, from initial test pressure, will require additional tests and/or immediate repairs to ensure the mechanical integrity of the well.

- b. **External MIT:** The permittee must complete a demonstration of mechanical integrity to determine if significant fluid movement is occurring through vertical channels adjacent to the injection wellbore and into an underground source of drinking water (USDW). An initial external MIT must be conducted at the Leon #1-11 injection well during the well workover period. It must be conducted while injection is occurring and either a temperature log or oxygen activation log shall be run at the same time. A work plan must be submitted to the DEQ detailing the external MIT test procedures, including: the name of the company conducting the test and interpreting the results. The external MIT test results must be submitted to DEQ within 30 days of completing the test along with interpretation of the data and any remedial action proposed.

13. Groundwater Monitoring: A monitor well must be installed downgradient of the injection well to monitor the lowermost underground source of drinking water (USDW). It must be completed according to Oklahoma Water Resources Board (OWRB) regulations, OAC 785:35-7-2, to a depth above the base of treatable water estimated to be at 400 feet below ground level. A representative sample of groundwater must be taken from the monitor well and analyzed for total dissolved solids, specific conductance, chlorides, pH, and temperature following methods published in 40 C.F.R. Part 141 Appendix A or a DEQ accredited laboratory. Static water level must be measured and recorded in the monitoring well prior to acquisition of samples. Samples from the monitoring well must be collected initially prior to injection occurring and monthly thereafter, and the results of all sampling and analysis must be submitted to DEQ in the quarterly report.

14. Notifications: A notification must be provided to DEQ in the event of discovery of a spill, release, leak, groundwater contamination, seismicity event, or lack of well mechanical integrity that might endanger the USDW or the safety of human health or the environment. Upon such discovery, the implementation of the contingency plan included in the Application shall be initiated along with any other requirements of non-compliance with the permit regarding notifications or corrective actions specified in this permit.

15. Quarterly Reports: A quarterly report must be submitted to DEQ within 30 days following the last day of the calendar quarter. Such report must contain injection well operating conditions, including: the maximum and average injection rate, the average and maximum injection pressure, and the average, maximum and minimum annulus pressure, along with the total monthly volume injected, the cumulative volume injected, the average daily injection volume, and the maximum and minimum daily injection volume. The quarterly report must also include the monthly sampling results for the monitoring well and the injection well including: water level (monitor well only), specific conductivity, specific gravity (injection well only), pH, temperature, chloride concentration, and total dissolved solids concentrations. The report must include explanations for any unusual occurrences such as injection pressures exceeding permitted maximum, annular pressure drop below permitted minimum, maintenance and stimulations to the well, or any breaks in continuous monitoring.

16. Other Reporting: The permittee must provide reports to DEQ, containing the following results by the timelines indicated in the identified conditions or within 30 days of

acquisition of the information:

- a. Physical, chemical, and other relevant characteristics of the injection zone (the Haskell formation) reservoir properties and reservoir fluids, and the groundwater testing (Conditions A8, A9 and A10);
- b. Calculated information (MAIP, maximum allowable injection rate, and wellhead pressure (at permit injection rate) using actual measured reservoir properties and formation fluid characteristics) (Conditions A2, A3, and A4);
- c. Injection well testing (pressure fall-off tests, pump tests, and internal and external MITs) (Conditions A7f, A8, A11 and A12);
- d. Any geophysical or geotechnical testing (Condition A7c);
- e. Workovers and / or well stimulations (Condition A7); and
- f. Any other supporting information, test data, logs (where available), and expert interpretation of any tests thereof.

17. Retention of Records: If the permittee elects not to retain records concerning the nature and composition of all injected fluids after the required three-year retention period, the permittee must transfer them to DEQ.

18. Well Plugging and Abandonment: If changes are made to the original plugging and abandonment (P&A) plan, an updated P&A plan must be submitted to DEQ for approval within 180 days prior to cessation of operations of the Tuttle Geothermal injection well. Within sixty (60) days after plugging the well, the permittee must submit a report certifying the well was plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water.

19. Well Plugging and Abandonment Cost estimates: The plugging and abandonment cost estimates must be adjusted for inflation within 30 days after the anniversary of the date of the permit issuance and submitted to DEQ for approval. The annual Implicit Price Deflator for Gross National Product inflation rate posted on DEQ's website will be used for the cost adjustment. Upon approval of the revised cost estimate, the facility financial assurance mechanism must be updated accordingly and the instrument submitted to DEQ.

20. Financial Assurance: The permittee is required to establish and maintain appropriate financial assurance in the amount of the initial plugging and abandonment cost estimate and subsequent updates. Within 30 days of issuance of the Tuttle Geothermal injection well permit, a financial assurance instrument in the amount of the initial cost estimate must be submitted to DEQ. Such financial assurance will be maintained until after the injection well is plugged and abandoned and a request for release from financial assurance is requested from DEQ.

21. Plugging and Abandonment of Monitoring Wells: All monitoring wells that will be plugged and abandoned must be plugged in accordance with OWRB well plugging requirements in OAC 785:35.

22. Duration of Permit: This permit shall remain in effect for five (5) years.

23. Legal Ownership of Land. An access agreement between the Permittee and the

landowner must be maintained for the duration of the permit.

B. Conditions Common to All UIC Permits

As required by 40 C.F.R § 144.51 and incorporated by reference at OAC 252:652-1-3, the following conditions apply to all UIC permits.

- 1. Duty to comply:** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and the Oklahoma Environmental Quality Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 C.F.R § 144.34.
- 2. Duty to reapply:** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- 3. Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- 4. Duty to mitigate:** The permittee must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
- 5. Proper operation and maintenance:** The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
- 6. Permit actions:** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 7. Property rights:** This permit does not convey any property rights of any sort or any exclusive privilege.
- 8. Duty to provide information:** The permittee must furnish to DEQ, within a time specified, any information which DEQ may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee must also furnish to DEQ, upon request, copies of records required to be kept by this permit.

- 9. Inspection and entry:** The permittee must allow DEQ, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
- a. Enter upon the permittee's premises at reasonable times where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Safe Drinking Water Act, any substances or parameters at any location.

10. Monitoring and records:

- a. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.
- b. The permittee must retain records of all monitoring information for a period of at least three (3) years from the date of the sample, measurement, report, or application, including the following:
 - i. Calibration and maintenance records and all original recordings for continuous monitoring instrumentation,
 - ii. copies of all reports required by this permit, and
 - iii. records of all data used to complete the application for this permit,

This period may be extended by request of DEQ at any time.

- c. The nature and composition of all injected fluids until three (3) years after the completion of any plugging and abandonment procedures specified under 40 C.F.R. § 144.52(a)(6), or under 40 C.F.R. Part 146 subpart G as appropriate. If the permittee elects not to retain records concerning the nature and composition of all injected fluids after the required three (3) year retention period, the permittee must transfer them to DEQ.

Records of monitoring information shall include:

- i. The date, exact place, and time of sampling or measurements;
- ii. The individual(s) who performed the sampling or measurements;
- iii. The date(s) analyses were performed;
- iv. The individual(s) who performed the analyses;
- v. The analytical techniques or methods used; and
- vi. The results of such analyses.

- 11. Signatory requirement:** All applications, reports, or information submitted to DEQ must be signed and certified. 40 C.F.R. § 144.32.

12. Reporting requirements:

- a. Planned changes. The permittee must give notice to DEQ as soon as possible of any planned physical alterations or additions to the permitted facility.
- b. Anticipated noncompliance. The permittee must give advance notice to DEQ of any planned changes in the permitted facility or activity which may result in noncompliance

with permit requirements.

- c. Transfers. This permit is not transferable to any person except after notice to DEQ. DEQ may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory. *See* 40 C.F.R. § 144.38.
- d. Monitoring reports. Monitoring results must be reported at the intervals specified in this permit.
- e. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than thirty (30) days following each schedule date.
- f. Twenty-four hour reporting: The permittee must report any noncompliance which may endanger human health or the environment, including:
 - i. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water (USDW); or
 - ii. Any noncompliance with a permit condition or malfunction of the injection system which may cause non-compliant fluid migration into or between USDWs.Any information must be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission must also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- g. Other noncompliance. The permittee must report all instances of noncompliance not reported under paragraphs (12) (b), (e), and (f) of this section, at the time monitoring reports are submitted. The reports must contain the information listed in paragraph (12)(f) of this section.
- h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEQ, it shall promptly submit such facts or information.

13. Duty to notify: The permittee must notify DEQ at such times as the permit requires before closure of the project.

14. Plugging and Abandonment: The permittee must meet the applicable requirements of 40 C.F.R. § 146.10 to insure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not abandonment.

15. Plugging and abandonment report: Within 60 days after plugging a well or at the time of the next quarterly report (whichever is less) the owner or operator must submit a plugging and abandonment report to DEQ. If the quarterly report is due less than 15 days before completion of plugging, then the report must be submitted within 60 days. The report must be certified as accurate by the person who performed the plugging operation. Such report must consist of either:

- a. A statement that the well was plugged in accordance with the plan previously submitted

to DEQ; or

- b. Where actual plugging differed from the plan previously submitted, an updated version of the plan on the form supplied by DEQ, specifying the differences.

16. Duty to establish and maintain mechanical integrity: The owner or operator must establish mechanical integrity prior to commencing injection or on a schedule determined by DEQ, and thereafter maintain mechanical integrity as defined in 40 C.F.R. § 146.8. If lack of mechanical integrity occurs, the following procedures are required.

- a. When DEQ determines that the well(s) lacks mechanical integrity pursuant to 40 C.F.R. § 146.8, written notice of this determination shall be provided to the owner or operator. Unless DEQ requires immediate cessation, the owner or operator must cease injection into the well within 48 hours of receipt of DEQ's determination. DEQ may allow plugging of the well pursuant to the requirements of 40 C.F.R. § 146.10 or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between USDWs caused by the lack of mechanical integrity. The owner or operator may resume injection upon written notification from DEQ that the owner or operator has demonstrated mechanical integrity pursuant to 40 C.F.R. § 146.8.
- b. DEQ may allow the owner or operator of a well which lacks mechanical integrity pursuant to 40 C.F.R. § 146.8(a)(1) to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between USDWs.

AN AUTHORIZED OFFICER OF BLUE CEDAR GEOTHERMAL, LLC MUST SIGN THIS PERMIT.

By signing this Acknowledgement, the Permittee acknowledges that it has read Permit # **IW-V-26001-OP** and understands the terms and conditions of the permit. Permittee agrees to comply with Chapter 2 of Title 27A of the Oklahoma Statutes,(Oklahoma Environmental Quality Code), specifically § 2-6-105 (Pollution of state air, land or waters - Order to cease), § 2-6-701 (Underground injection of hazardous and non-hazardous liquids - Permit required - Water wells and holes to be constructed or sealed to avoid pollution), § 2-7-120 (Fee for disposal of liquid waste other than hazardous waste in underground injection wells) and understands that it is subject to the enforcement provisions of the Code, 27A O.S. §§ 2-3-501 through 2-3-506, inclusive (General Regulation and Enforcement) and § 2-6-901 (Penalties, Misdemeanors, Injunctions, Assessment of Civil Penalties) and rules promulgated pursuant thereto (OAC 252:652). Permittee further agrees to comply with the Underground Injection Control program of the federal Safe Drinking Water Act (42 U.S.C. 300f-300j-26) and applicable federal rules promulgated thereunder (40 C.F.R. Parts 144, 145, and 146) and incorporated by reference in OAC 252:652.

Signature.

Title

Name of authorized signatory
(Please print or type)

Date

STATE OF OKLAHOMA)
) ss:
COUNTY of _____)

Subscribed and sworn to before me this _____ day of _____ 2022.

Notary Public

My Commission Expires: _____