

BEFORE THE INDUSTRIAL COMMISSION  
OF THE STATE OF NORTH DAKOTA

CASE NO. 29450  
(CONTINUED)  
ORDER NO. 32250

IN THE MATTER OF A HEARING CALLED  
ON A MOTION OF THE COMMISSION TO  
CONSIDER THE APPLICATION OF  
DAKOTA GASIFICATION COMPANY  
REQUESTING CONSIDERATION FOR THE  
GEOLOGIC STORAGE OF CARBON  
DIOXIDE FROM THE GREAT PLAINS  
SYNFUELS PLANT LOCATED IN  
SECTIONS 5, 6, 7, 8, 17, 18, 19, TOWNSHIP  
145 NORTH, RANGE 87 WEST, SECTIONS 1,  
2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24,  
TOWNSHIP 145 NORTH, RANGE 88 WEST,  
SECTIONS 30, 31, 32, TOWNSHIP 146  
NORTH, RANGE 87 WEST, SECTIONS 25,  
26, 27, 33, 34, 35, 36, TOWNSHIP 146 NORTH,  
RANGE 88 WEST, MERCER COUNTY,  
NORTH DAKOTA PURSUANT TO NORTH  
DAKOTA ADMINISTRATIVE CODE  
SECTION 43-05-01.

ORDER OF THE COMMISSION

THE COMMISSION FINDS:

(1) This cause originally came on for hearing at 9:00 a.m. on the 20th day of July, 2022. The Commission entered Order No. 32020 on October 5, 2022 continuing this matter for one hundred and seventy (170) days or until further order of the Commission.

(2) Dakota Gasification Company (DGC) made application to the Commission for an order requesting consideration for the geologic storage of carbon dioxide from the Great Plains Synfuels Plant located in Sections 5, 6, 7, 8, 17, 18, 19, Township 145 North, Range 87 West, Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, Township 145 North, Range 88 West, Sections 30, 31, 32, Township 146 North, Range 87 West, Sections 25, 26, 27, 33, 34, 35, 36, Township 146 North, Range 88 West, Mercer County, North Dakota, pursuant to North Dakota Administrative Code (NDAC) Section 43-05-01.

(3) DGC submitted an application for a Storage Facility Permit and necessary attachments pursuant to NDAC Section 43-05-01-05 and all other provisions of NDAC Chapter 43-05-01 as necessary.

(4) Case Nos. 29450, 29451, and 29452 were combined for the purposes of hearing.

(5) Case No. 29451, also on today's docket, is a motion of the Commission to determine the amalgamation of storage reservoir pore space, pursuant to a Storage Agreement by DGC for use of pore space falling within portions of Sections 25, 26, 27, 33, 34, 35, and 36, Township 146 North, Range 88 West, Sections 30, 31, and 32, Township 146 North, Range 87 West, Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, and 24, Township 145 North, Range 88 West, and Sections 5, 6, 7, 8, 17, 18, and 19, Township 145 North, Range 87 West, Mercer County, North Dakota, in the Broom Creek Formation, has been signed, ratified, or approved by owners of interest owning at least sixty percent of the pore space interest within said lands pursuant to North Dakota Century Code (NDCC) 38-22-10.

(6) Case No. 29452, also on today's docket, is a motion of the Commission to determine the amount of financial responsibility for the geologic storage of carbon dioxide from the Great Plains Synfuels Plant located in portions of Sections 25, 26, 27, 33, 34, 35, and 36, Township 146 North, Range 88 West, Sections 30, 31, and 32, Township 146 North, Range 87 West, Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, and 24, Township 145 North, Range 88 West, Sections 5, 6, 7, 8, 17, 18, and 19, Township 145 North, Range 87 West, Mercer County, North Dakota in the Broom Creek Formation, pursuant to NDAC Section 43-05-01-09.1.

(7) The record in these matters were left open to receive additional information from DGC. Such information was received on August 8, 2022, and the record was closed.

(8) Pursuant to NDCC Section 38-22-06 and NDAC Section 43-05-01-08, the notice of filing of the application and petition and the time and place of hearing thereof was given, and that at least 45 days prior to the hearing, DGC, as the applicant, did give notice of the time and place of said hearing and the Commission has accepted the notice as adequate, and that the applicant did, at least 45 days prior to the hearing, file with the Commission engineering, geological, and other technical exhibits to be used and which were used at said hearing, and that the notice so given did specify that such material was filed with the Commission; that due public notice having been given, as required by law, the Commission has jurisdiction of this cause and the subject matter.

(9) The Commission gave at least a thirty-day public notice and comment period for the draft storage facility permit and issued all notices using methods required of all entities under NDCC Section 38-22-06 and NDAC Section 43-05-01-08. Publication was made June 8, 2022, and the comment period for written comments ended at 5:00 PM CDT July 19, 2022. The hearing was open to the public to appear and provide comments.

(10) The Commission received an email from Perry Anderson on June 26, 2022, asking if the applicant was to become Bakken Energy LLC, a subsidiary of Basin Electric Power

Cooperative. The Commission assumes this was intended for Dakota Gasification Company. The Commission finds the information included in the letter to be either inapplicable or irrelevant to this case.

(11) The Commission received a letter from Allen Eisenbeis (A. Eisenbeis) on June 27, 2022 indicating ownership of farmland in the N/2 NW/4 and S/2 NW/4 of Section 34, Township 146 North, Range 88 West, and mineral rights in Lot 1, Lot 2, the S/2 NE/4, and SE/4 of Section 3, Township 145 North, Range 88 West, the S/2 N/2 of Section 10, Township 145 North, Range 88 West, the NW/4 of Section 11, Township 145 North, Range 88 West, the SE/4 and SW/4 of Section 27, Township 146 North, Range 88 West, and the N/2 SE/4 of Section 36, Township 146 North, Range 88 West, Mercer County, North Dakota. The Commission notes A. Eisenbeis is identified as a mineral owner and surface owner requiring notification. A. Eisenbeis indicates that DGC sent him a letter offering \$500 to sign an agreement to store carbon dioxide on his property. A. Eisenbeis considers the amount to not be worth the loss of the oil on his property. A. Eisenbeis states the land belongs to the property owners and not the state of North Dakota nor DGC, and that DGC should store the carbon dioxide on property that they own. A. Eisenbeis states that pressurized carbon dioxide is cryogenic, and questions why anyone would want to make North Dakota colder. A. Eisenbeis questions how the government or corporations can seize property that belongs to private citizens without paying fair market value for the land and oil.

(12) DGC testified the \$500 dollar offer was for surface access to gather seismic data, and that nonconsenting pore space owners would receive the same compensation as consenting owners.

(13) NDCC Section 38-22-10 states, “If a storage operator does not obtain the consent of all persons who own the storage reservoir’s pore space, the commission may require that the pore space owned by nonconsenting owners be included in a storage facility and subject to geologic storage.” If oil and gas was displaced from the Bakken Formation, unitization of minerals would be required under NDCC Chapter 38-08. The atmosphere will not be exposed to cryogenic temperature impacts of pressurized carbon dioxide.

(14) The Commission received a letter from the Dakota Resource Council (DRC) on July 12, 2022, indicating concern with this project. DRC states the applicant should be required to conduct modeling regarding lithofacies and petrophysical properties that are specific to the site. DRC states to ensure the success and longevity of this project it would be prudent to require site specific data as geologic formations are not entirely uniform.

DRC states that the applicant should explain in more specific detail their plans to work with Mercer County LEPC. DRC states a leak from a Class VI injection well would be a new event for local first responders, and that there could be severe consequences for environmental and human health if local emergency crews are not equipped and educated for such an event.

(15) DGC’s application discusses 3D seismic surveys in section 2.2.2.6 of their application. The application states placement of a seismic source and receiver locations required for a seismic survey would be restricted because of the active coal mine and industrial facilities. Due to the

inability to acquire site-specific 3D seismic data within the area, localized variograms distributing lithofacies and petrophysical properties are not viable.

(16) DGC testified to having a protection services group. The group takes care of security, hazmat, fire protection, and medical and are the first responders for any emergency in the event of a leak. DGC testified to having a reverse 911 system that contacts all people within the area of impact corridor that will be notified with an evacuation order. DGC testified that they meet with local emergency responders every two years to provide them with plans and training. Local responders are informed what the hazards of carbon dioxide and natural gas pipelines are. DGC stated they are a member of the emergency local planning commission where mock drills and tabletop drills are performed for the event of a leak. DGC testified that local law enforcement would be used to block roads since DGC has the staff to take care of an emergency response.

(17) The Commission received a letter from Bruce and Gail Bitterman (Bittermans) on July 11, 2022, indicating they are not in favor of this application. The Bittermans state science does not agree that the storage is permanent or forever. The Commission did not receive additional information from the Bittermans supporting this statement.

(18) The Commission received a letter from Clyde Eisenbeis (C. Eisenbeis) on June 9, 2022 indicating ownership of farmland and mineral rights in Lot 1, Lot 2, the S/2 NE/4, and SE/4 of Section 3, Township 145 North, Range 88 West, the S/2 N/2 of Section 10, Township 145 North, Range 88 West, the NW/4 of Section 11, Township 145 North, Range 88 West, the SE/4 and SW/4 of Section 27, Township 146 North, Range 88 West, the N/2 NW/4 and S/2 NW/4 of Section 34, Township 146 North, Range 88 West, and the N/2 SE/4 of Section 36, Township 146 North, Range 88 West, Mercer County, North Dakota. The Commission notes C. Eisenbeis is identified as a mineral owner and surface owner requiring notification. C. Eisenbeis is concerned with injected carbon dioxide displacing oil and gas in the Bakken Formation. C. Eisenbeis questioned if Basin Electric will reimburse farmland owners and mineral rights owners for potential future loss of oil and gas income. C. Eisenbeis provided North Dakota Geological Survey geologic investigation number 59 by Julie A. LeFever 2008.

(19) C. Eisenbeis appeared on July 20, 2022 to provide testimony, and submitted emails supplemental to his testimony. The first email was received July 21, 2022 and clarified his ownership from his letter received June 9, 2022. C. Eisenbeis indicated ownership of farmland in the N/2 NW/4 and S/2 NW/4 of Section 34, Township 146 North, Range 88 West, and mineral rights in Lot 1, Lot 2, the S/2 NE/4, and SE/4 of Section 3, Township 145 North, Range 88 West, the S/2 N/2 of Section 10, Township 145 North, Range 88 West, the NW/4 of Section 11, Township 145 North, Range 88 West, the SE/4 and SW/4 of Section 27, Township 146 North, Range 88 West, the N/2 NW/4 and S/2 NW/4 of Section 34, Township 146 North, Range 88 West, and the N/2 SE/4 of Section 36, Township 146 North, Range 88 West, Mercer County, North Dakota. C. Eisenbeis asks if all mineral rights owners have been informed that the carbon dioxide could displace oil and gas under their land. C. Eisenbeis asks if all mineral owners have been given a Bakken and Broom Creek Formation elevation map, and asks if all mineral rights owners have been informed that this could cost them, their children, and their grandchildren millions of

dollars in the future. C. Eisenbeis asks the following: 1.) if it is possible there is an opening between the Broom Creek and Bakken Formation that could allow carbon dioxide to displace oil and gas in the Bakken Formation, 2.) if it is possible that pressurizing the carbon dioxide in the Broom Creek Formation could rupture the gap between the Broom Creek and Bakken Formations that could allow carbon dioxide to displace oil and gas, 3.) if it is possible that an earthquake could allow carbon dioxide to displace oil and gas in the Bakken Formation, and 4.) if Basin Electric will reimburse mineral rights owners for potential future loss of oil and gas income.

C. Eisenbeis states he heard during the hearing, North Dakota legislature created a law that allows others to remove minerals under mineral rights land. C. Eisenbeis asks if the state can remove minerals that are the owner's property with no just cause and states that Industrial Commission should take this to the federal court and US Supreme Court if necessary.

C. Eisenbeis questions why the Bakken Formation was not mentioned in the hearing until he brought it up and if the Bakken Formation is in the reports submitted to the Industrial Commission. C. Eisenbeis states the Bakken Formation could be affected by carbon dioxide injection into the Broom Creek, could result in millions of dollars of losses to the mineral rights owners, and should be included in the reports.

C. Eisenbeis referenced models mentioned in the hearing, and states models are often inaccurate and referenced global warming models being incorrect. C. Eisenbeis states that code writers who write the code for models can produce any result they want, and that it can be modified until producing the result they want. C. Eisenbeis interprets the applicant's mention of several models in the hearing as the initial model producing a result the applicant did not like and switched to a model that produced a result it liked.

C. Eisenbeis referenced that he heard there is no Broom Creek 3D map, and states he is concerned with the 1,000-foot distance between the Broom Creek and Bakken Formations as being too little. C. Eisenbeis asks how the applicant knows the distance between the formations is 1,000 feet without a 3D map and asks if it is 1,000 feet from the top of the Broom Creek to the top of the Bakken. C. Eisenbeis questions if this thickness varies and if the formations are as close as one foot in some places, or already connected. C. Eisenbeis questions if the formations were drilled through vertically, and states there is already a breach between the formations if so. C. Eisenbeis states that the depth and thickness of the Bakken Formation varies and asks how the applicant's models accurately determine the distance between the formations. C. Eisenbeis states oil companies do not know the exact depth and thickness of the Bakken in various locations.

C. Eisenbeis states that there is an aquifer 80 to 100 feet below the surface of his farmland valley, and that there is another aquifer 180 to 200 feet below the surface. C. Eisenbeis states that a well was dug in that valley for the carbon dioxide project, asks if there are protections in place to prevent contaminating the aquifer, and states the water's color is changing. C. Eisenbeis states DGC puts sulfur into the ground and that there is a lot of sulfur in lignite coal. C. Eisenbeis is concerned with fly ash pits, loss of cattle due to sulfide, and that sulfur can kill people. C. Eisenbeis asks if DGC should be shut down and remove the fly ash and all sulfur from the ground.

C. Eisenbeis referenced that it was mentioned in the hearing that no one lives on the land. C. Eisenbeis states that Lucille Sailer (Sailer), Lyle Eisenbeis, and Karen Waltz do live on the land in the area at various times of the year and there may be others. C. Eisenbeis states that coal mining pond water discharges into a farmland creek which floods Sailer's farmhouse basement and farmland. C. Eisenbeis states Sailer was not given a Bakken Formation or Broom Creek Formation map and was not told it could displace oil or gas under her land, nor that it could affect her water. C. Eisenbeis states all contracts should be invalidated as they did not provide adequate information.

C. Eisenbeis referenced the hearing and the applicant testimony that it is not economically feasible to extract oil or gas under his farmland. C. Eisenbeis states the same was said years ago in the Williston area, and that new technology of horizontal drilling made it feasible as evidenced by the current oil and gas extraction in the Williston area. C. Eisenbeis questions if future technology could heat the gas present to convert it to oil.

C. Eisenbeis asks if a leak is detected by the applicant, how they would find and fix the location of the leak, and how they would ensure it does not displace oil or gas.

C. Eisenbeis is concerned that the permit also grants access to the surface of farmland without any restrictions, and that the applicant could build a variety of infrastructures, including buildings, on the farmland. C. Eisenbeis asks what authority grants access to someone else's farmland.

C. Eisenbeis states that proponents of carbon dioxide injection supposedly know there is no risk of displacing oil or gas. C. Eisenbeis states if the proponents know, they should sign a legal contract that gives all of their assets to the mineral rights owner if there is a problem. C. Eisenbeis states that if displacing oil and gas does occur then the proponents lose money rather than the mineral rights owners. C. Eisenbeis states that if the proponents do not sign these types of legal documents, that they do not know if displacement will occur and are guessing.

C. Eisenbeis states Mary Ricker's (Ricker) attorney said oil companies will not drill where carbon dioxide is stored. C. Eisenbeis agrees with the statement saying there is too much of a risk which could have many complications. C. Eisenbeis states carbon dioxide storage should not be placed within a hundred miles of the Bakken Formation.

C. Eisenbeis states there should be another hearing to include the property owners which discusses responses from the applicant. C. Eisenbeis states this would give the opportunity to discuss responses and ask more questions, and that there is a lot of money at stake.

(20) C. Eisenbeis submitted a second email received by the Commission on July 25, 2022 as an addendum to his July 21, 2022 email. C. Eisenbeis states that after the well was dug in the valley for the carbon dioxide project that there is sand in the water, that the water's color changed, that it is unknown what contaminates changed the water's color, and that these contaminants could harm people. C. Eisenbeis states that it is unknown if it is possible to completely seal well holes and that over time water penetrates almost everything. C. Eisenbeis states steel cannot be welded to rocks, and that filling the area around a well pipe with concrete may delay the penetration, but

the odds are quite high that water and some gasses will eventually bypass the filling around the pipes.

C. Eisenbeis states if carbon dioxide escaped from the Broom Creek, it could kill people and that the injection puts people at risk. C. Eisenbeis states carbon dioxide is heavier than air and references carbon dioxide killing close to 2,000 people living near Lake Nyos in Cameroon, Africa in 1986.

C. Eisenbeis asks if sulfur killed some cattle, are residents drinking well water that has sulfur. C. Eisenbeis asks if sulfur contamination has occurred in rural water, Lake Sakakawea, and for fish in the area.

C. Eisenbeis states Sailer did not sign the document that allowed seismic testing on the farmland, and that she did not know there were two documents. C. Eisenbeis states that flooding of her basement occurred when deep holes were dug for the Dakota Gasification Company and or Antelope Valley Coal Power Plant.

C. Eisenbeis states carbon dioxide is heavier than air, that storing it under the valley may not be safe, and that it could kill people who live in the valley if it escaped. C. Eisenbeis states that storing carbon dioxide on a mountain may not be safe as it could sink to lower levels and kill people. C. Eisenbeis states the safest place to store carbon dioxide appears to be the ocean.

(21) Pursuant to NDAC 43-05-01-08(2), the notice given by the applicant to mineral owners within one half mile of the facility boundary must contain a legal description of the land within the facility area; the date, time, and place that the Commission will hold a hearing on the permit application; a statement that a copy of the permit application and draft permit may be obtained from the Commission; a statement that all comments regarding the storage facility permit application must be in writing and submitted to the Commission prior to the hearing or presented at the hearing; a statement that amalgamation of the storage reservoir pore space is required to operate the storage facility, that the commission may require the pore space owned by nonconsenting owners be included in the storage facility and subject to geologic storage, and the amalgamation of pore space will be considered at the hearing.

(22) Using a conservative 6,500-foot subsea contour from the map provided by C. Eisenbeis, that would place the Bakken Formation at approximately 8,500 feet true vertical depth at the location of the Coteau #1 (File No. 38379). The top of the injection formation, the Broom Creek Formation, is 5,907 feet true vertical depth and the base of the formation is 6,166 feet true vertical depth at the location of the Coteau # 1 (File No. 38379). The approximate 2,300 feet of underlying formations include the Amsden, Tyler, Otter, Kibbey, Charles, Mission Canyon, and Lodgepole Formations. Beds of impermeable shales as well as hydraulically isolated porous formations separate the injection formation from the Bakken Formation. If an existing transmissive conduit existed connecting the Broom Creek and Bakken Formations, gas or oil shows would be expected. Carbon dioxide is buoyant and would not behave in a manner conducive to downward migration. If fluids were displaced downward, various porous formations that would intercept fluid exist

between the injection formation and the Bakken Formation. For an earthquake to occur, there would need to be a fault present and testimony indicated there are no faults present within the storage reservoir or upper or lower confining zones. Microseismic events caused by injection created fractures will not be created due to the regulatory bottom hole pressure constraint of ninety percent of fracture pressure. Migration of carbon dioxide outside of the injection formation would be detected in seismic data. If oil and gas was displaced from the Bakken Formation, unitization of minerals would be required under NDCC 38-08.

(23) NDCC 38-22-10 states that if a storage operator does not obtain the consent of all persons who own the storage reservoir's pore space, the commission may require that the pore space owned by nonconsenting owners be included in a storage facility and subject to geologic storage. Removal or displacement of oil and gas is not the subject of this application as it is not applying for storage in a hydrocarbon bearing reservoir.

(24) The Bakken Formation is addressed in Section 2.6 of the application. It indicates there has been no historic hydrocarbon exploration in, or production from, formations below the Broom Creek Formation in the storage facility area. It includes that in the event that hydrocarbons are discovered in commercial quantities below the Broom Creek Formation, a horizontal well could be used to produce the hydrocarbons while avoiding drilling through the carbon dioxide plume, or a vertical well could be drilled using proper controls. Should operators decide to drill wells for hydrocarbon exploration or production, real-time Broom Creek Formation bottomhole pressure data will be available, which will allow prospective operators to design an appropriate well control strategy via increased drilling mud weight.

(25) The equation of state reservoir simulator used by DGC is GEM, an EPA acknowledged existing code used for the development of geologic sequestration models. Commission staff reviewed all inputs for the reservoir model and used Computer Modelling Group LTD.'s software with GEM to verify outputs given by DGC. DGC updated and submitted the model based on a request by the Department of Environmental Quality in the review process. Reference to an alternate model was made based on DGC using publicly available relative permeability and capillary entry pressure data that allowed for a greater extent of carbon dioxide migration than site specific core data. This provides for a more conservative storage facility boundary. Formations considered in the model included the Opeche, Broom Creek, and Amsden Formations. DGC has performed baseline 2D seismic over the storage facility area. Time-lapse seismic surveys will be repeated 1, 3, 5, and 10 years after initial injection. Time-lapse 2D seismic will show the vertical and lateral extents of the carbon dioxide independent of the model.

(26) All stratigraphic test wells drilled in the storage facility were subject to NDAC 43-02-03-32, stating, in part, stratigraphic test and core holes shall be permitted the same as oil and gas wells. NDAC 43-02-03-21 states, in part, drilling of the surface hole shall be with freshwater-based drilling mud or other method approved by the director which will protect all freshwater-bearing strata. This includes water used during the cementing of surface casing for displacement. The surface casing for stratigraphic wells is set into the Pierre Formation, below



the deepest underground source of drinking water within the facility area, cemented to surface, and verified by radial cement bond log.

(27) The Commission notes three residential occupancies within figure 4-2 of the application, and various others within the area of review. DGC testified to the safety procedures concerning the facility and residential and public land use within one mile of the facility area as required in NDAC 43-05-01-13.

(28) The application indicates leak detection at the wellbore will be monitored using temperature and pulse neutron logging. In the event of out of zone migration through the upper confining zone, the Inyan Kara Formation above exists as a porous trap. The location of a confining zone leak can be detected with time-lapse seismic. DGC identifies installing a system to intercept brine or carbon dioxide or to pump and treat to air-strip carbon dioxide from the impacted water in the event of an underground source of drinking water being impacted.

(29) Article 8 of the Storage Agreement, section 8.1 “Grant of Easement” states the storage operator shall have the right to use as much of the surface of the land within the Facility Area as reasonably necessary for Storage Operations and the injection of Storage Substances. DGC testified that the surface access would be for monitoring activities by means of seismic surveys. NDCC 38-22-09 states the commission may include in a permit or order all things necessary to carry out this chapter’s objectives and to protect and adjust the respective rights and obligations of persons affected by geologic storage. Seismic surveys are required to monitor the migration, lateral, and vertical extent of the plume. If an applicant proposed to build a variety of infrastructures, including buildings, as C. Eisenbeis states, an application can be filed for hearing by an impacted party under NDAC 43-05-01-12(1), which states in part that any interested person (i.e., the storage operator, local governments having jurisdiction over land within the area of review, any person who has suffered or will suffer actual injury or economic damage) may request that the commission review permits issued under this chapter for one of the reasons set forth below. NDAC 43-05-01-12(1)(k), “The commission receives information that was not available at the time of the permit issuance. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance). Building infrastructure or buildings without a separate surface agreement would not be considered reasonably necessary to carry out the objectives of NDCC 38-22.

(30) The Commission has rules and regulations in place to safeguard against tubing leaks or blowouts. NDAC Section 43-05-01-11(10) requires all tubing strings must meet the standards contained in subsection 6. All tubing must be new tubing or reconditioned tubing of a quality equivalent to new tubing and that has been pressure-tested. For new tubing, the pressure test conducted at the manufacturing mill or fabrication plant may be used to fulfill this requirement. NDAC Section 43-05-01-11(11) requires all wellhead components, including the casinghead and tubing head, valves, and fittings, must be made of steel having operating pressure ratings sufficient to exceed the maximum injection pressures computed at the wellhead and to withstand the corrosive nature of carbon dioxide. Each flow line connected to the wellhead must be equipped

with a manually operated positive shutoff valve located on or near the wellhead. NDAC Section 43-05-01-11(12) requires all packers, packer elements, or similar equipment critical to the containment of carbon dioxide must be of a quality to withstand exposure to carbon dioxide. NDAC 43-05-01-11(14) requires all newly drilled wells must establish internal and external mechanical integrity as specified by the Commission and demonstrate continued mechanical integrity through periodic testing as determined by the Commission. All other wells to be used as injection wells must demonstrate mechanical integrity as specified by the Commission prior to use for injection and be tested on an ongoing basis as determined by the Commission. NDAC 43-05-01-11(17) requires all injection wells must be equipped with shutoff systems designed to alert the operator and shut-in wells when necessary.

(31) The Commission has rules and regulations in place requiring the operator to demonstrate seismicity will not interfere with containment and prohibiting fracturing of the injection zone. NDAC Section 43-05-01-05(1)(b)(2)(m) requires the applicant must provide information on the seismic history, including the presence and depth of seismic sources and a determination that the seismicity would not interfere with containment. NDAC Section 43-05-01-11.3(1) requires except during stimulation, the storage operator shall ensure that injection pressure does not exceed ninety percent of the fracture pressure of the injection zone so as to ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone. Injection pressure must never initiate fractures in the confining zone or cause the movement of injection or formation fluids that endanger an underground source of drinking water. All stimulation programs are subject to the Commission's approval as part of the storage facility permit application and incorporated into the permit.

(32) Pursuant to NDAC 43-05-01-05 (1)(b)(2)(j) the application is required to provide the location, orientation, and properties of known or suspected faults and fractures that may transect the confining zone in the area of review, and a determination that they would not interfere with containment. Pursuant to NDAC 43-05-01-05 (1)(b)(2)(k) the application must include data on the depth, areal extent, thickness, mineralogy, porosity, permeability, and capillary pressure of the injection and confining zone, including facies changes based on field data, which may include geologic cores, outcrop data, seismic surveys, well logs, and names and lithologic descriptions. Pursuant to NDAC 43-05-01-05 (1)(b)(2)(l) the application is required to provide geomechanical information on fractures, stress, ductility, rock strength, and in situ fluid pressures within the confining zone. The confining zone must be free of transmissive faults or fractures and of sufficient areal extent and integrity to contain the injected carbon dioxide stream. Pursuant to NDAC 43-05-01-05 (1)(b)(2)(o) the application is required to identify and characterize additional strata overlying the storage reservoir that will prevent vertical fluid movement, are free of transmissive faults or fractures, allow for pressure dissipation, and provide additional opportunities for monitoring, mitigation, and remediation.

(33) DGC's application provides adequate data to show suitability of the Broom Creek Formation for geologic storage of carbon dioxide in the facility area.

(34) DGC's application provides adequate modeling of the storage reservoir for delineation of the facility area, and adequate monitoring to detect if carbon dioxide is migrating into properties outside of the facility area pursuant to NDAC Section 43-05-01-11.4. Vertical release of carbon dioxide is addressed by the application pursuant to NDAC Section 43-05-01-13, and lateral release of carbon dioxide from the facility area is addressed by the application pursuant to NDAC Section 43-05-01-05.

(35) The Commission finds the information and opinions included in C. Eisenbeis's letters that were not addressed, to be either inapplicable or irrelevant to this case.

(36) Ricker appeared on July 20, 2022 to provide testimony. Ricker testified to owning mineral rights within the storage facility in the N/2 Section 10 and NW/4 Section 11, Township 145 North, Range 88 West. Ricker testified to seeking legal advice and their lawyer stated their mineral rights will be condemned or made null by this operation. Ricker is concerned about what may be in the Bakken Formation, and how any retrieval of those minerals will be made more difficult because of the actions being taken here. Ricker states that even if you can drill through or around it, these actions would be more costly than direct retrieval, and that there will be a real economic impact to mineral rights.

(37) There has been no historic hydrocarbon exploration, production, or studies suggesting there is an economically profitable supply of hydrocarbons from formations above or below the Broom Creek Formation within the proposed storage facility area. There has been historic production approximately 11 miles to the west of the storage facility from the Traxel 1-31H well (File No. 17877). The lateral extent of the stabilized plume and the pressure differential are minor enough to allow for horizontal drilling for hydrocarbon exploration, under the Broom Creek Formation, without penetrating the stored carbon dioxide. DGC testified that should operators decide to drill wells for hydrocarbon exploration or production, real-time Broom Creek Formation bottomhole pressure data will be available, which will allow prospective operators to design an appropriate well control strategy via increased drilling mud weight. DGC testified that a vertical well could be drilled using proper controls.

(38) The Commission received no compelling information to indicate underlying minerals would be stranded.

(39) DGC's Great Plains Synfuels Plant is a gasification plant located in Mercer County, North Dakota, near the city of Beulah. The lignite used for natural gas generation is the source of the carbon dioxide.

(40) Up to 2,700,000 metric tons of carbon dioxide will be captured annually from the Great Plains Synfuels Plant. The captured carbon dioxide will be compressed, transported to a Class VI well by a transmission and flow line, and then injected. Up to 2,700,000 metric tons of carbon dioxide will be injected into the Broom Creek Formation annually.

(41) DGC permitted a 6.8-mile transmission line through the North Dakota Public Service Commission (PSC) and implements their approved corrosion monitoring and prevention strategy. Transition from the PSC jurisdiction transmission line to injection well flow line will be at the flow meter on each injection well pad.

(42) The projected composition of the carbon dioxide stream is 95.9% carbon dioxide, 1.8% C<sub>2</sub><sup>+</sup> and hydrocarbons, 1.2% hydrogen sulfide, 0.6% methane, and 0.5% nitrogen.

(43) The flow line will be equipped with pressure gauges and a Supervisory Control and Data Acquisition (SCADA) system to detect leaks. Hydrogen sulfide detection stations will also be utilized for detection of leaks.

(44) The Coteau #1 well (File No. 38379) is stratigraphic test well that was used for reservoir characterization and constructed to Class VI requirements, located 555 feet from the south line and 460 feet from the west line of Section 1, Township 145 North, Range 88 West, Mercer County, North Dakota. This well is to be converted to a Class VI injection well.

(45) The Coteau #2 well (File No. 38916) is stratigraphic test well that is constructed to Class VI requirements, located 424 feet from the south line and 805 feet from the west line of Section 2, Township 145 North, Range 88 West, Mercer County, North Dakota. This well is to be converted to a Class VI injection well.

(46) The Coteau #3 well (File No. 38917) is stratigraphic test well that is constructed to Class VI requirements, located 2,462 feet from the south line and 2,391 feet from the east line of Section 2, Township 145 North, Range 88 West, Mercer County, North Dakota. This well is to be converted to a Class VI injection well.

(47) The Coteau #4 well (File No. 38918) is stratigraphic test well that is constructed to Class VI requirements, located 1,641 feet from the south line and 2,421 feet from the west line of Section 1, Township 145 North, Range 88 West, Mercer County, North Dakota. This well is to be converted to a Class VI injection well.

(48) The Coteau #5 well (File No. 39418) is a stratigraphic test well that will be tested, logged, and constructed to Class VI requirements, located 1,408 feet from the south line and 1,138 feet from the east line of Section 12, Township 145 North, Range 88 West, Mercer County, North Dakota. This well is to be converted to a Class VI injection well.

(49) The proposed Coteau #6 well will be tested, logged, and constructed to Class VI requirements, to be located approximately 688 feet from the south line and 2,037 feet from the east line of Section 12, Township 145 North, Range 88 West, Mercer County, North Dakota. This proposed well is to be a Class VI injection well.

(50) DGC created a geologic model based on site characterization as required by NDAC Section 43-05-01-05.1 to delineate the area of review. Data utilized included seismic survey data,

geophysical logs from nearby wells, and core data. Structural surfaces were interpolated with Schlumberger's Petrel software, and included formation tops, data collected from the Coteau #1 (File No. 38379), the Flemmer #1 (File No. 34243), the BNI #1 (File No. 34244), the J-LOC #1 (File No. 37380), the Liberty #1 (File No. 37672), the ANG #1 (Class I well), as well as 3D seismic surveys conducted at the Flemmer #1 and Liberty #1 locations. Due to low well control and difficulties with obtaining 3D seismic data on reclaimed mine land, publicly available variograms from the Minnkota Center MRYS Broom Creek Storage Facility #1 were used to inform lithofacies and petrophysical properties in the geologic model. The variograms were selected as they provided a generalized representation of property distributions expected in the Broom Creek Formation. Based on the reservoir pressure obtained from the Coteau #1 (File No. 37380), critical threshold pressure for this storage facility exists in the Broom Creek Formation prior to injection. Critical threshold pressure has the same meaning as pressure front, defined in NDAC Section 43-05-01-01, for area of review delineation purposes. EPA's "UIC Program Class VI Well Area of Review Evaluation and Corrective Action Guidance" lists several methods to estimate an acceptable pressure increase for over-pressurized reservoirs, including a multiphase numerical model designed to model leakage through a single well bore, or through multiple well bores in the formation. DGC has used this method to determine cumulative leakage potential along a hypothetical leaky wellbore without injection occurring is estimated to be 0.01 cubic meters over 20 years. Incremental leakage with injection occurring was determined to be a maximum of 0.011 cubic meters over 20 years. A value of 1 cubic meter is the lowest meaningful value that can be produced by the ASLMA model as smaller values likely represent statistical noise. An actual leaky wellbore or transmissive conduit would likely communicate with the Inyan Kara Formation. DGC's application noted no indications of communication between the Broom Creek Formation and Inyan Kara Formation were observed, and that nothing in fluid samples indicated communication to USDWs. The predicted extent of the carbon dioxide plume from beginning to end of life of the project, at the time that the carbon dioxide plume ceases to migrate into adjacent cells of the geologic model, was used to define the area of review in this case. Pursuant to NDAC 43-05-01-05(1)(b)(2) the area of review was proposed as a one-mile buffer around the storage facility boundaries. Time lapse seismic surveys will be used for monitoring the extent of the carbon dioxide plume.

(51) The area proposed to be included within the storage facility is as follows:

TOWNSHIP 146 NORTH, RANGE 88 WEST

ALL OF SECTIONS 35 AND 36, THE S/2 OF SECTION 25, THE S/2 OF SECTION 26, THE SE/4 OF SECTION 27, THE SE/4 OF SECTION 33, AND THE S/2, AND NE/4 OF SECTION 34,

TOWNSHIP 146 NORTH, RANGE 87 WEST

ALL OF SECTION 31, THE S/2 OF SECTION 30, AND THE SW/4 OF SECTION 32,

TOWNSHIP 145 NORTH, RANGE 88 WEST

ALL OF SECTIONS 1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23 AND 24, THE E/2 OF SECTION 4, THE E/2 OF SECTION 9, AND THE E/2 OF SECTION 16,

TOWNSHIP 145 NORTH, RANGE 87 WEST

ALL OF SECTIONS 6, 7, 18 AND 19, THE W/2 OF SECTION 5, THE W/2 OF SECTION 8, AND THE W/2 OF SECTION 17.

ALL IN MERCER COUNTY AND COMPRISING OF 15,979.20 ACRES, MORE OR LESS.

(52) The Broom Creek Formation, the upper confining Opeche Formation, and the lower confining Amsden Formation are laterally extensive through the area of review.

(53) Core analysis of the Broom Creek Formation shows sufficient permeability to be suitable for the desired injection rates and pressures without risk of creating fractures in the injection zone. Thin-section investigation shows the Broom Creek Formation's sandstone intervals are comprised primarily of quartz, with minor occurrences of feldspar, dolomite, and anhydrite as cement. Within the Broom Creek, carbonate intervals are present consisting of dolostone, dolomite, anhydrite, quartz, dolosparite, feldspar, and clay. Anhydrite is present crystallized between quartz grains, as well as in the form of clasts and veins within carbonate intervals. Microfracture testing in the Flemmer #1 (Well No. 34243) well, near, but outside of the delineated facility area, at a depth of 6,358 feet determined the breakdown pressure of the formation to be 4,950 psi bottom hole pressure, with a fracture propagation pressure of 4,384 psi bottom hole pressure, and a fracture closure pressure of 4,195 psi bottom hole pressure. Microfracture in situ tests were not attempted in the Coteau #1 (File No. 38379) well due to unstable wellbore conditions. A one-dimensional mechanical earth model (1D MEM) was used to compensate for the lack of microfracture data within the storage facility area. Average fracture propagation pressure gradient at the Coteau #1 was assigned at 0.71 psi/ft, comparable to the 0.69 psi/ft gradient of the Flemmer #1.

Core analysis of the overlying Opeche Formation shows sufficiently low permeability to stratigraphically trap carbon dioxide and displaced fluids. Thin-section investigation shows the Opeche Formation is comprised of alternating intervals of silty mudstone and mudstone. Microfracture testing in the Flemmer #1 (Well No. 34243) well, near, but outside of the delineated facility area, at a depth of 6,262 feet observed formation breakdown at 8,157 psi bottom hole pressure and fracture propagation pressures of 4,879 psi bottom hole pressure and 5,085 psi bottom hole pressure, or a 0.78 psi/ft and 0.81 psi/ft gradient respectively. Microfracture in situ tests were not attempted in the Coteau #1 (File No. 38379) well due to unstable wellbore conditions. Injection pressure is limited to ninety percent of the fracture pressure of the injection zone. Injection formation breakdown would be observed and recorded if permitted operational pressures were exceeded before compromising the confining zone.

Core analysis of the underlying Amsden Formation shows sufficiently low permeability to stratigraphically contain carbon dioxide and displaced fluids. Thin-section investigation shows the Amsden Formation is comprised of dolomite, sandy dolomite, shaly sand, and anhydrite.

(54) The in situ fluid of the Broom Creek Formation in this area is in excess of 10,000 parts per million of total dissolved solids.

(55) Investigation of wells within the area of review found no vertical penetrations of the confining or injection zones requiring corrective action. The area of review will be reevaluated at a period not to exceed five years from beginning of injection operations.

(56) The Fox Hills Formation is the deepest underground source of drinking water (USDW) within the area of review. Its base is situated at a depth of 1,749 feet at the location of the proposed injection wells, leaving approximately 4,158 feet between the base of the Fox Hills Formation and the top of the Broom Creek Formation.

(57) Fluid sampling of shallow USDWs has been performed to establish a geochemical baseline, with additional baseline sampling proposed for the Fox Hills Formation and other shallow wells under investigation. Future sampling is proposed in DGC's application pursuant to NDAC Section 43-05-01-11.4.

(58) Soil sampling is proposed pursuant to NDAC Section 43-05-01-11.4. A baseline of soil gas concentrations has been established and was submitted to the Commission as part of this application. Six soil gas profile stations are located where the six injection wells will be, as well as five additional stations within the proposed storage facility area boundary.

(59) The top of the Inyan Kara Formation is at 4,404 feet, approximately 2,655 feet below the base of the Fox Hills Formation and it provides an additional zone of monitoring between the Fox Hills Formation and the Broom Creek Formation to detect vertical carbon dioxide or fluid movement.

(60) No known or suspected regional faults or fractures with transmissibility have been identified during the site-specific characterization. Formation imaging logs run showed the section of the Opeche Formation closest to the Broom Creek Formation to be dominant in litho-bound fractures and microfaults which are electrically conductive likely due to the presence of clay. The mid-region of the Opeche Formation notes the presence of electrically conductive and resistive features. The resistive features are interpreted as minor anhydrite filled fractures. Conductive features and microfaults are interpreted as clay filled due to electric conductivity.

(61) Fluid samples from the Inyan Kara Formation and Broom Creek Formation suggest that they are hydraulically isolated from each other, supporting that the confining formations above the Broom Creek Formation are not compromised by migration pathways.

(62) Geochemical simulation performed with the injection stream and data obtained from the confining and injection zones determined no observable change in injection rate or pressure. Conservatively high carbon dioxide exposure simulations to the cap rock determined that geochemical changes will be minor and will not cause substantive deterioration compromising confinement.

(63) Risk of induced seismicity is not a concern based on existing studies of major faults within the area of review, tectonic boundaries, and relatively stable geologic conditions surrounding the proposed injection site.

(64) The six injection wells are proposed to be temperature logged annually to demonstrate external mechanical integrity.

(65) The approval of this application is in the public interest by promoting the policy stated in NDCC Section 38-22-01.

IT IS THEREFORE ORDERED:

(1) The creation of the DGC Beulah Broom Creek Storage Facility #1 in Mercer County, North Dakota, is hereby authorized and approved.

(2) Dakota Gasification Company, its assigns and successors, is hereby authorized to store carbon dioxide in the Broom Creek Formation in the DGC Beulah Broom Creek Storage Facility #1.

(3) The DGC Beulah Broom Creek Storage Facility #1 shall extend to and include the following lands in Mercer County, North Dakota:

TOWNSHIP 146 NORTH, RANGE 88 WEST

ALL OF SECTIONS 35 AND 36, THE S/2 OF SECTION 25, THE S/2 OF SECTION 26, THE SE/4 OF SECTION 27, THE SE/4 OF SECTION 33, AND THE S/2, AND NE/4 OF SECTION 34,

TOWNSHIP 146 NORTH, RANGE 87 WEST

ALL OF SECTION 31, THE S/2 OF SECTION 30, AND THE SW/4 OF SECTION 32,

TOWNSHIP 145 NORTH, RANGE 88 WEST

ALL OF SECTIONS 1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23 AND 24, THE E/2 OF SECTION 4, THE E/2 OF SECTION 9, AND THE E/2 OF SECTION 16,

TOWNSHIP 145 NORTH, RANGE 87 WEST

ALL OF SECTIONS 6, 7, 18 AND 19, THE W/2 OF SECTION 5, THE W/2 OF SECTION 8, AND THE W/2 OF SECTION 17.

ALL IN MERCER COUNTY AND COMPRISING OF 15,979.20 ACRES, MORE OR LESS.

(4) Injection into the DGC Beulah Broom Creek Storage Facility #1 shall not occur until Dakota Gasification Company has met the financial responsibility demonstration pursuant to Order No. 32252.



(5) This authorization does not convey authority to inject carbon dioxide into the DGC Beulah Broom Creek Storage Facility #1; approved permits to inject for the Coteau #1 well (File No. 38379), the Coteau #2 well (File No. 38916), the Coteau #3 well (File No. 38917), the Coteau #4 well (File No. 38918), the Coteau #5 (File No. 39418), and the proposed Coteau #6 shall be issued by the Commission prior to injection operations commencing.

(6) The authorization granted herein is conditioned on the operator receiving and complying with all provisions of the injection permit issued by the Oil and Gas Division of the Industrial Commission and complying with all provisions of NDAC Chapter 43-05-01 where applicable, and this order.

(7) Definitions.

“Area of review” in this case means an area encompassing a radius around the facility area of one mile.

“Cell” in this case means individual cell blocks of the geologic model; each cell is approximately 1,000 feet by 1,000 feet.

“Facility area” means the areal extent of the storage reservoir as defined in paragraph (3) above, that includes lands within the lateral boundary of the carbon dioxide plume from beginning of injection to the time the carbon dioxide plume ceases to migrate into adjacent geologic model cells.

“Storage facility” means the reservoir, underground equipment, and surface facilities and equipment used or proposed to be used in the geologic storage operation. It does not include pipelines used to transport carbon dioxide to the storage facility under NDCC Section 38-22-02.

(8) The storage facility operator shall comply with all conditions of this order, the permit to inject, and NDAC Chapter 43-05-01, where applicable. Any noncompliance constitutes a violation and is grounds for enforcement action, including but not limited to termination, revocation, or modification of this order pursuant to NDAC Section 43-05-01-12.

(9) In an administrative action, it shall not be a defense that it would have been necessary for the storage facility operator to halt or reduce the permitted activity in order to maintain compliance with this order, the permit to inject, and NDAC 43-05-01, where applicable.

(10) The storage facility operator shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this order, the permit to inject, and NDAC 43-05-01, where applicable.

(11) The storage facility operator shall implement and maintain the provided emergency and remedial response plan pursuant to NDAC Section 43-05-01-13.

(12) Pursuant to NDAC 43-05-01-13, subsection 1, subdivision a, the Commission requests DGC submit the documentation of the training efforts with Mercer County LEPC after the exercises are performed.

(13) The storage facility operator shall cease injection immediately, take all steps reasonably necessary to identify and characterize any release, implement the emergency and remedial response plan approved by the Commission, and notify the Commission within 24 hours of carbon dioxide detected above the confining zone.

(14) The storage facility operator shall at all times properly operate and maintain all storage facilities which are installed or used by the storage facility operator to achieve compliance with the conditions this order, the permit to inject, and NDAC 43-05-01, where applicable. Proper operation and maintenance includes 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 backup or auxiliary facilities or similar systems only when necessary to achieve compliance.

(15) This order may be modified, revoked and reissued, or terminated pursuant to NDAC Section 43-05-01-12. The filing of a request by the storage facility operator for and order modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any condition contained therein.

(16) The injection well permit or the permit to operate an injection well does not convey any property rights of any sort of any exclusive privilege.

(17) The storage facility operator shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this order, or to determine compliance thereof. The storage facility operator shall also furnish to the Director, upon request, copies of records required to be kept by this order, the permit to inject, and NDAC 43-05-01, where applicable.

(18) The storage facility operator shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the storage facility premises where records must be kept pursuant to this order and NDAC Chapter 43-05-01.
- (b) At reasonable times, have access to and copy any records that must be kept pursuant to this order and NDAC Chapter 43-05-01.
- (c) At reasonable times, inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required pursuant to this order, the permit to inject, and NDAC Chapter 43-05-01.

- (d) At reasonable times, sample or monitor for the purposes of assuring compliance, any substances or parameters at any location.

(19) The storage facility operator shall maintain and comply with the proposed testing and monitoring plan pursuant to NDAC Section 43-05-01-11.4

(20) The storage facility operator shall comply with the reporting requirements provided in NDAC Section 43-05-01-18. The volume of carbon dioxide injected, the average injection rate, surface injection pressure, and down-hole temperature and pressure data shall be reported monthly to the Director on or before the fifth day of the second succeeding month once injection commences regardless of the status of operations, until the injection well is properly plugged and abandoned.

(21) The storage facility operator must obtain an injection well permit under NDAC Section 43-05-01-10 and injection wells must meet the construction and completion requirements in NDAC Section 43-05-01-11.

(22) The storage facility operator shall notify the Director at least 48 hours in advance to witness a mechanical integrity test of the tubing-casing annulus in the injection well. The packer must be set within 100 feet of the upper most perforation and in the 13CR-80 casing, as an exception to NDAC Section 43-05-01-11. However, the packer must also be set within confining zone lithology, and within carbon dioxide resistant cement.

(23) The storage facility operator shall maintain and comply with the prepared plugging plan pursuant to NDAC Section 43-05-01-11.5.

(24) The storage facility operator shall establish mechanical integrity prior to commencing injection and maintain mechanical integrity pursuant to NDAC Section 43-05-01-11.1.

(25) The storage facility operator shall implement the worker safety plan pursuant to NDAC Section 43-05-01-13.

(26) The storage facility operator shall comply with leak detection and reporting requirements pursuant to NDAC Section 43-05-01-14.

(27) The storage facility operator shall implement the proposed corrosion monitoring and prevention program pursuant to NDAC Section 43-05-01-05.1.

(28) The storage facility operator shall maintain financial responsibility pursuant to NDAC Section 43-05-01-09.1.

(29) The storage facility operator shall maintain and comply with the proposed post-injection site care and facility closure plan pursuant to NDAC Section 43-05-01-19.

(30) The storage facility operator shall notify the Director within 24 hours of failure or malfunction of surface gauges in the Coteau #1 (File No. 38379), the Coteau #2 (File No. 38916), the Coteau #3 (File No. 38917), the Coteau #4 (File No. 38918), the Coteau #5 (File No. 39418), and the proposed Coteau #6 injectors.

(31) The storage facility operator shall implement surface air and soil gas monitoring as proposed.

(32) This storage facility authorization and permit shall be reviewed at least once every five years from commencement of injection to determine whether it should be modified, revoked, or minor modification made, pursuant to NDAC Section 43-05-01-05.1(4).

(33) The storage facility operator shall pay fees pursuant to NDAC Section 43-05-01-17 annually, no more than thirty days after the receipt of 26 U.S. Code § 45Q tax credits, unless otherwise approved by the Director.

(34) This order shall remain in full force and effect until further order of the Commission.

Dated this 24th day of January, 2023.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

/s/ Doug Burgum, Governor

/s/ Drew H. Wrigley, Attorney General

/s/ Doug Goehring, Agriculture Commissioner