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Summarized comments and questions received regarding the American Growers No. 4 class II disposal well permit application.

I am concerned about truck traffic related to this proposed well.

The Ohio General Assembly did not grant authority to the Division to regulate traffic or dust generated from truck traffic associated with an injection well. The Ohio Department of Transportation has regulatory authority of traffic on state routes in Ohio. Township and County roads are regulated by Township and County governments.

How does the regulation of Class II disposal wells help to prevent contamination of groundwater and surface water?

The application for a permit submitted by the operator and the Division's review process provides for protection of groundwater, surface water, and public health and safety in the following manner: Prior to making a determination regarding an application for a permit, geologists evaluate the proposed site for injection. As part of the permit review process, geologists determine the depth of the deepest USDW to ensure that it is protected.

Geologists establish the depth of surface casing necessary to extend through and protect all USDWs. A USDW is defined as an "aquifer...that contains a sufficient quantity of groundwater to supply a public water system, and … contains less than 10,000 milligrams per liter of total dissolved solids …."[1] Most groundwater used for public drinking water today contains less than 500 milligrams per liter of Total Dissolved Solids (TDS),and most water that is treated for drinking water contains less than 3,000 milligrams per liter TDS. Therefore, the Underground Injection Control (UIC) Program ensures that water resources that could be treated and used as drinking water in the future are protected.

Division geologists evaluate the proposed well construction plan. Class II injection wells must be constructed with multiple layers of protection (cemented, steel casing strings) between USDWs and the injected waste stream. This includes surface casing to protect and

[1] U.S. Environmental Protection Agency, 2002, Definition: Underground Source of Drinking Water (Section 146.3 of Part 146); U.S. Code of Federal Regulations, Title 40, Part 146, revised of July 1, 2002.

isolate USDWs, an injection string that isolates the injection zone, and may include additional cemented casing strings.

The Division establishes injection pressure limits designed to confine injected fluids in the authorized injection zone.

Division geologists also evaluate all known wellbores within an "Area of Review" surrounding the proposed injection well. Wellbores that pose potential avenues for fluid migration by virtue of their construction or plugging status must be mitigated before injection can be authorized. During the permitting process the Division also reviews surrounding wells within ½ mile from the American Growers No. 4 to determine if any wells pose potential avenues for fluid migration in the subsurface. The Division has determined that there is only one well that penetrates the injection interval and does not require corrective action and does not pose a potential threat for fluid migration in the subsurface.

In addition, unloading and surface facilities must be proposed and approved prior to construction. Fluid may only be stored in above-ground tanks that have primary and secondary containment equal to 100% of the storage capacity of the tanks plus an allowance for rainfall. The facility construction must be witnessed by a representative of the Division to ensure the approved plan is followed as required by conditions attached to the issued permit.

Finally, public health and safety are also protected through as brine hauler regulations. Anyone transporting oilfield brine is required to register with the Division prior to hauling as required by Ohio revised Code (ORC) 1509.222(A). The registered brine hauler must submit information on vehicles, disposal locations, and collection points (ORC 1509.222(A)(2). Brine haulers are required to submit proof of liability insurance in an amount not less than $600,000 and a surety bond in the amount of $15,000 (ORC 1509.222 and 1509.225). The combined requirements ensure that injection fluid moves safely from the trucks, to the storage tanks, down the well, and into the disposal zone.

Should there be an accident, then the brine hauler will be held responsible for the clean-up, remediation, and any financial penalties.

What happens if there is a spill at the injection well?

Incidents such as spills at a class II well or facility are required to be reported to the Division by calling 1- 844- OHCALL1 (1-844-642-2551) within 30 minutes of occurrence. The Division is prepared to respond to oilfield incidents with an Emergency Operations and Response team should a spill occur. These individuals are on-call 24 hours a day, 7 days a week, 365 days a year. If a spill occurs, the Division will respond to the site, assess the situation, and ensure the company cleans up the spill. If the operator does not complete necessary remedial action, ODNR has the authority to take further action including issuing orders suspending operations, referring the matter to the Ohio Attorney General's Office to

pursue criminal or civil penalties, forfeiting the operator's bond or financial assurance, and possibly revoking the operator's permit depending on the circumstances. In addition, if the operator fails to respond to a spill or other emergency situation at a well, the Division has the authority to enter into emergency contracts to respond and mitigate the emergent situation.

Why does Ohio accept Brine from Pennsylvania and West Virginia?

Pursuant to the Interstate Commerce Clause of the U.S. Constitution, Ohio's General Assembly cannot enact laws that restrict commerce between states. Therefore, the Division also cannot restrict brine from entering from other states. Any registered brine hauler may transport brine in Ohio to be disposed of at permitted injection wells. Ohio's General Assembly enacted laws (ORC 1509.21, ORC 1509.22, ORC 1509.226) establishing the ways that brine may be disposed of in Ohio. Every state bordering Ohio has class II disposal wells; those states have not outlawed brine injection. However, the number of wells in each state varies. The U.S. Environmental Protection Agency has determined that Class II disposal wells provide the safest method for disposal of oil field waste fluids. Prior to the underground injection control (UIC) program, the primary method of disposal of brine was surface pits which resulted in numerous water wells being contaminated.

The Redbird well impacted other producing wells. Will this proposed well impact other wells?

The Washington County Produced Water Study document outlines the study and actions the Division took regarding the Redbird No.4 Disposal Well. The expert who completed that study concluded that fluid injected into the Ohio Shale formation migrated into the Berea Sandstone. The expert concluded this fluid impacted certain producing oil and gas wells completed in the Berea Sandstone. The injection zone for the American Growers No. 4 well does not include the Ohio Shale formation and is proposed to be in deeper formations. Additionally, the Redbird No. 4 well no longer injects into the Ohio Shale formation. The well now injects into a deeper formation, the Bass Islands/Salina Group injection zones.

Are water wells near injection wells monitored?

Injection well owners are required to conduct water well testing before drilling their new wells. The terms and conditions of the permit for this well and Ohio Administrative Code 1501:9-3-06 provides: "After a permit has been issued but before commencement of drilling a new class II disposal well or converting aThe well to a class II disposal well, a class II disposal well owner shall provide to the chief results of sampling of water wells within one thousand five hundred feet of the proposed location of the class II disposal well and five hundred feet of any associated pipelines utilized for the injection of brine. The class II disposal well owner shall provide a list and map that identifies the location of each water well sampled." These pre-construction samples serve as a baseline measurement of the water wells quality.

Public notice was poorly advertised, will ODNR extend the comment period?

The public notice period is not being extended. DeepRock Disposal Solutions, LLC complied with the applicable public notice requirements. The rules in effect at the time the American Growers #4 application was filed require that an applicant must run public notice in a newspaper of general circulation in the county where the proposed well is to be located.

OAC 1501:9-3-06(H) reads, in part, "a legal notice shall be published by the applicant in a newspaper of general circulation in the county in which the proposed well is situated for a period of not less than five consecutive days. A copy of the legal notice shall also be delivered to all owners or operations of wells within the area of review producing from or injection into the same formation proposed as the injection formation."

DeepRock Disposal Solutions, LLC published the legal notice in the Marietta Times from January 27, 2025, through January 31, 2025. DeepRock Disposal Solutions, LLC also provided notice to Heinrich Enterprises on February 13, 2025, who owns the Wilfong Unit No. 3, a nearby well producing from the proposed injection zone of the American Growers No. 4. Both notices meet the requirements set forth by the Ohio Administrative Code 1501:9-3-06(H).

How would ODNR handle a fracking explosion on the barge offload site or at the proposed rail offload site?

Although no fracking will occur on the barge offload site, and the Division believe the risk of such an explosion to be low, the Division established an emergency response team that will respond to any oil and gas incident within the State of Ohio. If a fire would occur at the DeepRock Disposal Solutions, LLC facility, the local and state emergency staff will respond to the incident.

What about the risks of induced seismicity associated with class II disposal wells? There have been dozens of earthquakes in Washington County. Will there be seismic monitoring requirements for the American Growers #4?

Seismic events associated with Class II injection wells are rare. More than 180,000 Class II injection wells exist in the United States, with only a small percentage of these wells being associated with seismic activity. The Division understands the concern with the potential of injection-related seismicity and has taken proactive steps in this area. The Division has its own seismic monitoring network and staff dedicated to monitoring it. Additionally, part of the permitting process is to review the proposed location to determine if seismic monitoring will be a requirement. Ohio's seismic monitoring network is the strongest it has ever been statewide, allowing the Division to better understand seismic activity that occurs in our state. The Division currently has a robust monitoring network in the immediate area (10 seismometers within 20 miles). Because of this, the Division determined that it was not necessary to require a seismic monitoring plan for the American Growers #4 well. Ohio's rules governing Class II Disposal Wells (OAC 1501:9-3-07) were updated in January 2022. Under these new rules, for any Class II disposal well operating in Ohio, the Division can

suspend operations if seismic activity occurs within three miles of the well and require the operator to implement a plan before resuming operations.

How many injection wells are there in Washington County? How much brine does Washington County accept? Why does Washington County accept so much more brine than other Ohio counties?

Washington County has 17 operating class II disposal wells, and 5.9 million barrels of brine were disposed of into those wells in 2023. The amount of fluid disposed in a particular county depends on various factors including number of wells, business practices of the operators, location of the wells, and the injection formations' ability to accept fluid. The only specific limit on disposal amounts set forth in law or rule is in OAC 1501:9-3-05 (B) and apply only to wells for which an application is received after January 2022. It's also important to note, Washington County is one of Ohio's most active counties in the number of producing wells, nearly all vertical production wells.

What is disposed at Class II disposal wells?

Ohio law only allows brine produced from oil and gas wells to be injected into a Class II disposal well. Generally, the majority of fluid disposed is production fluid or brine, the very salty water located in the formation from which the oil and gas is produced. This water may contain traces of other elements found in the rock formation. Brine also includes fluids resulting from hydraulic fracturing operations; this fluid is sometimes referred to as flowback and often contains water and chemicals that are used to hydraulically fracture a well. Substances used in this process are disclosed in Ohio using the FracFocus database. Fluids disposed of at a Class II well can also contain waters collected during a cleanup from a brine release or precipitation that has been collected in secondary containment at oil and gas locations.

How do injection wells benefit the community?

Ohio law (ORC 1509.22(H)(3)) establishes that fees collected from the disposal of brine or other waste substances shall be placed in the oil and gas well fund. By law (ORC 1509.02) money from this fund must be used for the expenses of the division to enforce Ohio law and rule and for expenses that are critical and necessary for the protection of human health and safety and the environment related to oil and gas production in this state. In addition, funds from the oil and gas well fund are used to plug orphan wells. The Division has plugged dozens of wells through multiple projects in Washington County, utilizing $4.57 million from the Oil and Gas Well Fund.