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June 3, 2019

MEMORANDUM

To: Richard E. Dunn, Director
Environmental Protection Division

FROM: Chuck Mueller, Chief
Land Protection Branch

SUBJECT: Responses to Comments Received During the Public Comment Period
Regarding Proposed Amendments to the Rules for Oil and Gas and Deep Drilling
Rule, Chapter 391-3-13

On April 1, 2019, EPD issued a public notice requesting comments on the proposed revisions to the Georgia Rules for Oil and Gas and Deep Drilling Rule, Chapter 391-3-13. The proposed changes included the following rules:

- Rule 391-3-13-.01, "Purpose,"**
- Rule 391-3-13-.02, "Definitions,"**
- Rule 391-3-13-.03, "Enforcing Official,"**
- Rule 391-3-13-.04, "Well Permit,"**
- Rule 391-3-13-.06, "Establishment of the Drilling Units and Operation Units,"**
- Rule 391-3-13-.07, "Determining and Naming Fields and Pools,"**
- Rule 391-3-13-.08, "Access of Department Agents,"**
- Rule 391-3-13-.09, "Change of Operator,"**
- Rule 391-3-13-.10, "Drilling,"**
- Rule 391-3-13-.11, "Shooting, Perforating, Chemical Treatment, or Fracturing"**
- Rule 391-3-13-.12, "Plugging,"**
- Rule 391-3-13-.13, "Notice of Rig Removal,"**
- Rule 391-3-13-.14, "Production Well,"**
- Rule 391-3-13-.16, "Spills,"**
- Rule 391-3-13-.17, "Enforcement,"**

A public hearing was held at 9:30 a.m. on April 15, 2019 in the DNR Board Room located at 2 Martin Luther King Jr. Dr. SE, East Tower, Suite 1252, Atlanta, Georgia, 30334. No oral comments were received from the person in attendance during the public hearing. The public comment period ended April 29, 2019. A total of **3** commenters provided written comment. No changes to the proposed rules are recommended based on comments received, however modifications to the permitting checklist referenced in the rule have been made.

Responses to Comments Received on the Proposed Amendments to the Rules for Oil and Gas and Deep Drilling, Chapter 391-3-13

On April 1, 2019, the Georgia Environmental Protection Division (EPD) issued a public notice requesting comments on Georgia's proposed amendments to the Rules for Oil and Gas and Deep Drilling, Chapter 391-3-13. No comments were received during the public hearing held on April 15, 2019. Written comments were received and are summarized below, followed by EPD's responses.

Comment: The commenters expressed concern that Rule 391-3-13-.10(11) allows for the use of unlined pits in the ground to store drilling fluid, fracking fluid, and various types of wastewater. They indicated that their preference would be to eliminate the routine use of pits and require that all wastewater and fluids be managed in closed-loop systems, or in the alternative require double liners, leak detection equipment, inspections, and setback requirements from rivers, lakes, and streams (e.g., 300 feet from surface waters).

Response: Rule 391-3-13-.10(11) does not specify whether the bottom of an enclosure is required to have a liner. There are circumstances when the use of soils or bentonite may be adequate to protect from leakage. In order to provide the permittee with some additional guidance, EPD has made changes in the permitting checklist referenced in the rule to include requirements for the bottom of all enclosures to be sealed such that seepage loss through the seal is as low as practicably possible. In addition, freeboard requirements of 2 to 3 feet depending on the height of freeboard needed to contain the maximum continuous rainfall event at that location, and requiring monitoring wells in the uppermost aquifer beneath the pond for each 2 acre pond have been added to the checklist.

Comment: Commenters stated that the rules must establish where groundwater monitoring should occur, when monitoring should occur, how samples should be collected, what parameters should be sampled, and so forth. In addition, they stated that groundwater monitoring must include baseline monitoring, which takes place before drilling and fracking occur to understand the original condition of the area, and subsequent monitoring after operations begin to ensure there is no release of dissolved gases, salts, fracking chemicals, breakdown products, and other pollutants into groundwater sources. They expressed their concern that simply requiring permit applicants to design their own "comprehensive groundwater monitoring plan" is woefully inadequate and gives applicants too much leeway to ignore important water resources, pollutants, and issues that may arise.

Response: This issue was discussed during the stakeholder process and based on these stakeholder comments, modifications have been made to the permitting checklist referenced in the rule detailing when and what monitoring is required. Rule 391-3-13-.04(1)(j)(4) requires a comprehensive groundwater monitoring plan be included in the permit application for any operations that will conduct fracking. The rule goes on to say that more details can be found in the narrative section of the "Oil and Gas Exploration and Production Well, Deep Mineral Exploration and Production Well, and Deep Fresh Water Production Well Permitting Checklist." All applications will be reviewed for adequacy by EPD's trained professional staff.

Comment: Commenters requested that the rule be amended to require that an independent certified or accredited laboratory analyze and test the water samples.

Response: EPD agrees this should be a component of the applicant's comprehensive ground water monitoring plan. Therefore EPD has added to the permitting checklist referenced in the rule a requirement for samples to be analyzed by an independent certified or accredited laboratory.

Comment: Commenters stated that all groundwater monitoring results should be made available to the public.

Response: As an agency of the state and in accordance of the Georgia Open Records Act, all records prepared, received or maintained by EPD are available for inspection by the public, unless such records are exempt from disclosure as provided for in Georgia law. *See O.C.G.A. 50-18-70, et seq.*

Comment: The commenters expressed concern that the rules do not establish any siting restrictions for drilling and fracking operations and associated infrastructure, other than minimum setbacks from property lines and total acreage requirements.

Response: The checklist referenced in the rule requires a plat or index map showing surface elevation, locations and depth of public and private water supply wells within one-half mile of the route of any directional borehole and each end point. In addition, procedures for establishing buffers and setbacks at an appropriate distance and their calculations are required. This allows EPD to consider each application in accordance with unique factors prevalent in the relevant geographic region of the state.

Comment: The commenters commented on 391-3-13-.04(4) which states, "After considering the permit application, the Director shall either issue or deny a permit for the well." They requested that the language be amended to require the Director to consider both the permit application and any public comments received.

Response: EPD will consider public comments that it receives following the comment solicitation provided for in this rule.

Comment: The commenters expressed concern that Rule 391-3-13-.04(8) allows an operator to request "modification of any permit condition" as long as the request is in writing and documented and that the Director may grant the modification if he is satisfied that the request is justified and will allow the operator to remain in compliance with the law. They requested that all modifications to an existing permit be subjected to public notice and comment.

Response: The amendments to the Oil and Gas and Deep Drilling Act of 1975 adopted in 2018 specifically address public notice requirements. The proposed rules are consistent with the statute.

Comment: The commenters noted that it appeared that EPD simply inserted language from HB 205 (relating to permit conditions) into numbers (8) through (10) of 391-3-13-.04. They further noted that the underlying statute states that drilling permits must include requirements for testing the integrity of well casings, requirements for maintenance and repair of roadways significantly impacted by drilling operations, and requirements for buffers around wells and property line setbacks, et cetera. O.C.G.A. § 12-4-46(f). They requested that rather than asking the applicant to provide illustrations and narratives describing these requirements, EPD should establish the requirements on its own, which would then also be directly incorporated into drilling permits.

The commenters also noted that it appeared that, perhaps based on their stakeholder comments, EPD decided to put additional requirements in the “Illustrations and Narratives” section of the “Oil and Gas Exploration and Production Well, Deep Mineral Exploration and Production Well, and Deep Fresh Water Production Well Permitting Checklist.” They expressed concern, however, that the substantive requirements set forth in the checklist were not codified in the rules.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. The checklist was developed to give some specificity regarding what EPD would need to review when considering whether to grant or deny any permit application. All applications will be reviewed for adequacy by EPD’s trained professional staff.

Comment: The commenters noted that the checklist requires groundwater monitoring only for the chemicals added to fracking fluids and the breakdown products of those chemicals. They asserted that well operators also must be required to monitor for dissolved gases, such as methane, ethane, and propane, chlorides, total dissolved solids, hardness, iron, manganese, pH, sodium, and sulfate.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. The checklist was developed to give some specificity regarding what EPD will need to review when considering whether to grant or deny any permit application. All applications will be reviewed for adequacy by EPD’s trained professional staff.

Comment: The commenters requested that the rule be amended to codify to requirements that are currently in the permitting checklist.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. The checklist was developed to give some specificity regarding what EPD will need to review when considering whether to grant or deny any permit application. All applications will be reviewed for adequacy by EPD’s trained professional staff.

Comment: The commenters requested that the rules prohibit wastewater disposal on-site through land application, a practice that threatens water and soil quality.

Response: The comment is outside the scope of this proposed rule. Any disposal of treated wastewater by a land treatment and/or land disposal system requires that an applicant secure a land application system permit from EPD before land applying treated wastewater.

Requirements for land application systems can be found in the Georgia Water Quality Control Act and related rules. *See, e.g.,* Ga. Comp. R. and Regs. 391-3-6-.11.

Comment: Two commenters stated that the average wastewater treatment plant cannot effectively process the chemicals and high concentration of chlorides, bromides, and other salts in these fluids, which often pass through untreated and cause damage to the receiving waters. Salts can also disrupt wastewater treatment facilities' biological systems so that other wastes are not treated. They urged DNR to prohibit local wastewater treatment facilities as disposal options for gas and oil drilling wastewater in Georgia or in the alternative require wastewater treatment facilities to certify that they are not only willing to accept these wastewaters, but that they can properly treat them.

Response: The comment is outside the scope of this proposed rule. Wastewater treatment plants and pretreatment of wastewater is regulated by EPD pursuant to the Georgia Water Quality Control Act and related rules.

Comment: Two commenters requested a new section that requires permit applicants to seek and obtain certification from local authorities that the proposed operations comply with all local land use ordinances and plans.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. Issuance of a permit by EPD for oil and gas deep drilling does not waive any other permit or other legal requirement applicable to such a project or relieve the applicant of any obligation or responsibility for complying with the provisions of any other applicable federal, state, or local laws, ordinances, or regulations.

Comment: Two commenters requested that the rule require that operators prepare a local transportation plan that, at a minimum, establishes mandatory truck routes that avoid schools, downtowns, and residential areas, includes bonding requirements for road maintenance and must be approved by the local government before drilling begins.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. Issuance of a permit by EPD for oil and gas deep drilling does not waive any other permit or other legal requirement applicable to such a project or relieve the applicant of any obligation or responsibility for complying with the provisions of any other applicable federal, state, or local laws, ordinances, or regulations.

Comment: Oil and gas operations are also a significant source of air pollutants, including methane, volatile organic compounds ("VOCs"), nitrogen oxides, and hazardous air pollutants like benzene. The existing regulations do not address emissions from gas and oil drilling operations. We urge EPD to develop requirements to limit methane, VOC, NOx, and hazardous air pollution emissions from gas and oil development that are more stringent than the federal standards. At a minimum, these requirements should include: A leak detection and repair

program; VOC emissions control equipment for tanks and other equipment capable of achieving emissions reductions of 95% or greater; Emissions criteria for VOCs, hazardous air pollutants, NOx, and methane; and Enclosed combustion devices for all permanent flaring operations.

Response: The comment is out of the scope of this proposed. Air emissions are regulated by EPD pursuant to the Georgia Air Quality Act and rules.

Comment: EPD should ensure that its existing erosion and sediment control standards and stormwater management requirements are at least as stringent as those required for other construction sites in Georgia. API recommends routine site inspection as well as after each storm event to monitor sediment and erosion control installations.

Response: The comment is out of the scope of this proposed rule. Erosion and sediment control and construction stormwater management are regulated by EPD pursuant to the Erosion and Sedimentation Act of 1975 and the Georgia Water Quality Control Act and those statutes' related rules.

Comment: 391-3-13-.01, we do not oppose the proposed revisions to the first part of this section. However, we oppose the deletion of subsections (a) and (b), which provide that the purpose of the rule is to protect water resources and environmentally sensitive areas.

Response: Comment noted.

Comment: One commenter noted their support for the deleted definitions in 391-3-13.02, as long as all deleted terms have been defined elsewhere in Chapter 391 of Georgia's Rules and Regulations or in the Oil and Gas and Deep Drilling Act. They requested additional clarification on the new definition of "blow-out," which includes the terms "well fluids" and "formation fluids."

Response: EPD appreciates the support for deleting some of the definitions that are defined elsewhere. With regards to additional clarification for certain definitions, EPD notes that these are definitions peculiar to the oil and gas industry and are given that meaning defined in the Handbook of Oil Industry Terms and Phrases or what is generally accepted within the oil and gas industry.

Comment: One commenter expressed support for the proposed bond changes in subsection (1)(h) and TABLE I, but objected to allowing for a lesser amount of a bond or an irrevocable letter of credit. They asserted that the currently proposed figures are not adequate to cover the costs of performing all requirements of the Oil and Gas and Deep Drilling Act, their corresponding regulations, and permit terms. In choosing appropriate bond amounts, EPD should consider the costs of cleaning up accidents, spills, and other contamination events, in addition to the costs of properly plugging wells and restoring the sites. With those costs in mind, EPD should maintain the currently proposed figures and refuse to contemplate a lesser amount.

Response: Comment noted. EPD is maintaining the currently proposed figures as suggested. Lesser amounts will be considered if the applicant can document that a lesser amount is appropriate.

Comment: One commenter suggested deleting “, and for ground-water quality monitoring before, during, and after drilling operations” from 392-3-13.04(1)(j)3. They believe that language is unnecessary given the requirement for a comprehensive groundwater monitoring plan in number (4) of that same subsection.

Response: EPD does not believe a change is necessary at this time.

Comment: One commenter opposed the language in 391-3-13-.04(1)(j)6 and 391-3-13-.04(1)(j)7, that call for a description “of the provisions for” the safe disposal of all hydraulic fracturing fluids and the restoration and reclamation of abandoned well sites, storage facility sites, pits, and access roads. They believe EPD should be more prescriptive in identifying “provisions” for the safe disposal of fracking fluids or for the restoration and reclamation of abandoned well sites, etc., and not allow applicants to propose their plan for addressing these provisions.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. The checklist was developed to give some specificity regarding what EPD will need to review when considering whether to grant or deny any permit application. All applications will be reviewed for adequacy by EPD’s trained professional staff.

Comment: One commenter objected to 391-3-13-.10(9) relating to confidentiality and confidential documents, which would include claimed trade secrets. They assert that compliance with EPD’s “June 2015 Procedures for Submitting Information Pursuant to a Claim that Information in the Submittal is Protected under Georgia Law from Disclosure to the Public” is not sufficient.

Response: The recent revision to O.C.G.A. 12-4-44(b)(3) required EPD to develop rules that included in part provisions providing for the “mandatory disclosure of the chemicals in the fluids used in hydraulic fracturing projects to the director and to the commissioner of public health, and a fair process for the disclosure of fracturing fluids to facilitate transparency, *while protecting valuable trade secrets and allowing well owners, operators, and service companies to protect their right to obtain an advantage over competitors.*” (emphasis added) EPD’s “June 2015 Procedures for Submitting Information Pursuant to a Claim that Information in the Submittal is Protected under Georgia Law from Disclosure to the Public” was developed for use across all of EPD’s programs as a procedure for ensuring that trade secrets are subject to protection, in accordance with Georgia law. *See* O.C.G.A. § 50-18-70 *et seq.*

Comment: Industrial-scale gas and oil development can affect many different aspects of the local environment and community. We urge EPD consultation with other state agencies for gas and oil drilling permits, including the Historic Preservation Division; Coastal Resources Division (if relevant); Parks, Recreation and Historic Sites Division; Wildlife Resources Division; and the Georgia Department of Transportation.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. All applications will be reviewed for adequacy by EPD's trained professional staff. Issuance of a permit by EPD for oil and gas deep drilling does not waive any other permit or other legal requirement applicable to such a project or relieve the applicant of any obligation or responsibility for complying with the provisions of any other applicable federal, state, or local laws, ordinances, or regulations.

Comment: EPD should prohibit operators from burying solid waste from drilling muds and cuttings on site at the end of the drilling operation. This waste may contain heavy metals and naturally occurring radioactive materials which can leach into groundwater and contaminate soils. We urge EPD to require that muds and cuttings be maintained in a closed loop system and disposed off-site at an approved facility.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. All applications will be reviewed for adequacy by EPD's trained professional staff. Issuance of a permit by EPD for oil and gas deep drilling does not relieve the applicant of any obligation or responsibility for complying with the provisions of any other applicable federal, state, or local laws, ordinances, or regulations.

Comment: Georgia should establish reporting and tracking requirements to insure that wastes transported off site reach their intended destination.

Response: EPD included in the proposed rule the elements that the recent amendments to the statute required to be addressed in the permit application. All applications will be reviewed for adequacy by EPD's trained professional staff. Issuance of a permit by EPD for oil and gas deep drilling does not relieve the applicant of any obligation or responsibility for complying with the provisions of any other applicable federal, state, or local laws, ordinances, or regulations.

Comment: During the in-person stakeholder meeting, industry representatives recommended a provision requiring operators to use FracFocus for disclosing the chemicals and ingredients used in fracking fluids. One commenter stated that although FracFocus is a useful tool, its limitations are well-known, including that it is error prone, needlessly difficult for research, and allows companies too much latitude in claiming information as trade secrets. They indicated that they would support a requirement that operators use FracFocus for disclosures if certain other provisions are included in the final rule.

Specifically, they requested that DNR or EPD should maintain a separate state registry that is thorough, up-to-date, and easily searchable. Additionally, they commented that, because FracFocus contains no enforcement mechanism and is simply a tool for self-reporting, it is essential that DNR (or EPD) conduct periodic monitoring to ensure the reported information is accurate and reliable. Finally, they asserted that Georgia must require operators to disclose all chemicals and ingredients anticipated to be used in fracking operations before any operations commence.

Response: The revision to O.C.G.A. 12-4-44(b)(3) required EPD to develop rules that included in part "[p]rovisions *providing for the mandatory disclosure of the chemicals in the fluids used*

in hydraulic fracturing projects to the director and to the commissioner of public health, and a fair process for the disclosure of fracturing fluids to facilitate transparency, while protecting valuable trade secrets and allowing well owners, operators, and service companies to protect their right to obtain an advantage over competitors.” (emphasis added) FracFocus is a tool industry developed as a mechanism to meet similar requirements in other states and EPD believes it to be a fair process for the disclosure of fracturing fluids to facilitate transparency.