

BEFORE THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

IN THE MATTER OF PROMULGATION OF)
REGULATION NO. 34, STATE WATER PERMIT) DOCKET NO. 10-008-R
REGULATION)

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY'S
RESPONSIVE SUMMARY**

Introduction

Pursuant to Minute Order 10-44 the Arkansas Department of Environmental Quality ("ADEQ" or "Department") submits the following Responsive Summary regarding the proposed promulgation of Arkansas Pollution Control and Ecology Commission Regulation No. 34, State Water Permit Regulation.

On December 3, 2010, the Arkansas Pollution Control and Ecology Commission (hereinafter "APCEC" or "Commission") granted ADEQ's Petition to Initiate Rulemaking to promulgate Regulation No. 34.

A public hearing was held at ADEQ Headquarters in North Little Rock, Arkansas on January 25, 2011. The public comment period ended on February 8, 2011. Fifteen (15) written comments were submitted and four (4) persons spoke at the public hearing. As provided by Ark. Code Ann. § 8-4-202(c)(4)(C), the Department has grouped the following comments into similar categories and explains why each comment was accepted or rejected.

Comments

Comment 1: In Chapter 1 Reg.34.104 Definitions, the Commission defines the terms Land Application, Sewage, Industrial Waste, and Other Wastes as definitions that apply to this regulation. Upon review of the regulation the terms only appear in the definitions. This makes it impossible for potentially affected entities to determine if these are proper definitions when these terms are not used in the text of the regulation.

Response 1: The definitions for Sewage, Industrial Waste and Other Wastes found in Reg.34.104 are identical to the definition for those terms found in the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-102.

As a logical outgrowth of this comment, ADEQ will remove the definition of "Land Application." That definition is not necessary for the implementation of this proposed rulemaking. If the regulation is amended in the future, interested stakeholders will be consulted about a proposed definition for "Land Application" and other proposed additions.

Comment 2: Chapters 3, 4, & 5 appear as "Reserved." This leads us to believe future modifications to the Regulation are imminent. If the regulation is issued "as is", this would not allow affected entities or the general public to comment on the definitions of the terms as they are used in future modifications. The definitions would be final and not subject to comment.



Response 2: As stated above, the definitions found in this regulation are taken directly from the definitions found in the Arkansas Water and Air Pollution Control Act. The regulation should be consistent with the statute and, thus, these terms are appropriate now and into the future. If the statute is amended by the Arkansas General Assembly to amend any of these definitions, a modification of the regulation would be appropriate. Any amendments to the regulation would follow the rulemaking procedures (including public comment) found in APCEC Regulation No. 8, Administrative Procedures.

Comment 3: The term “Waste” is defined as industrial waste, sewage, or other wastes. This term is found in Chapter 2 Permit Requirements for Construction, Operation, and Closure of Pits Associated with Oil and Gas Wells. Since this is the only place the term waste is found, it should be redefined to capture the wastes produced from oil and gas production and not include sewage, industrial wastes and other wastes, as defined, since no other waste will be produced and stored in the pits.

Response 3: See Responses 1 and 2, above.

Comment 4: The Economic Impact does not take any land application effects into account. Without regulation, it is impossible to properly assess the economic impact these definitions may have on potentially affected entities.

Response 4: The purpose of Regulation No. 34 is to provide a regulatory foundation for the issuance of state water permits. ADEQ has the authority to issue those permits under the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-203, which states, “The [ADEQ]...is given and charged with the power and duty to issue, continue in effect, revoke, modify, or deny permits, under such conditions as it may prescribe...to prevent, control, or abate pollution...” At this time, the Regulation No. 34 does not include any standards for land application activities authorized by state water permits. If those standards are ever included in the regulation, the Economic Impact/Environmental Benefit Analysis that accompanies that proposed rulemaking will consider economic impacts to potentially affected entities. At that time, the analysis will be available for public comment.

Comment 5: Albemarle Corporation states:

Our core business in South Arkansas centers around bromine production from saltwater/brine. Our brine is removed from and re-injected into the Smackover Formation. This is the same formation utilized by the oil and gas industry in this area. Both our production and injection wells require reserve pits when initially drilled. Our existing wells could also need reserve pits if re-worked, or re-drilled horizontally. We follow the same best practices/standards, rules, etc. for construction and closing our reserve pits as the oil and gas industry does. In fact, we use the same contractors. There is no difference in reserve pits use and construction for these types of drilling operations. They should be treated equally.

Your draft regulation currently covers oil and gas, commercial saltwater injection wells, and Class II disposal wells. We would recommend that the following changes be made to the proposed Regulation 34:

- 1) The title of chapter 2 should be updated to include brine production

and injection wells.

2) Reg. 34.202 paragraph A. This section should be updated to include brine production and injection wells.

We have discussed this issue with the AO&GC staff, and they do not have any issues adding our wells to their General Rule B-17. They would also not have any issues supporting the addition of our wells to Regulation 34.

Response 5: As ADEQ has previously permitted reserve pits for brine production and injection in the same manner as pits associated with oil and gas exploration, ADEQ does not have any objection to this revision. The title of Chapter 2 of Regulation No. 34 will be updated to include brine production and injection wells and Reg.34.202(A) will be updated to include brine production and injection wells.

Comment 6: Reg. 34 implements a “permit by rule” for pits associated with oil and gas production such that if a pit is in compliance with AOGC Rule B-17, it is deemed to have a permit by rule under proposed Reg. 34. This approach seems a reasonable way to avoid duplication (and potentially different) regulatory requirements by AOGC and by ADEQ for the same activity. AEF supports this regulatory objective and the use of the proposed permit by rule to accomplish this objective – for pits associated with oil and gas production.

Response 6: ADEQ acknowledges this comment.

Comment 7: Proposed Reg. 34.101 identifies the “Purpose” of the rule and proposed Reg. 34.103 identifies the “Scope” of the rule in terms that are much broader than the announced purpose and scope of the rule. The “Purpose” and “Scope” of the rule is to adopt standards for all activities that will “result in wastes being placed in a location where it is likely to cause pollution of the waters of the state.” Given the broad interpretation given to the term “waters of the state” (i.e. any accumulation of water), these statements of Purpose and Scope would potentially encompass practically every outdoor activity at every residential, commercial or industrial facility in the state. The “Purpose” and “Scope” in Reg. 34.101 and 34.103 should be revised to reflect the limited purpose and scope of this rule (pits associated with oil and gas production) to avoid any confusion or unintended consequences.

Response 7: ADEQ disagrees. The purpose of Regulation No. 34 is to provide a regulatory foundation for the issuance of state water permits. ADEQ has the authority to issue those permits under the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-203, which states, “The [ADEQ]...is given and charged with the power and duty to issue, continue in effect, revoke, modify, or deny permits, under such conditions as it may prescribe...to prevent, control, or abate pollution....” At this time, the Regulation No. 34 only includes standards for pits associated with oil and gas wells. If standards regarding other types of state permits are ever included in the regulation, the public will be able to comment on those specific requirements.

Comment 8: Friends of the North Fork and White Rivers thanks the Commission for the opportunity to comment on this proposed Rule regarding disposal and containment of waste from the drilling and fracking operations being conducted across Arkansas. We have been

extremely concerned about the potential for watershed, ground water, stream and aquifer pollution by waste from the oil and gas industry drilling and fracking operations. We do not fully understand the full extent of what Regulation 34 will cover. For instance, will this regulation apply to the disposal of waste and wastewater which is hauled away from the drilling sites and then disposed of elsewhere if wastewater is sprayed over land surface? Will this regulation cover the retention and ultimate disposal of waste from frac-sand mining operations where chemicals/flocculants are going to be used to rapidly settle particulates washed during processing from the final product? Will this regulation also cover disposal of chemically laden byproducts from resin coating plants which are coating frac-sand for the oil and gas industry use?

Response 8: The provisions of Regulation No. 34, as proposed in this rulemaking, will only apply to pits construction during the drilling, completion, or testing of an oil, gas, or oil and gas production well, Class II Disposal Well, and Class II Commercial Disposal Well. A list of the different types of pits covered by the regulation can be found in proposed Reg.34.201. The proposed rule does not apply to land application of drilling wastes or waste disposal from frac-sand mining or processing.

Comment 9: Waste from these operations contains chemicals and heavy metals that can and have caused great harm to humans and animals. Therefore we feel it is extremely important that these pits or ponds if you will, are heavily regulated. We believe Rule 34 should cover all drilling/fracking and other fluid disposal pits whether they are located on the same property as the drilling site, or disposal of fluids and waste is to off site (sic) disposal pits.

Response 9: The provisions of Regulation No. 34, as proposed in this rulemaking, would not be appropriate from off-site waste disposal pits. Currently, those pits and associated facilities are regulated under individual state water permits, not under general permits or permits by rule. Pit construction, operation and closure requirements are included in each of those individual permits. In the future, Regulation No. 34 (as the state water permit regulation) may include specific requirements for those activities and the public will have an opportunity to comment on those requirements at that time.

Comment 10: Waste ponds/pits must be constructed [in] such a manner that there is no possibility that they will ever leak or can overflow into the watershed. Facility operation procedures for acceptance, transfer and transport of industry waste must be heavily regulated. Past experience across the Nation and in Arkansas clearly demonstrates that leaking/failed and improperly constructed pits have caused severe health problems where the pollutants stored in these ponds leach into the groundwater and aquifers. Pond failures and illegal discharges have resulted in damage to Arkansas' waters, its aquatic life and habitat and other wildlife. Inattention to protection of pond/pit liners during any cleaning operations to remove sediment have resulted in damaged liners which were not repaired, allowing dangerous chemicals to leach into the ground and flow into our waterways. In some cases the operators simply didn't even bother to apply for permits or install liners.

Response 10: ADEQ acknowledges this comment. ADEQ believes that Regulation No. 34, in conjunction with AOGC Rule B-17, will protect water quality.

Comment 11: In Arkansas, all the surface disposal waste facilities in operation prior to 2009 have been cited for violations after ADEQ initiated inspections at all the permitted facilities. These facilities had leaks, illegal discharges or other direct violations regarding storage

discharge and/or acceptance of fluids which were not allowed. Clearly the industry cannot be trusted to self regulate. In...some cases, this has led to serious pollution of nearby creeks and damage to the aquatic environment. Two of the facilities were permanently closed as a result of the ADEQ findings. Since ADEQ has very limited inspection staff, it is critical that funding of ADEQ be continued under the permitting fees currently in place. In fact, Friends recommends that the permitting fee be increased substantially so that ADEQ can increase the number of facility inspections each year.

Response 11: ADEQ acknowledges this comment. All permit fees are promulgated through Regulation No. 9, Fee Regulation, which is not part of this rulemaking.

Comment 12: *Friends* is also concerned about the potential pollution from improperly constructed and/or maintained frac-sand mining/processing wastewater pits and ponds. Already a containment pond failed in Izard County causing serious silting of a small creek channel and aquatic life kill. *Friends* believes these ponds should also be specifically included under Rule 34.201 given that frack sand is a key component used to achieve gas and oil well production.

Response 12: Frac-sand mining/processing wastewater pits and ponds are regulated in another manner from the pits associated with oil and gas exploration and productions. Some of those activities may actually be regulated as point source discharges under the National Pollutant Discharge Elimination System (“NPDES”). As such, requirements for those pits and ponds are not appropriate for Regulation No. 34, which is established for state water permits issued under the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-203.

Comment 13: Fines imposed for violations where fluids are found in waters of Arkansas, or where human or wildlife health has been impacted must be substantial. As of this date fines relative to the profits these companies are making are a mere pittance and do not serve as a discouragement to bad practices or actors in the industry.

Response 13: ADEQ acknowledges this comment. Fines are based on the provisions of the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-103 and APCEC Regulation No. 7.

Comment 14: As currently proposed Rule 34, like its counterpart Arkansas Oil and Gas Commission (AOGC) rule B 17, does not sufficiently safeguard against leaks from waste pits. Rule 34 relies heavily on AOGC’s enforcement and regulatory powers under Rule B 17. ADEQ would no longer receive the \$300 per pit permit fee required under the old permit, significantly limiting ADEQ enforcement. This is unacceptable.

Response 14: ADEQ acknowledges this comment. Under the authority granted to it by the Arkansas Water and Air Pollution Control Act, ADEQ will retain final enforcement authority over any activities that cause or are likely to cause pollution to waters of the State. (Ark Code Ann. §§ 8-4-217(a)(1)-(2)). Through this cooperative permitting process, ADEQ will be able to utilize the staff of AOGC to spot and report violations at the pit sites. This program will actually increase the resources available for oversight in the field.

Comment 15: ADEQ should take a stronger protective position than AOGC has done. ADEQ should stand firm protecting the public at a time when AOGC concentrates on industry’s needs.

Response 15: ADEQ acknowledges this comment. ADEQ believes that this permitting procedure will join the resources of two agencies in addressing water quality issues that concern the public.

Comment 16: Other states require higher standards; Arkansas shouldn't be satisfied with less.

Response 16: ADEQ acknowledges this comment. ADEQ believes that this permitting procedure will join the resources of two agencies in addressing water quality issues that concern the public.

Comment 17: ADEQ's should exert its authority regarding water and air protection over the oil and gas industry which claims it should only have to answer to AOGC.

Response 17: ADEQ acknowledges this comment. Under the authority granted to it by the Arkansas Water and Air Pollution Control Act, ADEQ will retain final enforcement authority over any activities that cause or are likely to cause pollution to waters of the State. (Ark Code Ann. §§ 8-4-217(a)(1)-(2)). This regulation does not address air quality.

Comment 18: The current rule is vague and makes enforcement difficult.

Response 18: ADEQ disagrees with this comment. This rule clarifies the requirements for two separate agencies. Both of the agencies, the regulated community, and the public will now be able to find just one set of requirements regarding pits associated with oil and gas activities.

Comment 19: Surface owners should be informed of pit development well in advance of construction and consulted to create the least interference possible.

Response 19: ADEQ acknowledges this comment. ADEQ cannot be certain what the commenter means by "interference." ADEQ and the Commission only have authority to address water quality issues through this rulemaking. Issues related to the surface owners' use of their property is outside the scope of the rulemaking authority.

Comment 20: I strongly urging the ADEQ to take the strongest position possible to prevent pollution from natural gas waste and completion pits! The industry must earn a reputation for responsible extraction methods and safe storage procedures. These pits are some of the primary sources of toxic materials getting into ground water and generating air pollution. We in the Natural State want to keep our air and water safe. All life on Earth depends on safe water and breathable air.

Response 20: ADEQ acknowledges this comment.

Comment 21: I want to remind you that it is your duty to do everything in your power to protect the people, ecosystems and natural capital of Arkansas from pollution and harmful activities. I am asking you to adopt strong regulation of waste pits and other hazardous industry activities.

Response 21: ADEQ acknowledges this comment.

Comment 22: The Arkansas Independent Producers and Royalty Owners Association supports this rulemaking.

Response 22: ADEQ acknowledges this comment.

Comment 23: The following comments are directed at the substantive requirements found in Rule B-17. ADEQ will respond to all of the comments with one response below.

- a. The current requirements for liners for pits/ponds are weaker than those used by other states, and generally inadequate for the purposes applied. Pits/ponds should be double lined with HDPE liners and an additional impervious clay liner constructed beneath.
- b. Pits/Ponds must be designed to have a freeboard height capable of providing stormwater storage for a 100 year storm event if the storage/processing facility is an ongoing waste disposal facility. The difference in construction costs for a pit to be able to handle a between a 10 year 24 hour event and a 100 year event are not worth the risk to the waters and environment in the event of a pond overflow. On-site waste storage pits should have a freeboard to handle a 10 year 24 hour event.
- c. The permit fee for construction of the pond and operation of a drilling/fracking fluid or frac-sand processing pond which is going to operate over a period of 10 years or more should be raised to \$5000, all of which should go to ADEQ. This would cover the costs of ADEQ providing a minimum of quarterly inspections of the facilities and perhaps some funds for prosecution of violations.
- d. Adequate fencing must be provided to prevent human and animal access to these poisonous pits/ponds.
- e. Significant distance setback requirements from waterways must be defined to protect streams and neighboring ponds from possible contamination/pollution. A 200 to 500 ft setback should be considered with our preference being toward the higher distance. New Mexico setback requirements include setbacks of 300 feet from watercourses, homes, and schools, and 500 feet from any water supply well.
- f. There should be significant facility and pit siting standards with significant setback requirements from homes, schools, parks and other public facilities.
- g. Rule B 17 does not have sufficiently strong site rehabilitation and monitoring programs and allows some waste to be left on site.
- h. Rule B 17 does not make substantial efforts to encourage or require the use of pitless drilling and closed loop systems that would eliminate much water pollution risk.
- i. Rule B 17 does not appear to require clean-up or lining of existing pits. As a result, it does nothing to begin clean-up of hundreds of pits across Arkansas, many of which are likely already discharging into the waters of the state.

Response 23: These comments related to specific requirements found in AOGC Rule B-17 and are outside the scope the proposed rulemaking. ADEQ understands that the commenters submitted these issues, concerns and suggestions with the hopes that ADEQ and the Commission would propose to expand certain parts of Regulation No. 34 beyond the requirements of Rule B-17. However, to do so would be counter to the reasons Rule B-17 and Regulation No. 34 were proposed by the agencies. As discussed in the Petition to Initiate Rulemaking, the intent of the proposed rules was to give the public one permitting procedure for these pits. By changing Regulation No. 34 to include the issues raised in Comments 23-34, the Commission would negate that intent and, essentially, create two rule structures. This would cause confusion for both the regulated community in knowing what rules to follow and for the public in being able to determine when the rules are not being followed. One set of rules enforced by both agencies provides a cohesive and comprehensive approach for ensuring that water quality is maintained and protected.

In addition, some of comments may have also addressed issues (such as, “frac-sand processing ponds”) that are outside the scope of this rulemaking.

Comment 24: The following comments relate to “off-site waste processing facilities.” ADEQ will respond to all of those comments with one response below.

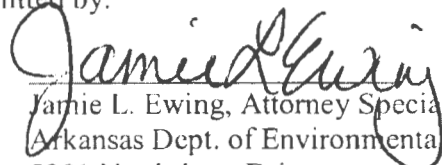
- a. The reclamation bond for such a waste storage facility should be raised to \$2500 per acre or higher dependent on the service life of the facility to allow for the inflationary increase to reclamation costs at the planned facility closing date. Again, this would apply primarily to facilities which are off site from the well drilling areas. It would be preferable that in addition to the reclamation bond no permits would be granted to Limited Liability Corporations since there is an ongoing history of corporations walking away from their reclamation responsibility and leaving the public to pay for damages and restoration.
- b. If a separate off site waste processing facility is going to operate under a surface discharge permit, the property over which the water is to be sprayed must also be fenced and hay or other crops may not be harvested to be sold to the public.
- c. Wastewater entering an off site facility must be tested by an independent laboratory. A quick test by the facility operator must be performed prior to transferring waste from a truck to assure it meets chemical requirements for this type facility. A waste facility which accepts material which is above the chemical limits will be subject to permanent closure.
- d. Test water wells must be required to be drilled on the property for off site processing/storage facilities at locations deemed best by ADEQ for an ongoing monitoring program. Monthly testing of water samples from these wells must be performed by an independent lab to assure groundwater and/or the underlying aquifer quality is not being compromised through operation of these facility.

Response 24: ADEQ believes that these comments are outside of the scope of this proposed rulemaking. If the commenters use the term “Off-site facilities” to refer to commercial waste disposal facilities, those facilities are not covered by AOGC Rule B-17 or the proposed rulemaking. Those facilities are issued individual operating permits by ADEQ and are eligible for coverage under the permit-by-rule.

Comment 25: The definition of “water table” is confusing and inconsistent with other definitions give for this term.

Response 25: The term “water table” is not defined in the proposed sections of Regulation No. 34; therefore, ADEQ believes that this comment refers to the definitions found in Rule B-17. Please see Response 23 regarding issues related to Rule B-17.

Submitted by:


Jamie L. Ewing, Attorney Specialist
Arkansas Dept. of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118