Apache Corporation
Comments on Draft Proposed Rules
Statewide Rules 9, 36, and 46
September 10, 2013

The reordering of the rules so that SWR 9 and SWR 46 to parallel each other is a positive move. The in-rules, tables of requirements and suggested notice language are appreciated, as well.

At the Midland workshop it was noted that the Commission will likely allow on-line filing of MIT tests and charts in the near future. It was also noted that the required notification of H-5 tests would be scheduled on line also. Apache appreciates the Commissions' attempts to modernize and become more efficient. There are concerns about the online scheduling of these tests in the Permian area due to the large number of injection wells and frequent tests required. If each test must be scheduled individually online, and an affirmative acknowledgement of each test is required, this burden will overwhelm Commission staff and the operators responsible for such notifications. Even though it may not be the most efficient, Apache suggests maintaining the current email and fax notification as currently in practice.

§3.9 Disposal Wells.

Page 1, Line 24: The definition of an affected person. The definition is being expanded to include all tracts within one-half mile, not just operators. In that disposal is an activity which does not affect oil and gas rights, and can be done only with a surface use agreement, the notice to unleased mineral interests is not appropriate. Apache's recommendation is to remove the unleased mineral interest from the definition. In any case, if this comment is not accepted, there is a need to specify which owners of record and unleased mineral interests are included, Line 24 should read "owners of record of unleased mineral interests <u>for tracts located within one-half mile of the proposed disposal well site</u>."

Page 1, Line 25: Define "primarily" as used to describe a commercial disposal well. Or, eliminate the proposed definition of a commercial well and keep the definition as has been per RRC policy for years: 1) water must be trucked, and 2) disposal must be for a fee. Changing the definition will create unnecessary problems, expense, and permitting burdens for wells which are shared disposal wells on leases and waterfloods. Apache does not believe it is the Commission's best interest to restrict "community" or "field" disposal wells shared by operators locally. Apache suggests the definition of a commercial disposal well include "partially or wholly trucked" and "in exchange for a fee or other consideration."

Page 2, Line 7: Change "and" to "or" in the definition of owner of record, to read "...appraisal district records, <u>or</u> probate records." This more closely reflect practice in oil and gas transactions.

Page 3, Line 21: Apache has concern about the definitions of separation requirements. There is no definition of impermeable strata, and the "continuous" requirement is nebulous. In many areas it is hard, if not impossible, to identify a complete 100 ft continuous impermeable zone. There are no technical standards to judge what constitutes an impermeable strata. Further, no exception process is given.

Page 4, Line 30: While understanding the reason and desirability of a drilling permit for an applied-for disposal well, it is suggested that a permit be withheld until a drilling permit is issued, but allow an application to be processed pending the drilling permit. The delays in obtaining disposal permits are often 3 to 6 months, while a drilling permit can be issued in several days. If the Commission is requiring a drilling permit for the purpose of tracking an application and permit, Apache suggests the Commission utilize the UIC number that is currently assigned to each application and permit.

Page 5, Line 2: The requirement of an open-hole log from TD to ground surface, is not needed from a technical standpoint. Obtaining open-hole logs in surface holes can be problematic for several reasons, including hole size and logging tool incompatibility, mud program issues, hole instability, etc. All formation information necessary can be obtained by a cased-hole log with gamma ray information. It is recommended that this requirement be changed to allow cased-hole logs. This requirement also has language allowing exceptions, see comments below for Page 5, Line 10.

Page 5, Line 8: See comment concerning open-hole logs above.

Page 5, Line 10: This section is intended to allow an exception to the log requirements of Page 5, Line 2. Rather than require an applicant to request an exception, it is suggested the opposite approach is made: allow the RRC to request additional logs, including open hole logs, in the permitting process for new wells in situations where the lack of geological or groundwater information makes such steps necessary or prudent. This eliminates the burden of an exception request in 95% of the applications.

Page 5, Line 20: The required map should not include unleased mineral interest owners. See the comments regarding notice provided earlier. Apache suggests deleting the requirement to provide unleased mineral interest owners.

Page 7, Line 10: Notice requirements as written will require both a certified, return receipt notice and a regular, first-class mailed notice. This is excessive. Even for the Commission's own notices, a certified mailing is considered sufficient, whether it is delivered, received, or not. It is the responsibility of the recipient to sign for and pick up their mail. This should be revised to allow only certified mail, properly addressed and postage affixed, to be sufficient notice. Additionally Apache suggests the notice period be changed to 60 days, to conform with suggested comments in later sections.

Page 9, Line 2: Suggest 60 days, see comment above.

Page 9, Line 17: Requiring GWCD notification may be required by statute, as they are a subdivision of government. Disposal activities are, by definition, not affecting underground water resources and requiring notice to GWCD serves only to provide opportunity for the GWCD to protest on grounds which, if a case were to go to hearing, would be ruled inappropriate and disallowed. This section should be rewritten in such a manner to require notice to the local GWCD while protecting the applicant from protests from parties with no standing.

Page 10, Line 1: the 30 day limit on publication dates is not sufficient. Obtaining the complete publisher's affidavit and tear sheet is often time consuming, and 60 days would be a more appropriate limit to publication.

Page 13, Line 25. In transferring a commercial disposal well permit, Apache agrees approval by the Director is appropriate. We would suggest making this review within 15 days, otherwise the permit will transfer by default.

Page 14, Line 27: Orphan well prohibition. The prohibition of permit issuance in cases where an orphan well is identified it too restrictive. This almost seems a way to force plugging liability onto operators not now legally responsible for orphan wells, rather than then Commission utilizing its abandoned well plugging program and budget to address these wells. If it can be shown the well does not present a threat to groundwater resources, a permit should be issued. The fact that a well is considered "orphan" does not affect the well's impact on a new permit application.

Page 15, Line 15: Is an area of review variance sufficiently compelling to require publication? Notice may be appropriate, but publication is not needed.

Page 17, Line 23: Providing a GWCD notification, see comment above for notifications to GWCDs.

Page 18, Line 20: The absolute prohibition of a disposal well permit in cases of insufficient surface casing should be reconsidered. Apache suggests this section be revised to allow permitting wells, properly completed at the time of the original completion, that may not be cased sufficiently under modern standards. Such cases should be handled much as the variance to the area of review.

Page 20, Line 2: Same comments as above regarding open-hole logs.

Page 23, Line 33: Test frequency. I would suggest that every <u>commercial</u> disposal well, regardless of wellbore construction, be required to be tested at least annually. If the well construction deems it advisable, a semi-annual test may be prudent.

Page 25, Line 18: In noting the prohibition against additives which may affect validity of the pressure test, I would suggest the following additional language: The use of gels, polymers, mud, thickening agents, or any other substance which increases the viscosity of the annular fluid is prohibited.

Page 26, Line 26: What is the basis and necessity for changing the required MIT frequency from one year to three years? Three years is not often enough, in any case, as these annual test requirements are for wells with insufficient cement, inadequate surface casing, or a combination of mitigating factors. The annual test should remain as written now.

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§3.36. Hydrogen Sulfide Operations.

Page 28, Line 6: Suggest adding "disposal" as an operation which applies to SWR 36.

Page 33, Line 16: Change "...contingency plan and make appropriate amendments as necessary at least once a year, upon public infringement..." to read "...contingency plan and make appropriate amendments as necessary, upon public infringement..." This more accurately reflects operational practice in protecting the public.

Various Pages: There is inconsistency in the use of the terms "area of influence" and "area of exposure" related to SWR 36 and SWR106. Apache suggests keeping with SWR 36's accepted terminology and using "area of exposure."

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§3.46 Fluid Injection into Productive Reservoirs.

Page 37, Line 24: Need to specify which owners of record and unleased mineral interests are included, Line 24 should read "owners of record of unleased mineral interests for tracts located within one-half mile of the proposed disposal well site."

Page 37, Line 25: Define "primarily" as used to describe a commercial disposal well. Or, eliminate the proposed definition of a commercial well and keep the definition as has been per RRC policy for years: 1) water must be trucked, and 2) must be done for a fee. Changing the definition will create unnecessary problems, expense, and permitting burdens for wells which are shared disposal wells on leases and waterfloods.

Page 38, All of (2) Permit Expiration: It would seem that the references to "disposal" well permits should reference "injection" well permits, instead, in multiple instances.

Page 43, Line 7: Notice requirements as written will require both a certified, return receipt notice and a regular, first-class mailed notice. This is excessive. Even for the Commission's own

notices, a certified mailing is considered sufficient, whether it is delivered, received, or not. It is the responsibility of the recipient to sign for and pick up their mail. This should be revised to allow only certified mail, properly addressed and postage affixed, to constitute sufficient notice.

Page 45, Line 1: Requiring GWCD notification may be required by statute, as they are a subdivision of government. Disposal activities are, by definition, not affecting underground water resources and requiring notice to GWCD serves only to provide opportunity for the GWCD to protest on grounds which, if a case were to go to hearing, would be ruled inappropriate and disallowed. This section should be rewritten in such a manner to require notice to the local GWCD while protecting the applicant from protests from parties with no standing.

Page 50, Line 15: Orphan well prohibition. The prohibition of permit issuance in cases where an orphan well is identified it too restrictive. This almost seems a way to force plugging liability onto operators not now legally responsible for orphan wells, rather than then Commission utilizing its abandoned well plugging program and budget to address these wells. If it can be shown the well does not present a threat to groundwater resources, a permit should be issued.

Page 51, Line 18: Is an area of review variance sufficiently compelling to require publication? Notice may be appropriate, but publication is not needed.

Page 53, Line 13: Providing a GWCD notification, see comment above for notifications to GWCDs.

Page 55, Line 28: The requirement of an open-hole log from TD to ground surface on newly drilled wells is not reasonable. Obtaining open-hole logs in surface holes can be problematic for several reasons, including hole size and logging tool incompatibility, mud program issues, hole instability, etc. All formation information necessary can be obtained by a cased-hole log with gamma ray information. It is recommended that this requirement be changed to allow cased-hole logs only in cases where the data is truly necessary.

Rather than require an applicant to request an exception, it is suggested the opposite approach is made: allow the RRC to request additional logs, including open hole logs, in the permitting process for new wells in situations where the lack of geological or groundwater information makes such steps necessary or prudent. This eliminates the burden of an exception request in 95% of the applications.

Page 59, Line 26: Test frequency. I would suggest that every <u>commercial</u> disposal well in a productive formation, regardless of wellbore construction, be required to be tested at least annually. If the well construction deems it advisable, a semi-annual test may be prudent.

Page 61, Line 9: In noting the prohibition against additives which may affect validity of the pressure test, I would suggest the following additional language: <u>The use of gels, polymers,</u>

mud, thickening agents, or any other substance which increases the viscosity of the annular fluid is prohibited.

Page 62, Line 18: What is the basis and necessity for changing the required MIT frequency from one year to three years? Three years is not often enough, in any case, as these annual test requirements are for wells with insufficient cement, inadequate surface casing, or a combination of mitigating factors. The annual test should remain as written now.

Page 62, Line 28: Area permits are so onerous that none have ever been approved in Texas. A complete review of the requirements for issuance of an area permit is in order so that they may be a realistic option in high-density waterflood areas.