

Class I/Class II Overlap: Competition for Limited Injection Zones

For consideration:
Marshall, Texas Area, Rodessa Fm

- Class I Wells – Pergan Marshall, LLC
- Class II Wells – Various for salt water disposal

Pergan operates Class I wells for disposal of hazardous and nonhazardous wastewater from manufacture of organic peroxides.

- The Texas Commission on Environmental Quality (TCEQ) regulates Pergan's Class I wells by permit for protection of fresh water and USDWs.
- Pergan has an EPA approved petition for exemption of its Class I wells from the hazardous waste land disposal restrictions based on the company's demonstration of no migration of hazardous waste from the authorized injection zone.
- The Railroad Commission of Texas (RRC) regulates Class II salt water disposal wells related to exploration and production of oil and gas by permit for protection of fresh water and USDWs.

2008

- Pergan reported that the required annual injection zone pressure test showed a significant pressure increase without any corresponding increase in injection rates and volumes by Pergan.

2011

- Pergan notified TCEQ, RRC, and EPA of its finding of several new Class II salt water disposal wells in the Rodessa Fm in the Marshall area, but outside the normal Class I area of review radius, which started injection in 2007-2008.

2012

- Pergan filed a protest with RRC on the proposed permit for a new Class II salt water disposal well in the Rodessa Fm.
- After a hearing, the RRC denied the application for Class II permit.

2011 -2012

- In meetings with Pergan, TCEQ UIC program staff encouraged the company to develop alternatives to waste water injection in the Rodessa.
- TCEQ letter (March 2012)to Pergan required further analysis and modeling of pressure build up, analysis of artificial penetrations in the area of review, and an updated corrective action plan to prevent USDW endangerment at artificial penetrations.

2012

- RRC directed Class II salt water disposal well operators in Shelby, Panola, and Harrison counties to perform and submit bottom hole pressure measurements by July 2012.

Sept 2012

- Pergan submitted revised pressure modeling including data on 8 SWD wells in the Rodessa within 15 mile radius.
- Identified several artificial penetrations which could become locations of unauthorized fluid movement if noted pressure trends continue.

Summer 2013

- EPA(Region 6) met with Pergan concerning the pressures in the Rodessa Fm.
- EPA staff encouraged Pergan to develop alternatives to wastewater injection in the Rodessa Fm.

Fall 2013

- Pergan met with state legislators to discuss the problems of Class I and Class II wells operating in the Marshall area, the lack of good alternatives for the company's wastewater management, and the resulting threats to jobs and the local economy.

Pergan's most recently announced plans:

- Cease injection in the Rodessa.
- Treat waste steam to remove hazardous characteristics and minimize volume.
- Inject the plant's waste water into the deeper Pettit Fm.
- Pergan will need to appropriately amend the well permit with regard to the injection interval and zone specification and the wastestream authorization.
- Pergan will need to meet any EPA and TCEQ requirements for monitoring and assurance of containment of hazardous waste already injected in the Rodessa Fm.

General questions for discussion:

- What factors are driving increased interstate transportation of oil and gas waste (produced water) for disposal in commercial Class II wells?

Response: Increased oil and gas production in the Haynesville-Bossier trend in east Texas and Louisiana, with adoption by Louisiana of stepped-up regulatory requirements for permitting and operation of commercial salt water disposal wells.

General questions for discussion:

- How should responsibility be apportioned between well operators for keeping injection zone pressure below levels of possible hazardous waste migration from injection zone and USDW endangerment?
- How should limits on injection volume and pressure be determined, coordinated, and enforced by regulatory agencies with dissimilar AOR and other rule requirements, but with overlapping jurisdictions in the same locale?

Response: Comments mostly from TCEQ, RRC, and EPA staff attending the session generally conceded a lack of easy answers for either question, but agreed on the need for good communication and cooperation between the three regulatory agencies and well operators, ideally before problems occur and particularly after problems are identified. The problem in the Marshall area was recognized as primarily a result of different area of review specifications in Class I and Class II rules.

General questions for discussion:

- Under state or federal law, do operators of existing permitted wells have precedence in use of a permitted injection zone over persons wanting to expand capacity or operate new injection wells in the zone?

Response: By general consensus, this is a legally complex issue. In Texas, permit issuance is not considered to convey a property right or exclusivity in use of a specified portion of the subsurface for injection of a guaranteed volume of fluid. UIC rules do not address this question beyond the specific requirement that injection wells must not be allowed to pollute fresh water or USDWs. Claims of one well operator against another would be civil matters for possible litigation.

General questions for discussion:

- Could operators of existing Class I hazardous waste wells be subject to EPA termination of LDR exemptions as a consequence of increased injection zone pressures attributed mostly to Class II injection?

Response: Yes, based on 40 CFR Part 148. The responsibility of the Director (EPA) for such termination of LDR exemptions appears to be applicable even if sufficiently adverse subsurface conditions, e.g., pressure, are attributable largely to other area wells.

For questions or comments:

- Contact

Ben Knape

16018 Webb Ln

Austin, TX 78734

512-669-3218

benknape@gmail.com