UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

June 13, 2023

Danny Sorrells Director, Oil
and Gas Division
Railroad Commission of Texas
Post Office Box 12967
Austin, Texas 78711-2967

Dear Mr. Sorrells:

This letter transmits EPA's end-of-year evaluation (EOY) of the Texas Underground Injection Control (UIC) program implemented by the Railroad Commission of Texas (RRC) for State Fiscal Year 2022.

The Railroad Commission continues to embrace challenges in the UIC program and adjust to future opportunities in a changing energy environment. We wish to thank you and your staff for your work in protecting underground sources of drinking water from underground injection activities under your authority. We appreciate the continued attention to issues related to permitting disposal wells in seismically active areas of the Permian Basin and the continued attention on problematic areas in East Texas resulting in a consistent system for evaluating seismic hazards near disposal wells and application of appropriate permitting conditions. We also note your efforts toward continued improvement of data reporting and recordkeeping at the Commission through special grants. As we continue to see an increased focus on Class VI Carbon Capture and storage projects while the RRC pursues Class VI primacy, EPA encourages continued close collaboration between our staffs.

We thank you and your staff for your efforts in the implementation of this challenging program. If you wish to discuss any aspect of this EOY evaluation, please call me at (214) 665-7101, or you or your staff may contact Mr. James R. Brown at (214) 665-3175. If your staff have specific questions about UIC grant performance, please contact Mr. Michael Vaughan at (214) 665-7313 or Mr. Arnold Bierschenk at (214) 665-7435 for questions regarding EPA's program oversight.

Sincerely,

CHARLES MAGUIRE
Digitally signed by CHARLES MAGUIRE
Date: 2023.06.14 11:18:51 -05'00'

Charles W. Maguire
Director
Water Division

Enclosure

cc: Paul Dubois, Assistant Director, Technical Permitting, w/encl.
Ivan Salas, RRC UIC Manager, w/encl.

FISCAL YEAR 2022
EPA REGION 6 END-OF-YEAR EVALUATION RAILROAD COMMISSION OF TEXAS
UNDERGROUND INJECTION CONTROL PROGRAM

Introduction

Under Safe Drinking Water Act (SDWA) Section 1425 authority, EPA approved the Railroad Commission of Texas (RRC) Underground Injection Control (UIC) primacy enforcement responsibility for Class II oil and gas related injection wells in 1982. EPA later approved RRC's primacy UIC program for Class III brine mining wells and energy related Class V injection wells under SDWA Section 1422.

As part of the EPA/RRC primacy agreements, EPA Region 6 retains oversight responsibilities that includes an annual end-of-year evaluation. This annual oversight report summarizes RRC activities during State Fiscal Year (FY) 2022 in fulfillment of its primacy program and Federal UIC grant and workplan commitments. The Texas State Fiscal Year begins on September 1 and ends on August 31 each year.

FY2022 Grant Application/Workplan

Pursuant to receiving federal financial assistance through SDWA Part C authorization, the RRC submits, and EPA approves an annual grant application and associated workplan that outlines goals, expected milestones for key program activities, and estimated funding toward achieving those goals and milestones. The grant application for FY2022 was approved by Region 6 on July 27th, 2021. The FY2022 workplan was approved by Region 6 on July 27th, 2021.

FY2022 Grant Award and Allocation

The federal FY2022 grant allotment for the Texas Railroad Commission's (RRC) UIC program was $813,960 in UIC programmatic funds; these funds are determined annually based on the annual well inventory numbers submitted by State UIC Primacy programs upon EPA request near the end of each calendar year. There were also $24,200 in TX RRC UIC Special Project funds awarded in FY2022. The grand total Federal amount awarded to the FY2022 TX RRC UIC grant was $838,160 ($813,960 UIC programmatic funds + $24,200 in UIC Special Project funds).

Grant Deliverables

Pursuant to EPA regulations and policies, environmental programs conducted on behalf of EPA will establish and implement effective quality systems. Correspondingly, the State program's Quality Management Plan (QMP) must be updated annually, and the Quality Assurance Project Plan (QAPP) must be updated every three years (at the least). If both the QMP and QAPP are current and valid, EPA requires each state to certify annually that both plans are current by submitting updated signatory pages and organizational charts as applicable.

Table 1 includes the workplan due dates and date of receipt for documents submitted by RRC as specified in the grant workplan.

The FY2023 UIC QAPP [QTRAK #23-074] was approved by Region 6 on December 13th, 2022, and expires on December 15th, 2025.
The FY2022 UIC QAPP [QTRAK #22-047] was approved by Region 6 on November 18th, 2021 and expired on December 16th, 2022.

The FY2023 QMP [QTRAK #23-072] was approved by Region 6 on December 12th, 2022, and expires on December 2nd, 2023.
The FY2022 QMP [QTRAK #22-049] was approved by Region 6 on November 19th, 2021, and expired on December 2nd, 2022.

Table 1. Grant deliverables in FY2022 UIC Workplan.

Grant Deliverable	**Due Date**	**Date Received**
Quarterly Reports (EPA Forms 7520)	04/30/2022; 10/31/2022	Submitted on time
FY2022 Grant Application FY2022 Grant Workplan	The application/workplan were both due on 06/18/2021	Application received-6/07/2021 Approved – 07/21/2021 Workplan received-06/07/2021 Approved – 07/21/2021
Final Financial Status Report (FY22)	11/30/2022	11/16/2022
Annual UIC Program Report (FY2022)	11/30/2022	12/16/2022
Update on Program, Regulatory or Statutory Changes	11/30/2022	12/16/2022

	Table 1. (cont) Grant deliverables in FY2022 UIC Workplan (cont.)	
FY2022 & FY2023 Annual QMP/UIC QAPP Updates*	FY2022 QMP	Approved- 11/19/2021 Expires- 12/02/2022
	FY2023 QMP	Approved- 12/12/2022 Expires- 12/02/2023
	FY2022 UIC QAPP	Approved-11/18/2021 Expires- 12/16/2022
	FY2023 UIC QAPP	Approved 12/13/2022; Expires 12/15/2025
UIC Well Inventory for FY22	01/01/2023	Submitted 12/16/2022 - Finalized 01 / 4 / 2 0 2 3

* The Quality Management Plan (QMP) is updated annually; and the Quality Assurance Project Plan (QAPP) is updated every three years (at least).

Inventory
The State UIC program annual inventory numbers are usually submitted during or near December each year. These values (along with values reported by other State and EPA UIC programs) are used by EPA to calculate the annual grant funds allocated to each State UIC program.
Since inception, the RRC UIC program remains the nation's largest Class II program by far based on the total number of Class II injection wells reported annually. Injection wells used in natural gas storage operations are also regulated by the RRC but are specifically excluded from regulation under the SDWA and not subject to EPA UIC oversight.

At the end of FY2022, the Commission's inventory of UIC wells was 52,586. This is a decrease of approximately 1.3% from September 30, 2021. See the table below for the inventory of UIC wells by UIC class.

UIC Class	Well Inventory 2021	Well Inventory 2022	% of Total
IIR – Secondary Recovery / EOR	38,565	37,851	72%
IID - Disposal	14,005	13,585	26%
IIH – Liquid Hydrocarbon Storage	525	515	1%
III – Brine Mining	197	214	<1%
Total*	**53292**	**52586**	

* 421 wells in the Total are for Gas Storage

Key Program Activities
This section includes an evaluation of key program measures as reported annually to EPA by the RRC through EPA's Forms 7520 and the annual narrative required in the annual UIC grant workplan.

Permitting
All injections wells authorized by the RRC are authorized through RRC permits. There are no authorized-by-rule injection wells regulated by the RRC.

In FY 2022, the Commission received 1,317 applications for 1,394 disposal and injection wells and issued 1136 permits for 1215 wells. The Commission transmitted 126 applications to Docket Services for resolution through a hearing.

In FY 2022, the Commission received 32 applications for 32 brine-mining wells and issued 5 new permits for 5 wells and amended permits for 18 brine-mining wells. The Commission received 4 new applications and 10 expansion applications for underground hydrocarbon storage. The Commission amended permits for 95 underground hydrocarbon storage wells and issued permits for 17 new underground hydrocarbon storage wells. The Commission received no applications for salt cavern disposal wells in FY 2022. Additionally, the Commission issued 2 amended permits for caprock injection.

The East Texas Field is the only area in Texas for which operators have been granted an exception to the Area of Review (AOR) requirements of Statewide Rule 46. In FY2022, the Commission permitted no new and amended two non-commercial injection wells in the East Texas field.

Commercial disposal wells in East Texas Field are subject to the AOR requirement and special permit conditions that include open-hole logs to verify formation tops, cement bond logs to confirm formation

isolation, and radioactive tracer surveys to ensure confinement. Many logs and surveys are witnessed by district office staff. In FY 2022, the Commission permitted no new wells and amended no permits for commercial disposal wells in the East Texas field.

Class II Injection Well Completions, Mechanical Integrity Testing, Reporting, Inspections, and Enforcement

Well Completions

In FY 2022, the Commission's online system for filing and processing Completion Reports for Oil, Gas, and Injection wells (Forms W-2/G-1) tracked approximately 3,908 completion packets for injection/disposal wells, each of which was reviewed for compliance with the permit. This was almost double the amount from 2021 as covid restrictions eased.

Mechanical Integrity Test (MIT)

One of the most important indicators of ground water protection in any UIC program is the mechanical integrity testing program, or MIT. A properly conducted MIT evaluates the condition of the well casing, tubing, and packer to assure acceptable operating conditions. In most cases, an MIT is a pressure test of the casing/tubing annulus and the associated packer; a test failure may indicate a pathway for injected fluid to move out of the well into an underground source of drinking water. This procedure is required at least every five years for Class II wells; in some cases, more frequent testing is required depending on the completion, age of the well, or other factors determined by the RRC.

In FY 2022, the Commission received and reviewed 22,699 reports for MIT pressure tests of disposal and injection wells. The Commission's district inspectors witnessed 6,743 (40%) of the 16.939 MITs performed by operators on UIC wells. The Commission approved tubing casing annulus credit (TCAM) in lieu of mechanical integrity testing for 3 wells per 16 TAC §3.9 (12) (E) alternative testing methods. Each well was inspected to verify credible wellhead monitoring.

In FY 2022, there were no radioactive tracer surveys and only one temperature survey conducted as testing in lieu of pressure testing. The Commission also received reports of 170 MITs for hydrocarbon storage wells (e.g., nitrogen-brine interface tests) and 163 MITs for brine-mining wells (e.g., static fluid pressure tests).

Annual Reports

The Commission processed 48,141 annual reporting forms (Form H-10) for injection/disposal wells and 829 annual reporting forms (Form H-10H) for hydrocarbon storage and brine mining wells.
The Commission's Form H-10 online filing system has continued to increase the availability of information relating to injection and disposal volumes for public, as well as internal queries. This system also continues to increase the number of annual compliance reviews.

Inspections

The Commission's district offices reported 38,613 routine inspections of injection, disposal, and storage wells in FY 2022. This represents approximately 80% of UIC wells that submitted an annual report were inspected this fiscal year. The district offices continue to maintain a high level of activity in support of the UIC program.

Enforcement

As part of their UIC surveillance, the RRC requires operators of injection wells to complete and submit Form H-10 annually. Form H-10 includes specific well identification information and monthly measurements of injection pressures, injected volumes, and casing/tubing annulus pressures.

In FY 2022, the Commission took a total of 11,122 enforcement actions against operators of disposal and injection wells. Of these actions, 3,305 were notices of violation for failure to timely file the annual reporting forms and 2,694 were notices of violation for failure to conduct a pressure test within the time required by the Commission. The Commission issued seal orders for 148 disposal and injection wells and severed pipeline connections on 1,053 wells/leases due to delinquent annual reporting forms and failure to conduct required MITs.

In FY 2022, the H-10 online system initiated the review of reports and issued 602 notice of violation letters, representing 1,433 violations for 1,048 wells. Of those violations, 886 notice of operating violations were for excessive pressure and volume or injecting out of zone. The Commission issued 31 seal/pipeline severance orders when operators failed to comply with H-10 online system notices of violation.

In FY 2022, the Commission issued 2,344 seal orders and pipeline severances for violations associated with the UIC program resulting in $1,759,000 lease reconnection fees. The Commission signed 21 consent agreements and administrative orders for enforcement actions associated with the UIC program. Enforcement actions resulted in penalties of $253,369 violations associated with the UIC program.

Based on the information provided by the RRC, EPA Region 6 believes the State UIC program compliance surveillance and enforcement program for Class II and III injection wells regulated by the RRC appears effective. Even as permitting activity has increased post- pandemic, a large percentage of the authorized injection wells in Texas were inspected in FY2022 and the RRC also collected and reviewed operator-submitted monitoring information from a large percentage of the Class II well inventory. Those numbers assure more than adequate inspection and monitoring surveillance actions.

A summary of focused oversight matters makes up the remainder of this evaluation.

Current Oversight Issues
In previous program evaluations EPA Region 6 has focused on various UIC program concerns which continue to warrant attention with this evaluation. These include:

Apparent formation pressure increases in East Texas, Fort Worth Basin, and other areas with pressure concerns associated with authorized Class II disposal.

Increased seismic activity related to authorized Class II disposal, particularly in the Permian Basin of West Texas.

Review and amendment of aquifer exemptions in some producing basins.

Increased interest in Class VI CO2 Geosequestration in the State and transition of acid gas well projects for sequestration.

East Texas Field
The East Texas Field is the only area in Texas for which operators have been granted an exception to the Area of Review (AOR) requirements of Statewide Rule 46. In FY 2022, the Commission permitted no new wells and amended permits for 2 non-commercial injection wells in the East Texas field.

Commercial disposal wells in East Texas Field are subject to the AOR requirement and special permit conditions that include open-hole logs to verify formation tops, cement bond logs to confirm formation isolation, and radioactive tracer surveys to ensure confinement. Many logs and surveys are witnessed by district office staff. In FY 2022, the Commission permitted no new or amended commercial disposal wells in the East Texas field. The RRC continues to coordinate with the Louisiana Department of Natural

Resources in instances of concern near the state line including joint calls with both agencies and the EPA as concerns surfaced over pressures in certain wells in Louisiana.

Fort Worth Basin
The Commission imposes additional permitting criteria and conditions for disposal wells in the Fort Worth Basin. The Commission expanded the AOR for these wells to an area of ½-mile radius. In addition, permit applicants for commercial disposal wells or for lease disposal wells proposing to inject over 5,000 barrels per day into formations above the Barnett Shale Formation in the Barnett Shale trend area are required to provide pressure influence information demonstrating that the injected fluids will be confined to the injection interval.

In FY 2022, the Commission received 1 application for injection above the Ellenburger Formation. Permitted injection below the Barnett Shale Formation into the Ellenburger Formation, must be at least 250 feet below the top of the Ellenburger Formation, and is restricted to a maximum of 25,000 barrels per day. In FY 2022, the Commission received applications for 2 new wells to inject into the Ellenburger. The Commission permitted 1 new well for injection into the Viola, Simpson, and Ellenburger Formations in the Barnett Shale trend area. One permit application remained pending as of the end of FY 2022. In FY 2022, the Commission also amended permits for 2 wells permitted to inject into the Ellenburger.

Panhandle
The Commission imposes special conditions requiring bottomhole pressure (BHP) measurements for wells injecting into portions of the Brown Dolomite in the Texas Panhandle region. These wells are also subject to annual mechanical integrity testing. The EPA commends RRC for continuing communication and coordination with Oklahoma regulatory agencies on this ongoing issue in the area.

Harrison, Panola, and Shelby Counties
The Commission continues to study certain areas where formation pressures are elevated. The Commission continued its study of the effects of the increase in disposal well operations in the Rodessa and other formations in Harrison, Panola, and Shelby Counties of Texas related to the development of the Haynesville Shale. In January of FY 2018, the Commission provided the Final Report for the East Texas Formation Pressure Project with EPA's funding assistance. The Joaquin area of northeast Shelby County was studied in detail in conjunction with staff from EPA and Louisiana Department of Natural Resources. A geologic boundary two miles south of Joaquin was identified between an area of elevated pressure and an area of lower pressure. The Commission continues to monitor the formation pressures in the Pergan-Marshall area in Harrison County. Annual bottomhole pressure testing three miles northwest of that area shows normal pressure, and the area 10-13 miles southeast shows elevated pressures. EPA commends the RRC for continued collaboration and information sharing with the Louisiana Department of Natural Resources on near border issues related to pressure conditions in this area.

In FY 2022, the Commission received the results of bottomhole pressure tests from wells in Harrison, Panola, and Shelby counties from the operators of 16 wells. The Commission issued, in these counties, 11 new permits and 8 amended permits with a special condition to monitor bottomhole pressure. In FY 2022, the Commission denied one application for a new permit based on the results of previous formation pressure mapping and continues to closely monitor pressure related issues in the area.

Seismicity
Since the Commission's Statewide Rules 9 and 46 were amended in November of 2014, operators have been required to provide information from the United States Geological Survey (USGS) regarding the locations of any historical seismic events within a circular area of 100 square miles centered around a proposed disposal well location. This requirement applies to all new disposal wells and similar amendment applications where pressure, volume, or interval changes are requested. During FY 2019, the Commission

Seismologist and UIC staff produced a guidance document (SOG), titled "Permitting Salt Water Disposal Wells in Seismically-Active Areas of the Permian Basin". The SOG provided UIC staff with a consistent system for evaluating seismic hazard near a disposal well and appropriate permitting conditions. EPA is pleased that the SOG has helped standardize disposal well permit application reviews confidence in the review process in areas prone to seismic activity and has also served to increase staff awareness of the issue of seismicity.

For FY 2022, the Commission initiated a seismicity review for 263 disposal well applications. Of those applications, 54 applications remain pending. The Commission issued 3 permits without special conditions and 156 permits with special conditions to mitigate risk of seismic activity. The applicant withdrew or the Commission returned 39 applications. UIC staff transmitted 28 applications to Docket Services for a hearing.

EPA commends the RRC for publishing its Response Plan to Seismic Events in Texas and took several actions in response to unacceptable increases in seismicity. The designation of three separate Seismicity Response Areas (SRAs) after staff's analysis of available information determined that disposal well injection likely contributes to seismic activity in those areas. Staff notified operators within the SRAs that RRC staff were prepared to take specified actions if operators did not act, and seismicity did not decrease within approximately 18 months. Staff also coordinated with operators on the development and implementation of two Operator-Led Response Plans (OLRPs), which met the goals outlined by staff. Updates on SRAs and copies of the Commission staff's Response Plan and OLRPs are provided on the Commission's website: https://www.rrc.texas.gov/oil-and-gas/applications-and-permits/injection-storage-permits/oil-and-gas-waste-disposal/injection-disposal-permit-procedures/seismicity-review/seismicity-response/.

Midland-Odessa (Gardendale) SRA
Between February 2020 and September 2021, six felt earthquakes of magnitude (M) 3.5 or greater occurred in an area of the Midland Basin from northeast Ector County to southwest Martin County known as the Gardendale Seismic Response Area (SRA). These included a M 3.7 earthquake in southwestern Martin County, about eight miles northwest of Midland, on September 7, 2021, and two M 3.6 earthquakes northeast of Odessa in February 2020 and May 2021. Commission staff ultimately requested that: operators of disposal wells with the SRA report daily injection each month to the Tex Net – Injection Volume Reporting Tool; that operators do not complete new disposal wells or return shut-in disposal wells to injection; operators not exceed 10,000 bbl/day disposal into shallow disposal wells; and operators of deep disposal wells suspend injection for at least 18 months.

Most operators complied with Commission staff's request. As a result, seismicity has decreased within the Gardendale SRA. However, two operators did not comply with staff's request and staff are pursuing suspension of their deep disposal well permits within the SRA according to the Commission's rules and procedures. Staff of the Oil and Gas Division and the Commission's Seismologist testified in hearings which were held in April and May of 2022. The result of those hearings is pending.

Northern-Culberson Reeves (NCR) SRA
As of October 2021, 15 magnitude (M) 4.0 or greater earthquakes had occurred in northern Culberson and Reeves Counties since January 1, 2020. Six (6) of these M 4.0 or greater earthquakes were experienced in a one-month period between September 3, 2021, and October 3, 2021, an unprecedented frequency of significant earthquakes in a localized area of Texas. The goal of the OLRP is to reduce high-magnitude seismicity such that the occurrence of 3.5 magnitude earthquakes is decreasing no later than December 31st, 2023.

The first major checkpoint was completed on September 1, 2022, whereby shallow disposal operators had to

install seismometers to be eligible for a higher disposal volume. Additionally, NCR SRA operators have already reduced deep disposal within the NCR SRA and have worked diligently with Commission staff to permit shallow disposal alternatives outside the shallow SRA boundary. An operator of deep disposal wells near the seismicity shut-in one deep disposal well to install a bottomhole pressure sensor. The pressure data collected will help inform decision making and reduce seismicity in the future.

Stanton SRA
On December 31, 2020, a magnitude (M) 4.2 earthquake occurred about 11 miles north of Stanton, Texas, about five miles east of the unincorporated community of Lenorah and 25 miles northeast of Midland. A total of 9 earthquakes of $M \geq 3.0$ have occurred in this area, including a M 4.6 earthquake on December 28, 2021. Saltwater disposal well operators within the Stanton SRA have created a response plan which begins on May 15, 2022. The goal of the OLRP is to reduce high-magnitude seismicity such that there no more 3.5M+ earthquakes after 18 months from the date of response action implementation, approximately May 15, 2024. Stanton SRA operators have already substantially reduced deep disposal within the Stanton SRA. The operator of the deep disposal well nearest the seismicity shut-in their well to install a bottomhole pressure sensor. The pressure data collected will help inform decision-making and reduce seismicity in the future.

EPA commends the RRC for an increased focus on the issue of seismicity in the Permian basin, efforts to increase the information provided to the existing seismic network and updates of the new seismicity procedures, internal guidance, and permitting actions discussed above. The RRC is encouraged to continue to make public as much of the collected seismic data possible while considering proprietary information of leaseholders.

USDW Reviews & Aquifer Exemptions
In November 2017, the Commission produced a report, "State of Texas Aquifer Exemption Project", and statewide digital maps of aquifer exemptions from oil and gas fields as they were at the time the Commission received UIC primary enforcement authority, April 23, 1982. The Commission also reviewed its UIC inventory to determine if any wells were permitted to inject into aquifers with Total Dissolved Solids (TDS) of 10,000 ppm or less, which would be an Underground Source of Drinking Water (USDW) if not granted an aquifer exemption. Commission staff continues to review UIC permits in Texas to ensure protection of USDWs. If Commission staff discovers a UIC permit that could threaten USDWs, staff determines whether an aquifer exemption should be pursued or if the permit should be modified or terminated. The Texas Water Development Board (TWDB) also reviews aquifer resources in Texas for water quality and may be required to review oil, gas, and injection wells to perform their duties. EPA commends RRC staff for their coordination with the TWDB on any UIC permit that could threaten a potential water resource.

In FY 2021 and 2022, the Commission staff reviewed 9 wells and notified operators that their permits may be injecting into aquifers with TDS $\leq$ 10,000 ppm. Following review, the Commission amended UIC permits for 1 well and terminated UIC permits for 1 well. Operators for 4 wells provided information that showed the wells were not injecting into aquifers with TDS $\leq$ 10,000 ppm or that the aquifers were exempted. Reviews for 3 wells remain pending.

In FY 2022, the Commission notified EPA and EPA provided concurrence for the expansion of 1 aquifer exemption for an enhanced oil recovery project. The RRC should continue to work closely on any reviews or revisions of aquifer exemptions in the future. Region 6 appreciates the communication on historical aquifer exemptions and the renewed focus of the RRC on awareness when processing new permits or modifications to existing areas.

Class VI Geosequestration wells

There has been an increased level of activity in the State and nation regarding the geosequestration of CO2 for climate mitigation purposes and the reduction of carbon footprint for certain industrial operations. There have also been legislative actions designed to consolidate authority for permitting potential wells under the RRC. In 2021 Texas Governor Greg Abbott signed House Bill 1284 ("HB 1284"), which was introduced along with its Senate companion, SB 450, during the state's 87th legislative session. The bill granted the RRC sole jurisdiction over Class VI Injection Wells and carbon capture, use, and sequestration ("CCUS") activities in Texas. A Class VI UIC permit is required prior to drilling and operating a Class VI well for CCUS operations. While the RRC currently does not have authority or primacy to issue Class VI permits they have been directed by rule to seek such primacy. EPA appreciates that the RRC has worked closely with Region 6 in the initial stages of work to develop rules necessary to obtain State authorization. EPA urges the RRC teams to maintain close communication with the Region and Headquarters during the application and development process. Meanwhile, final authorization to utilize such wells will still come from the EPA. Communication on existing applications and projects in the State will still be required and crucial to moving projects forward.

Special Projects
EPA has previously awarded special grant funds to the Commission to improve data quality and availability.

Special Grants
EPA awarded special grant funds for FY 2021 to the Commission to scan underground hydrocarbon storage files, including permit applications, MITs, and sonar reports, and injection/disposal well MITs. As a result, all hydrocarbon storage and brine mining permit, MIT and SONAR documents have been scanned in and have been publicly viewable online as of January 2022. All hydrocarbon storage and brine mining documents will be stored publicly online going forward, increasing data accessibility and transparency.

EPA awarded special grant funds for FY 2022 to the Commission to document the existing UIC Permits MS Access database, set up a new Oracle database, and move the data to the new database. This project was completed in September 2022. The project enhanced the UIC Permits database in the following ways: 1) allows each user to see real-time updates from other users; 2) increased read/write speed over network connection; 3) increased reliability and security from our IT Services Division. EPA appreciates the use of the special grant funds to help increase the reliability and accessibility of RRC data.

The RRC was funded to build new and modify existing information technology systems for FY 2020 and awarded the contract to the Groundwater Protection Council (GWPC). The RRC completed a fit-gap analysis and began development of the new system, which included the new system's infrastructure and oil and gas operator Organization Reports (Form P-5). The Commission deployed Release 1 in February 2022. When fully funded, the new system will completely replace the Commission's mainframe data system over five or more years which should assist in required reporting to the EPA 7520 data system The Commission added staff in FY 2020 to ensure safety, protection of groundwater, and productivity during the transition to this new system.

The RRC deployed a new online H-5 system for submission of MIT data and results in 2020 and ceased accepting hardcopy submission of MITs. All MITs must be submitted in the new online H-5 system. In March 2021, the Commission began requiring top of cement be reported on each casing string on the Form H-5 to facilitate Commission staff with compliance reviews. As a result, Commission staff are updating well completion information and increasing well compliance. Beginning in FY 2023, the Commission will require all Form H-10s to be filed online. This new requirement will decrease program cost and increase annual report review efficiency. EPA encourages increased availability of online information in the interest of public accessibility to permitting and testing data and appreciates the wise use of the provided special funding.

Summary

The Railroad Commission continues to confront significant challenges in the program and increasing workloads. There has been increasing interest in Class VI wells, primacy application status, and overall RRC activity which does not directly involve the underground injection program. EPA continues to have heightened awareness of areas where there remain vulnerabilities of underground sources of drinking water (USDWs) in areas of over- pressured injection formations in East Texas and increasing seismicity in portions of West Texas. The RRC is commended for establishing response areas in relation to seismicity requiring additional monitoring, reduced injection volumes, and increased information sharing.

EPA continues to express concerns regarding increasing operator proposals for the use of Class II H2S wells for Class VI CO2 geologic storage and other proposals which would be less protective of USDW than the Class VI rules. The RRC should evaluate all such proposals to ensure that the permitted activity remains consistent with normal Class II operations for acid gas disposal, and continue to coordinate with EPA Region 6 as in the past when there are questions regarding a specific operator proposal for such projects
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EPA is appreciative that the Railroad Commission continues to actively participate in activities concerning UIC and other groundwater protection issues that involve activities external to the RRC including the SGE/SPE injection induced seismicity conference, the Interstate Oil and Gas Compact Commission (IOGCC), the Groundwater Protection Council (GWPC) forums, and other conferences relevant to protection of ground water. An increased focus on Class VI CO2 projects as well as the pursuit of Class VI primacy will put an additional burden on RRC staff in the future, and EPA suggests the RRC explore ways to augment staff numbers and capabilities to deal with what is likely to be a substantial increase in workload when the Commission obtains primacy for Class VI well permitting. The Commission is to be congratulated on their efforts implementing such a large national program and wisely using their available resources.