

# Texas Commission on Environmental Quality

## Permit Application to Dispose of Waste in a Class I Injection Well

### Instructions

1. A person (individual, corporation or other legal entity) who disposes of waste by Class I well injection regulated by the Texas Commission on Environmental Quality (TCEQ), must obtain a permit pursuant to the Texas Water Code (TWC), Chapter 27, and the Texas Health and Safety Code (THSC), Chapter 361. If the operator of the disposal well is not the owner, the operator shall be the applicant for a permit, and the operator and the facility owner(s) must sign the permit application. The applicant is referred to [Title 30 of the Texas Administrative Code (TAC)](https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=3&ti=30&pt=1)[[1]](#footnote-1) Chapters 1, 3, 33, 37, 39, 40-86, 281, 305, 331, 335 and 350 for technical and procedural regulations.
2. A person may not commence operation of a Class I waste injection well, continue operation of an injection well, begin drilling an injection well, or convert an existing well into a Class I injection well until the Commission has issued an injection well permit and financial assurance requirements have been met. In the case of an application for a Class I injection well permit for an existing well that is permitted by the Railroad Commission of Texas as a Class II injection well, financial assurance requirements must be met prior to issuance of the Class I permit.
3. The application should be delivered to the following mailing address or physical address:

Mailing address:

Texas Commission on Environmental Quality

Attn: Underground Injection Control (UIC) Permits Section

Radioactive Materials Division

Mail Code 233

P O Box 13087

Austin Texas 78711-3087

Physical address:

Texas Commission on Environmental Quality

Attn: Underground Injection Control (UIC) Permits Section

Radioactive Materials Division

Mail Code 233

12100 Park 35 Circle Building F

Austin Texas 78753

Submit one original application and two copies of the application. If the application is for a new permit, renewal or major amendment and the injection well is or will be located in the territory of a groundwater conservation district, the TCEQ is required to send a copy of the application to the district in accordance with the requirements of TWC §27.017(b). If this is applicable to your facility, submit a third copy of the application to the TCEQ in a box suitable for shipping with a postage paid shipping label addressed to the groundwater conservation district. The TCEQ will ship the application to the groundwater conservation district. To determine if the injection well is or will be located in a groundwater conservation district refer to the [Texas Groundwater Conservation District Map](https://www.twdb.texas.gov/mapping/doc/maps/GCDs_8x11.pdf)[[2]](#footnote-2) on the Texas Water Development Board (TWDB) website. Please note that Subsidence Districts are not Groundwater Conservation Districts. To obtain a point of contact and mailing address for the district refer to the [Groundwater Conservation Districts Contact List](https://www.tceq.texas.gov/downloads/groundwater/gcd/gcd-contact-list.pdf)[[3]](#footnote-3) on the TCEQ website.

Additionally, for all applications provide a flash drive with a copy of the cover letter and application text in portable document format (pdf). If available, include diagrams, pictures, maps, etc. in pdf with high enough resolution to discern the details of the image.

Telephone inquiries:

(512) 239-6466 - Technical - Underground Injection Control Permits Section

(512) 239-0600 - Legal - Environmental Law Division

(512) 239-0300 - Fees - Financial Administration Division

(512) 239-6833 - Registration - Registration and Reporting Section

(512) 239-2335 - Surface Facility - Industrial and Hazardous Waste Permits Section

(512) 239-6239 - Financial Assurance - Financial Assurance Unit

Sections I through IV of the application consist mainly of nontechnical information, as follows: Section I, General Information and Signature Page; Section II, Information Required to Provide Notice; Section III, Railroad Commission Letter; and Section IV, Financial Assurance and Liability. Sections V through XIV comprise the Technical Report which addresses aspects of geology, hydrology, well construction, well operation, reservoir mechanics, wastes and waste management. The technical report must be prepared either by a licensed professional engineer, a licensed professional geoscientist, or a qualified person who is competent and experienced in the field to which the application relates and thoroughly familiar with the operation or project for which the application is being made. [30 TAC §305.45(a)(8)]

An application for more than one well at a site may combine the information into one document. Section I should be completed for each well (unique permit number and well location) and placed at the beginning of the application. The remainder of the application may apply to all wells, with individual wells being addressed where appropriate.

Information submitted should be organized and labeled consistent with the organization of this form. For example, the discussion of regional geology and hydrogeology should be labeled as Section V.A. The application should include a table of contents and be organized in three-ring binders not to exceed three inches in thickness. All pages should be numbered and placed in the binders. Once the application is submitted, any revised text, tables, figures or maps should be clearly marked as revisions and dated. Any new pages, tables, figures, maps or well logs should be clearly marked as additions and numbered or labeled appropriately for insertion into the application. Application revisions and additions must be accompanied by a signature page.

For a new permit application or renewal application [30 TAC §305.65], submit:

1. an original complete application, plus two (2) full paper copies;
2. if located in a groundwater conservation district, a third copy of the application in a box suitable for shipping with a postage paid shipping label addressed to the groundwater conservation district;
3. a flash drive with a copy of the application in pdf; and
4. payment of permit application fees transmitted directly to the TCEQ Financial Administration Division with a photostatic copy of the payment documentation included in the original application.

For a major amendment application [30 TAC §305.62(c)(1)], submit:

1. an original application, plus two (2) paper copies;
2. if located in a groundwater conservation district, a third copy of the application in a box suitable for shipping with a postage paid shipping label addressed to the groundwater conservation district;
3. the application must include Section I, the Signature Page, Section II, plus any other portion of the application that changes as a result of the major amendment;
4. a flash drive with a copy of the application in pdf; and
5. payment of permit application fees transmitted directly to the TCEQ Financial Administration Division with a photostatic copy of the payment documentation included in the original application.

For a minor amendment application [30 TAC §305.62(c)(2)], submit:

1. an original application, plus two (2) paper copies;
2. the application must include Section I.A through M, the Signature Page, Section II, plus any other portion of the application that changes as a result of the minor amendment;
3. a flash drive with a copy of the application in pdf; and
4. payment of permit application fees transmitted directly to the TCEQ Financial Administration Division with a photostatic copy of the payment documentation included in the original application.

For a minor modification application [30 TAC §305.72], submit:

1. an original application, plus two (2) paper copies;
2. the application must include Section I.A through L, the Signature Page, plus any other portion

of the application that changes as a result of the minor modification;

1. a flash drive with a copy of the application in pdf; and
2. payment of permit application fees transmitted directly to the TCEQ Financial

Administration Division with a photostatic copy of the payment documentation included in the original application.

For a transfer application [30 TAC §305.64], submit:

1. an original application, plus two (2) paper copies submitted at least 30 days prior to the proposed transfer date;
2. the application must include Section I.A through L, Section I.P., the Signature Page, Section II and Section IV;
3. the date of the proposed transfer;
4. if the permittee is filing the application, the transferee name, address, and contact name and phone number;
5. if the transferee is filing the application, a sworn statement that the application is made with the full knowledge and consent of the permittee;
6. a flash drive with a copy of the application in pdf; and
7. payment of permit application fees transmitted directly to the TCEQ Financial Administration Division with a photostatic copy of the payment documentation included in the original application.

For an endorsement application [30 TAC §50.145], submit:

1. an original application, plus two (2) paper copies;
2. the application must include Section I.A through L, the Signature Page, plus any other portion

of the application that changes as a result of the endorsement;

1. if the endorsement is changing the permittee name, submit verification from the Secretary of State that a name change alone has occurred;
2. a flash drive with a copy of the application in pdf; and
3. payment of permit application fees transmitted directly to the TCEQ Financial

Administration Division with a photostatic copy of the payment documentation included in the original application.

For an endorsement application to change the mailing address of the permittee [30 TAC §50.145], submit:

1. a cover letter requesting an endorsement to change the mailing address of the permittee;
2. an original core data form, plus two (2) paper copies;
3. the core data form must include information in Items 1 – 7, 11, 15, and 39 – 46, and must be signed by a person authorized in accordance with 30 TAC §305.44;
4. a flash drive with a copy of the application in pdf; and
5. payment of permit application fees transmitted directly to the TCEQ Financial Administration Division with a photostatic copy of the payment included in the original application.
6. Signatures on Application: Refer to 30 TAC §305.44, “Signatories to Applications.” The application must be signed by the applicant and verified before a notary public. An application submitted for a corporation must be signed by a responsible corporate officer of at least the level of vice president. A responsible corporate officer may assign or delegate authority to sign the application to a manager meeting the criteria in 30 TAC §305.44(a)(1). Signing authority may be delegated to a manager position rather than to a specific individual. For a partnership or sole proprietorship, the application must be signed by a general partner or the proprietor, respectively. For a municipal, state, federal, or other public facility, the application must be signed by either a principal executive officer or ranking elected official. If the applicant is not the facility owner, the facility owner(s) must also sign the application. The facility includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of waste.
7. An application will not be processed until all information required to properly consider the application has been obtained. When an application is severely lacking in detail and/or the applicant fails to submit additionally requested information in a timely manner, the application will not be considered to be "filed in accordance with the rules and regulations of the Commission" and may be returned. [30 TAC §281.18] When an application is returned, one copy will be retained to comply with state records laws. [Texas Government Code, Chapter 441, Subchapter L]
8. Fees and Costs

**Fees and Costs**

| Type of Application | Application Fee | Rule Citation 30 TAC | Notice Fee 30 TAC §305.53(b) |
| --- | --- | --- | --- |
| New Class I Nonhazardous | $100 per well | §305.53(a)(1) | $50 |
| New Class I Hazardous | $2000 per well | §305.53(a)(1) | $50 |
| Amendment Class I Nonhazardous | $100 per well | §305.53(a)(1) | $50 |
| Amendment Class I Hazardous | $2000 per well | §305.53(a)(1) | $50 |
| Renewal Class I Nonhazardous | $100 per well | §305.53(a)(1) | $65 |
| Renewal Class I Hazardous | $2000 per well | §305.53(a)(1) | $65 |
| Transfer of Permit1 | $100 per well | §305.64(b)(4) | $50 |
| Minor Modification | $100 per well | §305.53(a) | None [§305.72(b)] |
| Endorsement2 | $100 per well | §305.53(a) | None [§50.145(a)] |

1 Change of ownership or operational control of a permitted facility

2 For changing the permittee’s name, permittee’s address, or correction of errors subject to 30 TAC §50.145

The applicant for a permit is required to bear the cost of publication of notice of the application in a newspaper [30 TAC §39.651(c)(2) & (d)(1)] and, for a hazardous waste well by radio broadcast. [30 TAC §39.651(d)(5)]

Payment of fees and costs should be made at the time the application is submitted. [30 TAC §281.5(2)] Payment may be made online through [TCEQ ePay](https://www3.tceq.texas.gov/epay/)[[4]](#footnote-4) or may be sent to:

Financial Administration Division

Texas Commission on Environmental Quality

Mail Code 214

P O Box 13088

Austin Texas 78711-3088

Send with the payment a copy of page 1 of the application form (one copy per injection well); write “New Well” on the page if this is a new application.

1. Section III of the application requires a letter from the Railroad Commission of Texas, stating that drilling the disposal well and injecting industrial or municipal waste into the subsurface stratum will not endanger or injure any known oil or gas resources. This letter must be submitted with new and renewal applications, and with permit amendment applications for injection into subsurface formations not addressed by the current Railroad Commission letter for the injection well. Refer to 30 TAC §305.49(a)(7) and TWC §27.015. An application will not be considered administratively complete, nor will technical review begin, until the letter is received or until a copy of the applicant’s cover letter to the Railroad Commission requesting this evaluation is provided. An applicant should submit a cover letter, copy of the general information of the application form, discussion of local geology and hydrology (including maps and cross-sections), oil and gas production information, Area of Review information (including a map and well records) and any other information necessary for the Railroad Commission to make a determination to the following address:

Injection-Storage Permits Unit

Oil & Gas Division

Railroad Commission of Texas

P O Box 12967

Austin Texas 78711-2967

Telephone Inquiries: (512) 463-6792 – Injection-Storage Permits Unit

1. An application that involves the disposal of a defined waste containing radioactive materials shall be accompanied by a letter or other instrument in writing stating either that the applicant has a license governing the disposal of radioactive materials or that the applicant does not need a license. See Section XI of the application. [30 TAC §305.52]
2. Designation of Material as Confidential

The designation of material as confidential is frequently carried to excess. The Commission has a responsibility to provide a copy of each application to other review agencies and to interested persons upon request and to safeguard confidential material from becoming public knowledge. Thus, the Commission requests that the applicant (1) be prudent in the designation of material as confidential and (2) submit this material only when it might be essential to the staff in their development of a recommendation.

The Commission suggests that the applicant **not** submit confidential information as part of the permit application. However, if this cannot be avoided, the confidential information should be described in non-confidential terms throughout the application, submitted as a document or binder with each page conspicuously marked **"Confidential."**

Reasons of confidentiality include the concept of trade secrecy and other related legal concepts that give a business the right to preserve confidentiality of business information to obtain or retain advantages from its right in the information. This includes exemptions from disclosure under 5 United States Code (USC) 552(b)(4) (relating to Public Information) and special rules cited in Title 40 Code of Federal Regulations (CFR) §2.305 (relating to Special rules governing certain information obtained under the Solid Waste Disposal Act, as amended). Trade secrets and confidential information are also exempt from disclosure as public records under state law in certain circumstances under Texas Government Code §552.110 (relating to Confidentiality of Trade Secrets), THSC §361.037 (relating to Access to Hazardous Waste Records), 30 TAC §1.5 (relating to Records of the Agency), and 30 TAC §305.50(a)(4)(E) (relating to Additional Requirements for an Application for a Hazardous or Industrial Solid Waste Permit and for a Post-Closure Order).

The Commission is not required to consider any record concerning the composition or characteristics of hazardous solid waste being processed, stored, disposed of, or otherwise handled to be confidential. [THSC §361.037]

Information that deals with the existence, absence or levels of contaminants in drinking water will not be considered confidential. 30 TAC §1.5(d)(5).

If confidential information is not submitted, and this causes the application to be incomplete, the permit will not be issued, amended, or modified.

1. The applicant is referred to guidance document [Construction Guidance for Class I Injection Wells](https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/well-construction-guidance-1.docx)[[5]](#footnote-5) on the TCEQ website for assistance in designing, drilling and completing any new Class I injection wells. Proposals for conversion wells should meet the same health and environmental safety standards as any newly constructed well.
2. All engineering and geoscience plans, specifications, calculations, analyses, reports and other related engineering and geoscience documents must be prepared, sealed, signed, and dated by a Texas professional engineer (P.E.) or a Texas professional geoscientist (P.G.), as appropriate. Additionally, all engineering and geoscience documents released, issued or submitted by a licensee, including preliminary documents, shall clearly indicate the firm name and registration number of the engineering or geoscience firm by which the engineer or geoscientist is employed. Please refer to the Texas Engineering Practice Act (Occupations Code Chapter 1001), the Rules Concerning the Practice of Engineering and Professional Engineering Licensure (22 TAC Part 6 Chapters 133, 135 and 137), the Geoscience Practice Act (Occupations Code Chapter 1002), and the Rules for Geoscientist Licensure and the Practice of Geoscience (22 TAC Part 39 Chapters 850 and 851). [30 TAC §305.45(a)(8) and §331.21]

P.E. and P.G. Board rules (22 TAC §137.33 and 22 TAC §851.156) require that, unless contained in a bound document, all engineering and geoscience pages be sealed, signed and dated and indicate the firm name and registration number. For pages contained in a bound document, only the original title sheet needs to be sealed. If a single seal is used on a bound document, there must be a note near the seal clearly stating which pages of the document the seal covers. All engineering and geoscience plans and drawings must be individually sealed, signed and dated. If there are subsequent revisions to pages covered by the engineering or geoscience seal, each revised page must be individually sealed. An engineer or geoscientist may not seal a document in a field outside their area of expertise. If more than one P.E. or P.G.’s work is contained in a document, each engineer’s or geoscientist’s seal is required on the document, and the limits of their work must be clearly indicated. See the following websites, [Texas Board of Professional Engineers](https://pels.texas.gov/) and Land Surveyors[[6]](#footnote-6) and the [Texas Board of Professional Geoscientists](https://tbpg.state.tx.us/)[[7]](#footnote-7), for additional information.

1. Information taken from sources such as publications and public documents should be checked for accuracy and completeness and be properly referenced.
2. The applicant may wish to consider copyrighting the application.
3. Pre-injection units used for storage and processing nonhazardous waste to be injected in an injection well must be authorized by an industrial solid waste permit under 30 TAC §335.2 or must be exempted from permit under 30 TAC §335.2(d). If a permit is required, submit an application for the storage and processing units using form INS-0024, [Permit Application to Store or Process Industrial Nonhazardous Solid Waste](https://www.tceq.texas.gov/downloads/permitting/waste-permits/ihw/forms/0024.docx)[[8]](#footnote-8), to the Waste Permits Division, Industrial and Hazardous Waste Permits Section, Mail Code 130 at the TCEQ address. The application for the storage and processing units will be processed concurrently with the UIC application.
4. Pre-injection units used for storage and processing hazardous waste to be injected in an injection well must be authorized by a RCRA permit under 30 TAC §335.2 or must be operated in compliance with the accumulation time requirements under 30 TAC §335.53(f). If a permit is required, submit Part A & Part B applications for the storage and processing units using forms TCEQ-0283 and TCEQ-00376, [Part A](https://www.tceq.texas.gov/downloads/permitting/waste-permits/ihw/forms/parta.docx)[[9]](#footnote-9) and [Part B](https://www.tceq.texas.gov/downloads/permitting/waste-permits/ihw/forms/rcra-part-b-application.docx)[[10]](#footnote-10)Applications for a Hazardous Waste Storage, Processing and Disposal Facility, to the Waste Permits Division, Industrial and Hazardous Waste Permits Section, Mail Code 130 at the TCEQ address. The applications for storage and processing units will be processed concurrently with the UIC application.
5. Pre-injection units used for storage and processing waste generated from in situ mining of uranium to be injected in an injection well must be designed, constructed, operated and closed in compliance with the radioactive substance requirements under 30 TAC Chapter 336. If a [radioactive materials license](https://www.tceq.texas.gov/permitting/radmat/general_rad_license.html)[[11]](#footnote-11) is required, contact the Radioactive Materials Division to obtain a General Application for Radioactive Material License form. The application for the license will be processed concurrently with the UIC application.
6. If an applicant applying for a hazardous waste Class I injection well permit is not required to obtain a RCRA permit for any other hazardous storage, processing or disposal units at the facility, the facility is subject to the requirements of RCRA Permit by Rule under 40 CFR §270.60(b) and Corrective Action for Solid Waste Management Units under 30TAC §335.167. The applicant must submit a UIC permit application supplement using form TCEQ-00756, [Supplement to Class I Injection Well Permit Application, Personnel Training and Corrective Action for Releases From Solid Waste Management Units at a Hazardous Waste Injection Well Facility with No Resource Conservation and Recovery Act (RCRA) Permit for Other Units](https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/class-i-uic-injection-well-application-supplement.docx)[[12]](#footnote-12). See Section X of this application.
7. Applicants who wish to apply for a salt cavern waste disposal permit should submit Sections I through IV of this application and form TCEQ-0356, [Technical Report - Supplemental Information for Salt Cavern Disposal Wells and Associated Caverns](https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/salt-cavern-application-supplemental-information.docx)[[13]](#footnote-13). Wastes disposed in a salt dome cavern must meet the requirements of 30 TAC Chapter 331, Subchapter J.
8. The disposal of nonhazardous brine from a desalination operation or nonhazardous drinking water treatment residuals (DWTR) may be authorized under the Class I UIC General Permit, [WDWG010000](https://www.tceq.texas.gov/permitting/radmat/uic_permits/UIC_Guidance_Class_1.html/#Permit). This single statewide general permit covering all qualifying Class I injection wells that meet the permit's performance standards for injection of nonhazardous desalination concentrate and nonhazardous DWTR (including DWTR containing naturally occurring radioactive material), will expedite the processing of authorizations for wells used solely for these purposes. The TCEQ UIC [general permitting process](https://www.tceq.texas.gov/permitting/radmat/uic_permits/UIC_Guidance_Class_1.html#General)[[14]](#footnote-14) is described on the TCEQ website. To obtain authorization to construct and operate a Class I well under the General Permit, submit a notice of intent using form TCEQ-20614, [Notice of Intent](https://www.tceq.texas.gov/permitting/radmat/uic_permits/UIC_Guidance_Class_1.html#General).
9. The TCEQ is not authorized to issue injection well permits for wells located on Indian lands in the State of Texas. Contact the Environmental Protection Agency (EPA) Region 6 for application and permit requirements for wells located on Indian lands. [40 CFR §147.2205(a)]
10. The TCEQ may not grant an application for an injection well permit in an area in which the processing or disposal of municipal or industrial solid waste is prohibited by an ordinance or order authorized by the governing body of the municipality or county. [THSC §363.112(d)]
11. The TCEQ may not issue a permit for a new commercial hazardous waste management facility, or the subsequent areal expansion of such a facility, if the boundary of the well or pre-injection units will be located within ½ of a mile of an established residence, church, school, day care center, surface water body used for public drinking water supply, or dedicated park. [30 TAC §335.205(a)(3]
12. UIC program information is available on the [Underground Injection Control Permits Page](https://www.tceq.texas.gov/permitting/radmat/uic_permits)[[15]](#footnote-15) on the TCEQ website.

### Procedural Information for New, Renewal and Major Amendment Applications

1. Upon receipt of the application for an injection well permit, the Underground Injection Control (UIC) Permits Section staff date stamps the application, makes sure that the application fees have been submitted, checks TCEQ records for delinquent fees and/or penalties owed by the applicant, and reviews the application for administrative completeness. The applicant may be contacted by way of an administrative deficiency letter for clarification or additional information at any time during the administrative review.
2. Within 30 days of the date that the application is determined to be administratively complete, the Chief Clerk mails the Notice of Receipt of Application and Intent to Obtain Permit to the applicant, to potentially affected persons, and to others. The applicant is responsible for newspaper publication of notice of the application in accordance with 30 TAC §39.418(b)(1) and §39.651(c). The applicant must also place a copy of the administratively complete application in a public place in accordance with 30 TAC §39.405(g). The Chief Clerk provides instructions for newspaper publication of the notice and for placing the application in a public place along with the mailed notice.
3. The UIC Permits Section staff begins a technical review of the application as soon as the application is administratively complete. As part of the technical review, staff evaluates the applicant’s compliance history for the previous 5 years including the company and facility compliance classification and rating. The applicant may be contacted by way of a technical notice of deficiency letter for clarification or additional information at any time during the technical review. No more than two notice of deficiency letters will be issued.
4. Once the technical review is completed, the Executive Director makes a preliminary decision to issue a permit or recommend denial of the permit. The preliminary decision and draft permit are filed with the Chief Clerk. The Chief Clerk mails the preliminary decision concurrently with the Notice of Application and Preliminary Decision to the applicant, to potentially affected persons, and to others. The applicant is responsible for newspaper publication of the Notice of Application and Preliminary Decision in accordance with 30 TAC §39.419(b) and §39.651(d). If the application is for a hazardous waste injection well, the applicant is responsible for radio broadcast in accordance with 30 TAC §39.651(d)(5). The Chief Clerk provides instructions for newspaper publication of the notice and radio broadcast along with the mailed notice.
5. Public comments must be filed with the Chief Clerk within the time period specified in the notice. The public comment period ends 30 days (nonhazardous waste permits) or 45 days (hazardous waste permits) after the last publication of the Notice of Application and Preliminary Decision, except as provided in 30 TAC §55.152. If comments are received, the Executive Director prepares a response to comments and files the response to comments with the Chief Clerk within 60 days following the close of the comment period in accordance with 30 TAC §55.156. The Chief Clerk mails the Executive Director’s decision, the Executive Director’s response to public comments, instructions for requesting that the Commission reconsider the Executive Director’s decision, and instructions for requesting a contested case hearing. See 30 TAC §39.420 and §55.156 for additional information on procedures for processing public comment.
6. The Executive Director may act on an uncontested application if public notice requirements have been satisfied and the application meets all relevant statutory and administrative criteria in accordance with 30 TAC §50.133. The Chief Clerk mails notice of the action and an explanation of the opportunity to file a motion to overturn the Executive Director’s action on the application. A motion to overturn must be filed no later than 20 days after the signed permit is mailed to the applicant in accordance with §50.139.

WDW

## Texas Commission on Environmental Quality

## Permit Application to Dispose of Waste

## In A Class I Injection Well

1. General Information
2. Type of Application (check all that apply):

Initial

Renewal

Major Amendment

Minor Amendment

Minor Modification

Transfer

Endorsement

Type of Waste (check all that apply):

Hazardous Waste

Nonhazardous Waste

Type of Facility (check all that apply):

Commercial

Noncommercial

Source of waste for noncommercial (check all that apply):

Onsite

Captured facility

Offsite from facilities owned or effectively controlled by owner/operator

1. Facility Name:

Street Address:

City, State, Zip:

Mailing Address:

Mailing City, State, Zip:

County:

TCEQ Solid Waste Registration (SWR) Number:

EPA ID Number:

Give a description of the location of the facility site with respect to known or easily identifiable landmarks. Detail the access routes from the nearest U.S. or State Highway to the facility:

Is the facility located within the Coastal Management Program boundary? Refer to [Texas Coastal Management Boundary Map](https://www.glo.texas.gov/coast/coastal-management/forms/files/CoastalBoundaryMap.pdf)[[16]](#footnote-16) for boundary. For questions regarding the Coastal Management Program, please call (800) 998-4456 (within Texas) or (512) 475-0773. [30 TAC §281.41]

Yes  No

Provide the location of the injection well relative to established surveys:

Enter the geographical coordinates of the injection well in decimal degrees to 6 decimal places:

Latitude:

Longitude:

Provide the depths of the injection zone and injection interval:

Injection Zone:      Formation(s) at depths of       to       feet below ground level.

Injection Interval:       Formation(s) at depths of       to       feet below ground level

1. Operator/Applicant (Individual, Corporation, or other Legal Entity Name)

Name:

Address:

City, State and Zip:

Telephone Number:

If the application is submitted on behalf of a corporation or other business organization with filing requirements, please identify the Charter Filing Number as recorded with the Office of the Secretary of State for Texas.

Charter Filing Number:

Is the applicant required to designate a registered agent with the Secretary of State of Texas?

Yes  No

If the application is submitted by a business organization that is required to designate and maintain a registered agent, the applicant must provide the name and address of the registered agent.

Agent:

Address:

City, State, and Zip:

Telephone Number:

1. Facility Owner(s) (Individual, Corporation, or other Legal Entity Name)

The facility includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of waste. The facility owner must be consistent with the owner on the deed filing bearing the stamp of the county property records or other generally accepted identifying reference of the current ownership record provided in Section I.P.5, Attachment C of the application. If the facility owner is the same as the operator, state “same as operator”. If the facility land, structures, appurtenances, and improvements on the land are owned by more than one individual, corporation or other legal entity, provide the following information for all owners. Clearly identify the relationship(s) between the operator and all facility owner(s). [THSC §361.087(1)]

Name:

Address:

City, State, Zip:

Telephone Number:

Charter Filing Number:

1. Indicate the ownership status of the facility.

Private:

Corporation

Partnership

Proprietorship

Nonprofit organization

Public:

Military

State

Regional

County

Municipal

Federal

Other (specify):

1. List those persons or firms authorized to act for the applicant during the processing of the permit application. Indicate the capacity in which each person may represent the applicant (engineering, geology, legal, etc.). The person listed first will be the primary recipient of correspondence regarding this application. Include complete mailing addresses, phone numbers and e-mail addresses.
2. For new, renewal, and major amendment applications specify the individual who will be responsible for causing notice to be published in the newspaper. Include the complete mailing address, telephone number, fax number and e-mail address.
3. Describe the activities conducted by the applicant which require a permit.
4. For amendment, modification, transfer or endorsement applications, briefly describe all requested changes to the permit and to the application contents and the reasons for the changes.
5. Business Information
6. Give a brief description of the nature of your business.
7. List the principal products and/or services which are provided by your plant. Please itemize by Standard Industrial Classification (SIC) codes. Also label the products with their common names, if applicable.
8. Applicant Compliance History

The TCEQ will utilize compliance history when making decisions regarding the issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit. Violations included in a criminal conviction are considered when evaluating and classifying the site’s compliance history.

For the five years preceding the filing date of this application, please submit a complete listing of all criminal convictions (i.e., State or Federal) of the operator and facility owner in which a violation of environmental law was an element of the crime. [30 TAC §60.2(d)(1)(E) and §60.2(d)(2)(F)] If there have been no such convictions then the application should state the following. If the operator is not the facility owner, a separate statement should be provided for each facility owner.

“In the five years preceding the filing of this application (the operator/applicant, owner),      , has not been convicted of a State or Federal crime in which a violation of environmental law was an element of the crime.”

1. TCEQ Core Data Form

The TCEQ requires that a [Core Data Form](https://www.tceq.texas.gov/downloads/permitting/central-registry-docs/10400-core-data-form.docx)[[17]](#footnote-17) (TCEQ-10400) be submitted with all new and renewal applications. Submit the form as “Attachment A”. For all other applications, if a Regulated Entity Number (RN) and Customer Reference Number (CN) have been issued by the TCEQ and core data information has not changed, a Core Data Form is not required. For more information regarding the Core Data Form, call (512) 239-5175 or go to the [Core Data Form Instructions](https://www.tceq.texas.gov/downloads/permitting/central-registry-docs/10400-core-data-form-instructions.pdf)[[18]](#footnote-18) on the TCEQ website.

RN

CN

1. Public Interest Demonstration

Section 27.051 of the Texas Water Code (TWC) stipulates certain conditions that must exist for the Commission to grant an application and issue a permit. For all new applications, permit renewals, and major and minor amendments, submit as "Attachment B" information addressing the following considerations:

1. That the use or installation of the injection well is in the public interest. [TWC§27.051(a)(1)]
2. That no existing rights, including, but not limited to, mineral rights, will be impaired. [TWC §27.051(a)(2)]
3. That, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution. [TWC §27.051(a)(3)]
4. That the applicant has made a satisfactory showing of financial responsibility if required by Section 27.073 of this code. [TWC §27.051(a)(4)]
5. That the compliance history of the applicant and related entities is acceptable. [TWC §27.051(d)(1), 30 TAC § 331.121(b)(1)]
6. That there is no practical, economic, and feasible alternative to an injection well reasonably available. Provide justification for subsurface disposal. Include results of treatability studies of alternate, practical, economic and feasible methods of waste disposal. Explain in detail why each method is considered to be less satisfactory in terms of environmental protection than the proposed subsurface disposal method. Indicate whether this waste is presently being produced and, if so, what method is used for disposal. Describe the manufacturing process(es) and product(s) which produce the waste(s). [TWC §27.051(d)(2), 30 TAC § 331.121(b)(2)]
7. (for hazardous waste injection wells only) That the applicant has provided for the proper operation of the proposed hazardous waste injection well. [TWC §27.051(a)(5)]
8. (for hazardous waste injection wells only) That the applicant for a hazardous waste injection well not located in an area of industrial land use has made a reasonable effort to ensure that the burden, if any, imposed by the proposed hazardous waste injection well on local law enforcement, emergency medical or fire-fighting personnel, or public roadways, will be reasonably minimized or mitigated. [TWC §27.051(a)(6)]
9. (for hazardous waste injection wells only) That the applicant owns or has made a good faith claim to own, or has the consent of the owner to utilize, or has an option to acquire, or has the authority to acquire through eminent domain, the property or portions of the property where the hazardous waste injection well will be constructed. [TWC §27.051(a)(7)]
10. (for hazardous waste injection wells only) That the applicant will maintain sufficient public liability insurance for bodily injury and property damage to third parties that is caused by sudden and non-sudden accidents or will otherwise demonstrate financial responsibility in a manner adopted by the Commission in lieu of public liability insurance. [TWC §27.051(d)(3), 30 TAC § 331.121(b)(3)]
11. (for hazardous waste injection wells only) For on-site generated waste, provide certification by the owner/operator that (1) the generator of the hazardous waste has a program to reduce the volume or quantity and toxicity of the waste to the degree determined by the generator to be economically practicable, and (2) injection of the waste is that practicable method of disposal currently available to the generator which minimizes the present and future threat to human health and the environment. [30 TAC §331.121(b)(4)]
12. For applications for new permits, renewals, and major amendments, a copy of the administratively complete application and subsequent revisions must be made available at a public place in the county where the facility is located or proposed to be located for review and copying by the public. Identify the public place in the county (e.g., public library, county courthouse, city hall), including the address, where the application will be located. [30 TAC §39.405(g)]
13. Facility Background Information [30 TAC §305.45(a)(7)]

Indicate (by listing the permit number(s) and governing agency(ies) in the columns below) all existing, pending, interim status, or permit-by-rule State and/or Federal permits, licenses or construction approvals which pertain to pollution control or industrial solid waste management activities conducted by your plant or at your location, or existing at a proposed plant or location. Complete each blank by entering either the **permit number** or **the date of application**, and the **governing agency** or **none**.

**Existing Permits**

| Relevant Program and/or Law | Permit Number or License | Government Agency \* |
| --- | --- | --- |
| Hazardous Waste Management Program under the Texas Solid Waste Disposal Act |  |  |
| UIC Program under the Texas Injection Well Act (Class I, II, III, IV, V and VI Wells) |  |  |
| Texas Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under the Texas Water Code, Chapter 26 |  |  |
| Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA) |  |  |
| Nonattainment Program under the FCAA |  |  |
| National Emission Standards for Hazardous  Air Pollutants preconstruction approval under the FCAA |  |  |
| Ocean dumping permits under the Marine  Protection Research and Sanctuaries Act |  |  |
| Dredge or fill permits under the Federal Clean Water Act |  |  |
| Licenses under the Texas Radiation Control Act |  |  |
| Subsurface Area Drip Dispersal System permits under Texas Water Code, Chapter 32 |  |  |
| Texas Solid Waste Disposal Act |  |  |
| Texas Uranium Surface Mining and Reclamation Act |  |  |
| Texas Surface Coal Mining and Reclamation Act |  |  |
| Other relevant environmental permits/licenses |  |  |

* Use the following acronyms for each agency:

TCEQ = Texas Commission on Environmental Quality

RRC = Railroad Commission of Texas

DSHS = Department of State Health Services

TDA = Texas Department of Agriculture

EPA = U.S. Environmental Protection Agency

CORPS = U.S. Army Corps of Engineers

1. Location
2. Is the facility located on Indian lands?

Yes  No

If yes, do not complete this application. Contact EPA Region 6 for application and permitting requirements for injection wells located on Indian lands. [40 CFR §147.2205(a)]

1. Is the facility located in an area in which the governing body of the county or municipality has prohibited the processing or disposal of municipal hazardous waste or industrial solid waste?

Yes  No

If yes, do not complete this application. TCEQ may not grant an application for an injection well permit in this area. [THSC §363.112(d)]

1. If the facility is a new commercial hazardous waste management facility, or the subsequent areal expansion of such a facility, is the boundary of the well or pre-injection units to be located within ½ of a mile of an established residence, church, school, day care center, surface water body used for public drinking water supply, or dedicated park?

Yes  No

If yes, do not complete this application. TCEQ may not issue a permit for a facility in this location. [30 TAC §335.205(a)(3)]

1. Is the location or proposed location of the injection well in the territory of a groundwater conservation district? To determine if the injection well is or will be located in the territory of a groundwater conservation district refer to the [Texas Groundwater Conservation District map](https://www.twdb.texas.gov/mapping/doc/maps/GCDs_8x11.pdf)[[19]](#footnote-19) on the TWDB website.

Yes  No

If yes, provide the contact name and mailing address for the groundwater conservation district. To obtain a point of contact and mailing address refer to the [Groundwater Conservation Districts Contact List](https://www.tceq.texas.gov/downloads/groundwater/gcd/gcd-contact-list.pdf)[[20]](#footnote-20) on the TCEQ website. [TWC §27.017(b)]

1. Legal Description of Facility Land

Submit, as "Attachment C", a legal description of the tract or tracts of land upon which the facility is or will be located and the deed filing bearing the stamp of the county property records or other generally accepted identifying reference of the current ownership record. If ownership of the property is transferring and new ownership documents are not final, provide the date upon which the documents will be submitted. The facility includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of waste including pre-injection units used for storage and processing waste to be injected into the injection well. The legal description should include the metes and bounds description or for platted urban sites the final plat with appropriate "lot" description(s). [THSC §361.087(2)]

1. Submit, as "Attachment D", a drawn-to-scale topographic map of the facility and the tract or tracts of land upon which the facility is or will be located as described in Attachment C and area extending at least one mile beyond the tract boundaries. The map must be prepared by a licensed professional engineer or a registered surveyor. The scale should be adequate to depict the following features: [30 TAC §305.45(a)(6)(A), (C) & (E)]
2. the boundary of the tract or tracts of land upon which the facility is or will be located as described in Attachment C; areal size of the tract or tracts of land in acres should be given;
3. if different, the boundary of the facility, and the location of all injection wells; each depicted area should be labeled to identify the well(s) and the well status (active, inactive, or proposed); areal size of the facility in acres should be given;
4. if applicable, the boundaries of captured facilities that generate waste to be disposed in the injection wells, each depicted area should be labeled to identify the names of the captured facilities;
5. the overall facility, each of its surface intake and discharge structures, each of its waste treatment, storage or disposal facilities, including proposed or existing pre-injection units for processing or storage of waste to be disposed in the injection wells; and
6. all wells (water, oil and gas, disposal, etc.), springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within one mile of the facility property boundary, and the purpose for which each water well is used (e.g., domestic, livestock, agricultural, industrial, etc.).
7. Plain-Language Summary

The TCEQ implemented new rule requirements in 30 TAC Chapter 39 that impact all permit applications subject to the Chapter 39 public notice requirements that are declared administratively complete after May 1, 2022. One of the new rules, 30 TAC §39.405(k), requires the applicant to provide a plain-language summary in English, and in an alternative language if required in accordance with 30 TAC §39.426. The plain-language summaries for all applications will be posted on the TCEQ website.

For new, renewal and major amendment permit applications submit, as “Attachment E”, a Plain-Language Summary of the application that is no more than two pages long. The summary should be entitled “Plain-Language Summary” and should be prepared in simple, concise, easy-to-understand terminology. The summary must include the following information. [30 TAC §39.405(k)]

1. the applicant/operator name;
2. the type of application;
3. the type of waste;
4. the type of facility;
5. the facility name and location;
6. the function of the proposed plant or facility;
7. the expected output of the proposed plant or facility;
8. the expected pollutants that may be emitted or discharged by the proposed plant or facility which require an injection well permit; and
9. how the applicant will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

If the applicant is required to provide notice in an alternative language in accordance with 30 TAC §39.426, provide a copy of the plain-language summary in English and in the alternative language.

In addition, provide a copy of the plain-language summaries in pdf clearly labeled on a flash drive.

1. Public Involvement Plan

TCEQ’s Public Participation Plan provides guidance for using preliminary screening and public involvement plans to ensure meaningful public outreach. Applicants who are applying for a new injection well permit are required to complete a Public Involvement Plan. A Public Involvement Plan is intended to provide an applicant and the agency with information to determine if additional public outreach is necessary or beneficial. Applicants may complete a Public Involvement Plan, even if not required, to learn about the communities in which their facilities are located or where their activities may have an impact.

Submit a Public Involvement Plan, as “Attachment F”, using the [Public Involvement Plan Form](https://www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/pip-form-tceq-20960.pdf)[[21]](#footnote-21) (TCEQ-20960) and [Instructions for Completing a Public Involvement Plan Form for Permit and Registration Applications](https://www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/instructions-for-pip-form-tceq-20960.pdf)[[22]](#footnote-22) (TCEQ-20960).

For more information regarding [Title VI compliance at TCEQ](https://www.tceq.texas.gov/agency/decisions/participation/title-vi-compliance)[[23]](#footnote-23) or the [Public Participation Plan](https://www.tceq.texas.gov/downloads/agency/decisions/participation/public-participation-plan-gi-607.pdf)[[24]](#footnote-24) go on the TCEQ website.

**Signature Page**

I (Signatory Name) (Title) (Company) certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Date:

See 30 TAC §305.44 for signatory authority.

Applications must be signed by the operator of the facility and the facility owner(s). The facility includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of waste. Duplicate this page for additional signatories.

**To Be Completed by the Applicant if the Applicant Is a Corporation and the Responsible Corporate Officer Is Assigning or Delegating Signature Authority to a Manager in Accordance with 30 TAC §305.44(a)(1)**

I (Signatory Name) (Title) (Company) hereby designate (Agent Name and/or Title) as my agent and hereby authorize said agent to sign any application, submit additional information as may be requested by the Commission, and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my agent in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Signature: Date:

**(Note: Application Must Bear Signature and Seal of Notary Public)**

SUBSCRIBED AND SWORN to before me by the said

on this day, month of , year of

My commission expires on the day, month of , year of

Notary Public

1. Information Required to Provide Notice

Submit, as "Attachment G", a mailing list of landowners identified under Section II.A. and a mailing list of mineral rights owners identified under Section II.B. In accordance with 30 TAC §39.405(b), please also submit this mailing list electronically, in Microsoft Word. The electronic list must contain only the name, mailing address, city, state, and zip code with no reference to the lot number or lot location. The list should contain up to 30 names and addresses (10 per column) per page. Each name and address must be typed in the format that meets the United States Postal Service (USPS) requirements for machine readability. The letters in the name and address must be capitalized, contain no punctuation, and the two-character abbreviation must be used for the state. Contact the USPS for further instructions on formatting addresses for machine readability. The applicant may elect to submit pre-printed mailing labels of this mailing list with the application instead of submitting the mailing list electronically. If you wish to provide the list on printed labels, please use sheets of labels that have 30 labels to a page (10 labels per column). Please provide **four complete sets of labels** of the landowners and mineral rights owners list.

1. Provide a complete mailing address for persons who own the property on which the existing or proposed injection well facility is or will be located and all persons who own tracts of land adjacent to the property on which the existing or proposed injection well facility is or will be located and within a reasonable distance from the proposed point or points of discharge, deposit, injection, or other place of disposal or activity. Identify the tracts of land and landowners on a map and provide the general character of the areas adjacent to the facility, including public roads, towns and the nature of development of adjacent lands (e.g., residential, commercial, agricultural, recreational, industrial or undeveloped) on the map. The property boundary of the tract or tracts of land on which the existing or proposed injection facility is or will be located must be consistent with the legal description of the tract or tracts of land provided in Section I.P.5, Attachment C, of the application. (Refer to Example Application Map) [30 TAC §281.5(6), §305.45(a)(6)(B) & (D) and §39.651(c)(4)(A) & (B)]
2. Provide a complete mailing address for all persons who own the mineral rights underlying the existing or proposed injection well facility and underlying the tracts of land adjacent to the property on which the existing or proposed injection well facility is or will be located as required by 30 TAC §39.651(c)(4)(C) & (D). Identify the mineral rights owners on the map provided above in Section II.A.
3. If the facility is located adjacent to navigable territorial waters of the state, or the State of Texas is an adjacent landowner and/or owner of mineral rights underlying the facility or underlying adjacent tracts, your application may affect lands dedicated to the permanent school fund. A determination whether lands dedicated to the permanent school fund will be affected by TCEQ formal action on the application will be made by the Texas General Land Office (TXGLO).

In order for the TXGLO to make a determination, the TCEQ will provide notice to the TXGLO regarding the application. Provide the following information for inclusion in the notice to the TXGLO:

1. state the location of the permanent school fund land, mineral rights, or waters of the state that may be affected; and
2. describe any foreseeable impact or effect of the proposed permitted action may have on permanent school fund land.

A formal action or ruling by the Commission on an application affecting permanent school fund land that is made without the notice required by 30 TAC §39.651(c)(3) is voidable by the School Land Board as to any permanent school fund lands affected by the action or ruling. [TWC §5.115(c) and (g)]

1. Provide the name and mailing address of the mayor and health authority of the municipality in whose territorial limits or extraterritorial jurisdiction the well is or will be located, and the name and mailing address of the county judge and the health authority of the county in which the facility is located. [30 TAC §39.651(c)(5)]
2. Bilingual Notice Instructions. For new, renewal and major amendment permit applications, public notice in an alternate language may be required. If an elementary school or middle school nearest to the facility offers a bilingual program, notice may be required to be published in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, requires a bilingual education program for an entire school district should the requisite alternative language speaking student population exist. However, there may not be any bilingual-speaking students at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notice in an alternative language is triggered if the nearest elementary or middle school, as part of a larger school district, is required to make a bilingual education program available to qualifying students and either the school has students enrolled at such a program on-site or has students who attend such a program at another location to satisfy the school’s obligation to provide such a program. [30 TAC §39.426]

**Bilingual notice confirmation for this application**

1. Is the school district of the elementary or middle school nearest to the facility required by the Texas Education Code to have a bilingual program?

Yes  No

If **no**, alternative language notice publication not required.

1. If **yes** to question 1, are students enrolled in a bilingual education program at either the elementary school or the middle school nearest to the facility?

Yes  No

If yes to questions 1 and 2, alternative language publication is required.

If no to question 2, then consider the next question.

1. If **yes** to question 1, are there students enrolled at either the elementary school or the middle school nearest to the facility who attend a bilingual education program at another location?

Yes  No

If **yes** to questions 1 and 3, alternative language publication is required.

If **no** to question 3, then consider the next question.

1. If **yes** to question 1, has the elementary school or the middle school nearest to the facility been granted an exception from the requirement to provide a bilingual education program, as available under 19 TAC §89.1207(a)?

Yes  No

If **yes** to questions 1 and 4, alternative language publication is required.

If **no** to question 4, alternative language notice publication not required.

1. Provide the alternative language for which the bilingual education program(s) is provided or for which an exception has been approved.

Example Application Map

**Landowners and Mineral Rights Owners**



**Landowners**

1. Mr. & Mrs. Samuel Davis
2. Mr. & Mrs. Edward Sanchez
3. Texlink Corporation
4. Mr. & Mrs. Ted Goldsby
5. Jaxson Brewing Company
6. Plainview Company
7. ABC Chemicals Inc.
8. Big C Bottle Company

**Mineral Rights Owners**

1. Mr. & Mrs. Samuel Davis

Mr. Fred Davis

Mrs. R.C. Davis

1. The Edward Sanchez Trust
2. Cibolo Energy LP
3. Mr. Don Williams

Mr. & Mrs. Richard Coons

Mrs. Dorothy Moore

1. The Larson Family Trust
2. SBN Minerals, LLC

Sorona Oil & Gas Company

Klein Operations, LLC.

1. Jack Walsh Family Trust
2. Terrace Flats Exploration Corp.
3. Railroad Commission Letter

Submit, as “Attachment H,” a letter from the Railroad Commission stating that “drilling the disposal well and injecting industrial or municipal waste into the subsurface stratum will not endanger or injure any known oil or gas resources.” This letter is required with initial and renewal applications, and with permit amendment applications for injection into subsurface formations not addressed by the current Railroad Commission letter for the injection well. [30 TAC §305.49(a)(7)]

1. Financial Assurance, Liability, and Financial Capability

Submit as, “Attachment I,” a description of the manner in which compliance with the financial assurance and liability requirements in 30 TAC Chapter 37, Subchapter Q will be attained, and demonstration of financial capability as outlined below. For converted wells and constructed wells provide documentation that financial assurance in the amount provided in Section VI of the application will be in effect upon permit issuance. [30 TAC §305.49(a)(3)]

1. Financial Assurance Requirements [30 TAC §§331.142-144 and §331.68(a)(3)]

The financial assurance requirements of 30 TAC Chapter 37, Subchapter Q, require an owner or operator to submit an originally signed financial assurance mechanism to the TCEQ Financial Assurance Unit at least 60 days prior to commencement of drilling operations for new wells. All financial assurance mechanisms shall be in effect before commencement of drilling operations. For converted wells and other previously constructed wells, financial assurance shall be provided at least 30 days prior to permit issuance and be in effect upon permit issuance. [§37.7021 (c) & §37.7031(c)]

1. Financial Assurance for Closure

Secure and maintain financial assurance for plugging and abandonment of each existing and new well in the amount of the closure cost estimate in current dollars developed in accordance with 30 TAC §331.143 and included in Section VI.D. of the application using the mechanisms listed in 30 TAC §37.7021(b).

1. Financial Assurance for Post Closure Care (hazardous waste wells only)

If applicable, demonstrate and maintain financial assurance for post-closure of each existing and new hazardous waste well in the amount of the post-closure care cost estimate in current dollars developed in accordance with 30 TAC §331.68(a)(4)(F) and included in Section VI.D. of the application using the mechanisms provided in 30 TAC §37.7031(b).

1. Liability Requirements (hazardous waste wells only) [30 TAC §331.142(b)]

For hazardous waste injection wells establish and maintain liability coverage for sudden and non-sudden bodily injury and property damage to third parties caused by accidental occurrences arising from operations of the facility in accordance with the requirements of 30 TAC §37.7041. Evidence must be provided to show that the insurance policy covers the injection well(s).

1. Financial Capability Requirements (hazardous waste wells only) [30 TAC §305.49(c)]

For hazardous waste injection wells demonstrate to the satisfaction of the executive director that the applicant has sufficient financial resources to operate the facility in a safe manner and in compliance with the permit and all applicable rules, including, but not limited to, how an applicant intends to obtain financing for construction of the facility, and to close the facility properly as required by 30 TAC §305.50(a)(4)(B).

Information requirements for making this demonstration vary depending on the type of financial information available to applicants, primarily whether audited financial statements are available as well as the type of application submitted. For each type of application described below, financial information must be provided for the specific type of applicant entities.

1. New Permits, Permit Amendment for Facility Expansions, and Permit Transfers
2. Publicly Traded Entities
3. Securities and Exchange Commission (SEC) Form 10-Ks

This portion of the requirement calls for the two most recent 10-K reports filed.

1. SEC Form 10-Q

This portion of the requirement calls for a copy of the most recent quarterly report.

1. Explanation statement

This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met. (i.e., which financial assurance mechanism is or will be used).

1. Construction capital cost estimates

This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

1. Privately Held Entities with Audited Financial Statements
2. Audited financial statements

This portion of the requirement calls for complete copies of the audited financial statements for each of the most recent two fiscal years. If an audit has not been completed for one of the previous two years, a complete copy of the fiscal year-end financial statement and federal tax return may be substituted in lieu of the audit not performed. The tax return must be certified by original signature of an authorized signatory as being a "true and correct copy of the return filed with the Internal Revenue Service." Financial statements must be prepared consistent with generally accepted accounting principles and include a balance sheet, income statement, cash flow statement, notes to the financial statement, and an accountant's opinion letter.

1. Quarterly financial statement

This portion of the requirement calls for a complete copy of the most current quarterly financial statement prepared consistent with generally accepted accounting principles. Internally prepared statements are satisfactory.

1. Supplementary information statement

This portion of the requirement calls for a written statement detailing the information that would normally be found in SEC’s Form 10-K including descriptions of the business and its operations; identification of any affiliated

relationships; credit agreements and terms; any legal proceedings involving the applicant; contingent liabilities; and significant accounting policies.

1. Construction capital cost estimates

This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

1. Explanation statement

This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure care, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (i.e., which financial assurance mechanism is or will be used).

1. Entities without Audited Financial Statements or Entities Choosing Not to Provide the Information Listed Above
2. Financial Plan

This portion of the requirement calls for a financial plan (including balance sheets listing assets, liabilities and capital accounts) sufficiently detailed to clearly demonstrate that the applicant will be in a position to readily secure financing for construction, operation, and closure, post-closure, and corrective action if the permit is issued. At least 3 balance sheets should be included as of: a) approximately the date of the permit application, b) 12 months after any construction is completed (or assumption of operational control for a permit transfer), and c) 24 months after any construction is completed (or assumption of operational control for a permit transfer).

1. Letters of opinion

The submitted financial plan must be accompanied by original letters of opinion from two financial experts, not otherwise employed by the applicant, who have the demonstrated ability to either finance the facility or place the required financing. If the permit action sought involves construction of a new facility or expansion of an existing facility, the opinion letters must certify that financing is obtainable within 180 days of permit approval and include the time schedule contingent upon permit finality for securing the financing as well as certify the financial plan is reasonable. Even if the application does not involve a facility or capacity expansion, the opinion letters must certify that the financial plan is reasonable. Only one opinion letter from a financial expert, not otherwise employed by the applicant, is required if the letter renders a firm commitment to provide all the necessary financing.

Letters of opinion are usually issued by investment or commercial bankers but there could be additional sources. Applicants are encouraged to verify the adequacy of the credentials of their chosen financial expert with TCEQ’s financial assurance unit prior to a formal engagement. Financial experts should describe their qualifications and disclose their independence from the applicant and/or any entity or person affiliated with the applicant.

1. Operating and cash flow statement

This portion of the requirement calls for a written detail of the annual operating costs of the facility and a projected cash flow statement including the period of construction and first two years of operation. The cash flow statement must

demonstrate the financial resources to meet operating costs, debt service, and provide financial assurance for closure, post-closure care, and liability coverage requirements. A list of the assumptions made to forecast cash flow must also be provided.

1. Explanation statement

This portion of the requirement calls for a statement addressing how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (i.e., which financial assurance mechanism is or will be used).

1. Construction capital cost estimates

This portion of the requirement calls for estimates of capital costs for expansion and/or initial construction if the application encompasses facility expansion, capacity expansion, or new construction.

1. Entities with A Resolution from A Governing Body Approving or Agreeing to Approve the Issuance of Bonds to Satisfy Financial Assurance Requirements (e.g., a City or County)
2. Explanation statement

This portion of the requirement calls for a statement signed by an authorized signatory [as described in 30 TAC30 305.44(a)] explaining in detail how the applicant demonstrates sufficient financial resources to construct, safely operate, properly close, perform post-closure, perform corrective action and provide adequate liability coverage for the facility. This statement must also address how the closure, post-closure, corrective action, and liability coverage financial assurance requirements of Chapter 37, Subchapter P will be met (i.e., which financial assurance mechanism is or will be used).

1. Certified copy of the resolution from the governing body
2. Certification by the governing body of passage of the resolution
3. Permit Renewals

For all types of applicant entities, include a financial disclosure letter addressed to UIC Permits Section signed by an applicant representative meeting the application signatory requirements of 30 TAC §305.44 stating the following information:

“This letter is furnished to you in response to financial disclosure requirements as applicable under Texas Health and Safety Code Section 361.085 and Title 30, Texas Administrative Code (30 TAC), Section 305.50 to provide assurance that [name of applicant] has sufficient financial resources.

In keeping with the above law and rule requirements I hereby certify that [name of applicant] is adequately capitalized and has sufficient financial resources to operate, close, provide post-closure care for and perform corrective action for the above-referenced facility in a safe manner, and in compliance with the permit and all applicable rules.

[name of applicant] currently provides a [describe type of mechanism, i.e., letter of credit, surety bond, etc.] financial assurance mechanism as set out in 30 TAC, Chapter 37, Subchapter C to meet [name of applicant]’s financial assurance obligations.

I am authorized to make these statements on behalf of [name of applicant]. I understand that the TCEQ may request additional information as part of their review.”

1. Geology Report

The Geology Report, including all associated geoscience specifications, details, calculations or estimates, maps, drawings, cross sections, other figures, opinions, recommendations, evaluations and other related geoscience documents, must be prepared, sealed, signed, and dated by a Texas professional geoscientist (P.G.). Additionally, all geoscience documents released, issued or submitted by a licensee, including preliminary documents, shall clearly indicate the firm name and registration number of the geoscience firm by which the geoscientist is employed. [30 TAC §305.45(a)(8), §331.21 and 22 TAC §851.156]

1. Regional Geology and Hydrogeology

Describe the regional stratigraphic and structural geology, lithology, and hydrogeology pertinent to the proposed injection program. Information must be integrated into a coherent and complete summary, not merely listed. Regional geology should be rendered on a scale capable of accurately depicting the geology of the region (approximately a 20 to 50-mile radius). Maps and cross-sections from commercial mapping companies may be used, provided they adequately characterize the geology (including faulting) of the region. Major aquifers, stratigraphic units, general lithology, confining zones and the injection zone should be indicated on all cross-sections. Cross-sections should be constructed with well logs and to scale. The injection well location(s) should be indicated on all maps and cross-sections. Maps and figures should be referenced in the description, where applicable. The information submitted will be used to help determine the geologic suitability of the region, as required by 30 TAC §331.121(c) and to determine compliance with 30 TAC §331.121(a)(2)(D) & (F). This information should include, but is not limited to, the following items.

1. Regional stratigraphy, including a stratigraphic column;
2. Regional hydrostratigraphy, emphasizing major aquifers and the lowest underground source of drinking water (USDW);
3. Definition and description of:
4. Confining zone, including structural and isopach maps;
5. Injection zone, including structural and isopach maps. (Maps of stratigraphic intervals approximating the confining and injection zones may be used);
6. Regional cross-sections from the surface through the confining strata below the injection zone; or if a major structure exists below the injection zone, to as deep as necessary to define the structure;
7. Discussion of the regional structural geology as it relates to the injection well site. Include fault characteristics and trends as they pertain to the confining and injection zones;
8. Regional seismic activity (earthquakes - natural and artificial);
9. Discussion of regional groundwater flow in the injection zone.
10. Local Geology and Hydrogeology (within the area of review)

Describe local stratigraphic and structural geology, lithology, and hydrogeology pertinent to the proposed injection program. Information must be integrated into a coherent and complete summary, not merely listed. Maps should cover the area of review (AOR), which has a 2.5-mile radius from the injection well, or the area of the cone of influence, whichever

is greater as defined in 30 TAC §331.42. Maps should conform to a uniform system of identification numbers for wells that will key the wells to tables, cross-sections and other figures. The injection well location should be indicated on all maps and cross-sections. Maps and figures should be referenced in the description, where applicable. Well locations, major aquifers, USDW base, confining bed below the USDW, stratigraphic units, general lithology, confining zones, injection zone, and injection interval should be indicated on all cross-sections. Cross-sections should be on a scale necessary to depict the local geology and hydrogeology. Cross-sections should be constructed with well logs and to scale. Sufficient well data must be used to accurately depict the local geology including data collected from logs, cores and tests performed during the drilling, completion and operation of existing wells. When necessary to accurately portray the geology of the area, maps or cross-sections should extend beyond the AOR. In areas that lack sufficient well control, where the geology is complicated or there are questions or disputes regarding faulting, the procurement and interpretation of seismic reflection data may be necessary. The data must be of sufficient quality and quantity to accurately delineate the faulting in the area, so as to evaluate its effect on the injection reservoir and to address the transmissive fault issue under 30 TAC §331.121(a)(2)(P) and Section V.B.6 of this application. Additional information, such as dipmeter logs, may be used to help delineate the faulting in the area. The information submitted in the application will be used to determine the geologic suitability of the area, as required by 30 TAC §331.121(c) and to determine compliance with 30 TAC §331.121(a)(2)(D) & (E) . This information should include, but is not limited to, the following items.

1. Stratigraphy, including a stratigraphic column.
2. Hydrostratigraphy, emphasizing major aquifers and USDWs within them. Describe the vertical and lateral limits of the USDWs and show direction of water movement, where known, in each USDW that may be affected by the injection activities. If applying for an aquifer exemption, provide a complete delineation of any aquifer or portion of an aquifer for which exempt status is sought. [30 TAC §305.49(a)(9)]
3. Definition and description, including but not limited to the lithology and rock properties, of the following:
4. Lowest USDW - describe the configuration of the USDW base and method of its determination and the confining bed below the formation containing the lowest USDW; [30TAC§331.62(a)(1)(A)]
5. Confining zone - include structure and isopach maps and justification of its capability to act as a confining layer;
6. Injection zone - include structure and isopach maps and justification of its capability to accept and contain the waste, including documentation that the injection zone has sufficient permeability, porosity, thickness and areal extent to prevent migration of fluids into USDWs or freshwater aquifers;
7. Injection interval - include structure and isopach maps and discussion of existing, abandoned and anticipated completion intervals; and
8. Confining strata beneath the injection zone, if applicable.
9. Include an uninterpreted copy of the base map used in (b), (c) and (d).
10. A minimum of two structural cross-sections, parallel to dip and strike, intersecting the (proposed) injection well location. These cross-sections should include available log control, with geologic units and lithology indicated (including USDWs and major aquifers), from the surface into the confining strata below the injection zone, or if a major structure exists below the injection zone, to as deep as necessary to define the structure.
11. Discussion of the structural geology. This should include analysis of faults, fractures and any surface lineations. Maps additional to those listed in Section V.A.3. above may be included as necessary to adequately depict the structural geology.
12. Delineation of all faults within the AOR. This provision applies to all Class I injection wells, both hazardous and nonhazardous. Permits cannot be issued for wells that have a fault in the injection zone or within the AOR unless the applicant demonstrates that each fault is not sufficiently transmissive or vertically extensive to allow migration of hazardous constituents from the injection zone. Applicants who have already made a demonstration to the EPA or the TCEQ should provide the date of the demonstration and summarize the results of the agency’s review of the demonstration in lieu of demonstration within this application. [30 TAC §331.121(a)(2)(P) and 335.205(a)(5)]
13. A demonstration that the confining zone “is laterally continuous and free of transecting, transmissive faults or fractures over an area sufficient to prevent the movement of fluids into a USDW or freshwater aquifer.” [30 TAC §331.121(c)(3)(B)(i)]
14. A demonstration that the confining zone “contains at least one formation of sufficient thickness and with lithologic and stress characteristics capable of preventing initiation and/or propagation of fractures.” [30 TAC §331.121(c)(3)(B)(ii)]
15. A demonstration that:
16. the confining zone is separated from the base of the lowermost USDW by at least one sequence of permeable and less permeable strata that will provide an added layer of protection for the USDW in the event of fluid movement in an unlocated borehole or transmissive fault; or
17. within the AOR, the potentiometric surface of the injection zone is less than the potentiometric surface of the lowermost USDW, considering fluid density effects, injection pressures, and any significant pumping in the overlying USDW; or
18. no USDW is present. [30 TAC §331.121(c)(4)]
19. An assessment of the potential for injection into the well to result in a seismic (earthquake) event. This assessment shall consider:
20. a description of any recorded seismic activity (natural and artificially induced) in the area, with a description of location, depth, severity, and impact on subsurface structures (e.g., wellbores);
21. within the AOR, the location of all injection wells that are authorized to inject fluids into the proposed injection zone;
22. the pattern of injection (injection volumes, rates, and time periods) for each well identified in b. above;
23. the thickness of sediments or rocks between the base of the injection zone and the top of the basement rocks at the location of the well. If the top of the basement is not known, then the thickness of sediments or rocks from the base of the injection zone to the lowermost depth to which this interval has been penetrated by drilling activity with the AOR;
24. the character of the sediments or rocks identified in d. above; and
25. the location and nature of all faults within the AOR that may provide a pathway for injected fluids to travel from the injection zone to the basement rocks.

If this assessment indicates there is a potential for injection into the well to result in a seismic event, provide a proposed plan for mitigation of this potential.

1. A brief description of the surface geology. Include a map showing detail equal to or greater than that shown at a 1:250,000 scale; indicate location of injection well, facility and known or suspected faults.
2. Separate copies of all well logs (scale 1"=100'), including logs of injection wells, seismic reflection data (with shot point maps and interpreted and clean prints of seismic data) or other geologic or geophysical data, evaluated during the preparation of the application, shall be submitted with the application. If only larger scale logs are available, the applicant should reduce the scale to 1"=100' before submission to the TCEQ.
3. Injection Well Engineering Report

The Engineering Report and all associated engineering specifications, details, calculations or estimates, plans or drawings, opinions, recommendations, evaluations and other related engineering documents must be prepared, sealed, signed, and dated by a Texas professional engineer (P.E.). Additionally, all engineering documents released, issued or submitted by a licensee, including preliminary documents, shall clearly indicate the firm name and registration number of the engineering firm by which the engineer is employed. [30 TAC §305.45(a)(8) and 22 TAC §137.33]

1. Proposed New Well Design and Construction

Provide the following information on well design and construction for proposed new injection wells and wells to be converted for injection. Refer to 30 TAC §331.62(a) for construction standards and to the Class I Injection Well Construction Guidance. The well shall be designed and constructed to prevent potential leaks from the well, to prevent the movement of fluids along the wellbore into or between USDWs, to prevent the movement of fluids along the wellbore out of the injection zone, to permit the use of appropriate testing devices and workover tools, and to permit continuous monitoring of injection tubing, long string casing and annulus. All well materials must be compatible with fluids with which the materials may be expected to come in contact. The surface casing must be set to a minimum subsurface depth which extends into the confining bed below the lowest USDW or freshwater aquifer and at least one long string casing, using a sufficient number of centralizers, shall extend to the injection interval. The annulus monitoring system shall be designed and constructed to maintain at least 100 pounds per square inch (psi) pressure greater than the maximum injection tubing pressure at any point along the length of the tubing and at the packer to prevent the leak of injection fluids into any unauthorized zones and to detect well malfunctions.

1. Engineering drawing (schematic) of the proposed well construction. [30 TAC §331.121(a)(2)(K)]
2. Total depth of the well.
3. For each casing and tubing string: [30 TAC §331.62(a)(1)]
4. Type, size, weight, grade, joint specification, wall thickness, length, setting depth and life expectancy;
5. Collapse resistance, internal yield pressure, joint strength, and yield strength, including the source of these ratings;
6. Maximum external pressure, internal pressure, and axial loading which may be experienced at any point along the length of the strings at any time during construction, operation, testing and closure, including effects of the injection pressure and annular pressure;
7. Detailed factor of safety calculations for burst pressure, collapse pressure, joint strength and pipe body strength;
8. Size, type and life expectancy of packer, and proposed setting depth;
9. Discussion of tubular selection and design process including consideration of depths of lowermost USDW, injection interval and injection zone, volume of injected fluids, chemical composition, corrosive effects, temperature and density of injected fluids, annulus fluid, and formation fluids, injection rates, maximum pressures, downhole equipment needs, presence of lost circulation zones and other subsurface conditions, and life expectancy of the well; and
10. Procedures to inspect and prepare casing, tubing, and packer prior to installation in the well.
11. Proposed completion interval(s) and completion type including perforation, open hole, or screen setting depths.
12. Number and location of centralizers, wall scratchers, etc. used in running casings/liners to aid in centering the pipe in the hole to prevent cement channeling and to remove mud cake from the borehole to enhance cement bonding.
13. Non-corrosive or corrosion-inhibiting fluid to be used in the annulus between the tubing and long string casing. The annulus fluid should have sufficient density to maintain at least 100 psi pressure greater than the injection tubing pressure at any point along the tubing and packer accounting for density of the injection fluids to prevent leaks from the well into unauthorized zones, to detect well malfunctions, and to control static reservoir pressures when release of the packer and removal of tubing become necessary for remedial workovers. [30 TAC §331.63(e)]
14. For proposed new wells only: a step-by-step drilling program that ensures the well will be drilled according to sound engineering practices to minimize problems which may jeopardize completion attempts, such as deviated holes, washouts and stuck pipe. As much as technically practicable and feasible, the hole should be drilled under laminar flow conditions, with appropriate fluid loss control, to minimize hole washouts. Deviation checks should be conducted on all holes at sufficiently frequent intervals to assure that the hole is kept as straight as possible to prevent adverse effects on cement bonding and to assure that avenues for fluid migration in the form of diverging holes are not created during drilling. Immediately prior to running casing, the drilling fluid in the hole is to be circulated and conditioned to establish rheological properties commensurate with proper cementing practices. Once installed, the surface casing shall be pressure tested to 1,000 psig for at least 30 minutes and the long string casing shall be tested to 1,500 psig for at least 30 minutes.

State the mud weight that is planned for each stage of drilling the well and the limits or acceptable ranges for circulation pressures and pump rates that will keep the circulated mud in laminar flow while drilling and in turbulent flow while cementing and prevent formation fracturing in the wellbore. Include site-specific information describing the presence of any anticipated formation breakdown pressures, lost circulation zones, and other potential problems based on historical experience from drilling other wells near the proposed well. Provide detailed plans to manage problems such as lost circulation zones, over pressured zones, stuck pipe, etc.

Discuss precautions to be taken to assure that no contaminants are introduced into the USDWs during drilling. If drilling through an existing wastewater plume, discuss procedures to be taken to isolate the drilling fluid through zones of possible contamination, to confine possible increased pressures, and to test and manage possible contaminated drill cuttings, fluids and equipment.

All phases of well construction shall be supervised by qualified individuals acting under the responsible charge of a licensed professional engineer or licensed professional geoscientist who is knowledgeable in practical drilling engineering and who is familiar with the special conditions and requirements of injection well construction. [30 TAC §§331.62(a)(4), (a)(7)(A)(i), (a)(7)(B) & (a)(9)]

For conversion wells only: a certification of the well’s existing construction and condition, and a step-by-step program for all work to be done in preparing the well for waste injection. Also submit the original drilling report, if available, and all other construction and plugging records.

1. For proposed new wells only: cementing procedures, types of cement including volumes, additives, slurry weight, compressive strength, etc., and cementing equipment (guide shoe, float collar, baskets, cement stage (DV) tool, etc.). The casings shall be cemented to prevent the movement of fluids along the wellbore into or between USDWs or freshwater aquifers, and to prevent movement of fluids along the borehole out of the injection zone. Cementing shall be by pump and plug or other approved method. Volume of cement shall be equivalent to at least 120% of the volume calculated necessary to fill the annular space between the hole and casing and between the casing strings to the ground surface measured with a two-dimensional caliper. If the two-dimensional caliper cannot measure the diameter of the hole over an interval, the volume of cement for that interval shall be equivalent to at least 150% of the space between the casing the maximum measurable diameter of the caliper.

Discuss the suitability and compatibility of the selected cement for the well design including consideration of the chemical composition, corrosive effects, temperature and density of the injected fluids and formation fluids, injection rates, and maximum pressures. Discuss procedures used to prevent channeling of the cement slurry through the wellbore mud (i.e., use of centralizers and scratchers, reciprocating the casing, maintaining pump rates, mud conditioning and gel strength, pre-flushing and wiper plugs) and to prevent downhole formations from being subjected to hydrostatic pressure sufficient to cause formation fracturing in the wellbore. Discuss the site-specific presence of lost circulation zones, over-pressured zones, hydrostatic pressures and formation breakdown pressures, and other subsurface conditions which could adversely affect the success of the cementing program and plans to manage these problems if encountered in the construction of the proposed well. Submit detailed contingency cementing plans that will be implemented if there is less than 100% filling of the annular space between the casing and the borehole or the casings. Submit cement service company recommendations. [30 TAC §331.62(a)(1)(A)(ix) & (x), (a)(5) and (a)(6), and §331.121(a)(2)(O)]

For conversion wells only: cementing procedures, types of cement including volumes, additives, slurry weight, etc., cementing equipment, and information on location of cement in the well. Submit all available data concerning cementing procedures, cement bond, any cementing problems and how they were managed. Submit a plan for any cementing or other additional work to be done in preparing the well for waste injection.

1. Plans for logging, coring and testing new wells, and plans for logging and testing conversion wells, as required in 30 TAC §331.62(a)(7). All logs and tests shall be interpreted by the service company which processed the logs or conducted the test, or by other qualified persons. The logging, coring, and testing of a new well should include the following.
2. Surface casing hole

Before casing is installed:

1. Spontaneous potential, resistivity and natural gamma ray log
2. Caliper log

After casing is set and cemented:

1. Temperature log
2. Cement bond log
3. Intermediate/long string casing hole (to total depth)

Before casing is installed:

1. Spontaneous potential and resistivity log
2. Natural gamma ray log
3. Compensated density and/or neutron porosity log
4. Directional or inclination survey
5. Caliper log
6. Fracture finder log (borehole imaging survey recommended)

After casing is set and cemented:

1. Temperature log
2. Cement bond log (from surface to bottom of long string casing)
3. Casing inspection

Note: The cement bond logs utilized should be the best suitable for the composition and size of the well construction materials in order to provide the highest quality data for evaluation.

1. Injection zone and confining zone
2. Full-hole cores from selected intervals of the injection zone and lowermost part of the overlying confining zone, supplemented by sidewall cores. If full-hole coring is not feasible, extensive sidewall coring should be done at sufficient intervals to yield representative data for selected parts of the injection zone and lowermost overlying confining zone. Coring should be sufficient to adequately characterize all parts of the section (permeable and impermeable strata). Core analysis shall include a determination of permeability, porosity, bulk density, Poisson’s ratio, formation compressibility and other necessary tests.
3. Formation fluid sample(s) and analysis of the chemical, physical and radiological characteristics of the formation fluids. [30 TAC §§331.62(a)(8) & 331.121(a)(2)(H)]
4. Compatibility testing of the formation fluids and minerals of both the injection zone and the confining zone with the injected wastes, and demonstration that the waste stream and its anticipated reaction products will not alter the permeability, thickness, or other relevant characteristics of the confining or injection zones such that they would no longer meet the requirements of 30 TAC §331.121(c) nor have the potential to react to generate gases. [30 TAC §331.45(1)(G), §331.64(j) and §331.66(c)]
5. Well mechanical integrity
6. Pressure test with liquid or gas
7. Radioactive tracer survey
8. Temperature or noise log

For conversion wells: all available open hole and cased hole logs, results of core analysis, compatibility testing and mechanical integrity testing; state which of the above are not available. Submit a plan for any additional logging to demonstrate that the well construction is suitable for waste injection.

1. Proposed well stimulation program, acidizing, etc., where applicable.
2. Description of proposed injectivity/fall-off test for determination of well capacity and reservoir characteristics and description of proposed surveys to establish preferred injection intervals. Injection preceding the fall-off testing shall be performed at the maximum rate which can be held constant under the conditions at the site in order to maximize pressure changes. Injectivity and fall-off testing shall be conducted for a sufficient time to reach radial flow in the reservoir. Prior to performing injectivity tests, determine the bottom hole pressure, bottom hole temperature and static fluid level in the well. Test results should be used to determine the reservoir fluid pressure, fracture pressure, transmissibility, permeability, faulting or other boundaries, dual porosity, skin factor, completion anomalies, and other physical and chemical characteristics of the injection zone. [30 TAC §331.62(a)(8)]
3. Engineering drawings and design specifications for the wellhead configuration and annulus monitoring systems. [30 TAC §331.121(a)(2)(K)]
4. Demonstration that all well materials, including the wellhead, tubing, packer, long string casing and cement, are compatible with the injection fluids and formation fluids the materials are expected to contact. Provide results of all compatibility tests on all well construction components, historical compatibility data from existing wells and waste streams that are totally analogous with the compatibility conditions of the new well, and/or documentation that the materials meet or exceed the standards of the American Petroleum Institute or the American Society for Testing and Materials for the materials and the injection fluids and formation fluids. [30 TAC §331.62(a)(1) and §331.64(g)(1)]
5. Plans for notification of well construction and submittal of pre-operations reports in accordance with 30 TAC §331.62(a)(10), §331.65(b), and §331.45.
6. Existing Well Design and Condition

Provide the following information on well design and condition of existing injection wells.

1. Engineering drawing of the existing well construction, with appropriate information on type, size, weight, grade and setting depths of tubing, casings, liners, packers, cement types and location behind casings, annulus fluids, completion details, sidetracks, plugbacks, etc. [30 TAC §331.121(a)(2)(K)]
2. Detailed discussion of the well history including construction, plugbacks, sidetracks, workovers, stimulations, logging and testing results, design and operational problems, failed mechanical integrity, permit violations, periods of no operation, periods of temporary abandonment, concerns, and recommendations for improvements.
3. Engineering assessment of the present condition and life expectancy of the tubing, packer, casings, liner, cement, and interior of the wellhead, and demonstration of continuous attainment of the performance standard in 30 TAC §331.62(a)(5). The assessment should be based on, at a minimum, results of quarterly corrosion monitoring, recalculation of the design safety factors, results of casing inspection and evaluation logs, temperature, noise or oxygen activation logs, annual mechanical integrity testing, design, construction and operational problems, and well workovers and repairs.
4. (Optional) Plans for proposed future design and construction changes to the existing well in the event that continuous attainment of the performance standard in 30 TAC §331.62(a)(5) cannot be demonstrated or if satisfactory well operations cannot be achieved. The proposed plans must be in compliance with the applicable requirements of Section VI.A. for well design and construction and Section VI.D.1 for well plugback design. [30 TAC §331.44(b)(7)]
5. Engineering drawings and design specifications for the wellhead configuration and annulus monitoring system. [30 TAC §331.121(a)(2)(K)]
6. Well Operation, Monitoring and Maintenance

Provide the following information for all proposed new wells and existing wells. If existing wells are in temporary abandonment, provide the proposed duration of temporary abandonment and include applicable information regarding well operation, monitoring and maintenance during the period of temporary abandonment. [30 TAC §331.63-66, §331.121(a)(2)(G) & (J)-(M)]

1. The maximum instantaneous rate of injection, in gallons per minute (gpm), requested for the permit. [30 TAC §331.63(f)]
2. The average rate of injection (gpm) per month, and the total monthly and annual volumes (gallons) based on the average rate of injection requested for the permit. [30 TAC §331.63(f)]
3. An estimate of the average and maximum daily injection rate and the volume of fluid or waste to be injected over the anticipated life of the injection well and detailed information regarding patterns of injection. [30 TAC §331.121(a)(2)(G)(i) and §305.45(a)(8)(B)(i)]
4. The average surface injection pressure and the maximum surface injection pressure (MASIP) or if the calculated MASIP is less than zero psi, the average and maximum flowing bottomhole pressure requested for the permit. Discussion and calculations are to be shown below under Section VII.A.5. [30 TAC §331.121(a)(2)(G)(ii)]
5. Operation and injection procedures that demonstrate compliance with the operating requirements of 30 TAC §331.63 & §331.66(c). [30 TAC §331.121(a)(2)(J)]
6. Detailed monitoring plans with engineering diagrams, if applicable, for meeting the following monitoring requirements: [30 TAC §331.121(a)(2)(M)]
7. Pressure gauges installed and maintained, at the wellhead, in proper operating conditions in accordance with the requirements of 30 TAC §331.64(c).
8. Continuous recording devices installed, used and maintained in proper operating condition, and automatic alarm, shutoff, response and notification systems designed in accordance with the requirements 30 TAC §331.64(d).
9. Continuous or periodic monitoring devices installed, used and maintained in proper operating condition to monitor injection fluid pH, specific gravity and other waste characteristic limits requested under for the proposed permit under Section IX.A.5 of the application. [30 TAC §331.64(b)(3)]
10. Annual mechanical integrity testing conducted in accordance with the requirements of 30 TAC §331.64(e).
11. Quarterly corrosion monitoring for all well component materials that may be in contact with the waste stream conducted in accordance with the requirements of 30 TAC §331.64(g). Include coupon placement or constructed loop location.
12. Annual pressure buildup monitoring in the injection zone, including at a minimum, a shut-down of the well for a time sufficient to conduct a valid observation of the pressure fall-off curve in accordance with 30 TAC §331.64(h)(2)
13. Demonstration that the wellhead and associated facilities will be painted, if appropriate, and maintained in good working order without leaks. [30 TAC §331.66(b)(3)]
14. Demonstration that the base of the wellhead will be enclosed by a diked, impermeable pad or sump or alternative designed system to protect the ground surface from spills and releases and that any liquid collected will be disposed of in an appropriate manner. [TWC §27.051(3)]
15. Demonstration that an all-weather road will be installed and maintained to allow access to the injection well and related facilities. [30 TAC §331.66(b)(2)]
16. Demonstration that a sign will be posted at the well site, clearly legible in English with one-inch letters and numbers, showing the name of the company, company well number, and commission permit number. [30 TAC §331.66(b)(1)]
17. Contingency plans to cope with all shut-ins or well failures, based on worst case scenarios including 100-year rainfall events and hurricane events. Also provide descriptions of emergency storage/alternative disposal facilities and the operation of back-up or auxiliary facilities or similar systems to be used when necessary to achieve compliance with the permit conditions. [30 TAC §331.121(a)(2)(L) & §305.125(5)]
18. Well Closure, Post-Closure Care and Cost Estimates [30 TAC §305.49(a)(4) & §331.121(a)(5)]
19. Submit a step-by-step well closure plan describing the manner in which compliance with the plugging and abandonment requirements of 30 TAC §331.46 & §331.144 will be attained.
20. Submit a detailed cost-estimate, in current dollars, for closure of the well assuming closure activities will be conducted by a third party with no operable on-site equipment. If closure costs are based on contractor bids, submit a copy of the bid specifications and each contractor’s response. If cost estimates are based on a detailed analysis, submit details of item costs and number of each item, and details of costs for equipment rental, third party labor and supervision, transportation, testing, decontamination and disposal, contingencies, etc. [30 TAC §331.143]
21. For hazardous waste wells, submit a post-closure plan describing the manner in which compliance with post-closure care requirements of 30 TAC §331.68 will be attained.
22. If applicable, submit a detailed cost estimate, in current dollars for all proposed post-closure care activities, including corrective action and groundwater monitoring. [30 TAC §331.68(a)(4)(F)]
23. Reservoir Mechanics Report

The Reservoir Mechanics Report including all associated geoscience and engineering specifications, details, calculations or estimates, maps, plans or drawings, cross sections, other figures, opinions, recommendations, evaluations and other related geoscience and engineering documents must be prepared, sealed, signed, and dated by a Texas professional engineer (P.E.) and/or a Texas professional geoscientist (P.G.), as appropriate. Additionally, all engineering and geoscience documents released, issued or submitted by a licensee, including preliminary documents, shall clearly indicate the firm name and registration number of the engineering or geoscience firm by which the engineer or geoscientist is employed. [30 TAC§305.45(a)(8), §331.21, 22 TAC §137.33 and §851.156]

1. Discuss the reservoir mechanics/hydrology of the injection reservoir (providing sources of information, methods and calculations), and include the information itemized below. The term “injection reservoir” is used here for that part of the injection zone through which it is predicted that injected wastewater and displaced reservoir fluids will flow, and pressure will increase. Laterally continuous impermeable strata may isolate portions of the injection zone from the permeable strata that are in hydraulic communication with the actual completion interval (perforations, screen or open hole). Much of the information requested below applies to predictions of fluid flow and pressure changes. Considerations and predictions of fluid flow and pressure changes should be related to the thickness, extent, porosity, permeability and other parameters of the injection reservoir. The injection reservoir is an informal unit, as contrasted with the formal injection interval defined for the permit. It is required that the injection interval contain the actual completion interval where waste enters the reservoir, but not that the injection reservoir be totally within the injection interval. The injection interval may be defined to correspond to the injection reservoir if that is the preference of the applicant. If the injection interval includes more than one injection reservoir, the applicant may wish to evaluate each reservoir for pressure increase, waste plume, and area of review considerations. If all reservoirs meet the criteria, then the operator would be able to recomplete the well in any of them without further evaluation. An alternate acceptable method is to use a single worst-case reservoir to represent all injection reservoirs in communication with the injection interval. [30 TAC §331.121(c)]
2. A summary of the stratigraphy and lithology of the injection zone to address the relationship of the injection reservoir to the injection interval and to the part of the injection zone above the injection interval. Refer to logs, cross-sections, other figures, reservoir performance history, results from injectivity/fall-off testing, interference testing, and spinner surveys, modeling, etc. to clearly present the interpretation.
3. Injection reservoir stratigraphy, lithology, porosity, effective porosity, permeability, thickness and temperature.
4. Salinity, density, viscosity and pH of the injection reservoir fluid. [30 TAC §331.121(a)(2)(H)]
5. Initial and current static reservoir pressures at the top of the injection reservoir. Give methods of determination (or estimation for new wells). [30 TAC §331.62(a)(8) & §331.64(h)(2)]
6. Estimation of pressure necessary to extend existing fractures at the top of the injection reservoir; provide the method of determination and show calculations. State the maximum allowable surface injection pressure (MASIP), or if the calculated MASIP is less than zero psi, state the average and maximum flowing bottomhole pressure that is being requested for the permit. Discuss the method of determination and show calculations. [30 TAC §331.63(c) §331.121(a)(2)(G)(ii)]
7. Identify other subsurface disposal operations that are currently permitted to operate or have previously operated within the AOR or within the extended area affected by increased reservoir pressures or the waste plume. These should include industrial and municipal waste injection wells, waterflood wells, and saltwater disposal well operations. Provide operator names, distance from the applicant's well, and the injection reservoir depths. Describe whether any wells are injecting or have previously injected into the same injection reservoir as the applicant’s injection well(s), provide the maximum permitted injection rates and discuss whether there is potential for pressure interference between the injection wells or mingling of the waste plumes.
8. Predictions of increase in reservoir pressure (above current static pressure) due to injection within the AOR or the extended area affected by increased reservoir pressures. Justify the anticipated distribution pattern of pressure increase, considering patterns of fluid flow in response to any preferential permeability and to any faults or other possible reservoir boundaries. Include predictions for one and ten years from present and for the remainder of the operational lifetime of the well (30 years for new wells). Assume continuous injection during those periods. The rate of injection used in the model should be the requested maximum permitted rate sustainable over those periods of time. If a higher instantaneous rate is proposed, then also predict pressure increase over the maximum time period that the rate could be maintained. The pressure effect of other injection wells operating at maximum permitted injection rates in the same reservoir should be included. The predicted increase in reservoir pressure should not exceed the pressure necessary to extend fractures at the top of the injection reservoir.

Describe the methods/models used and their applicability to the site. Give the values used for all input parameters and provide justification for those values. If injection into the reservoir has occurred, use historical injection rates and flowing reservoir pressure data to calibrate the model adjusting appropriate input parameters until a satisfactory performance match has been obtained between the model’s calculated reservoir behavior and the behavior observed in the field. Show calculations done outside the framework of computer models. Provide computer model results, output files, and maps to illustrate the distribution of pressure within the AOR.

1. Determination of the cone of influence; show calculations. For this application, consider the cone of influence to exist over that area in which increased pressures at the top of the injection reservoir are sufficient to drive reservoir fluids into a wellbore by overcoming a 9.0 pound per gallon (ppg) fluid column extending from the top of the injection reservoir to a level of 50 feet below the ground surface. It is acceptable to use a minimum uniform depth for the top of the reservoir in order to conservatively delineate the area. Discuss the cone of influence in terms of its magnitude and extent. Plot the area outline of the cone of influence on the map requested under Section VIII.A. [30 TAC §331.42(b) & §331.45(1)(H)]
2. For renewals of permits and/or permitting of additional injection wells at a facility, a historical analysis of the pressure effects of existing injection well(s) upon the injection reservoir. For an additional injection well, discuss the potential effects of the new well as related to the existing injection operations.
3. A potentiometric surface map of the injection zone under static conditions, or if data is unavailable, expected static fluid level and regional gradient.
4. A justification for the anticipated geometry of the waste plume (groundwater velocity, radial versus nonradial flow, using information given in Section VII.A.8. above). Cite any pertinent historical data.
5. Extent of the waste plume
6. as it presently exists, either calculated or established by sampling;
7. projected 10 years from present (using the maximum permitted waste volumes); and
8. over the anticipated operational lifetime of the well (at least 30 years for new wells).

Evaluate the relationship of the anticipated plume with waste plumes of other injection wells in the area. If waste plumes of other injection wells will be affected, provide the extent of the affected waste plume as it presently exists, projected 10 years from present, and over the anticipated operation lifetime of the well.

Provide a description of the methods/models used and their applicability to the site. Effects of advection and dispersion should be evaluated. List and justify the site-specific parameter values of the model reservoir. Show calculations done outside the framework of a computer model. The presence of immoveable water should be considered in modeling plume expansion. Its effect can be conservatively estimated by reducing the reservoir porosity by a factor of 20 percent. Plot the area of extent of all waste plumes on the map requested in Section VIII.A of the application.

1. Area of Review Report

The Area of Review Report including all associated geoscience and engineering specifications, details, calculations or estimates, maps, plans or drawings, cross sections, other figures, opinions, recommendations, evaluations and other related geoscience and engineering documents must be prepared, sealed, signed, and dated by a Texas professional engineer (P.E.) and/or a Texas professional geoscientist (P.G.), as appropriate. Additionally, all engineering and geoscience documents released, issued or submitted by a licensee, including preliminary documents, shall clearly indicate the firm name and registration number of the engineering or geoscience firm by which the engineer or geoscientist is employed. [30 TAC§305.45(a)(8), §331.21, 22 TAC §137.33 and §851.156]

1. Submit a map showing the location, name, number, and depth of each of the existing and/or proposed injection wells and all other wells (oil and gas wells, exploratory tests, disposal wells, water wells, etc.) within the area of review. The area of review is an area determined by a radius of 2½ miles from the proposed or existing wellbore or the area within the cone of influence calculated in Section VII.A.8, whichever is greater. In addition, the map must show all surface bodies of water, springs, mines (surface and subsurface), quarries, and other pertinent surface features, including residences and roads. The map should also show surface faults, if known or suspected. If preferred, two separate maps may be submitted, with one showing the wells and the second depicting the surface features. [30 TAC §331.42 & §331.121(a)(2)(A)]
2. Identify, locate and ascertain the condition of all wells within the AOR which penetrate the injection zone and/or confining zone. Include a description of the protocol followed. Identify these wells on the map in Section VIII.A. above. [30 TAC §331.121.(a)(2)(C)]
3. Submit a tabulation of data on all wells in the AOR that penetrate the injection zone and/or confining zone. The data should include operator or owner, well number, lease name, date drilled, depth, and status. Each entry in the tabulation should be keyed by identification number to the map in Section VIII.A. above. Submit completion and plugging records for each well, including information regarding casing size, setting depth, and surface, intermediate and long string casing/liner cementing records. Submit completion cards (scout tickets) on each well. [30 TAC §331.121.(a)(2)(B)]
4. Submit schematics of all wells within the cone of influence, as determined from Section VII.A.8. Copy and modify, as appropriate, the attached sample well diagram and reference the schematics by identification number to the map in Section VIII.A. above. The sketches should show casings/liners, tubings, open hole, calculated or known cemented intervals, plugs, perforations, mud weight, and approximations of the depth of the base of the USDW and depths of the confining zone, injection zone and injection interval. Include a description of any construction or plugging inadequacies and potential problems. [30 TAC §331.121.(a)(2)(B)]
5. Determine the wells that are inadequately constructed, completed, plugged or abandoned, or for which plugging or completion information is not available (i.e., wells that may allow the movement of fluids into or between USDWs and fresh or surface water due to pressures in the injection zone). Considerations should include the adequacy of cement plugs and casing cement below the USDW, hydrostatic pressure and gel strength of the mud column in the well at the top of the injection reservoir, and the calculated pressure due to injection in the top of the injection reservoir at the wellbore (based on maximum injection rates over the requested permit term). Refer to Section VII.A.7. for predictions of pressure increase. For wells for which records are not available, assume insufficient cement and a fluid density of 9.0 ppg. Determine whether the calculated pressure in the injection reservoir exceeds the hydrostatic pressure. If the calculated injection reservoir pressure exceeds the hydrostatic pressure, consider the additional factor of gel strength of the mud (use 20 pounds per 100 square feet). If the pressure is still excessive, then the well is considered to be inadequately constructed or abandoned. For each inadequately constructed or abandoned well, show the calculations used in the determination. [30 TAC §331.121(a)(2)(N)]
6. Propose a corrective action plan and schedule (including cost estimates) for any inadequately constructed or abandoned wells in accordance with the requirements of 30 TAC §331.44 or request a lower injection rate that will result in a pressure increase in the reservoir that is not sufficient to drive fluids into or between the USDWs or freshwater aquifers and will prevent endangerment of USDWs and fresh or surface water. [30 TAC §331.121(a)(2)(N), §331.121(a)(5) & §305.49(5)]
7. If information provided in Sections VII or VIII of the application indicates that ambient monitoring is needed to assess or monitor the potential for fluid movement from the well or the injection zone, propose a monitoring plan in accordance with the requirements of §331.64(f)&(h)(1). [30 TAC §331.121(a)(2)(M)]

**Sample Well Diagram**

Map ID Number:

Operator:

Lease:

Well Number:

Type of well1:

Status2:

RCT Forms:

Distance from nearest injection well:

Using the example below, draw and label a diagram to show casing sizes, depths, cement tops, plugs, perforations, USDW, and tops of injection interval and injection zone. Show calculations on separate pages.

**Figure 1: Example Well Diagram**

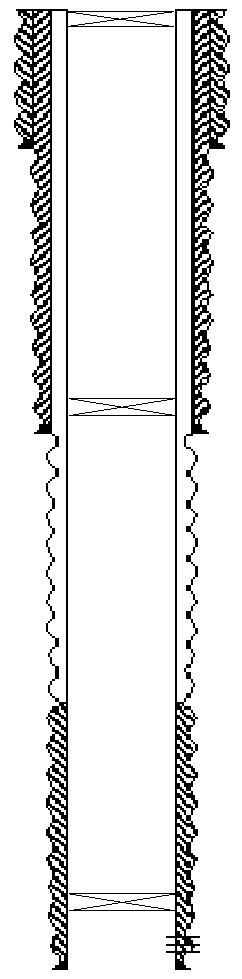
**Base USDW at 2610'**

**Top of Confining Zone at 3800'**

**Top of Injection Zone at 4750'**

**Top of Injection Interval at 5400'**

**5-½" long string casing set at 8431'**



**5 sack cement plug in top of casing**

**Cement plug 2825' - 2950'**

**9-5/8" surface casing set at 2900' Surface casing cemented to the surface'**

**TOC behind 5-½" casing calculated to 5241'**

**Cement plug 7725' - 7925'**

**Perforations 8175' - 8230'**

Potential Problem:

1 Oil/gas, enhanced recovery, water well, injection well (Class I,II,III,IV,V), hydrocarbon storage, other (specify)

2 Abandoned (dry or productive), shut-in, active, other (specify)

1. Wastes and Waste Management
2. Waste Generation and Management Activities

All analytical data submitted to the TCEQ must be generated by a lab that the Texas Laboratory Accreditation Program (TLAP) has accredited under the National Environmental Laboratory Accreditation Conference (NELAC) standard for matrices, methods, and parameters of analysis, unless: (1) the lab is an in-house lab and either the lab performs work for its owner, for another company with a unit located on the same site, or without compensation for a governmental agency or charitable organization, or the lab is in another state and is accredited or inspected by that state; (2) the lab is accredited under federal law; (3) the data are needed for emergency-response activities and no TLAP-accredited lab is available; or (4) the lab supplies data for which the TCEQ does not offer accreditation. Refer to the [list of laboratories](https://www.tceq.texas.gov/downloads/compliance/labs/txnelap-lab-list.pdf) [[25]](#footnote-25) accredited by the State of Texas under the National Environmental Laboratory Accreditation Program (NELAP) on the TCEQ website.

1. Provide a detailed description of each individual waste stream to be disposed in the injection well including a description of the process generating each waste stream, the source of each waste stream, the generator name, the exact point of generation, and the pre-injection units in which the waste will be stored and processed prior to disposal. Include a detailed flow diagram that illustrates the source of each waste stream and the pre-injection units in which the waste will be stored and processed. If a waste stream will be generated at a captured facility, provide the name and the TCEQ regulated entity number (RN) of the captured facility, and demonstrate that the facility meets the definition of captured facility. If a waste stream will be generated off-site at another facility owned or effectively controlled by the applicant, provide the name, location, and if applicable, the TCEQ regulated entity number (RN) of the off-site facility. If a waste stream will be generated off-site at another facility not owned or effectively controlled by the applicant, provide the name of the off-site facility or identify the type of off-site facility, industry or waste-generating process. Complete Table IX.A. for each individual waste stream. For on-site facilities, list "on-site" for the waste stream source. For waste received from captured facilities, list "captured facility" and the captured facility name. For waste received from off-site facilities, list "off-site" and the off-site facility name or the type of facility, industry, or waste-generating process. [30 TAC §331.121(a)(2)(G)(iii) & §331.63(f)]
2. Complete Table IX.B. for each waste stream to be injected into the injection well. If individual waste streams identified in Table IX.A. are blended before injection, list only the composite waste streams in Table IX.B. and indicate which waste streams are blended to form the composite waste streams. Provide a verbal description, EPA waste codes, EPA hazard codes (I, C, R, E, H, T), TCEQ waste classification (H, 1, 2 or 3), and TCEQ waste codes. Information on waste classification and codes may be obtained from the Registration and Reporting Section, Registration, Review, and Reporting Division of the TCEQ. [30 TAC §335.503 & §335.504]
3. Provide a description and a laboratory analysis report of the chemical and physical characteristics of each waste stream proposed to be injected. Include individual waste streams as generated as listed in Table IX.A. and/or composite waste streams consisting of individual waste streams mixed before injection as listed in Table IX.B. The description of each waste stream should include the chemical, physical, thermal, organic, bacteriological, or radiological properties or characteristics, as applicable, described in enough detail to allow evaluation of the water and environmental quality considerations involved. For each waste stream also state the ranges of pH, density and viscosity, and the percentage of total waste volume. [30 TAC § 305.45(a)(8)(B)(ii) and §331.121(a)(2)(G)(iv)]
4. For an amendment to add a new waste stream or change the characteristics of an approved waste stream, provide a demonstration that the proposed waste is compatible with all well materials, including the wellhead, tubing, packer, long string casing and cement. Additionally, provide compatibility testing of the formation fluids and minerals of both the injection zone and the confining zone with the proposed waste to demonstrate that the new waste stream and its anticipated reaction products will not alter the permeability, thickness, or other relevant characteristics of the confining or injection zones such that they would no longer meet the requirements of 30 TAC §331.121(c) nor have the potential to react to generate gases. [30 TAC §331.45(1)(G), §331.62(a)(1), §331.64(j) and §331.66(c)]
5. Specify the range of pH, the maximum specific gravity, and any other waste characteristic limits requested under the proposed permit for the injected waste streams that must be maintained for the protection of the injection well, associated facilities, and injection zone, and to ensure proper operation of the facility including waste compatibility with well materials, injection zone minerals and formation fluids. [30 TAC §331.63(h) & §331.66(c)(1)]
6. Submit a Waste Analysis Plan that describes the procedures to be carried out to obtain a detailed chemical and physical analysis of a representative sample of all wastes to be injected into the well. The plan should specify the parameters for which the waste will be analyzed and the rationale for selection of the parameters, the test methods that will be used to test for the parameters, and the sampling method and location that will be used to obtain a representative sample of the waste to be analyzed. The injected fluids shall be sampled and analyzed with a frequency sufficient to yield representative data of their characteristics. Waste analysis shall be repeated when process or operational changes occur that may significantly alter the characteristics of the waste stream. For waste received from off-site the plan must specify procedures which will be used to inspect and, if necessary, analyze each movement of waste received at the facility. The plan must describe methods which will be used to determine the identity of each movement of waste managed at the facility. The plan should be updated to remain accurate, and the analysis should remain representative.

All sampling procedures, sample transport, sample storage and waste analyses utilized for waste identification or verification and other analyses for environmental monitoring must be performed in accordance with methods specified in the current editions of EPA SW-846, ASTM or other methods accepted by the TCEQ. Describe the applicant’s quality assurance/quality control program and confirm that it is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan (QAAP).

Complete Table IX.C. for each waste stream proposed to be sampled and analyzed include sampling location, sampling method, sampling frequency, parameters and analytical methods for each waste stream to be disposed of by injection at the facility. [30 TAC §331.64(b)]

1. Identify which of any hazardous wastes listed above are subject to federal land disposal restrictions. See 40 CFR 148 Subpart B. Explain whether an exemption has been granted or requested under 40 CFR 148 Subpart C.
2. Identify which of any hazardous wastes listed above are not subject to federal land disposal restrictions. See 40 CFR 148 Subpart B. Explain why each waste is not restricted.
3. Complete Table IX.D for each Class I injection well at the facility (past, present, and proposed).
4. Waste Management

If applying for a hazardous waste injection well permit, submit the following information for each active Class I hazardous waste injection well at the facility: [30 TAC §331.121(e)]

1. dates the well has been operated;
2. specification of all wastes that have been injected in the well, if available;
3. all available information pertaining to any release of hazardous waste or constituents from any active hazardous waste injection well at the facility; and
4. results of preliminary site investigations required by 30 TAC §331.121(e)(3) as necessary to determine whether a release is occurring, has occurred, or is likely to have occurred.

**Table IX.A. Waste Management Summary**

| Individual Waste Stream | Source | Volume (gallons/year) |
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**Table IX.B. Waste Stream Summary**

| Waste Number | Waste Stream | EPA Waste Codes | EPA Hazard Codes (I, C, R, E, H, T) | TCEQ Waste Classifications (H, 1, 2 or 3) | TCEQ Waste Codes |
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**Table IX.C. Waste Stream Sampling and Analysis Summary**

| Waste Number (From Table IX.B) | Sampling Location | Sampling Method | Frequency | Parameter | Test Method |
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**Table IX.D. Injection Well Summary**

| WDW Number | Status1 | Injected Volume2 | Maximum Permitted Injection Rate3 | Number of Years Utilized | Date in Service |
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1Indicate only one of the following: Active, Inactive, Closed, or Proposed

2Total volume (gallons) injected into the well

3Gallons per year

1. RCRA Permit by Rule Requirements (For a facility where a UIC hazardous waste injection well is the only unit which requires a RCRA permit).

If the application is for a hazardous waste injection well permit at a facility where the underground injection well is the only unit at the facility which requires a RCRA permit, then special requirements must be met to be eligible for RCRA Permit By Rule in accordance with 30 TAC §335.47. The requirements include personnel training and an evaluation for corrective action for all releases of hazardous waste or constituents from any solid waste management unit at the facility. To comply with these requirements submit the application supplement as part of this permit application using form TCEQ-00756, [Supplement to Class I Injection Well Permit Application, Personnel Training and Corrective Action for Releases From Solid Waste Management Units at a Hazardous Waste Disposal Well Facility with No Resource Conservation and Recovery Act (RCRA) Permit for Other Units](https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/class-i-uic-injection-well-application-supplement.docx) [[26]](#footnote-26).

1. Disposal of Wastes Containing Radioactive Materials

If waste containing radioactive materials will be disposed in the injection well, submit as "Attachment J,” a letter or other instrument in writing from the Commission, the Texas Department of State Health Services, or any other appropriate authority stating either that the applicant has a license governing the disposal of radioactive materials or that the applicant does not need a license. [30 TAC §305.52]

1. Pre-Injection Units
2. Pre-Injection Unit Summary

Pre-injection units are the on-site above-ground appurtenances, structures, equipment, and other fixtures including the injection pumps, filters, tanks, surface impoundments, and piping for wastewater transmission between any such facilities and the well that are or will be used for storage or processing of waste to be injected, or in conjunction with an injection operation. Pre-injection units used for storage and processing hazardous waste must be authorized by a RCRA permit under 30 TAC §335.2 or must be operated in compliance with the accumulation time requirements under 30 TAC §335.53(f). Pre-injection units used for storage and processing nonhazardous waste must be authorized by an industrial solid waste permit under 30 TAC §335.2 or must be exempted from permit under 30 TAC §335.2(d) and meet the notification requirements under 30 TAC §335.6. Pre-injection units used for storage and processing waste generated from in situ mining of uranium must be designed, constructed, operated and closed in compliance with the radioactive substance requirements under 30 TAC Chapter 336.

Complete Table XII. for each pre-injection unit that is or will be used for storage or processing of waste to be injected, or in conjunction with an injection operation. Include the unit name, the unit number or identifier, and permit authority for each pre-injection unit. If the pre-injection unit is authorized by permit, provide the permit number. If the pre-injection unit is exempt from permitting under 30 TAC §335.2(d) or §335.53(f), provide the Notice of Registration unit number.

**Table XII. Pre-injection Unit Summary**

| Pre-Injection Unit Name | Unit Number or Identifier | Permit Authority |
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1. Confidential Material

Any information requested in the previous Sections I through XII of this application which is deemed confidential shall be provided in this Section as a separate collective document and clearly labeled "Confidential."

1. Index of Attachments

List and index below all attachments to this application and indicate if included, not included or not applicable

**Attachments to this Application**

| Description of Attachment | Section | Attachment | Included | Not Included | Not Applicable |
| --- | --- | --- | --- | --- | --- |
| Core Data Form | I.L | A |  |  |  |
| Public Interest Demonstration | I.M | B |  |  |  |
| Site Legal Description | I.P.5. | C |  |  |  |
| Facility Boundary and Topographic Map | I.P.6. | D |  |  |  |
| Plain-Language Summary | I.Q. | E |  |  |  |
| Public Involvement Plan | I.R | F |  |  |  |
| Affected Land and Mineral Owners | II. | G |  |  |  |
| Letter from Railroad Commission | III. | H |  |  |  |
| Financial Assurance, Liability, and Financial Capability | IV. | I |  |  |  |
| Radioactive Waste Statement | XI. | J |  |  |  |

1. <https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=3&ti=30&pt=1> [↑](#footnote-ref-1)
2. <https://www.twdb.texas.gov/mapping/doc/maps/GCDs_8x11.pdf> [↑](#footnote-ref-2)
3. <https://www.tceq.texas.gov/downloads/groundwater/gcd/gcd-contact-list.pdf> [↑](#footnote-ref-3)
4. <https://www3.tceq.texas.gov/epay/> [↑](#footnote-ref-4)
5. <https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/well-construction-guidance-1.docx> [↑](#footnote-ref-5)
6. <https://www.pels.texas.gov/> [↑](#footnote-ref-6)
7. <https://tbpg.state.tx.us/> [↑](#footnote-ref-7)
8. <https://www.tceq.texas.gov/downloads/permitting/waste-permits/ihw/forms/0024.docx> [↑](#footnote-ref-8)
9. <https://www.tceq.texas.gov/downloads/permitting/waste-permits/ihw/forms/parta.docx> [↑](#footnote-ref-9)
10. <https://www.tceq.texas.gov/downloads/permitting/waste-permits/ihw/forms/rcra-part-b-application.docx> [↑](#footnote-ref-10)
11. <https://www.tceq.texas.gov/permitting/radmat/general_rad_license.html> [↑](#footnote-ref-11)
12. <https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/class-i-uic-injection-well-application-supplement.docx> [↑](#footnote-ref-12)
13. <https://www.tceq.texas.gov/downloads/permitting/radioactive-materials/uic/salt-cavern-application-supplemental-information.docx> [↑](#footnote-ref-13)
14. <https://www.tceq.texas.gov/permitting/radmat/uic_permits/UIC_Guidance_Class_1.html#General> [↑](#footnote-ref-14)
15. <https://www.tceq.texas.gov/permitting/radmat/uic_permits> [↑](#footnote-ref-15)
16. <https://www.glo.texas.gov/coast/coastal-management/forms/files/CoastalBoundaryMap.pdf> [↑](#footnote-ref-16)
17. <https://www.tceq.texas.gov/downloads/permitting/central-registry-docs/10400-core-data-form.docx> [↑](#footnote-ref-17)
18. <https://www.tceq.texas.gov/downloads/permitting/central-registry-docs/10400-core-data-form-instructions.pdf> [↑](#footnote-ref-18)
19. <https://www.twdb.texas.gov/mapping/doc/maps/GCDs_8x11.pdf> [↑](#footnote-ref-19)
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21. <https://www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/pip-form-tceq-20960.pdf> [↑](#footnote-ref-21)
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23. <https://www.tceq.texas.gov/agency/decisions/participation/title-vi-compliance> [↑](#footnote-ref-23)
24. <https://www.tceq.texas.gov/downloads/agency/decisions/participation/public-participation-plan-gi-607.pdf> [↑](#footnote-ref-24)
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