

# 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 Permit for Other Units**

### **Introduction**

The owner or operator of a facility with a hazardous waste injection well is subject to the permitting requirements of both the Safe Drinking Water Act and the Resource Conservation and Recovery Act (RCRA). If the injection well is permitted under Texas Water Code (TWC), Chapter 27, the owner or operator is eligible for a RCRA Permit by Rule under 40 Code of Federal Regulations (CFR) §270.60(b) by complying with the special requirements of 30 Texas Administrative Code (TAC) §335.47. If the facility is required to obtain a RCRA permit for other hazardous waste storage, processing or disposal units at the facility, the requirements of 30 TAC §335.47 will be met through the RCRA permit application review process for those surface units. If the facility is not required to obtain a RCRA permit for other hazardous waste storage, processing or disposal units, the owner or operator of the hazardous waste injection well must comply with the special requirements of 30 TAC §335.47(c). These special requirements include applicable personnel training requirements of 40 CFR §264.16 and corrective action for solid waste management units (SWMUs) as required in 30 TAC §335.167. This application is designed as a supplement to a Class I injection well permit application to meet the requirements for Permit by Rule for the owner or operator of a facility with hazardous waste injection well(s) that is not required to obtain a RCRA permit for other units at the facility. For the purpose of implementing corrective action under 30 TAC §335.167, facility is defined in 30 TAC §335.1(61)(B).

1. Personnel Training Plan

Provide an outline of the facility training plan which includes all the applicable information required by 40 CFR §264.16. Indicate which training will be repeated annually. [30 TAC §335.47(c)(1)]

1. Corrective Action for Solid Waste Management Units and Areas of Concern

The Texas Solid Waste Disposal Act, 30 Texas Administrative Code (TAC) §335.167, 40 Code of Federal Regulations (CFR) §264.101, 40 CFR §270.14(d) and Section 3004(u) of the Hazardous and Solid Waste Amendments (HSWA) of 1984 require that each hazardous waste management permit application review shall address corrective action for all releases of hazardous waste and hazardous constituents listed in 40 CFR 261 Appendix VIII, 40 CFR 264 Appendix IX and/or other constituents of concern from any solid waste management unit (SWMU) and/or areas of concern (AOCs) at a facility, regardless of the time at which waste was placed in such unit. For the purposes of Hazardous and Solid Waste Amendments of 1984 (HSWA) Corrective Action, a SWMU may include, but is not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, incinerator, boiler, industrial furnace, tank, container storage area, drip pad, containment building, miscellaneous unit; also, any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, elementary neutralization units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have routine and/or systematic releases to the environment (e.g., process drainage ditches or product storage tanks).

Current United States Environmental Protection Agency (USEPA) interpretation of the requirement to address corrective action at permitted hazardous waste management facilities has resulted in a corrective action process that begins with a RCRA Facility Assessment (RFA) to determine if corrective action is necessary. The first step in the RFA is the development of a Preliminary Review (PR) from all available documentation for a facility (including, but not limited to, all facility documents, permit applications, permits, TCEQ correspondence files and inspection reports, etc. The second step of the RFA is a Visual Site Inspection (VSI) of the entire facility. The RFA is the combination of the PR and VSI documentation and any sample results and includes recommendations for whether further investigation or corrective action is warranted. The RFA is conducted during the initial injection well permit application process and the investigation results are submitted as part of this supplement to the Class I injection well application. If the RFA recommends further investigation or corrective action, requirements for conducting further investigation or corrective action are incorporated into the injection well permit. The TCEQ Office of Waste Remediation Division will oversee the further investigation or corrective action.

If there is a known release or potential for a release of hazardous waste or hazardous constituents from a unit, the PR may recommend a RCRA Facility Investigation (RFI) or an Affected Property Assessment (APA), if 30 TAC Chapter 350, Texas Risk Reduction Program (TRRP) applies, to determine the extent of the release for future corrective action or may recommend stabilization as an appropriate and immediate corrective action. The RFI shall comply with all the applicable items contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994, unless an alternate investigation approach is approved by the Executive Director. An RFI work plan may typically include a soil boring program, installation of monitoring wells, and sampling and analysis for 40 CFR 261 Appendix VIII and 40 CFR 264 Appendix IX hazardous constituents for surface soils, subsurface strata, surface water, ground water, and/or air. The applicant/permittee shall perform the RFI or APA and report the results to the TCEQ Remediation Division. Corrective Action under 30 TAC Chapter 350 consists of an APA, determination of protective concentration levels, selection of a remedy standard (if necessary), development and implementation of a response action (if necessary) and submittal of required report according to 30 TAC Chapter 350.

If the RFI Report indicates releases of hazardous waste or hazardous constituents for SWMUs and/or AOCs that have been grandfathered under 30 TAC Chapter 335 Subchapters A and S[[1]](#footnote-1), Corrective Action shall consist of, if necessary, Interim Corrective Measures, Baseline Risk Assessment (BLRA)/Corrective Measures Study (CMS) Report, and Corrective Measures Implementation (CMI). For grandfathered SWMUs and/or AOCs, the permittee may continue to complete the Corrective Action requirements under 30 TAC Chapter 335, Subchapter A and S, provided the permittee complies with the notification and schedule requirements pursuant to 30 TAC 335.8 and 350.2(m). The BLRA/CMS report shall evaluate the risk, identify and evaluate corrective measure alternatives, and recommend appropriate corrective measure(s) to protect human health and the environment. This report shall address all of the applicable items in 30 TAC 335 Subchapter S and the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994.

Upon approval of the BLRA/CMS Report by the TCEQ Remediation Division, the applicant/permittee shall submit a Corrective Measures Implementation (CMI) Work Plan to address all of the items for CMI Work Plan contained in the U.S. EPA publication EPA/520-R-94-004, Office of Solid Waste and Emergency Response (OSWER) Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. For projects conducted under TRRP, the risk assessment process shall be addressed in the Affected Property Assessment Report (APAR), and the evaluation of corrective measures shall be conducted as part of the remedy standard selection process provided in the Response Action Plan (RAP). The work plan or RAP shall contain detailed final engineering design, monitoring plans, and schedules necessary to implement the selected remedy. Upon installation of a corrective action system based upon the approved CMI Work Plan or RAP, the applicant/permittee shall submit a CMI Report or RAP which includes as-built drawings of the corrective action system. To report the progress of the corrective measures, the applicant/permittee shall submit periodic CMI Progress Reports or Response Action Effectiveness Reports to the TCEQ Remediation Division in accordance with an approved schedule. Upon completion of the corrective action requirements, the permittee shall submit CMI Report or Response Action Completion Reports for review and approval by the TCEQ Remediation Division.

Please note that the applicant/permittee may perform voluntary corrective action, stabilization, or "interim measures" at any time prior to or during the RFA/RFI/BLRA/CMS/CMI or the APAR/RAP process without prior TCEQ approval. The TCEQ strongly supports these actions when undertaken to mitigate releases or reduce or minimize exposure and releases to human health and the environment. However, these and subsequent final actions (which may be equivalent) will still require review and approval before formal "No Further Action" and corrective action termination can be authorized.

1. Applications for a New Hazardous Waste Injection Well Permit

The RFA consists of two parts, the first part is the Preliminary Review (PR) which must be submitted with the application supplement and the second part is the Visual Site Inspection (VSI) which is performed during the application review period. If the RFA recommends further investigation or corrective action, the requirements for an RFI or any other corrective action will be included in the permit or pursuant to 40 CFR §270.14(d)(3), the applicant may be required to start the RFI or other corrective action before the permit is issued.

The development of the PR involves collecting information from all available documentation for a facility including, but not limited to, all facility documents, permit applications, permits, TCEQ correspondence files, inspection reports and enforcement reports, etc. and interviews with relevant individuals with historical knowledge of the facility. The PR compiles available information on every SWMU and/or AOC that has ever existed at the facility. For each SWMU and/or AOC a recommendation is made for either:

* No Further Action;
* Stabilization (interim measures); or
* Further Investigation.

The PR may recommend no further action for:

* well-designed and well-managed units (inspection may be required);
* units that have not managed hazardous wastes or wastes containing hazardous constituents;
* units already under corrective action by enforcement order;
* units scheduled to be addressed in a compliance plan; or
* a unit which is a RCRA regulated unit (injection well) and will be authorized in the hazardous waste disposal well permit.

Once the PR is completed and submitted in the application supplement, the VSI will be conducted to collect visual evidence of releases at the facility, to identify additional areas of concern, to ensure that all SWMUs and AOCs have been identified, to fill data gaps identified in the PR, to determine the need for sampling or interim measures and ultimately assist in recommending further steps in the corrective action process. TCEQ staff may participate in the VSI process.

The following information is required for the Preliminary Review.

1. Unit Checklists

Complete the attached Unit Checklist for each facility SWMU (as defined previously) and/or AOC according to the following instructions. Make additional copies of the Unit Checklist as necessary.

**Waste Management Unit**: Enter the SWMU name and facility-designated number (e.g., Tank 101)

**NOR Number**: Enter the Unit Sequence Number from the TCEQ Notice of Registration (NOR) or, if unassigned, a letter designation (i.e., A-Z).

**Description**:Enter the type of unit (e.g., above-grade processing tank) and Process Code as listed on the attached Process Code table.

**Dates of Operation**: Enter the date the unit was placed into service and any other dates the unit changed status (active, inactive, closed, post-closure) with the appropriate status designation.

**Wastes Managed**: List all solid wastes ever managed in the unit and include the TCEQ NOR waste #, EPA hazard codes, and EPA waste codes. For each waste, list any hazardous constituent listed in 40 [CFR](http://www.gpoaccess.gov/cfr/index.html) 261 Appendix VIII or 40 [CFR](http://www.gpoaccess.gov/cfr/index.html) 264 Appendix IX, as appropriate.

**Evidence of Release**: Completely describe the release, or suspected release, including time frame, waste amount, to what media, and any corrective measures taken.

**Pollutant Dispersal Pathways**: Completely describe the possible and actual run-off pathways (i.e., to which tributary, creek, river, and bay or through subsoil to which aquifer with groundwater flow gradient, speed, and direction and any discharge point).

**Summary**: Provide complete unit description including unit type, elements of construction, location, age, condition, dimensions, size, capacity (i.e., gallons, square feet, cubic yards, etc.), and potential for release.

**Recommended Action**: Recommend either No Further Action, Stabilization (interim measures), or Further Investigation. Justify the recommendation. Corrective action under another authority is justification for No Further Action.

1. Appendices to Unit Checklists

The PR should also include Appendices I-IV to support information provided in the Unit Checklist:

1. Appendix I - Facility and SWMU Location Maps
2. Regional Location Map
3. Site Location Map
4. Facility SWMU Map - Use the Notice of Registration (NOR) number to show the location of each unit on a replicate of the topographic map required in Section I.Q.6 (Attachment C) of the Class I well permit application. Also, please note that the term "facility" includes the entire contiguous property under the control of the owner or operator, which in most cases is the area shown in the Legal Description of Facility in Section I.Q.5 of the permit application.
5. Appendix II - Wastes Managed

List all wastes managed and 40 CFR 261 Appendix VIII and 40 CFR 264 Appendix IX hazardous constituents. Provide pertinent health, safety, and risk data on each.

1. Appendix III - Evidence of Release

Provide any applicable documentation on a release. Provide a map of release locations, SWMU identification, and paths traveled.

1. Appendix IV - Pollutant Dispersal Pathways

Provide a facility, local, and regional map identifying all possible and eventual pathways in which a release from any unit could or did travel. Provide a facility general cross-section to illustrate vertical pathways and lateral movements in ground water, including discharges (i.e., seeps, creeks, etc.).

1. Facility Checklist

Complete the attached Facility Checklist according to the following instructions.

**RCRA Regulated Units**: List all units that received hazardous wastes after July 26, 1982 or for which closure was certified after January 26, 1983. Provide the appropriate information under the three provided column headings.

**Solid Waste Management Units**: List all remaining SWMUs.

**Reviewed Documents**: Enter the appropriate information for sub-items A-F, including document dates (item F should include company files and interviews).

**Summary**: Provide an overall summary of the results of this Preliminary Review noting units and areas of concern.

**Recommended Actions**: Summarize the Unit Checklist Recommended Actions and list those units recommended for further investigation including appropriate Unit Number.

The Preliminary Review should be bound with a cover page and contain a Table of Contents with the Facility Checklist entered first followed by all Unit Checklists in unit NOR numerical order and/or alphabetical order followed by the Appendices.

1. Applications for Renewal or Amendment to an Existing Hazardous Waste Injection Well Permit

If the RFA for any newly identified SWMUs and/or AOCs not previously investigated or incorporated into the permit recommends further investigation or corrective action, the requirements for an RFI or any other corrective action for those SWMUs and/or AOCs will be included in the permit. Ongoing corrective action for releases from any previously identified SWMUs and/or AOCs will also be included in the permit.

1. Unit Checklists
2. For any newly identified SWMUs (as defined previously) and/or AOCs that were not incorporated into the previous permit issuance (new, renewal, or amendment), complete the attached Unit Checklist according to the instructions in Section II.A.1. Make additional copies of the Unit Checklist as necessary.
3. For all previously identified SWMUs and/or AOCs that had not yet received TCEQ approval of “No Further Action” at the time of the previous permit issuance, update the status on the Unit Checklist. Provide copies of letters from TCEQ approving “No Further Action” or other determinations that were issued since the previous permit issuance.
4. For all previously identified SWMUs and/or AOCs that received TCEQ approval of “No Further Action” before the previous permit issuance, indicate “Not Applicable” and provide a brief explanation of the facts.
5. Facility Checklist

Update the Facility Checklist according to the instructions in Section II.A.3 to include any newly identified SWMUs and/or AOCs that were not incorporated into the previous permit issuance, and to update the status of all previously identified SWMUs and/or AOCs. Status updates should include notes regarding whether the SWMU or AOC has received approval of “No Further Action”, has had changes in its correction action status, or has had other determinations issued by the TCEQ. Include the date of the status change in the updated checklist.

**Process Codes**

| **Process Code** | **Unit Type** | **Process Code** | **Unit Type** |
| --- | --- | --- | --- |
| - | Disposal | T82 | Lime Kiln |
| D79 | Injection Well | T83 | Aggregate Kiln |
| D80 | Landfill | T84 | Phosphate Kiln |
| D81 | Land Application | T85 | Coke Oven |
| D83 | Surface Impoundment – Disposal | T86 | Blast Furnace |
| D99 | Other Disposal | T87 | Smelting, Melting, or Refining Furnace |
| - | Storage | T88 | Titanium Dioxide Chloride Process Oxidation Reactor |
| S01 | Container | T89 | Methane Reforming Furnace |
| S02 | Tank – Storage | T90 | Pulping Liquor Recovery Furnace |
| S03 | Waste Pile | T91 | Combustion Device Used in Recovery of Sulfur Values from Spent Sulfuric Acid |
| S04 | Surface Impoundment - Storage | T92 | Halogen Acid Furnace |
| S05 | Drip Pad | T93 | Other Industrial Furnaces Listed in 40 CFR §260.10 |
| S06 | Containment Building - Storage | T94 | Containment Building - Treatment |
| S99 | Other Storage | - | *Miscellaneous (Subpart X)* |
| - | *Treatment* | X01 | Open Burning/Open Detonation |
| T01 | Tank - Treatment | X02 | Mechanical Processing |
| T02 | Surface Impoundment - Treatment | X03 | Thermal Unit |
| T03 | Incinerator | X04 | Geologic Repository |
| T04 | Other Treatment | X99 | Other Subpart X |
| T80 | Boiler | - | - |
| T81 | Cement Kiln | - | - |

### **Unit Checklist**

Facility:

SWR Number:

Permit Number:

EPA ID Number:

City:

Date:

1. Waste Management Unit:
2. NOR Number:
3. Description:
4. Dates of Operation:
5. Wastes Managed:

1. Evidence of Release:

1. Pollutant Dispersal Pathways:

1. Summary:

1. Recommended Action:

### **Facility Checklist**

Facility:

SWR Number:

Permit Number:

EPA ID Number:

City:

Date:

1. Waste Management Units
2. RCRA Regulated Units

| **NOR Number** | **Description** | **Status** |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

1. Solid Waste Management Units

| **NOR Number** | **Description** | **Status** |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

1. Reviewed Documents
2. RCRA Permit Applications:

RCRA Permits:

1. CERCLA:
2. Inspection Reports:
3. Enforcement Actions:
4. Exposure Information:
5. Other Information (Company Records and Interviews):
6. Summary:

1. Recommended Action:

1. See 30 TAC §335.551(c) [↑](#footnote-ref-1)