

**Releases From Solid Waste Units And Corrective Action at a Hazardous Waste Injection Well Facility With No Resource Conservation And Recovery Act (RCRA) Permit For Other Units**  
(Supplement to Class I Injection Well Permit Application)

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 or 40 CFR 261 Appendix VIII and 40 CFR 264 Appendix IX hazardous constituents from any solid waste management unit (SWMU) at a facility, regardless of the time at which waste was placed in such unit.<sup>1</sup> Current United States Environmental Protection Agency (USEPA) interpretation of this requirement has resulted in a corrective action process that begins with a RCRA Facility Assessment (RFA) to determine if corrective action is necessary.

This requirement should be met through the RCRA permit application review process for those hazardous waste injection well facilities that have RCRA permits for surface units. However, 40 CFR §270.60(b) requires that facilities that obtain a hazardous waste injection well permit, without also obtaining a RCRA permit for other units, must meet the requirements for Permit by Rule. This means that the facility is a RCRA facility and must comply with HSWA Corrective Action requirements of 40 CFR §270.60(b)(3). The following procedure is designed as a supplement to an injection well application under these circumstances. It is essentially the same as required in Section IX of the Part B application for a RCRA surface facility permit. Note in the following that the RFA consists of two parts, the first of which must be submitted with the application and the second performed during the application review period.

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.). It must be submitted with the application. The PR compiles available information on every SWMU that has ever existed at the facility. A unit checklist is completed for each SWMU. On a unit-by-unit basis, the PR may recommend no further action for:

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

In addition, the unit checklists are summarized in a Facility Checklist. 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) to determine the extent of the release for future corrective action, or for stabilization as an appropriate and immediate corrective action.

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<sup>1</sup>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).

The second step is a Visual Site Inspection (VSI) of the entire facility to be done by TCEQ staff during the application review. The RFA is the combination of the PR and VSI documentation and any sample results. The RFA process should be scheduled so as to be completed during the latter stages of the Technical Review process or no later than one month in advance of the preparation of an initial draft permit for the facility. The RFA includes recommendations for whether further investigation or corrective action is warranted.

The requirements for an RFI or any other corrective action will be included in the permit, in the associated compliance plan, which is mandatory for facilities with known ground-water contamination, 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 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 and report the results. If the RFI Report indicates releases of hazardous waste or hazardous constituents, then the applicant/permittee shall determine the full lateral and vertical extent of the release to the satisfaction of the TCEQ. Once the report is approved, if the release is a potential risk to human health and the environment, the permittee may be required to submit a Baseline Risk Assessment (BLRA)/Corrective Measures Study (CMS) Report. This report shall evaluate the risk, identify and evaluate corrective measure alternatives, and recommend appropriate corrective measure(s) to protect human health and the environment. The BLRA/CMS 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, 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. If the CMI does not propose a permanent remedy, then a CMI Work Plan shall be submitted as part of a new compliance plan application or as a modification/amendment application to an existing compliance plan. The work plan shall contain detailed final engineering design, monitoring plans, and schedules necessary to implement the selected remedy. Implementation of the corrective measures shall be addressed through issuance of a new or a modified or amended compliance plan. Upon installation of a corrective action system based upon the approved CMI Work Plan, the applicant/permittee shall submit a CMI Report 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 to the TCEQ in accordance with the schedule specified in the compliance plan.

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 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.

A. Preliminary Review Checklists

For all facility SWMUs (as defined previously), complete the accompanying forms entitled "Preliminary Review Facility Checklist" (page 6) and "Preliminary Review Unit Checklist" (page 7). Make additional copies as necessary. The following instructions are provided in same format as these forms:

**Preliminary Review Facility Checklist Instructions**

Facility Checklist - On the form provided, supply the following information:

Fill out the information block at the top of the page (the reviewer space should remain blank for the TCEQ permit writer).

Facility:	City:
ISW Reg Number:	Date:
Permit Number(s):	Reviewer:
EPA ID Number:	

I. Waste Management Units (see footnote at bottom of page 1):

1. 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 as explained in the Unit Checklist instructions.
2. Solid Waste Management Units: List all remaining SWMUs.

II. Reviewed Documents: Enter the appropriate information for sub-items 1-6, including document dates (item 6 should include company files).

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

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

## Preliminary Review Unit Checklist Instructions

Unit Checklist - On the form provided, supply the following information for **EACH** unit or area of concern:

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

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

B. Description: enter type of unit (e.g., above-grade processing tank) and Process Code as listed below:

Process Code	Unit Type	Process Code	Unit Type
	<i>Disposal</i>	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
	<i>Storage</i>	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		<i>Miscellaneous (Subpart X)</i>
	<i>Treatment</i>	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		

C. 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.

- II. 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 261 Appendix VIII or 40 CFR 264 Appendix IX, as appropriate.
- III. Evidence of Release: Completely describe the release, or suspected release, including time frame, waste amount, to what media, and any corrective measures taken.
- IV. 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).
- V. 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.
- VI. Recommended Action: Recommend No Further Action, Stabilization (interim measures), or Further Investigation and justify. Note, corrective action under another authority is justification for No Further Action.

## Preliminary Review Facility Checklist

Facility:

City:

ISW Reg Number:

Date:

Permit Number(s):

Reviewer:

EPA ID Number:

I. Waste Management Units:

1. RCRA Regulated Units:

NOR No.	Description	Status

2. Solid Waste Management Units:

NOR No.	Description	Status

II. Reviewed Documents:

1. RCRA: Permit Applications:

Permits:

2. CERCLA:

3. Inspection Reports:

4. Enforcement Actions:

5. Exposure Information:

6. Other Information:

III. Summary:

IV. Recommended Action:

## Preliminary Review Unit Checklist

Facility:

City:

ISW Reg Number:

Date:

Permit Number:

Reviewer:

EPA ID Number:

I. Waste Management Unit:

A. NOR Number:

B. Description:

C. Dates of Operation:

II. Wastes Managed:

III. Evidence of Release:

IV. Pollutant Dispersal Pathways:

V. Summary:

VI. Recommended Action:

B. Appendices to Preliminary Review (PR)

The PR should also include Appendices I-IV to correspond to the Roman numerals in the Unit Checklist:

Appendix I. FACILITY and SWMU LOCATION MAPS

1. Regional Location Map
2. Site Location Map
3. 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 I.I.C.4 (Attachment B) 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 I.I.C.3 of the permit application.

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.

Appendix III. EVIDENCE of RELEASE

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

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.).

C. Preliminary Review Submittal Format

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