TCEQ REGULATORY GUIDANCE
Remediation Division
RG-649 • March 2025

Determining Which Releases Are Subject to TRRP

Purpose and Applicability

This document describes a process to help clarify when a release of chemicals of concern (COCs) reported to the TCEQ Remediation Division is subject to the Texas Risk Reduction Program (TRRP) rule [Title 30, Texas Administrative Code (30 TAC), Chapter 350)]. This process applies to releases that occur under the jurisdiction of a TCEQ Remediation Division program. The intention of TRRP is to focus on releases that threaten or affect water resources (groundwater, surface water/sediment) and/or those releases that necessitate a decontamination or control remedy. This document sets forth the procedure to help persons make this determination.

If any other rule, permit, or enforcement order applies and is more stringent, then the requirements of the other rule, permit, or enforcement order must be met. Release determinations do not apply to situations where materials or products are used as intended, such as lawful application of chemical pesticides and agricultural chemicals, paved parking lots or roads, or treated utility poles and railroad ties.

This document does not cover current spills handled under 30 TAC Chapter 327. A responsible party must report a spill of a reportable quantity as soon as possible within 24 hours after the discovery of the spill or discharge. Report to the Texas Spill Reporting Hotline at 1-800-832-8224 or the appropriate regional office of TCEQ during normal office hours. See Regional Office Locations and phone numbers[1].

Assumptions

Use of this determination process assumes:

The person has notified the agency of the **release** in accordance with the Texas Water Code and applicable program rules.

All **release** source areas are adequately identified.

Properly collected samples are analyzed for all target chemicals of concern[2] (COCs) by standard analytical methods with method quantitation limits (MQLs) below the action levels, or by the standard analytical method with the lowest possible MQL for that COC.

[1] www.tceq.texas.gov/agency/directory/region
[2] See TCEQ Regulatory Guidance RG-366/TRRP-10: Selecting Target Chemicals of Concern

Groundwater sampling, when required, is sufficient to characterize target COC concentrations in the uppermost saturated zone at all source areas (not intending to include tank hold water).

If any of these assumptions are invalid for a particular release the release will be subject to TRRP.

Definitions

Release

The terms “release” and “discharge” are defined by statute (Texas Health and Safety Code Section 361.003 and the Texas Water Code Section 26.001 and Section 26.121) and in rule (30 TAC, 335.1, and 350.4).

Action Levels

For determining which **releases** are subject to TRRP, action levels are defined as the lowest applicable Tier 1 residential protective concentration level (PCL) for a given target COC, assuming a 0.5-acre source area and Class 1 groundwater. Table 1 below identifies the applicable human health exposure pathways for determining action levels for surface soils, subsurface soils, and groundwater. TRRP Tier 1 PCLs may be found on the TCEQ’s TRRP PCLs webpage[3].

If either the background concentration or the MQL is higher than the lowest applicable PCL, then the higher of the background concentration or MQL is the action level. Background concentrations can be calculated on a site-specific basis following the requirements that would be applicable under 30 TAC Chapter 350, or the person may choose to use the Texas-Specific Median Background Concentrations from Table 2 below.

Additionally, for the metals listed in Table 2, site-specific soil-to-groundwater ingestion ($^{GW}Soil_{Ing}$) action levels can be calculated using site-specific soil pH to account for the high pH dependence of the soil-water partition coefficient (Kd) of metals. Once the site-specific soil pH is determined, the person can apply 30 TAC 350.73(f)(1)(A) and (C) as applicable to determine pH-dependent Kd values and calculate site-specific $^{GW}Soil_{Ing}$ action levels.

Table 1. Exposure Pathways for Action Levels

Media	$^{Tot}Soil_{Comb}$ (0-15 ft)	$^{GW}Soil_{Ing}$	$^{Air}Soil_{Inh\text{-}V}$ (>15 ft)	$^{GW}GW_{Ing}$	$^{Air}GW_{Inh\text{-}V}$	Higher of Background or MQL
Surface Soil	X	X				X
Subsurface Soil		X	X			X
Groundwater				X	X	X

[3] www.tceq.texas.gov/remediation/trrp/trrppcls.html

Table 2: Texas-Specific Median Background Concentrations for Certain Metals

Metal	Median Background Concentration (mg/kg)	Metal	Median Background Concentration (mg/kg)
Aluminum	30,000	Lead	15
Antimony	1	Manganese	300
Arsenic	5.9	Mercury	0.04
Barium	300	Nickel	10
Beryllium	1.5	Selenium	0.3
Boron	30	Strontium	100
Total Chromium	30	Tin	0.9
Cobalt	7	Titanium	2,000
Copper	15	Thorium	9.3
Fluoride	190	Vanadium	50
Iron	15,000	Zinc	30
Taken from TRRP 350.51(m) Note: A site-specific background study can be conducted in lieu of using these values.			

Determining Applicability to TRRP

Investigate suspected COC releases. The results of the investigation may result in one of three scenarios:

- Target COC concentrations are less than background or MQLs.
- Target COC concentrations exceed background or the MQLs but are less than the PCL-based action levels[4].
- Target COC concentrations exceed background, MQLs, and PCL-based action levels.

The steps to be followed for these three scenarios are discussed and illustrated in Figure 1 below. If any of the answers are still unknown following completion of the investigation, the release is subject to TRRP.

Target COC Concentrations Less Than Background or MQLs (Scenario 1)

Scenario 1

TRRP is not applicable when:

- target COC concentrations are not detected above background[5] or MQLs, whichever is higher,
- there is no other evidence of a release, and
- response actions were not required to achieve target COC concentrations at or below background or MQLs.

No report to the agency is required unless required by rule, permit, order, or program area requirement (e.g., closure of a waste management unit under the Industrial Hazardous Waste Corrective Action program).

Target COC Concentrations Exceed Background or MQLs (Scenarios 2 and 3)

Scenario 2

When target COC concentrations exceed the higher of background or the MQLs, both ecological and human health exposure pathways must be considered. Complete an ecological risk assessment Tier 1: Exclusion Criteria Checklist[6] to evaluate potential ecological exposure to COCs. If the site fails the checklist, or if groundwater, surface water, or sediment are threatened or affected, the release is subject to TRRP.

If the site passes the ecological checklist, evaluate the soil exposure pathways by comparing target COC concentrations to the PCL-based action levels[4]. If the target COC concentrations do not exceed the PCL-based action levels and there is no evidence of other affected or threatened media, the release is not subject to TRRP.

[4] Lowest applicable Tier 1 residential PCL for a given target COC, assuming a 0.5-acre source area and Class 1 groundwater or site-specific pH-based $^{GW}Soil_{Ing}$ action levels.
[5] Table 2 values or site-specific background
[6] texreg.sos.state.tx.us/fids/200900890-1.pdf

No report to the agency is required unless required by rule, permit, order, or program area (e.g., closure of a waste management unit under the Industrial Hazardous Waste Corrective Action program).

Scenario 3

If target COC concentrations exceed the higher of background, MQLs, or PCL-based action levels[4], the release is subject to TRRP unless the person elects to evaluate the groundwater exposure pathway ($^{GW}GW_{Ing}$). Collect a representative groundwater sample in a manner that will prevent COCs from migrating to the groundwater during the drilling or sampling process. If representative target COC concentrations in groundwater exceed the groundwater action levels, the release is subject to TRRP.

If representative target COC concentrations in groundwater do not exceed the groundwater action levels, the person can choose a course of action based on which soil action levels are exceeded.

Option 1

If only the $^{GW}Soil_{Ing}$ action level is exceeded, the person may choose to collect samples from the areas of highest target COC concentrations for Synthetic Precipitation Leaching Procedure (SPLP) analysis to determine COC leachability.

If the SPLP leachate COC concentrations don't exceed $^{GW}GW_{Ing}$ action levels, the release is not subject to TRRP. Submit a report documenting the actions taken and justification for no further action. If the agency concurs with the conclusions, a no further action letter will be issued.

If the SPLP leachate COC concentrations are greater than the $^{GW}GW_{Ing}$ action level, the release is subject to TRRP unless option 2 is implemented.

> ***Note:*** *Groundwater sampling is always required in conjunction with exercising the SPLP option or excavation to attempt to resolve matters prior to triggering TRRP applicability.*

Option 2

For any soil action level exceedance, excavation and proper disposal of affected soil may be conducted if the affected soil is located on site, entirely in the vadose zone, and can be removed within 60 days from the date the release was reported to the Remediation Division. After excavation, collect and analyze enough representative soil samples to verify the target COC concentrations are below soil action levels. Submit a report documenting the actions taken and justification for no further action. If the agency concurs with the conclusions, a no further action letter will be issued.

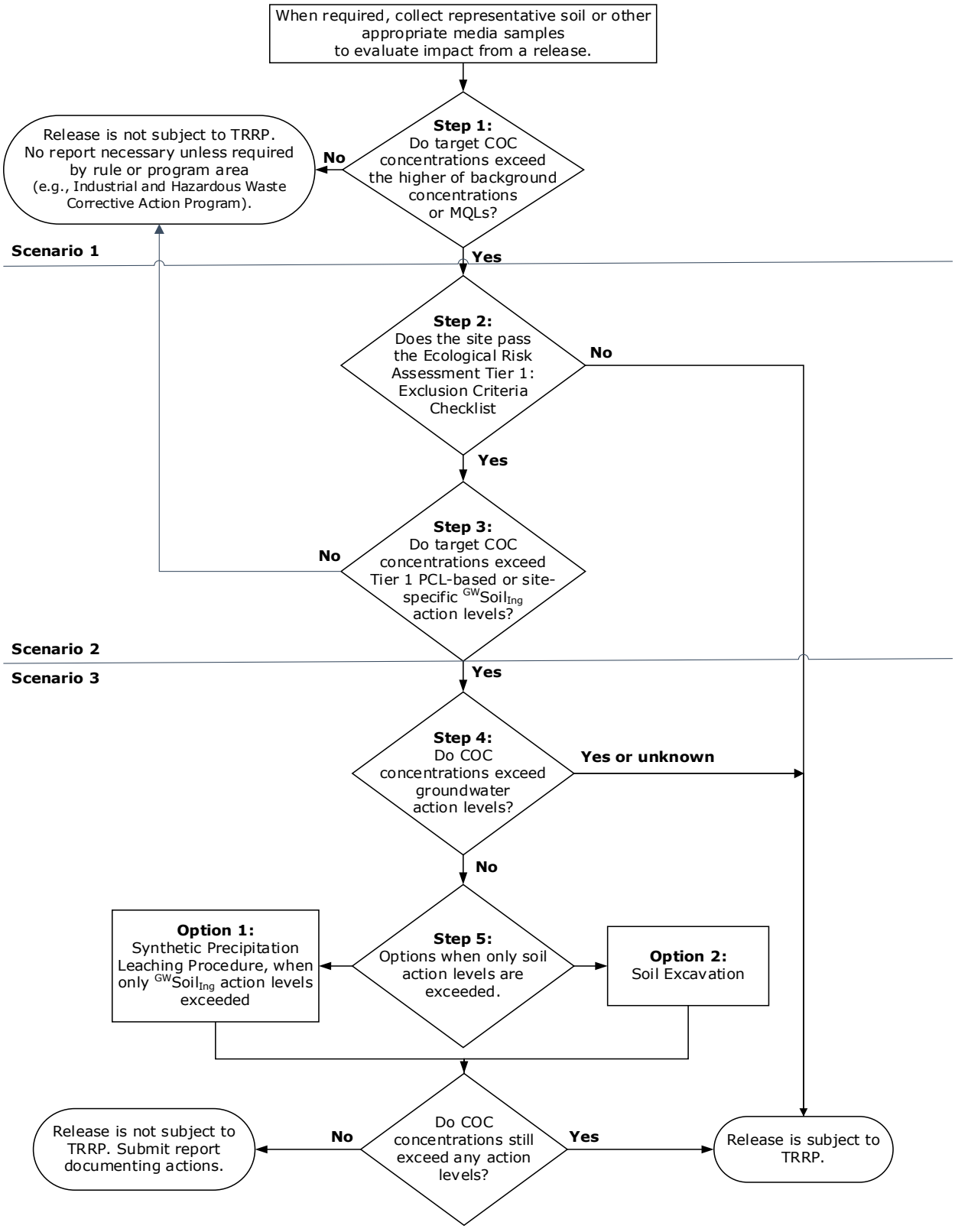

Figure 1: Determining if a Release is Subject to TRRP Flowchart

This flowchart cannot be used by itself. Refer to the text for detailed information on this process. *Note*: Use of SPLP test is not an option to address exceedance of $^{Tot}Soil_{Comb}$ or $^{Air}Soil_{Inh\text{-}V}$ action level.