



# TNRCC Regulatory Guidance

Remediation

RG-366/TRRP-1

February 2000

## SUBJECT: **An Introduction to the Texas Risk Reduction Program**

**Objectives:** This informational pamphlet introduces a new TNRCC environmental cleanup regulation and will cover the following:

- [Is the TRRP rule in effect yet?](#)
- [What types of sites does it apply to?](#)
- [Why is there a new rule?](#)
- [What is regulated under TRRP?](#)
- [Is the TRRP rule different from the 1993 rule?](#)
- [If I switch to the TRRP, do I have to start over?](#)
- [If I will be using the TRRP, what should I do?](#)
- [List of planned TRRP guidance.](#)

**Audience:** General Public, Regulated Community, and Environmental Professionals. In this document, “you” refers specifically to the person regulated by or implementing the TRRP rule.

**References:** The regulatory citation for the Texas Risk Reduction Program (TRRP) Rule is 30 TAC 350.

The TRRP Rule and Preamble are online at <http://www.tnrcc.state.tx.us/oprd/rules/indxpdf5.html>.

The TRRP Rule, together with conforming changes to related rules, is contained in 30 Texas Administrative Code Chapter 350 (30 TAC 350), and was published in the September 17, 1999 Texas Register (24 TexReg 7413-7944). Download Tier 1 PCL Tables, toxicity factors, and other TRRP information at <http://www.tnrcc.state.tx.us/permitting/trrp.htm>.

**Contacts:** Technical Support Section at 512/239-0310.

Corrective Action Section at 512/239-2343. Responsible Party Remediation Section at 512/239-2200. Site Assessment & Management Section at 512/239-2509. Superfund Cleanup Section at 512/239-2425. Voluntary Cleanup Program Section at 512/239-5891.

The Texas Natural Resource Conservation Commission (TNRCC) has adopted a new rule, the Texas Risk Reduction Program (TRRP). TRRP most commonly regulates the cleanup and management of hazardous wastes and substances, referred to as chemicals of concern (COCs), which are released into the environment from regulated commercial and industrial facilities, and on the closure of waste management facility components (e.g., tanks, container storage areas, surface impoundments). TRRP begins to apply on May 1, 2000. However, you may choose to have TRRP apply to your affected property before this date.

Releases of COCs can affect the quality of our air, groundwater, and other environmental media (Figure 1) and may pose unacceptable risks to human health and the environment.

However, when cleaned up to protective levels or properly managed, the releases do not pose unacceptable risk.

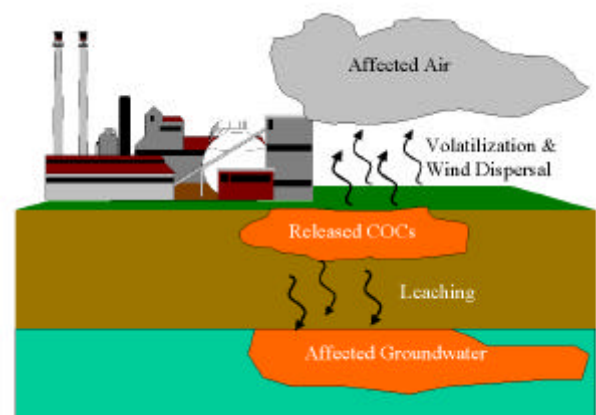


Figure 1. How COCs affect environmental media

The TRRP sets out new requirements for how to determine if releases or closures pose unacceptable risk. If they do, the rule defines requirements for what must be done to reduce the risk, prevent pollution, or protect natural resources.

The purpose of this document is to introduce the new TRRP and provide some basic background information, highlight some important features of the new rule, provide an overview of the applicability of the TRRP, and discuss how to transition to using the new rule.

## Is the TRRP in effect yet?

Yes, TRRP went into effect on September 23, 1999. People can voluntarily use the rule now, but the rule does not have to be applied until May 1, 2000. However, even then the rule does not have to be applied if certain “grandfathering” conditions are met.

## What types of sites does it apply to?

The TRRP applies to releases of COCs into the environment that are produced, stored, or disposed at commercial and industrial facilities or operations. The TRRP also applies to the closure of tanks, landfills, and other waste management facility components at locations that are regulated under any of these programs:

- State Superfund Program,
- Industrial Solid Waste and Municipal Hazardous Waste Program,
- Voluntary Cleanup Program,
- Underground Injection Control Program,
- Wastewater Treatment Program,

Some landfills regulated by the Municipal Solid Waste Program are also covered by the TRRP.

Beginning September 1, 2003, TRRP will also apply to the Petroleum Storage Tank Program.

For more information regarding the applicability of the TRRP, please see *TRRP Applicability and Grandfathering* (RG-366/TRRP-2).

## Why is there a new rule?

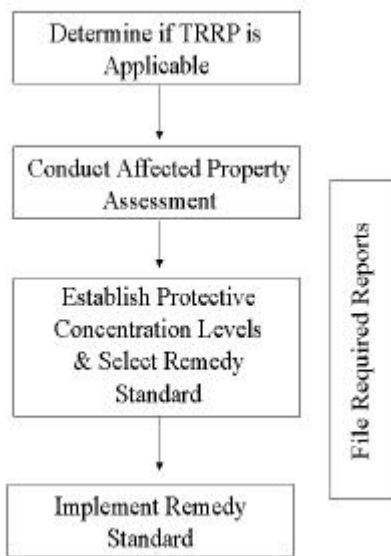
This new rule was established for the following reasons:

- To keep pace with the advancement in the science of setting environmental cleanup levels.
- To implement new regulatory flexibility to encourage people to voluntarily address environmental problems.
- To clarify and further develop provisions that were contained within the former rules.
- To create one set of rules that can be universally applied to environmental releases covered under the different TNRCC remediation programs.

## What is regulated under TRRP?

The rule defines the requirements for assessing the extent of the environmental problem, establishing human-health and environmentally protective concentration levels (PCLs), and cleaning up or controlling the environmental problem. The rule also addresses applicability, grandfathering matters, and report filing requirements. Complying with the TRRP rule involves the four key steps illustrated in Figure 2.

In each of these steps you may be required to file related notices, reports, or both. We are in the process of developing detailed guidance documents for each element of these steps. See the table at the end of this document for the tentative date by which each of these guidance documents will be available. This table will be updated on the web at [www.tnrcc.state.tx.us/permitting/trrp.htm](http://www.tnrcc.state.tx.us/permitting/trrp.htm).



**Figure 2. Complying with the TRRP Rule**

**Determine Applicability**

The process begins with establishing the applicability of the TRRP to a given environmental problem. See the rule and *TRRP Applicability and Grandfathering* (RG-366/TRRP-2) for more information.

**Assess Affected Property**

The rule sets out guidelines to adequately assess the extent of any COCs in soil and groundwater, impacts to other environmental media, and the general surface and subsurface conditions at the affected property. As part of the assessment, the land and groundwater affected by the COCs must be classified in accordance with criteria defined in the rule so that proper cleanup levels and cleanup requirements can be established.

For example, the land use, which must be classified as either residential or commercial/industrial, is important because different cleanup levels are established for each of the land uses. More stringent cleanup levels are applied to residential properties than commercial/industrial properties.

Similarly, a groundwater classification system is set in the rule so that the sensitivity and use potential of the groundwater, which is different in different areas of the state, can be considered when setting cleanup levels and cleanup requirements. These new guidelines are different from those set forth in the previous rules. These new rule requirements appear in 30 TAC §§350.51-350.54.

Additionally, as part of the affected property assessment, the rule lists requirements notifying owners of properties that were sampled or affected by COCs and people who may be potentially exposed to levels of COCs that could pose a risk that critical information from the assessment is available. These new notification requirements appear in 30 TAC §350.55.

**Establish PCLs**

The rule sets out procedures for calculating cleanup levels that are protective of human health and the environment referred to as protective concentration levels (PCLs) in the rule. The procedures to calculate PCLs are set forth as Tier 1, 2, or 3.

Tier 1 is the simplest and cheapest method to set protective concentration levels, but generally results in the most stringent levels. Tier 3 uses the most sophisticated methods and is likely the most expensive, but it factors in the most site-specific considerations. Because of this, it makes sense to start with Tier 1 and progress to Tier 2 or 3 only when warranted.

On the other hand, under the tiered process for ecological issues, Tier 1 is actually a checklist that determines whether you must move into Tier 2 or 3 to set protective concentration levels.

COCs that are found in concentrations higher than the calculated PCLs must be cleaned up or controlled under one of the two remedy standards established in the rule. These rule requirements appear in 30 TAC §350.71-350.79.

## Implement Remedy Standards

The rule provides two remediation options to address COCs that exceed protective concentration levels: Remedy Standard A and Remedy Standard B. These rule requirements appear in 30 TAC §§350.31-350.33 and §350.37.

- Remedy Standard A is a cleanup option. A person may initiate or “self-implement” Remedy Standard A without seeking prior approval from the TNRCC. However, you must submit a Self Implementation Notice to the TNRCC 10 calendar days before the actual cleanup begins.
- Remedy Standard B provides the option to control and manage the COCs instead of cleaning them up. Under Remedy Standard B, the COCs must be controlled and managed such that their extent does not spread in an unauthorized manner and so that no one will be exposed to COCs at a level above the PCL.

If Remedy Standard B is used, then long term monitoring will most likely be required, financial assurance may be required, and institutional controls (deed notices and restrictive covenants) must typically be filed in the county deed records. Remedy Standard B cannot be self-implemented. A Response Action Plan must be submitted to and approved by the TNRCC before a person can use Remedy Standard B.

## File Reports

The rule defines notices and reports you may have to file at various points in the process. The number and type of notices and reports you must submit depends on whether you choose to self-implement cleanup, the remedy standard selected, and how long the remedy takes to complete.

Small, quickly addressed problems will require fewer reports than a large, complex problem that takes a long time to address. Further, you may combine several reports into a single report when that is most efficient. The report requirements appear in 30 TAC §§350.91-350.96.

## Is the TRRP rule different from the 1993 rule?

Yes, some of the former requirements have been modified. Specifically, the new rule:

- sets up a new land use and groundwater classification system;
- modifies the method by which cleanup levels are set;
- modifies the assessment requirements; and
- provides more clarity for when controls may be allowed in lieu of cleanup, among other things.

For more details see *Comparison of 30 TAC 335 and 30 TAC 350: Points to Consider in Making the Shift* (RG-366/TRRP-4), which describes key differences between the TRRP and the 1993 rule.

## If I switch to the TRRP, do I have to start over?

This is a logical question if you have already begun to address a release under the 1993 rule — and no, you will not have to start over. But you may have to do some things differently, perhaps do some additional work, or redo some work to conform with TRRP requirements. If you complied with the assessment requirements of the 1993 rule then you may have adequately addressed the TRRP assessment requirements (the 1993 rule required you to characterize the nature and extent of COCs in excess of background concentrations). However, you must meet the new notification requirements, establish cleanup levels based on the TRRP procedures, and perhaps make some adjustments to comply with the new remedial requirements.

The TNRCC intends that a transition into using the TRRP occur not by starting over, but by completing any additional or remaining work that may be necessary. The degree to which additional work may be needed, if any, depends on the situation.

To determine how changing to the TRRP may affect you, we recommend that you seek the services of an environmental professional. An environmental professional can determine what completed work satisfies the TRRP, determine what additional or remaining work may be necessary, help evaluate the costs and benefits of using Tier 1, 2, or 3 and Remedy Standard A or B, and provide an estimate of the associated cost and time involved in your transition to TRRP.

For more information on the matter, see *Use of Data Collected for 30 TAC 335 under the TRRP* (RG-366/TRRP-5).

## **If I will be using the TRRP, what should I do?**

The TRRP rule does not address the actual reporting of releases of COCs. The reporting requirements you must follow depend on which regulatory program you fall under. When the TNRCC program area determines that the release must be addressed, you are ready to begin using TRRP.

If site work has not already begun under other rules, then you must initiate action to comply with the TRRP. You will have to assess the affected property and establish PCLs to determine the need for any remediation, all in accordance with the requirements of the TRRP.

We recommend that you plan sufficiently before you begin site activity so that you can identify and collect all of the needed information as efficiently as possible. The information needs will depend on whether you establish PCLs under Tier 1, 2, or 3 and whether you plan to use Remedy Standard A or B.

For example, if you collect data to support Tier 1 and Remedy Standard A only, you will likely not have the information needed to calculate protective concentration levels under Tier 2 or 3 or to exercise some of the more flexible options under Remedy Standard B. Be sure and submit a self-implementation notice or response action plan, as appropriate, before you begin a response action to meet Remedy Standard A or B requirements.

If you have already begun work under other rules, then you should determine what additional information you need to comply with the TRRP. Your assigned TNRCC project manager can help you with this determination and other aspects of your transition to the TRRP. Then you should begin to collect this information.

Table 1. Guidance Planned for the Texas Risk Reduction Program

### GENERAL

RG-366	Topic*	Availability*
TRRP-1	Introduction to TRRP	2/00
TRRP-2	Applicability and Grandfathering	2/00
TRRP-3	Compatibility with RCRA	4/00
TRRP-4	Comparison to 30 TAC 335	2/00
TRRP-5	Use of Data Collected for 30 TAC 335	5/00

### AFFECTED PROPERTY ASSESSMENTS

RG-366	Topic*	Availability*
TRRP-6	Planning and Receptor Surveys	4 <sup>th</sup> Qtr 2000
TRRP-7	Landuse Determinations	4 <sup>th</sup> Qtr 2000
TRRP-8	Groundwater Classification	4/00
TRRP-9	Exposure Pathway Evaluations	6/00
TRRP-10	Determining Target COCs	10/00
TRRP-11	Contrasts in Data Needs for Tiers 1, 2 and 3	1/01
TRRP-12	Assessment Requirements (Extent determinations)	4/00
TRRP-13	Validation Requirements for Analytical Data	4/00
TRRP-14	Screening of COCs	4/00
TRRP-15	Determining Representative Concentrations	7/00
TRRP-16	Analytical Testing	4 <sup>th</sup> Qtr 2000
TRRP-17	Notification of Affected Persons	4/00

### DEVELOPMENT OF HUMAN HEALTH PCLs

RG-366	Topic*	Availability*
TRRP-18	Risk Levels and Cumulative Adjustments	1/01
TRRP-19	Toxicity Factors and COC Properties	10/00
TRRP-20	Exposure Factors	1/01
TRRP-21	Determining Points of Exposure	4/00
TRRP-22	Development of Human Health PCLs	8/00
TRRP-23	Correct Use of Tier 1 PCL Tables	3/00
TRRP-24	Determining PCLs for Surface Water and Sediment	8/00
TRRP-25	Determining Critical PCLs	8/00
TRRP-26	Use of Tier 1 and 2 Natural Attenuation Factor Models	9/00
TRRP-27	Development of PCLs for TPH	3/00

### REMEDY STANDARDS

RG-366	Topic*	Availability*
TRRP-28	Application of Remedy Standards to Affected Properties	4/00
TRRP-29	Soil and Groundwater Response Objectives	4/00
TRRP-30	Compliance Sampling and Monitoring	4 <sup>th</sup> Qtr 2000
TRRP-31	Evaluating the Effectiveness of Remedies	4 <sup>th</sup> Qtr 2000
TRRP-32	Demonstrating Sufficient NAPL Recovery	4 <sup>th</sup> Qtr 2000
TRRP-33	Monitored Natural Attenuation Demonstrations	3 <sup>rd</sup> Qtr 2000
TRRP-34	Facility Operations Area	4/01

### STANDARDIZED REPORT FORMS

Form No.	Title	Availability*	Form No.	Title	Availability*
10323/SIN	Self-Implementation Notice	2/00	10327/RAER	Response Action Effectiveness Report	1/01
10324/NOI	Notice of Intent (Grandfathering)	3/00	10328/RACR	Response Action Completion Report	7/00
10325/APAR	Affected Property Assessment Report	5/00	10329/PRACR	Post Response Action Care Report	1/01
10326/RAP	Response Action Plan	7/00	10337/NOIST	Notice of Intent to Switch to TRRP	3/00

\* Topic refers to subject matter, not document title. Availability refers to a target date only. Documents will be issued as completed. Please keep track through the website <http://www.tnrcc.state.tx.us/permitting/trrp.htm>.