

# Texas Commission on Environmental Quality

## Interoffice Memorandum

**To:** Commissioners **Date:** August 7, 2024

**Thru:** Laurie Gharis, Chief Clerk  
Kelly Keel, Executive Director

**From:** Beth Seaton, Director  
Office of Waste

**Docket No.:** 2024-0837-RUL

**Subject:** Commission Approval for Proposed Rulemaking  
Chapter 350, Texas Risk Reduction Program  
Staff-Recommended Updates to Protective Concentration Level Approaches for  
Dioxins/Furans and Dioxin-like Polychlorinated Biphenyls  
Rule Project No. 2024-023-350-WS

### Background and reason(s) for the rulemaking:

The Remediation Division proposes to amend 30 Texas Administrative Code (TAC) Chapter 350, Texas Risk Reduction Program (TRRP) rule §350.76, to update the chemical-specific approaches used for developing and demonstrating attainment of the critical human health protective concentration levels (PCLs) for dioxins/furans<sup>1</sup> and dioxin-like polychlorinated biphenyls (PCBs).

The dioxin/furan and dioxin-like PCB soil PCLs used for residential and commercial/industrial land use under TRRP, which are specified in the TRRP rule at §350.76(e)(3), need to be updated. The PCLs in the TRRP rule were based on a 1998 Environmental Protection Agency (EPA) policy memo (OSWER Directive 9200.4-26), which described an approach for addressing dioxin in soil. In 2012, EPA completed a reassessment of this approach and derived an updated reference dose for dioxin. At the time, TCEQ was concerned about EPA's updated reference dose. However, more recent evaluations now support the use of a reference dose in the range of the 2012 EPA value.

An additional consideration is that dioxins/furans and dioxin-like PCBs are mixtures of chemical compounds (congeners) with different toxicities. Section 350.76 of the TRRP rule uses toxicity equivalency factors (TEFs) to assess the relative toxicity of the individual congeners within a mixture of dioxins/furans and dioxin-like PCBs. The TEFs are applied to each measured congener and are summed to derive a total toxicity equivalency quotient (TEQ) to compare to a 2,3,7,8-tetrachlorodibenzodioxin (the most toxic congener) PCL. The TRRP rule provides specific TEFs for various dioxin/furan and dioxin-like PCB compounds and directs persons to use these TEF values when demonstrating attainment of the critical PCL.

When the TRRP rule was promulgated in 1999, the most recent TEF values established by the World Health Organization (WHO) in 1998 were listed in the rule. However, as science has evolved and more data has become available, WHO has updated the TEF values. EPA and other regulatory agencies have been using the 2005 WHO TEFs.

Therefore, the TRRP chemical-specific PCL approaches for dioxins/furans and dioxin-like PCBs need to be revised to reflect updated information on dioxin toxicity and address appropriate updates to the WHO TEFs for dioxins/furans and dioxin-like PCBs. Updating the rule would also provide TCEQ with the flexibility needed to evaluate the scientific defensibility, adoption, and use of more recent TEFs that have been derived after the TRRP rule was published in 1999.

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<sup>1</sup> The TRRP rule uses the term "Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans". This interoffice memorandum refers to these compounds as "dioxins/furans."

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**Scope of the rulemaking:**

The rulemaking would amend the chemical-specific approaches under §350.76(d) for dioxin-like PCBs and §350.76(e) for dioxins/furans and remove the figure in §350.76(d)(2)(B) containing TEFs for dioxins/furans and dioxin-like PCBs (referred to in the figure collectively as “Dioxin-Like Compounds”). Additionally, instead of specifying new TEFs in TRRP, the rulemaking would direct persons to determine the constituents considered to be dioxins, furans, and dioxin-like PCBs from the list established by WHO in 2005. The rulemaking would also direct persons to use the TEFs established by WHO in 2005, or more recent TEFs established by a scientifically valid source that have been reviewed and approved by the executive director, when determining a 2,3,7,8-TCDD TEQ. This would allow TCEQ and regulated entities to use more up-to-date values and retain flexibility in the TEFs to adapt to updated science in the future.

The rulemaking would also remove the residential and commercial/industrial dioxin/furan and dioxin-like PCB soil PCLs listed in §350.76(e)(3) and instead require PCLs for a 2,3,7,8-TCDD TEQ to be calculated according to the equations and rule provisions provided in §350.75.

**A.) Summary of what the rulemaking would do:**

The rulemaking would amend 30 Texas Administrative Code (TAC) Chapter 350, Texas Risk Reduction Program (TRRP) rule §350.76, to update the chemical-specific approaches used for developing and demonstrating attainment of the critical human health protective concentration levels (PCLs) for dioxins/furans<sup>2</sup> and dioxin-like polychlorinated biphenyls (PCBs).

**B.) Scope required by federal regulations or state statutes:**

The rulemaking is not required by federal regulations or state statute; rather it revises the PCL approaches used for dioxins/furans and dioxin-like PCBs based on updated toxicity information.

**C.) Additional staff recommendations that are not required by federal rule or state statute:**

Staff outlined all recommended changes above and do not propose further recommendations at this time.

**Statutory authority:**

- Texas Water Code (TWC), §5.102, which establishes the commission's general powers;
- TWC, §§5.103 and 5.105, which authorize the commission to adopt rules and policies necessary to carry out its powers and duties;
- TWC, §26.011, which authorizes the commission to administer the provisions of TWC, Chapter 26;
- TWC, §26.039, which states that activities which are inherently or potentially capable of causing or resulting in the spillage or accidental discharge of waste or other substances and which pose serious or significant threats of pollution are subject to reasonable rules establishing safety and preventative measures which the commission may adopt or issue;
- TWC, §26.121, which prohibits persons from discharging wastes into or adjacent to any water in the state unless authorized to do so and prohibits persons from engaging in any other activity which causes pollution of any water in the state;

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<sup>2</sup> The TRRP rule uses the term “Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans”. This interoffice memorandum refers to these compounds as “dioxins/furans.”

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- TWC, §§26.262 and 26.264, which state it is the policy of this state to prevent the spill or discharge of hazardous substances into the waters in the state and authorizes the commission to issue rules to carry out the policy;
- TWC, §§26.341 and 26.345, which state it is the policy of this state to maintain and protect quality of groundwater and surface water resources from pollution from certain substances in underground and above-ground storage tanks and authorizes the commission to adopt rules to carry out the policy;
- TWC, §26.401, which states that it is the policy of this state that discharges of pollutants, disposal of wastes, or other activities subject to state regulation be conducted in a manner to maintain and not impair groundwater uses or pose a public health hazard, and that groundwater quality be restored if feasible;
- Texas Health & Safety Code (THSC), §§361.017 and 361.024, which establish the commission's jurisdiction over all aspects of the management of industrial solid waste and hazardous municipal waste with all power necessary or convenient to carry out the responsibilities of that jurisdiction and authorizes the commission to adopt rules; and
- THSC, Chapter 361, Subchapter F, which authorizes the commission to identify, assess, and remediate facilities that may constitute an imminent and substantial endangerment to public health and safety or the environment due to a release or threatened release of hazardous substances into the environment.

**Effect on the:**

**A.) Regulated community:**

The rulemaking will result in lower assessment and cleanup levels for regulated entities addressing dioxins/furans and dioxin-like PCBs currently and in the future, which could require the expenditure of additional time and costs to possibly implement an unplanned or more extensive remedy. However, the agency estimates that a comparatively small universe of sites will be impacted (i.e., fewer than 25 sites, mostly confined to the wood treating sector). In addition, it is possible that closed sites would need to be revisited if the lower PCL was deemed a substantial change in circumstance, or if an actual exposure to concentrations above the new PCLs needed to be addressed. While it is difficult to accurately estimate the additional costs that could be incurred, staff anticipate that these costs could vary depending on the extent of the contamination at a particular site and the selected or implemented remedy.

**B.) Public:**

The rulemaking will result in updated human health PCLs for dioxins/furans and dioxin-like PCBs and will allow TCEQ the flexibility to adapt to the latest science.

**C.) Agency programs:**

Some remediation programs, such as the Voluntary Cleanup, Corrective Action, and Superfund may require regulated entities to perform additional work to address releases of dioxins/furans and dioxin-like PCBs. Additionally, the costs for assessing and remediating impacted state-funded Superfund sites may increase. However, since the rulemaking would only affect a small number of state-funded Superfund sites, the program anticipates it would be able to absorb these additional costs within the existing budget.

**Stakeholder meetings:**

A public hearing will be held on Monday, September 30, 2024 during the public comment period (August 30, 2024 - October 1, 2024).

**Public Involvement Plan**

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Yes. In addition to the statutory public notice requirements, TCEQ will develop a public involvement plan to encourage public participation. A plain language summary will also be provided.

#### **Alternative Language Requirements**

Yes. Notices will be provided in Spanish for this rulemaking. Persons planning to attend the public hearing may request translation services as needed.

#### **Potential controversial concerns and legislative interest:**

Amending the chemical-specific PCL approaches for dioxins/furans and dioxin-like PCBs in rule will result in lower PCLs for these chemicals, which could compel additional delineation and remediation requirements at sites affected by these chemicals. This could affect persons currently addressing these chemicals at remediation sites, potentially requiring unplanned expenditures of additional time, costs, and resources.

The TRRP rule requires persons to conduct additional assessment and remediation at sites where "...changes [in toxicity data] are of such magnitude to present an unacceptable threat to human health or the environment when the site is evaluated for future exposure conditions based on property-specific considerations" [30 TAC §350.35(e)]. Therefore, there may be concerns from regulated entities that have already completed approved response actions involving dioxins/furans or dioxin-like PCBs. As the agency becomes aware of these sites, there may be the need to re-evaluate them on a case-by-case basis.

#### **Would this rulemaking affect any current policies or require development of new policies?**

There are currently no policies or regulatory guidance regarding developing and demonstrating attainment of the critical PCLs for dioxins/furans and dioxin-like PCBs. However, with this rulemaking, it is anticipated that guidance will be developed to provide assistance to the regulated community on implementing the rule.

#### **What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?**

Without this rule change, the TCEQ must continue to use the outdated 1998 TEFs. The existing framework of the rule provides chemical-specific PCL approaches for dioxins/furans and dioxin-like PCBs, and they could continue being addressed as they have been for the past 25 years. However, based on updated science, the cleanup levels for dioxins/furans and dioxin-like PCBs in soil should be lower than the PCLs currently used by TCEQ.

An alternative would be to adopt the 2005 WHO TEFs to replace the outdated TEFs in TRRP (WHO 1998). The agency could also adopt soil PCLs directly as published by EPA in their regional screening levels (RSLs) tables, using the TCEQ specific risk and hazard values. This would make it clear what PCLs and TEFs would apply for regulated entities, but would leave TCEQ with little to no flexibility in choosing appropriate updated toxicity factors, PCLs or TEFs.

#### **Key points in the proposal rulemaking schedule:**

**Anticipated proposal date:** August 14, 2024

**Anticipated *Texas Register* publication date:** August 30, 2024

**Anticipated public hearing date:** September 30, 2024

**Anticipated public comment period:** August 30, 2024 - October 1, 2024

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**Anticipated adoption date:** January 2025

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