Compliance Guide

A GUIDE TO COMPLYING WITH THE 2024 TRICHLOROETHYLENE (TCE) REGULATION UNDER THE TOXIC SUBSTANCES CONTROL ACT (TSCA) (RIN 2070-AK83)

Includes:

Compliance Guidance on Prohibitions, Workplace Chemical Protection Program (WCPP) and Other Requirements

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This guide includes small entity compliance guidance prepared pursuant to section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. 104-121 as amended by Pub. L. Number 110-28. The statutory provisions and the EPA regulations described in this document contain legally binding requirements. This document does not substitute for those provisions or regulations, nor is it a regulation itself. Thus, this document does not, and is not intended to, impose legally binding requirements on the EPA or the regulated community, and may not apply to a particular situation based upon the circumstances. **This document is not intended, nor can it be relied upon, to create any rights enforceable by any party in litigation with the United States**. The statements in this document are intended solely as guidance to aid you in complying with the EPA regulation *Trichloroethylene (TCE); Regulation under Section 6(a) of the Toxic Substances Control Act (TSCA)* and the implementing regulations in 40 CFR Part 751. The EPA retains the discretion to adopt approaches on a case-by-case basis that differ from this guide where appropriate. The EPA may decide to revise this guide without public notice to reflect changes in the EPA's approach to regulating chemical substances generally or this chemical substance (TCE) under TSCA or to clarify information and update text.

To get help accessing technical resources on environmental regulations and compliance assistance information contact the EPA's Small Business Ombudsman or visit the EPA's small business resources page. For information specific to the TCE regulation, consult the EPA's TCE TSCA risk management website. A fact sheet summarizing information from this guide is at https://www.epa.gov/system/files/documents/2024-12/tce-fact-sheet.pdf.

The full text of the implementing regulation can be found at 40 CFR Part 751, subpart D and also in the Federal Register (FR) (89 FR 102568, December 17, 2024) and at docket EPA-HQ-OPPT-2020-0642 at https://www.regulations.gov.

FOR FURTHER INFORMATION CONTACT: *For TCE technical information contact*: email address: TCE.TSCA@epa.gov. *For general information contact*: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554-1404; email address: TSCA-Hotline@epa.gov.

Reproduction of the manual

This manual may be reproduced, but if this manual is altered, it may not provide accurate information that owners or operators need to comply with the requirements of the EPA's regulation of chemical substances under TSCA, including for TCE. Additionally, altering this guide may prevent potentially exposed persons from properly informing themselves of the protections required by the EPA.

The EPA may issue additional guidance about the TCE regulation and may amend the rule in the future. Please check the EPA's TCE website for further information and current amendments.

This manual, titled "A Guide to Complying with the 2024 Trichloroethylene (TCE) Regulation under the Toxic Substances Control Act (TSCA) (RIN 2070-AK83)" and other materials related to TCE are available at https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-trichloroethylene-tce.

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I: Overview

A. Why is the information in this compliance guide important?

The information in this guide can help you understand and comply with new regulations under section 6(a) of the Toxic Substances Control Act (TSCA) from the U.S. Environmental Protection Agency (EPA) for the **chemical substance** trichloroethylene, or TCE. While the EPA's rule will result in a complete prohibition of TCE, the prohibition will take longer to phase in for certain uses and the rule places strict requirements for those uses in the interim. It is important to understand compliance obligations. Being aware of and following these regulations correctly will prevent injuries and long-term illness.

The EPA issued Trichloroethylene (TCE); Regulation under Section 6(a) of the Toxic Substances Control Act (TSCA) on December 17, 2024, in the Federal Register. These regulations went into effect on January 16, 2025, and updated the Code of Federal Regulations (CFR) at 40 CFR Part 751, subpart D. This is also referred to throughout this guide as the TCE rule.

It is a violation of Federal law to manufacture (including import), process, distribute in commerce, use, or dispose of a chemical substance in a manner inconsistent with TSCA and the TCE regulations. Violations may result in penalties and injunctive relief (e.g., preventing certain actions) as appropriate.

This compliance guide:

- Provides a short description of why the EPA's regulation of TCE is important (Unit II);
- Helps you determine whether you need to comply with the TCE Rule and what your responsibilities may be (Unit III);
- Gives you detailed information on how to comply with the components of the regulation: the **Workplace Chemical Protection Program (WCPP)**, recordkeeping requirements, downstream notifications, and other requirements (Unit V, Unit VI);
- Outlines the compliance timeframes (Unit IV.D., Unit V, Unit VI, Unit VII);
- Explains how important definitions affect your compliance responsibilities; and
- Provides notes to help you better understand your compliance responsibilities and how the rule applies to you.

Words or phrases that appear in **bold red text** throughout this guide are defined in the glossary in Appendix A. Other abbreviations are also spelled out in the Abbreviation List.

B. Do I need to read this guide?

This guide is intended for persons who own or operate a business that manufactures (including imports), processes, distributes in commerce, uses, or disposes of TCE.

Potentially exposed persons (such as **workers** and others in the workplace) may want to refer to this guide to understand what protections may be required in the workplace under these regulations, and for awareness of the risks from TCE that the EPA has identified.

This guide may also be beneficial to consumers, community members, or anyone else that may be affected by exposure to TCE.

C. Are there additional requirements?

The TCE rule has restrictions and requirements for all TSCA **conditions of use** of TCE. In addition to applicable risk management regulations for TCE under TSCA section 6(a), other Federal, state, or local statutes or regulations may be relevant to you. Some examples include:

- Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL);
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and
- Resource Conservation and Recovery Act (RCRA).

Potentially applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) include: 40 CFR part 63, subpart F, Synthetic Organic Chemical Manufacturing Industry; 40 CFR part 63, subpart DD, Off-Site Waste and Recovery Operations; 40 CFR part 63, subpart VVV, Publicly Owned Treatment Works; 40 CFR part 63, subpart VVVVVV, Chemical Manufacturing Area Sources; 40 CFR part 63, subpart GG, Aerospace Manufacturing and Rework Facilities; and 40 CFR part 63, subpart T, Halogenated Solvent Cleaning.

II: EPA's Regulation of TCE Under Section 6 of TSCA

This unit describes how and why the EPA is regulating TCE under section 6 of TSCA.

A. What is TCE?

Trichloroethylene – also called ethylene trichloride, TCE, trichloroethene, or trilene – is a colorless liquid primarily used in industrial settings to produce refrigerants. As of December 17, 2024, the date of publication of the EPA's regulation of TCE in the Federal Register, this highly toxic solvent is used in many consumer **products** including cleaning and furniture care products, degreasers, brake cleaners, and tire repair sealants. Commercially, it is also used for vapor degreasing items such as metal parts used in aircraft or other machinery, as an intermediate in the manufacturing of certain refrigerants that are already being phased down nationally (under the American Innovation and Manufacturing (AIM) Act), and in the production of materials inside batteries, known as battery separators. TCE is both produced in and imported into the United States and is distributed in commerce, used, and disposed of as part of many industrial and commercial conditions of use.

B. What are the risks to health from TCE?

The EPA identified health risks from acute and chronic inhalation or dermal exposures to TCE, and cancer from chronic inhalation or dermal exposure to TCE. In the TCE risk determination, the endpoints identified by the EPA as the basis for the unreasonable risk for TCE were immunosuppression effects for acute inhalation and dermal exposures, and autoimmunity effects for chronic inhalation and dermal exposures.

TCE's hazards are well-established. The EPA found that TCE causes liver cancer, kidney cancer, and non-Hodgkin's lymphoma. It also causes damage to the central nervous system, liver, kidneys, immune system, reproductive organs, and is dangerous for fetal development. These risks are present at very small concentrations of TCE.

C. Why is the EPA regulating TCE?

TSCA requires the EPA to issue a regulation applying requirements to address any unreasonable risks identified as part of a TSCA section 6(b) risk evaluation to the extent necessary so that there is no longer unreasonable risk. The EPA determined that TCE presents an unreasonable risk of injury to health under the conditions of use based on a risk evaluation for TCE that the EPA issued in 2020 pursuant to TSCA section 6(b). The details of the EPA's unreasonable risk determination were finalized in January 2023.

D. How is the EPA regulating TCE?

Using the authority under TSCA section 6(a), the EPA's regulation:

- Prohibits the manufacture (including import), processing, and distribution in commerce of TCE (including TCE-containing products) for all uses (including all consumer uses), with longer compliance timeframes or exemptions for manufacture, processing, and disposal related to certain industrial and commercial uses;
- Prohibits the industrial and commercial use of TCE, with longer compliance timeframes or exemptions for certain uses;
- Prohibits the manufacture (including import) and processing of TCE as an intermediate for the manufacturing of hydrofluorocarbon-134a (HFC-134a), following an 8.5-year phaseout;
- Prohibits the industrial and commercial use of TCE as a solvent for closed-loop batch vapor degreasing for rayon fabric scouring for end use in solid rocket booster nozzle production by Federal agencies or their contractors, following a 10-year phaseout;
- Prohibits the manufacture (including import), processing, distribution in commerce, and use of TCE as a laboratory chemical for asphalt testing and recovery, following a 10-year phaseout;
- Prohibits the manufacture (including import), processing, distribution in commerce, and industrial and commercial use of TCE as a solvent in batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices, following a 7-year TSCA section 6(g) exemption;
- Prohibits the manufacture (including import), processing, distribution in commerce, and industrial and commercial use of TCE as a solvent in closed loop vapor degreasing necessary for rocket engine cleaning by Federal agencies and their contractors, following a 7-year TSCA section 6(g) exemption;

- Prohibits, following a 10-year TSCA section 6(g) exemption, a variety of industrial and commercial uses for vessels of the Armed Forces and their systems as noted in 40 CFR 751.325(b)(3);
- Prohibits the emergency industrial and commercial use of TCE in furtherance of NASA's mission for specific conditions of use which are critical or essential and for which no technically and economically feasible safer alternative is available, following a 10-year TSCA section 6(g) exemption;
- Prohibits the manufacture (including import), processing, distribution in commerce, and use of TCE as a processing aid for manufacturing specialty polymeric microporous sheet materials following a 15-year TSCA section 6(g) exemption;
- Prohibits the manufacture (including import), processing, distribution in commerce, disposal, and use of TCE as a processing aid for manufacturing battery separators for lead acid batteries, following a 20-year TSCA section 6(g) exemption;
- Prohibits the manufacture (including import), processing, distribution in commerce, and use of TCE as a laboratory chemical for essential laboratory activities, following a 50-year TSCA section 6(g) exemption;
- Requires strict workplace controls to limit exposure to TCE, including compliance with a TCE WCPP, which would include requirements for an interim existing chemical exposure limit, as well as dermal protection, for conditions of use with long term phaseouts or time-limited exemptions under TSCA section 6(g);
- Prohibits the disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works, through a phaseout allowing for longer timeframes for disposal necessary for certain industrial and commercial uses, along with a 50-year TSCA section 6(g) exemption for disposal for cleanup projects before prohibition and interim requirements for wastewater worker protection; and
- Establishes recordkeeping and downstream notification requirements.

More detail is in the TCE rule (40 CFR 751.315), and guidance for compliance is provided throughout this document.

III: Determining Your Responsibilities

This unit provides information to help you determine your responsibilities under the final rule, which may depend on your role and if or how you use TCE.

A. Does this rule apply to me?

You may be impacted by this rule if you manufacture (including import), process, distribute in commerce, use, or dispose of TCE or products containing TCE. The EPA identified and assessed all intended, known, and reasonably foreseen uses of TCE subject to TSCA, and determined that nearly all TSCA industrial, commercial, and consumer uses of TCE contribute to the unreasonable risk of injury to health.

Table 1 shows how each condition of use is regulated. For descriptions of each condition of use, see Appendix B of this guide or Unit III.B.1. of the 2023 proposed TCE rule.

It is important to understand whether the EPA's rule applies to you because you may have to cease certain activities, comply with a WCPP, keep records, update safety data sheets (SDSs), or complete other activities to be in compliance with the rule and avoid potentially significant non-compliance penalties.

B. What is my role?

Are you an owner, operator, or something else?

- Owners or operators are persons responsible for implementing the prohibition and/or the WCPP in any workplace that has an applicable condition of use of TCE (see Table 1 below and 40 CFR 751.315). The EPA has defined the phrase "**owner or operator**" to include any person who owns, leases, operates, controls, or supervises a workplace covered within 40 CFR Part 751 (see 40 CFR 751.5). Owners or operators are responsible for compliance with the WCPP, if applicable, until prohibition, including ensuring that inhalation exposures do not exceed the limit the EPA has identified. Any provisions applying to the term "employer" in OSHA's regulations[1] apply equally to any owner or operator for the **regulated area**. While owners or operators remain responsible for ensuring compliance, they may contract with others to provide services required for compliance, such as training or implementing a respiratory protection program, for example.
- The EPA has defined the phrase "potentially exposed person" to mean any person who may be exposed to a chemical substance (in this case TCE) in a workplace as a result of a condition of use of that chemical substance or mixture (see 40 CFR 751.5). This includes workers, employees, independent contractors, employers, and all other persons in the workplace where TCE is present.
- The EPA has defined the word "**retailer**" to describe any person or business entity that distributes or makes available a chemical substance or mixture to consumer end users, including through e-commerce internet sales or distribution (see 40 CFR 751.5). Any distributor with at least one consumer end user customer is a retailer. A person who distributes in commerce or makes available a chemical substance or mixture solely to commercial or industrial end users or solely to commercial or industrial businesses is not a retailer.

[1] OSHA regulations at 29 CFR 1910.132 (see https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.132) and 29 CFR 1910.134 (see https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134)

Table 1: Summary of Conditions of Use of TCE and Relevant Units Within This Guide

Prohibition with extended timeframes and WCPP (or alternative prescriptive workplace controls)

Prohibition

Conditions of Use of TCE	Relevant Units in this Guide
Conditions of use of TCE under TSCA with uses or sub-uses with extended timeframes and/or exemptions that require worker protections until eventual prohibition:	
Domestic manufacturing	IV, V, VIII, IX
Import	IV, V, VIII, IX
Processing as a reactant/intermediate	IV, V, VIII, IX
Processing as incorporation into formulation, mixture, or reaction product	IV, V, VIII, IX
Processing: incorporation into articles	IV, V, VIII, IX
Processing as repackaging	IV, V, VIII, IX
Processing as recycling	IV, V, VIII, IX
Industrial and commercial use as an adhesive and sealant in solvent-based adhesives and sealants; tire repair cement/sealer; mirror edge sealant (*adhesives and sealants for NASA emergency use)*	IV, V, VIII, IX
Industrial and commercial use as a solvent for open-top batch vapor degreasing	IV, V, VIII, IX
Industrial and commercial use as a solvent for closed-loop batch vapor degreasing	IV, V, VIII, IX
Industrial and commercial use in processing aids in process solvent used in battery manufacture; process solvent used in polymer fabric spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; precipitant used in beta-cyclodextrin manufacture	IV, V, VIII, IX
Industrial and commercial use as a solvent for aerosol spray degreaser/cleaner and mold release (*energized electrical cleaning; NASA emergency use)*	IV, V, VI, VIII, IX
Industrial and commercial use as a solvent for cold cleaning (*NASA emergency use*)	IV, V, VIII, IX
Industrial and commercial use as a lubricant and grease in tap and die fluid (*NASA emergency use*)	IV, V, VIII, IX
Industrial and commercial use as a lubricant and grease in penetrating lubricant (*NASA emergency use*)	IV, V, VIII, IX
Industrial and commercial use as a functional fluid in heat exchange fluid (*NASA emergency use*)	IV, V, VIII, IX
Industrial and commercial use in corrosion inhibitors and anti-scaling agents (*NASA emergency use*)	IV, V, VIII, IX
Industrial and commercial use in other miscellaneous industrial and commercial uses (*laboratory use)*	IV, V, VII, VIII, IX

Conditions of Use of TCE	Relevant Units in this Guide
Disposal to industrial pre-treatment, industrial treatment, or publicly owned treatment works	IV, V, VI, VIII, IX
Unless otherwise specified, all other known, intended, or reasonably foreseen uses of TCE under TSCA are prohibited within 1 year including:	
Industrial and commercial use as solvent for in-line conveyorized vapor degreasing	IV, IX
Industrial and commercial use as a solvent for in-line web cleaner vapor degreasing	IV, IX
Industrial and commercial use in paints and coatings as a diluent in solvent-based paints and coating	IV, IX
Industrial and commercial use in cleaning and furniture care products in carpet cleaner and wipe cleaning	IV, IX
Industrial and commercial use in laundry and dishwashing products in spot remover	IV, IX
Industrial and commercial use in arts, crafts, and hobby materials in fixatives and finishing spray coatings	IV, IX
Industrial and commercial use as ink, toner, and colorant products in toner aid	IV, IX
Industrial and commercial use in automotive care products in brake and parts cleaner	IV, IX
Industrial and commercial use in apparel and footwear care products in shoe polish	IV, IX
Industrial and commercial use in hoof polish, gun scrubber, pepper spray, other miscellaneous industrial and commercial uses	IV, IX
Consumer use as a solvent in brake and parts cleaner	IV, IX
Consumer use as a solvent in aerosol electronic degreaser/cleaner	IV, IX
Consumer use as a solvent in liquid electronic degreaser/cleaner	IV, IX
Consumer use as a solvent in aerosol spray degreaser/cleaner	IV, IX
Consumer use as a solvent in liquid degreaser/cleaner	IV, IX
Consumer use as a solvent in aerosol gun scrubber	IV, IX
Consumer use as a solvent in liquid gun scrubber	IV, IX
Consumer use as a solvent in mold release	IV, IX
Consumer use as a solvent in aerosol tire cleaner	IV, IX
Consumer use as a solvent in liquid tire cleaner	IV, IX
Consumer use as a lubricant and grease in tap and die fluid	IV, IX
Consumer use as a lubricant and grease in penetrating lubricant	IV, IX
Consumer use as an adhesive and sealant in solvent-based in adhesives and sealants	IV, IX
Consumer use as an adhesive and sealant in mirror edge sealant	IV, IX
Consumer use as an adhesive and sealant in tire repair cement/sealer	IV, IX
Consumer use as a cleaning and furniture care product in carpet cleaner	IV, IX

Conditions of Use of TCE	Relevant Units in this Guide
Consumer use as a cleaning and furniture care product in aerosol spot remover	IV, IX
Consumer use as a cleaning and furniture care product in liquid spot remover	IV, IX
Consumer use in arts, crafts, and hobby materials in fixative and finishing spray coatings	IV, IX
Consumer use in apparel and footwear products in shoe polish	IV, IX
Consumer use in fabric spray	IV, IX
Consumer use in film cleaner	IV, IX
Consumer use in hoof polish	IV, IX
Consumer use in toner aid	IV, IX

C. Are there uses of TCE that this rule does NOT apply to?

- The EPA's rule includes a **regulatory threshold** of 0.1%. Products that include TCE at concentrations less than 0.1% by weight are not subject to the prohibitions and restrictions outlined in this rulemaking.
- The rule does not apply to the manufacturing of TCE as a byproduct. Additionally, the rule does not apply to the processing or reuse of TCE produced as a byproduct when that byproduct TCE is processed within a site-limited, physically enclosed system that is part of the same overall manufacturing process from which the byproduct substance was generated. This exclusion does not permit TCE to be present in any product that results from such site-limited, physically enclosed system, except when below the regulatory threshold (see above).
- The rule does not apply to the disposal of TCE and the processing and distribution in commerce for such disposal, except for the disposal of TCE to industrial pre-treatment, industrial wastewater treatment, and publicly owned treatment works (POTWs).
- The EPA's rule does not apply to any substance excluded from the definition of "chemical substance" under TSCA section 3(2)(B)(i) through (vi). These exclusions include:
  - Any food, food additive, drug, cosmetic, or device (as defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device;
  - Any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide;
  - Tobacco or any tobacco product;
  - Any source material, special nuclear material, or byproduct material (as defined in the Atomic Energy Act of 1954 and subsequent regulations issued under that Act); and
  - Any **article**, limited to shot shells, cartridges, and components of shot shells and cartridges, of which the sale is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or 4221 or any other provision of such Code) and any component of such an article.

IV: Prohibitions of TCE

A. Overview of the prohibitions of TCE

This section provides guidance on the prohibitions that the EPA has put into place to address unreasonable risk from TCE. The EPA prohibits manufacturing (including importing), processing, or distributing in commerce of TCE for all consumer and all industrial and commercial uses, with certain industrial and commercial uses being prohibited after longer timeframes in order to provide time to transition to alternatives or to continue critical uses. Because much of the industrial and commercial TCE use is by small entities, the requirements for small entities are the same as for other entities.

B. What conditions of use are prohibited?

All conditions of use of TCE are eventually prohibited. Many conditions of use are prohibited within one year of the TCE rule. Other conditions of use have phase-outs over longer timeframes or continue for a defined period of time under a TSCA section 6(g) exemption. These longer timeframes are subject to interim workplace controls (see Units V and VI of this guide). Note that for conditions of use with longer timeframes, the relevant manufacturing (including importing), processing, and distribution in commerce of TCE can continue for the duration of the phaseout or exemption for that use, with workplace controls in place.

C. How do I comply with prohibition requirements?

If you are a manufacturer (including importer), processor, or distributor in commerce of TCE or TCE-containing products, you should ensure compliance with the relevant compliance timeframes for prohibitions before the dates listed in Table 2, for example, by discontinuing or reformulating any such products or ceasing to make such products available to consumers (see section "Frequency Asked Questions (FAQs)" for more information). Understanding upcoming deadlines is crucial to avoiding stranded products and additional costs for disposal of such products.

Requirements for recordkeeping and downstream notification may also be relevant to you. Please see Unit VIII of this guide for more details.

D. What are the timeframes for the prohibitions?

The final rule imposes prohibitions in a staggered timeframe, beginning at the top of the supply chain to allow the channels of trade to clear and avoid stranded products or a mass disposal event. See the table below for more information. There are some conditions of use with prohibitions with time-limited exemptions in recognition of the need for reasonable time periods to transition to alternatives; those extended transition time periods are described in Unit IV.E. of this guide and are listed in 40 CFR 751.325. There are also several conditions of use with phaseouts before prohibitions; see Unit IV.F. below.

Table 2: Compliance Timeframes for Prohibitions within 5 Years

Requirement	Compliance Date
Prohibition on manufacturing	
All persons are prohibited from manufacturing (including importing and manufacturing for export) TCE except for certain manufacturing (see § 751.305(b)(1)).	**March 17, 2025**
Prohibition on retailers distributing TCE	
All retailers are prohibited from distributing in commerce (including making available) TCE for any use. This includes any TCE-containing products, including those TCE-containing products that can continue to be distributed or used commercially for a longer period of time (see § 751.305(b)(2)).	**June 16, 2025**
Prohibition on processing and distribution in commerce	
All persons are prohibited from processing (including processing for export) TCE and distributing in commerce (including making available TCE), including any TCE-containing products, except for certain processing or distributing in commerce (see § 751.305(b)(2)).	**June 16, 2025**
Prohibition on industrial and commercial use	
All persons are prohibited from industrial or commercial use of TCE, including any TCE-containing products, except for certain uses (see § 751.305(b)(3)).	**September 15, 2025**
Prohibition on certain types of disposal	
All persons are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works except as specified (see § 751.305(b)(4)).	**September 15, 2025**
Prohibition on manufacturing (including importing), processing, and use for vapor degreasing	
• All persons are prohibited from manufacturing (including importing) TCE for industrial and commercial use for batch vapor degreasing in open-top and closed-loop degreasing equipment except for certain uses (see § 751.305(b)(5)).	**June 16, 2025**
• All persons are prohibited from processing TCE for industrial and commercial use for batch vapor degreasing in open-top and closed-loop degreasing equipment except for certain uses (see § 751.305(b)(6)).	**September 15, 2025**
• All persons are prohibited from the industrial and commercial use of TCE for batch vapor degreasing in open-top and closed-loop degreasing equipment except for certain uses (see § 751.305(b)(7)).	**December 18, 2025**

Requirement	Compliance Date
Prohibition on manufacturing (including importing) and processing for use as a processing aid	
• All persons are prohibited from manufacturing (including importing) TCE for: (1) processing as a reactant/intermediate and processing; and (2) the use of TCE as a processing aid in: process solvent used in battery manufacture; process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; precipitant used in beta-cyclodextrin manufacture; except for certain uses (see § 751.305(b)(8)).	**June 10, 2026**
• All persons are prohibited from: (1) processing TCE as a reactant/intermediate; and (2) processing for and the industrial/commercial use of TCE as a processing aid in: process solvent used in battery manufacture; process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; precipitant used in beta-cyclodextrin manufacture; except for certain uses (see § 751.305(b)(9)).	**December 18, 2026**
Prohibition on industrial and commercial use in energized electrical cleaner	
All persons are prohibited from the industrial and commercial use of TCE in energized electrical cleaners and from the manufacturing (including importing), processing, and distribution in commerce of TCE for such a use (see § 751.305(b)(10)).	**December 18, 2027**
Prohibition on industrial and commercial use in adhesives and sealants for essential aerospace applications	
All persons are prohibited from the industrial and commercial use of TCE in adhesives and sealants for essential aerospace applications, and from the manufacturing (including importing), processing, and distribution in commerce of TCE for such uses (see § 751.305(b)(12)).	**December 18, 2029**
Prohibition on industrial and commercial use in lithium battery separator manufacturing	
All persons are prohibited from the industrial and commercial use of TCE as a processing aid for lithium battery separator manufacturing, and the manufacturing (including importing), processing, and distribution in commerce of TCE for such use as well as the disposal of TCE from such industrial or commercial use to industrial pre-treatment, industrial treatment, or publicly owned treatment works (see § 751.305(b)(14)).	**December 18, 2029**
Prohibition on industrial and commercial use in vapor degreasing for land-based Department of Defense (DoD) defense systems	
All persons are prohibited from the industrial and commercial use of TCE for batch vapor degreasing for land-based DoD defense systems by Federal agencies and their contractors, and from the manufacturing (including importing), processing, and distribution in commerce of TCE for such use (see § 751.305(b)(15)).	**December 18, 2029**

Manufacturing – 90 days

Unless otherwise stated, manufacturing TCE is prohibited after **March 17, 2025** (40 CFR 751.305(b)(1)).

Processing & Distribution in Commerce – 180 days

All persons are prohibited from processing and distributing in commerce TCE, including any TCE-containing products, for any use after **June 16, 2025**. (40 CFR 751.305(b)(2)).

Industrial and Commercial Use – 270 days

The industrial and commercial use of TCE is prohibited after **September 15, 2025**, including any TCE-containing products, except as specified for uses with longer timeframes, as described in Units IV.E. or IV.F. of this guide. (40 CFR 751.305(b)(3)).

Disposal – 270 days

The disposal of TCE to industrial pre-treatment, industrial treatment, or publicly-owned treatment works (except as described in Units IV.E. or IV.F. of this guide) is prohibited after **September 15, 2025** (40 CFR 751.305(b)4)).

Vapor Degreasing – 180 days (Manufacturing), 270 days (Processing), 1 year (Use)

The industrial and commercial use of TCE for batch vapor degreasing in open-top and closed-loop degreasing equipment is prohibited after **December 18, 2025**, except as specified in 40 CFR 751.305 and described in Units IV.E. or IV.F. of this guide. (Manufacturing for this use is prohibited after **June 16, 2025**, and processing for this use is prohibited after **September 15, 2025**.) Until this use is prohibited, owners or operators must comply with the WCPP required in 40 CFR 751.315 and described in Unit V.

Processing as a Reactant/Intermediate and as a Processing Aid – 540 days (Manufacturing), 2 years (Specific Uses)

Unless otherwise specified in 40 CFR 751.305 (and described in this unit), the industrial and commercial use a of TCE as a reactant/intermediate or processing aid in: process solvent used in battery manufacture; process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; and precipitant used in beta-cyclodextrin manufacture is prohibited after **December 18, 2026**. (Manufacturing for this use is prohibited after **June 10, 2026**.) Until this use is prohibited, owners or operators must comply with the WCPP required in 40 CFR 751.315 and described in Unit V.

Energized Electrical Cleaner – 3 years

The industrial and commercial use of TCE in energized electrical cleaners is prohibited after **December 18, 2027**. This refers to the use of TCE in a product to clean and/or degrease electrical equipment, where cleaning and/or degreasing is accomplished when electrical current exists, or when there is a residual electrical potential from a component, such as a capacitor. This should only be used where the electrical current cannot be turned off. Energized electrical cleaner does not include general purpose degreaser, electrical cleaner, or electronic cleaner, such as for use in motorized vehicle maintenance and parts. For use of TCE in energized electrical cleaners, owners or operators must comply with either the WCPP described in Unit V or prescriptive controls described in Unit VI.B.3. (40 CFR 751.317).

Note that products containing TCE for use in energized electrical cleaners may be reformulated to contain perchloroethylene (PCE); please consult the PCE Energized Electrical Cleaning Compliance Guide for more information.

Lithium Battery Separators – 5 years

The industrial and commercial use of TCE as a processing aid for lithium battery separator manufacturing is prohibited after **December 18, 2029**. This refers to the use of TCE in the manufacturing of the permeable membrane in the lithium battery that separates the internal anode and cathode components.

Until TCE use in battery separator manufacture is prohibited, owners or operators must comply with the WCPP required in 40 CFR 751.315 and described in Unit V. Disposal of TCE following use in battery separator manufacture is also regulated; see Unit IV.F.3.

E. What are the timeframes for the TSCA section 6(g) exemptions and how do I comply?

TSCA section 6(g) exemptions are intended for certain uses of a regulated substance that (1) are critical or essential with no feasible safer alternative; (2) are important to the national economy, national security, or critical infrastructure; or (3) substantially benefit health, the environment, or public safety. TSCA section 6(g) exemptions may be extended through rulemaking, and the EPA would need at least 2 years to complete the rulemaking for an extension. It is important to contact EPA in writing (at TCE.TSCA@epa.gov) well ahead of an extension expiration if a request to extend an exemption is expected.

Table 3: Compliance Timeframes for 6(g) Exemptions[2]

Requirement	Compliance Date
Use in rocket engine cleaning	
All persons are prohibited from the industrial and commercial use of TCE as a solvent in closed-loop batch vapor degreasing necessary for rocket engine cleaning by Federal Agencies and their contractors as described in § 751.325(b)(1) and the manufacturing (including importing), processing, and distribution in commerce of TCE for such use (see § 751.305(b)(16)).	**December 18, 2031**
Prohibition on use as a solvent in batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices	
All persons are prohibited from the industrial and commercial use of TCE as a solvent in closed-loop and open-top batch vapor degreasing for essential aerospace parts and components and narrow tubing for medical devices, and manufacturing (including importing), processing, and distribution in commerce of TCE for such use as described in § 751.325(b)(2) (see § 751.305(b)(17)).	**December 18, 2031**
Prohibition on industrial and commercial use in vessels of the Armed Forces and their systems	
All persons are prohibited from the industrial and commercial use of TCE in vessels of the Armed Forces and their systems (see § 751.325(b)(3), § 751.305(b)(21)).	**December 18, 2034**
Prohibition on industrial and commercial use in an emergency by NASA or its contractors	
All persons are prohibited from manufacturing (including import), processing, distribution in commerce, or use of TCE, including any TCE-containing products, for industrial or commercial use in an emergency by NASA or its contractors as described in § 751.325(b)(4), and manufacturing (including importing), processing, and distribution in commerce of TCE for such use (see § 751.305(b)(22)).	**December 18, 2034**
Prohibition on industrial and commercial use in specialty microporous sheet materials manufacturing	
All persons are prohibited from the industrial and commercial use of TCE as a processing aid for specialty polymeric microporous sheet materials manufacturing, and the manufacturing (including importing), processing, and distribution in commerce of TCE for such use, as well as the disposal of TCE from such industrial or commercial use to industrial pre-treatment, industrial treatment, or publicly owned treatment works (see § 751.325(b)(6), § 751.305(b)(24)).	**December 18, 2039**
Prohibition on industrial and commercial use in lead-acid battery separator manufacturing	
All persons are prohibited from the industrial and commercial use of TCE as a processing aid for lead-acid battery separator manufacturing, and the manufacturing (including importing), processing, and distribution in commerce of TCE for such use as well as the disposal of TCE from such industrial or commercial use to industrial pre-treatment, industrial treatment, or publicly owned treatment works (see § 751.325(b)(5), § 751.305(b)(23)).	**December 18, 2044**

[2] The rule includes additional TCE TSCA section 6(g) exemptions for various Federal Agencies and their contractors; see § 751.325(b)(1), (b)(3), and (b)(4) in the TCE Final Rule for more information.

Requirement	Compliance Date
Prohibition on industrial and commercial use for essential laboratory activities	
All persons are prohibited from the industrial and commercial uses of TCE for essential laboratory activities as described in § 751.325(b)(7) (see § 751.305(b)(25)).	**December 18, 2074**
Prohibition on disposal for the purposes of cleanup projects	
All persons are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works for the purposes of cleanup projects of TCE-contaminated water and groundwater as described in § 751.325(b)(8) (see § 751.305(b)(26)).	**December 18, 2074**

Essential Aerospace Parts and Medical Device Narrow Tubing – 7 years

The use of TCE as a solvent in batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices is allowed until **December 18, 2031**, under a TSCA section 6(g) exemption. This exemption only applies to essential aerospace parts and components where cleaning alternatives present technical feasibility or performance challenges to meet specifications from Federal agencies or other long-standing design specifications included in existing contracts.

Until this exemption for TCE use in batch vapor degreasing for these uses expires and these uses are prohibited, owners or operators must comply with the WCPP described in Unit V. Because this use is continuing under a TSCA section 6(g) exemption, additional recordkeeping requirements apply (see 40 CFR 751.325).

Specialty Polymeric Microporous Sheet Materials – 15 years

The industrial and commercial use of TCE as a processing aid in the manufacture of specialty polymeric microporous sheet materials is allowed until **December 18, 2039**, under a TSCA section 6(g) exemption, due to the use of these materials in critical or essential products such as drivers' licenses, passports, and chemical drum labels. This specific industrial and commercial use of TCE as a processing aid can only be used at industrial facilities in which TCE is in use for the manufacture of specialty polymeric microporous sheet materials prior to **February 18, 2025**.

Until this exemption for TCE use in manufacturing specialty polymeric microporous sheet materials expires and this use is prohibited, owners or operators must comply with the WCPP described in Unit V. Because this use is continuing under a TSCA section 6(g) exemption, additional recordkeeping requirements apply (see 40 CFR 751.325).

Lead Acid Battery Separators – 20 years

The industrial and commercial use of TCE as a processing aid in the manufacturing of lead-acid battery separators is allowed until **December 18, 2044**, under a TSCA section 6(g) exemption. This use refers to the permeable membrane in the lead-acid battery that separates the internal anode and cathode components. The use of TCE as a processing aid for battery separator manufacturing must be limited to lead-acid battery separator manufacturing.

Until this exemption for TCE use in battery separator manufacture expires and this use is prohibited, owners or operators must comply with the WCPP described in Unit V. Because this use is continuing under a TSCA section 6(g) exemption, additional recordkeeping requirements apply (see 40 CFR 751.325).

Laboratory Chemical for Essential Activities – 50 years

The industrial and commercial use of TCE as laboratory chemical for essential laboratory activities is allowed until **December 18, 2074**, under a TSCA section 6(g) exemption. Essential laboratory activities are: laboratory activities regarding cleanup and exposure monitoring activities, including chemical analysis, chemical synthesis, extracting or purifying other chemicals, dissolving other substances, research and development for the advancement of cleanup activities, and as an analytical standard for monitoring related to TCE contamination or exposure monitoring; or laboratory activities conducted by Federal agencies

and their contractors, provided the use is essential to the agency's mission. The use of TCE as a laboratory chemical for testing asphalt is under a phaseout (see below) and is not considered an essential laboratory activity. The use of TCE as a laboratory chemical must be performed on the premises of a laboratory. For more information, please see Unit VII.

Until this exemption for TCE use as laboratory chemical for essential laboratory activities expires and this use is prohibited, owners or operators must comply with the WCPP described in Unit V. Because this use is continuing under a TSCA section 6(g) exemption, additional recordkeeping requirements apply (see 40 CFR 751.325).

Disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works for the purposes of cleanup projects of TCE-contaminated water and groundwater – 50 years

The disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works for the purposes of cleanup projects of TCE-contaminated water and groundwater is allowed until **December 18, 2074**, under a TSCA section 6(g) exemption. The disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works must only be for the purposes of cleanup projects of TCE-contaminated water and groundwater, and is limited to sites undergoing cleanup under CERCLA, RCRA, or other Federal, state, and local government laws, regulations, or requirements.

Until this exemption expires and this use is prohibited, the owner or operator of the cleanup site location where TCE industrial treatment or pretreatment occurs must comply with the wastewater worker protection requirements described in Unit VI.C. of this guide (see 40 CFR 751.319(b)). The owner or operator of publicly owned treatment works that receive TCE wastewater must comply with the worker protection requirements described in Unit VI.C. of this guide (see 40 CFR 751.319(c)). Because this use is continuing under a TSCA section 6(g) exemption, additional recordkeeping requirements apply (see 40 CFR 751.325).

Note: See the next section of this document for the phaseout on disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works for industrial and commercial users of TCE as a processing aid for battery separator manufacturing and specialty polymeric microporous sheet materials manufacturing.

F. How do I comply with longer phase-out timeframe requirements until prohibition?

TSCA section 6(d) phase-outs permit a stepwise approach to eventual prohibition of a use of TCE. Manufacturing (including importing), processing, and distribution in commerce of TCE continues to be allowed for these uses as needed for the duration of the phaseout. Manufacturers and users must document how their use demonstrates compliance with the requirements of the phase-outs, see 40 CFR 751.323(d). (See Unit VIII.A. for more information on recordkeeping requirements.) By the end of the phase-out, the use must cease.

During the phase-out, owners or operators are required to comply with the WCPP described in this guide in Unit V or other Workplace Controls (if applicable) as described in Unit VI, and corresponding recordkeeping requirements. Several phase-outs are described below; for the full list of WCPP requirements (including those relevant to national security or Federal agencies and their contractors), see 40 CFR 751.315.

Use of TCE as a processing aid in the manufacture of HFC-134a – 8.5 years

HFC-134a (also known as 1,1,1,2-Tetrafluoroethane and R-134a) is a hydrofluorocarbon (HFC) refrigerant that can be made by processing TCE as an intermediate.[3] Manufacturers of HFC-134a who process TCE must follow the steps below to phase-out of TCE (see 40 CFR 751.307).

[3] https://www.epa.gov/climate-hfcs-reduction/background-hfcs-and-aim-act

Table 4: Phaseout Timeline for TCE in HFC-134 Manufacturing

Phaseout of TCE in HFC-134 Manufacturing	
June 16, 2025	Manufacturers of HFC-134a must establish a baseline annual volume of TCE processed by the facility as a feedstock to manufacture HFC-134a. This baseline is the average annual volume of any 12 consecutive months in the 3 years preceding December 17, 2024, and manufacturers must retain records that demonstrate how the baseline annual volume was calculated, in accordance with § 751.323(d)(1).
September 15, 2025	Workplaces continuing to manufacture and process TCE for HFC-134a must enact workplace protections.
June 7, 2027	Manufacturers cannot process TCE at a volume above 75% of their baseline.
June 18, 2029	Manufacturers cannot process TCE at a volume above 50% of their baseline.
June 18, 2031	Manufacturers cannot process TCE at a volume above 25% of their baseline.
June 18, 2033	Prohibition on manufacturing, distribution in commerce, and processing TCE for HFC-134a manufacturing.

Until TCE use as a processing aid for the manufacture of HFC-134a is prohibited, owners or operators must comply with the WCPP described in Unit V.

Laboratory chemical for asphalt testing and recovery – 10 years

The industrial and commercial use of TCE in laboratory use for asphalt testing and recovery is allowed until **December 18, 2034**. Beginning on **December 18, 2029**, TCE may not be used for laboratory asphalt testing and recovery in a manual centrifuge process (see 40 CFR 751.311(b)). This use of TCE as a laboratory chemical must be performed on the premises of a laboratory. For more information, please see Unit VII of this guide.

Until TCE laboratory use for asphalt testing and recovery is prohibited, owners or operators must comply with the WCPP described in Unit V.

Disposal to water treatment works – 5-20 years

After **September 15, 2025**, all persons manufacturing (including importing), processing, and using TCE are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works except as described below or in Unit IV.E.:

After **December 18, 2029,** all industrial and commercial users of TCE for *lithium* battery separator manufacturing are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works. After **December 18, 2039**, all industrial and commercial users of TCE for specialty polymeric microporous sheet materials manufacturing are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works. After **December 18, 2044**, all industrial and commercial users of TCE for *lead-acid* battery separator manufacturing are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works.

For more details on worker protections at publicly owned treatment works, see Unit VI.C.

V: Workplace Chemical Protection Program (WCPP)

The WCPP is a program to protect potentially exposed persons in the workplace and who are engaged in conditions of use that will continue for more than one year. The WCPP requirements include an interim inhalation exposure limit, called the EPA **interim existing chemical exposure limit (interim ECEL)**, to protect potentially exposed persons. Owners or operators have flexibility in selecting what controls are best for their facility when determining how to comply with the WCPP. See 40 CFR 751.315 for the full WCPP requirements.

The TCE rule contains provisions as part of the WCPP, including:

- An interim inhalation exposure limit;
- Initial and periodic exposure monitoring;
- Establishment of a regulated area;
- Development and communication of an exposure control plan;
- Respirator selection criteria;
- Recordkeeping; and
- Downstream notification.

These provisions will ensure that potentially exposed persons are protected in the workplace from TCE for uses that are continuing until the use is prohibited. For more information about these risks, see Unit II.B. this guide.

The following conditions of use of TCE are subject to the WCPP requirements where the conditions of use of TCE are allowed to continue past one year (or are covered by prescriptive workplace controls). Descriptions of these conditions of use are in Appendix B.

- Domestic manufacturing
- Import
- Processing as a reactant/intermediate
- Processing into a formulation, mixture, or reaction product
- Processing by repackaging
- Processing by recycling
- Industrial and commercial use as a processing aid in:
  - Process solvent used in battery manufacture;
  - Process solvent used in polymer fabric spinning;
  - Fluoroelastomer manufacture and Alcantara (i.e., synthetic textile) manufacture;
  - Extraction solvent used in caprolactam manufacture; and/or
  - Precipitant used in beta-cyclodextrin manufacture.
- Industrial and commercial use in energized electrical cleaner, except as otherwise covered by workplace controls as detailed in Unit VI.B.
- Industrial and commercial use of TCE for batch vapor degreasing for land-based DoD defense systems by Federal agencies and their contractors
- Industrial and commercial use as an adhesive and sealant for essential aerospace applications
- Industrial and commercial use in other miscellaneous industrial and commercial uses (laboratory use; asphalt testing and recovery)
- Industrial and commercial use as a solvent in closed-loop batch vapor degreasing for rayon fabric scouring for end use in rocket booster nozzle production by Federal agencies and their contractors
- Industrial and commercial use in closed-loop or open-top batch vapor degreasing for essential aerospace parts and narrow tubing used for medical devices
- Industrial and commercial use for vessels of the Armed Forces and their systems
- Industrial and commercial use of TCE as a solvent in closed-loop vapor degreasing necessary for rocket engine cleaning by Federal agencies and their contractors
- Disposal to industrial pre-treatment, industrial treatment, and POTWs, except to the extent that the activity is otherwise covered by specific workplace protections as detailed in Unit VI.C. of this guide.

A. What are the requirements of the WCPP?

The EPA designed the WCPP to be recognizable to those familiar with OSHA workplace standards, although there are some important differences in the EPA's TCE rule (e.g., interim ECEL).[4] The WCPP includes the following requirements, which are discussed in more detail in subsequent sections of this guide.

Interim Existing Chemical Exposure Limit (ECEL): 0.2 parts per million (ppm)

Interim ECEL Action Level: 0.1 ppm

- Interim Existing Chemical Exposure Limit– Owners or operators must take certain actions consistent with the hierarchy of controls to meet the EPA occupational exposure limit (OEL) (see more information in Unit V.H.). For TCE, the WCPP includes an EPA interim ECEL and **interim ECEL action level**.
  - The interim ECEL is an ECEL that is in place only for the timeframe indicated for each condition of use, until the prohibition takes effect. The EPA has determined that ensuring exposures remain at or below the 8-hour time-weighted average (TWA) interim ECEL of 0.2 ppm is necessary to reduce risk for those conditions of use that will continue for more than a year until the use is prohibited.
  - The interim ECEL is a regulatory exposure limit. The interim ECEL action level identifies a level at which certain compliance activities would need to be taken (such as exposure monitoring), and at what frequency. The interim ECEL and interim ECEL action level (0.1 ppm) are described in more detail in Unit V.D. below.
- Monitoring requirements – Workplace air concentrations of TCE must be determined through **personal breathing zone (PBZ)** sampling and remain at or below the exposure limits. PBZ sampling must be used to determine what actions are necessary to mitigate exposure (see § 751.315(b) for specific compliance requirements for exposure sampling). Such actions can include implementing additional feasible engineering and administrative controls, or, until such feasible engineering and administrative controls can be implemented, donning the appropriate level of respiratory protection and personal protective equipment (PPE), establishing the appropriate frequency of periodic monitoring, and recordkeeping.
- Regulated area – Owners or operators must mark areas where airborne concentrations of TCE exceed, or can reasonably be expected to exceed, the inhalation exposure limits (see § 751.315(b)); the interim ECEL is described in this guide in more detail in Unit V.D. and the regulated area in Unit V.F. (below).
- Exposure control plan – Owners or operators must develop and implement an exposure control plan that has several components, including the identification of exposure controls, how the hierarchy of controls is applied to reduce inhalation exposures to a level that is at or below the interim ECEL, a description of exposure control implementation, a description of the regulated area(s) and authorized entry, a description of measures to ensure effective controls, and procedures for responding to any potential changes that may introduce additional TCE exposure. See Unit V.H. below for information on the hierarchy of controls and the exposure control plan.
- Respiratory Protection and PPE – In some circumstances, as determined by TCE workplace air concentrations, respiratory protection such as respirators may be required to protect potentially exposed persons. Chemically resistant gloves are required where dermal exposure is expected to occur, after consideration of and implementation of all feasible controls within the hierarchy of controls

[4] For more information on EPA's consideration of OSHA standards, see Unit II.C. of the TCE proposed rule: https://www.federalregister.gov/documents/2023/10/31/2023-23010/trichloroethylene-tce-regulation-under-the-toxic-substances-control-act-tsca#h-17

(see § 751.315(e)). See more detail in Unit V.I. of this guide.

- Training – Comprehensive training in an understandable manner (i.e., plain language) is required before initial job assignments (see § 751.315(d)). Depending on potential exposure, training may also be required for respiratory protection and/or PPE.
- Additional requirements – These include recordkeeping and notification to potentially exposed persons of the results of workplace exposure monitoring activities, exposure incidents, and the steps taken or to be taken to protect potentially exposed persons from exposure to TCE.

B. What are the deadlines for meeting the WCPP requirements?

There are several key dates and legal deadlines for owners or operators to comply with the provisions of the WCPP. This section provides an overview of the compliance dates for components of the WCPP under the TCE rule, which explains these dates in detail.

See the chart below for more information on the following compliance dates:

- **June 16, 2025** – Initial Monitoring
  Note: Following Initial Monitoring, Periodic Monitoring must be conducted at a minimum every 5 years but could occur as frequently as every 90 days, dependent upon initial monitoring results.
- **September 15, 2025** – Exposure Limits and Dermal Protections
- **December 18, 2025**– Exposure Control Plan

Compliance Timelines* for the Workplace Chemical Protection Program until Prohibition

Initial Monitoring	Exposure Limits and Dermal Protections	Workplace Information and Training Program	Exposure Control Plan	Other Exposure Monitoring
Complete initial monitoring within 180 days, or within 30 days of initiating use. Demarcate regulated area within 90 days of initial monitoring data. Provide respiratory protection within 90 days initial monitoring data. <u>Existing Facilities</u> Before **June 16, 2025**. <u>Facilities with New TCE Use</u> Within 30 days of initiating use.	Ensure that TCE inhalation exposures do not exceed the interim ECEL for all potentially exposed persons (e.g., workers and others in the workplace). Provide respiratory and/or dermal protection as applicable. <u>Existing Facilities</u> Before **September 15, 2025**. <u>Facilities with New TCE Use</u> Within 90 days after receipt of any exposure monitoring that indicates exposures above the interim ECEL.	Develop and implement a program to train potentially exposed persons (e.g., workers and others in the workplace) on the rule's requirements. Ensure participation in a training and information program for potentially exposed persons by **September 15, 2025**.	Develop and implement an exposure control plan within 1 year, or before **December 18, 2025**. Notify potentially exposed persons of completion of exposure control plan within 30 days of its completion. Provide requested records by a potentially exposed person within 15 days of request. Update Exposure Control Plan at least every 5 years or when circumstances change significantly.	<u>Periodic Monitoring</u> Conduct at a minimum **every 5 years but could occur as frequently as every 90 days**, dependent upon initial monitoring results. <u>As Needed Monitoring</u> Conduct additional monitoring within 30 days after any change that may reasonably be expected to introduce new or additional sources of TCE exposure or where there is a reason to believe exceedances of the interim ECEL level have occurred.

* There are longer timeframes for Federal agencies and contractors acting for or on behalf of those agencies. See below and final rule for details.

C. What are the deadlines for meeting the WCPP as a Federal Agency and contractors of a Federal Agency?

There are several key dates and legal deadlines for compliance with the provisions of the WCPP specific to Federal agencies and Federal contractors acting for or on behalf of the Federal government. While Federal agencies and Federal contractors have different timelines for complying with certain requirements of the WCPP, the contents of those requirements are the same as those outlined in the previous section (Unit V.A.). For more information see, § 751.315.

Some of these dates are:

- **June 21, 2027** – Carry out initial monitoring (for Federal agencies and Federal contractors acting for or on behalf of the Federal government)
- **September 20, 2027** – Ensure that workplace TCE concentration levels are at or below the interim ECEL (for Federal agencies and Federal contractors acting for or on behalf of the Federal government)
- **December 17, 2027** – Develop and implement an exposure control plan (for Federal agencies and Federal contractors acting for or on behalf of the Federal government)

D. What is the interim Existing Chemical Exposure Limit (ECEL) under the WCPP?

To protect potentially exposed persons from risks from inhalation exposure to TCE in the workplace, the EPA has established an interim ECEL until use of TCE is prohibited.

An EPA ECEL is an 8-hour TWA regulatory exposure limit. For TCE, the interim ECEL is 0.2 ppm (1.07 mg/m^3) as an 8-hour TWA. The TCE interim ECEL is significantly lower (i.e., 500 times lower) than OSHA's PEL of 100 ppm as an 8-hr TWA for TCE. Implementation of the TCE interim ECEL is supported by an interim ECEL action level of 0.1 ppm (4 mg/m^3, or half the interim ECEL) as an 8-hour TWA.

The TCE interim ECEL action level is a trigger that indicates whether certain compliance activities (e.g., periodic monitoring) are required. For TCE, the interim ECEL action level is 0.1 ppm as an 8-hour TWA.

Example of How to Calculate a TWA

The interim ECEL is expressed as a TWA exposure. TWA measurements account for variable exposure levels over the course of a work shift, averaging periods of higher and lower exposures. The TWA exposure for an 8-hour work shift is computed using a simple formula:

$$\text{TWA} = (C_aT_a+C_bT_b+\ldots C_nT_n)/8$$

Where TWA is the time-weighted average exposure for the work shift; C is the concentration during any period of time (T) where the concentration remains constant; and T is the duration in hours of the exposure at the concentration (C).

For example, assume that an employee is subject to the following exposure to TCE:

- One hour exposure at 0.9 mg/m^3
- Three hours exposure at 0.7 mg/m^3
- Four hours exposure at 0.35 mg/m^3

Substituting this information in the formula:

$$TWA = (1\times0.9+3\times0.7+4\times0.35)/8 = 0.55 \text{ mg/m}^3$$

Note: 0.1 ppm = 0.54 mg/m^3

Since 0.55 mg/m^3 is more than 0.54 mg/m^3, the interim ECEL action level [0.1 ppm] has been exceeded. However, as 0.55 mg/m^3 is less than 1.08 mg/m^3, the interim ECEL [0.2 ppm] has not been exceeded.

To calculate this example using ppm, convert from mg/m^3 using the molecular weight of TCE of 131.39 g/mol as presented in the TCE Risk Evaluation. This scenario in ppm would be:

- One hour exposure at 0.17 ppm
- Three hours exposure at 0.13 ppm
- Four hours exposure at 0.065 ppm

Substituting this information in the formula:

$$TWA = (1\times0.17+3\times0.13+4\times0.065)/8 = 0.103 \text{ ppm}$$

Since 0.103 ppm is more than 0.1ppm, the interim ECEL action level [0.1ppm] has been exceeded. However, as 0.103 ppm is less than 0.2 ppm the interim ECEL [0.2 ppm] has not been exceeded.

See Unit V.E. of this guide for the monitoring requirements once the TWA is calculated.

E. Additional Information on Existing Chemical Exposure Limits (ECELs)

Owners and operators must develop and execute an exposure control plan (see Unit V.H. and § 751.315(c)(2)) to ensure that potentially exposed persons are not exposed to TCE.

What are the monitoring requirements?

The WCPP includes monitoring requirements to ensure that the interim ECEL inhalation exposure limits described above are not exceeded. The requirements are:

- Initial monitoring to establish a baseline of exposure for potentially exposed persons;
- Periodic exposure monitoring to assure continued compliance and protection from TCE exposure; over time. The frequency of periodic monitoring is determined by the TCE levels measured during the initial monitoring and then by successive monitoring activities;
- Additional monitoring, as needed;
- Notification of monitoring results; and
- Recordkeeping of each monitoring event.

An owner or operator may suspend, or pause, monitoring if certain conditions are met and documented, such as a temporary discontinued use of TCE (see Table 1 to § 751.315(b)(3)(iii)); however, additional monitoring may be required if workplace conditions change (e.g., changes in production volume), see Unit IV.C.4.d. in the TCE rule.

Initial Monitoring

Where TCE is used in the workplace, owners or operators must perform initial monitoring to:

- Establish a baseline of occupational inhalation exposure for potentially exposed persons (see § 751.315(b)(3))
- Determine the need for new, revised, or additional exposure controls (such as engineering controls, administrative controls, and/or a respiratory protection program)
- Inform development of the exposure control plan
- Determine the frequency of certain compliance activities, such as periodic monitoring

How and when should initial monitoring occur?

Owners and operators must either take a PBZ air sample of each potentially exposed person's exposure or take PBZ air samples that are representative of the 8-hour TWA exposure of each exposure group. (see § 751.315(b)(3)(i)(A)). More information is in the "Sampling Requirements" section below.

Initial monitoring must take place before **June 16, 2025**, or within 30 days after introduction of TCE into the workplace, whichever is later (see § 751.315(b)(3)(ii)).

Owners or operators must perform initial monitoring and subsequent periodic monitoring to characterize occupational exposures over time (see § 751.315(b)(3)(iii)).

Owners or operators may forgo initial monitoring requirements for a period of up to 5 years, provided that the following condition is met (see also § 751.315(b)(3)(ii)):

If the owner or operator has monitoring data generated during the last 5 years that satisfies all other requirements of the rule, the owner or operator may rely on that data to satisfy the initial monitoring requirements.

What do I do with the results of the initial monitoring?

The results of the initial monitoring determine how frequently periodic monitoring must occur (see § 751.315(b)(3)(iii), the "When should periodic monitoring occur?" section, and Table 5 below). Depending on representative exposures, the owner or operator will have periodic monitoring requirements that range from once every 5 years to once every 3 months. See Unit VIII of this guide for more detail on recordkeeping requirements.

The initial monitoring results should also inform occupational exposure controls and development of the exposure control plan. For more details on the exposure control plan, see Unit V.H. below.

When should periodic monitoring occur?

The results of the initial monitoring determine the need for and frequency of periodic monitoring (see Table 5).

Periodic monitoring must generally be repeated at least once every 5 years (see § 751.315(b)(3)(iii)). Monitoring frequency may change depending on the most recent results of periodic monitoring.

Table 5 summarizes the frequency for periodic monitoring that must occur following initial or other

monitoring results. Table 5 summarizes conditions for reducing the frequency of periodic monitoring.

Additional conditions that may require monitoring are discussed in the "Additional Monitoring" section, below.

Table 5: Periodic Monitoring Requirements*[a]

Air Concentration Condition	Periodic Monitoring Requirement
The initial exposure monitoring concentration is below the interim ECEL action level. (concentration < 0.1 ppm, 8-hr TWA)	Periodic monitoring at least once every 5 years.
The most recent exposure monitoring concentration indicates that airborne exposure is at or above the interim ECEL action level but at or below the interim ECEL. (≥ 0.1 ppm 8-hr TWA, ≤ 0.2 ppm, 8-hr TWA)	Periodic monitoring every 180 days of the most recent exposure monitoring.
The most recent exposure monitoring indicates that airborne exposure is above the interim ECEL. (concentration > 0.2 ppm, 8-hr TWA)	Periodic monitoring every 90 days of the most recent exposure monitoring.
The two most recent (non-initial) exposure monitoring measurements, taken at least seven days apart within a six-month period, indicate that airborne exposure is below the interim ECEL action level (< 0.1 ppm 8- hour TWA).	Periodic exposure monitoring within 5 years of the most recent exposure monitoring.
The owner or operator engages in a condition of use for which compliance with the WCPP is required but does not manufacture, process, use, or dispose of TCE in that condition of use over the entirety of time since the last required monitoring event.	The owner or operator may forgo the next periodic monitoring event. However, documentation of cessation of use of TCE is required; and periodic monitoring is required when the owner or operator resumes the condition of use.

* Initial interim ECEL monitoring must be repeated at least every 5 years to reestablish current exposure conditions and a new baseline to determine monitoring frequency.
[a] Additional scenarios in which monitoring may be required are discussed in "Additional Monitoring" below.

Sampling Requirements

Any initial, periodic, or additional monitoring activities related to the WCPP must meet the following requirements (see § 751.315(b)(3)):

- The sampling must reflect at minimum the required accuracy of monitoring as described below.
- Samples must be taken for every potentially exposed person, or be taken so that the PBZ samples are representative of the 8-hour TWA of each exposure group. PBZ sampling measures and documents either (see § 751.315(b)(3)(i)):
  - Each potentially exposed person's exposure; or
  - A representative sample that reflects each potentially exposed person's exposure.
- Samples should be taken when and where the operating conditions are best representative of each potentially exposed person's work-shift exposures.
- Potentially exposed persons or their designated representatives must have an opportunity to observe any exposure monitoring conducted under this provision.
- Sampling must measure workplace air concentrations for TCE (referred to in the rule as ambient air), without taking respiratory protections into account (§ 751.315(b)(3)(i)(A)).
- Sampling methods must be accurate to a confidence level of 95% and within either of the following ranges relative to the EPA exposure limits as noted in § 751.315(b)(3)(i)(D):

- Within (plus or minus) 25% of airborne concentrations of TCE.

Exposure samples must be analyzed using an appropriate analytical method by a laboratory that complies with the Good Laboratory Practice Standards, a laboratory accredited by the American Industrial Hygiene Association, or another industry-recognized program.

While the EPA does not endorse any specific air monitoring guidelines, ample guidance on sampling considerations is available from National Institute for Occupational Safety and Health (NIOSH) (NIOSH General Considerations for Sampling Airborne Contaminants [NMAM 5th edition]), OSHA (Method 1001/5000), and other trusted industrial hygiene resources.

What are representative PBZ samples?

PBZ samples are considered representative of the 8-hour TWA of all potentially exposed persons in an exposure group under the following condition: if the samples are of at least one person's work-shift exposure who represents the highest potential TCE exposures in that exposure group. PBZ air samples taken during one work shift may be used to represent potentially exposed person exposures on other work shifts where the owner or operator can document that the tasks performed and conditions in the workplace are similar across shifts.

Additional Monitoring

Additional exposure monitoring is required when there has been a change in the production, process, control equipment, personnel, or work practices that may reasonably be expected to result in new or additional exposures above the interim ECEL action level or when the owner or operator has any reason to believe that new or additional exposures above the interim ECEL action level have occurred (see § 751.315(3)(iv)).

This additional exposure monitoring may affect the frequency of periodic monitoring. The required additional exposure monitoring should not delay implementation of any necessary cleanup or other remedial action to reduce the exposures to potentially exposed persons. For additional information regarding additional monitoring, see Unit IV.C.3. of the TCE rule.

Notification of WCPP Monitoring Results

Owners or operators are required to inform each person whose exposures are monitored or who is part of a monitored exposure group, and their designated representative, of monitoring results within 15 working days after receipt of the results of any exposure monitoring. Notice must be written, in plain language, and either provided to each potentially exposed person individually in a language that the person understands or posted in an appropriate and accessible location outside the regulated area with an English-language version and a non-English language version representing the language of the largest group of workers who do not read English.

The notice of results must include the following (see § 751.315(b)(3)(vi)(B)):

- Identification and explanation of the TCE interim ECEL and interim ECEL action level;
- Exposure monitoring results;
- Statement of whether the airborne concentration of TCE exceeds the interim ECEL action level or the interim ECEL;
- Description of exposure controls implemented to reduce exposure to or below the interim ECEL, if exceeded;
- Explanation of any required respiratory protection provided;
- Quantity, location, and manner of TCE use at the time of monitoring; and
- Identified releases of TCE.

F. What is a regulated area, and how is it established?

A regulated area distinguishes places where airborne concentrations of a specific chemical substance exceed, or there is a reasonable possibility they may exceed, the applicable interim ECEL (see § 751.315(b)(4)). Regulated areas are established and marked by the owner or operator as part of the WCPP.

Regulated areas must be established by **September 15, 2025,** or within 90 days after receipt of any exposure monitoring that indicates exposures exceeding the interim ECEL (see § 751.315(b)(4)(i)).

To establish a regulated area, owners or operators must mark areas from the rest of the workplace in any manner that adequately establishes and alerts potentially exposed persons to the boundaries of the

area and minimizes the number of authorized persons exposed to TCE within the regulated area (see § 751.315(b)(4)(iii)). Owners or operators must consider the presence of TCE relative to the interim ECEL in demarcating the regulated area.

Marking the regulated area and alerting potentially exposed persons to the boundaries of the area can be accomplished through combinations of administrative controls including highly visible signifiers, in multiple languages as appropriate (e.g., when potentially exposed persons who are primarily Spanish-speaking are present, owners or operators should post additional highly visible signifiers in Spanish), placed in conspicuous areas.

Once the regulated area is established, there are several requirements, including:

- The owner or operator is required to restrict access to the regulated area to authorized persons, which may include restricting access to any person that lacks proper training, lacks PPE, if required, or is otherwise unauthorized to enter.
- Owners or operators must provide respiratory protection sufficient to reduce inhalation exposures to below the interim ECEL to all potentially exposed persons in the regulated area either within 3 months after receipt of the results of any exposure monitoring that indicates exposures exceeding the interim ECELOR by **September 15, 2025** (270 days after the date of publication of the final rule (see § 751.315(b)(4)(iv) and (e)).

G. What are the training requirements?

Owners or operators must institute a training program by **September 15, 2025**, and ensure that persons potentially exposed to TCE participate in the program. Trainings must be provided prior to or at the time of an initial job assignment and be presented in an understandable manner (i.e., plain language presentation based on languages spoken by potentially exposed persons) to potentially exposed persons (see 40 CFR 751.315(d)). Training consistent with the OSHA PPE standard at 29 CFR 1910.132(f) must be provided for dermal protection (see 40 CFR 751.315(e)(2)(iv)). If respiratory protection is required in the regulated area, training consistent with OSHA's respiratory protection standard 29 CFR 1910.134(k) must be provided (see 40 CFR 751.315(e)(1)(vii)). For more information, see § 751.315(d)).

The following information and training must be provided to all persons potentially exposed to TCE:

- The workplace requirements and how to access or obtain a copy of these requirements in the workplace.
- The quantity, location, manner of use, release, and storage of TCE and the specific operations in the workplace that could result in exposure to TCE, particularly noting where each regulated area is located.
- Methods and observations that may be used to detect the presence or release of TCE in the workplace (such as monitoring conducted by the owner or operator, continuous monitoring devices, visual appearance, or odor of TCE when being released).
- The acute and chronic health hazards of TCE as detailed on relevant Safety Data Sheets.
- The principles of safe use and handling of TCE and measures potentially exposed persons can take to protect themselves from TCE, including specific procedures the owner or operator has implemented to protect potentially exposed persons from exposure to TCE, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

Re-training of each potentially exposed person must occur annually to ensure that each such person maintains the requisite understanding of the principles of safe use and handling of TCE in the workplace. Whenever there are workplace changes, such as modifications of tasks or procedures or the institution of new tasks or procedures, that increase exposure, and where those exposures exceed or can reasonably be expected to exceed the interim ECEL action level, the owner or operator must update the training and ensure that each potentially exposed person is re-trained.

H. What is the exposure control plan?

The TCE rule requires owners or operators to develop an exposure control plan as part of the WCPP (see § 751.315(c)(2)). The exposure control plan documents actions taken to establish and implement exposure controls. The plan may be prepared as a stand-alone document or part of an existing industrial hygiene program. Owners or operators are encouraged to

include potentially exposed persons in the development of the exposure control plan. Additionally, owners or operators may use one exposure control plan for compliance with multiple TSCA 6(a) regulations, so long as that exposure control plan meets the requirements of each individual chemical.

The exposure control plan must describe efforts that will be taken to protect potentially exposed persons through use of the hierarchy of controls (see § 751.315(c)(2)(i)). The rule requires that entities follow the hierarchy of controls, which specifies that owners or operators should first attempt elimination, substitution, engineering controls, or administrative controls to manage TCE exposure to the extent feasible prior to requiring use of PPE as a means of controlling inhalation exposures (see § 751.315(c)(1)). The hierarchy of controls is detailed below and PPE is discussed in Unit V.I.

In accordance with § 751.315(c)(2)(i), the following elements are required in an exposure control plan:

- Identification of exposure control measures that were considered, including those that were not ultimately used, and the rationale for using or not using available exposure controls in the sequence described by hierarchy of controls;
- For the exposure controls considered, documentation of the efforts identifying why these are not feasible, not effective, or other relevant considerations;
- A description of actions the owner or operator must take to implement exposure controls selected, including proper installation, regular inspections, maintenance, training, or other steps taken;
- A description of regulated areas, how they are marked, and persons authorized to enter the regulated areas;
- A description of activities conducted by the owner or operator to review and update the exposure control plan to ensure effectiveness of the exposure controls, identify any necessary updates to the exposure controls, and confirm that all persons are properly implementing the exposure controls; and
- An explanation of the procedures for responding to any change that may reasonably be expected to introduce additional sources of exposure to TCE, or otherwise result in increased exposure to TCE, including procedures for implementing corrective actions to mitigate exposure to TCE.

In addition to the elements required to be in an exposure control plan, owners or operators must also do the following:

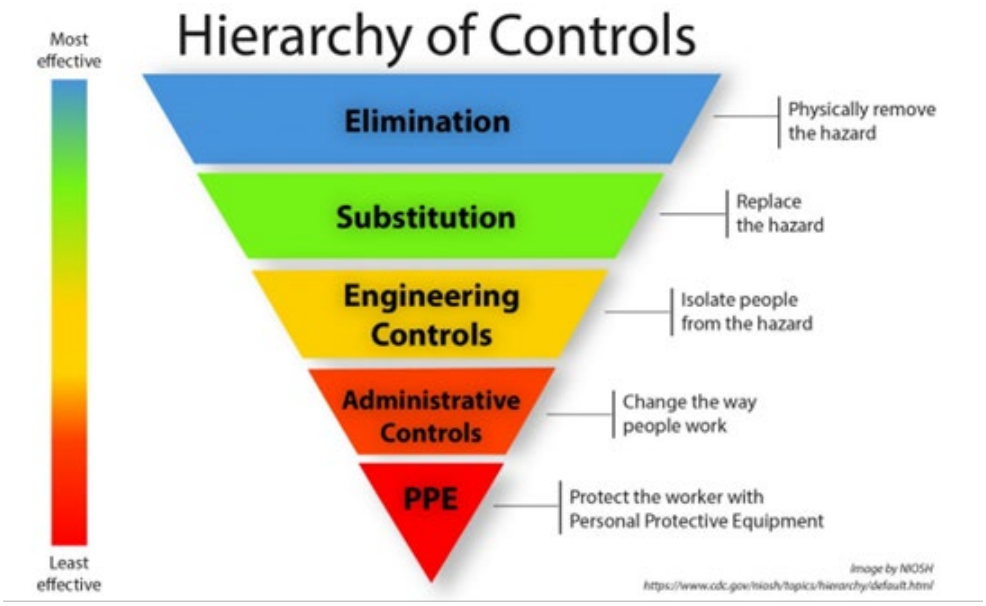
- Maintain the effectiveness of any engineering controls, administrative controls, or work practices instituted as part of the exposure control plan;
- Review and update the exposure control plan as necessary, and at least every 5 years. Updates should reflect any significant changes in the status of the approach to compliance with the exposure control requirements; and
- Make the exposure control plan and associated records available to potentially exposed persons, their designated representatives, and EPA enforcement as requested.

The Hierarchy of Controls

The EPA requires that in the exposure control plan, owners or operators look to the sequence of exposure reductions in the hierarchy of controls to identify possible exposure control measures, and to provide a rationale for whether these measures have been implemented.

For more information on the hierarchy of controls, visit the NIOSH website: https://www.cdc.gov/niosh/hierarchy-of-controls/about/.

The hierarchy of controls has five levels, ordered based on general effectiveness. See diagram below, used with permission from NIOSH.



For TCE, owners or operators must follow the hierarchy of controls, and should consider the following examples:

- Elimination – Remove TCE at the source. This could include changing the work process to stop using TCE. Elimination is the preferred solution to protect potentially exposed persons because no exposure can occur.
- Substitution – Use a safer alternative to TCE. When considering a substitute, compare the potential risks of the substitute to those of TCE. This review should consider how the substitute will combine with other agents in the workplace. Effective substitutes reduce the potential for harmful effects and do not create new risks. The EPA recommends careful review of the available information on potential substitutes (including the Alternatives Assessment that accompanies the TCE rule) to avoid a substitute chemical that might later be found to present unreasonable risks or be subject to regulation (sometimes referred to as a "regrettable substitution").
- Engineering controls – Engineering controls can include modifying equipment or the workspace, using local exhaust ventilation, protective barriers, and more to remove or prevent TCE exposure. Effective engineering controls have the following attributes:
  - Remove or block TCE at the source before it comes into contact with the worker;
  - Prevent users from modifying or interfering with the engineering control itself;
  - Need minimal user input; and
  - Operate correctly without interfering with the work process or making it more difficult.
- Administrative controls/Work practices – Establish work practices that reduce the duration, frequency, or intensity of TCE exposure. This may include work process training, ensuring adequate rest breaks, or limiting access to areas where TCE exposure may be possible. Establishment of a regulated area is an administrative control. However, though it may be appropriate in other circumstances, owners or operators may not use rotating work schedules to comply with the TCE interim ECEL 8-hour TWA (see § 751.315(c)(2)(ii)(A)).
- PPE – PPE is equipment worn to reduce or minimize exposure to hazards. Examples of PPE include gloves, safety glasses, and respirators. PPE use must be accompanied by a PPE program, which includes such elements as PPE selection and use training, PPE inspection and replacement schedules, and effectiveness monitoring. Owners or operators must not rely on PPE as a primary method to control hazards when other effective control options are feasible. See more information in Unit V.I. of this guide.

Who needs to know about the exposure control plan?

Owners or operators must make the exposure control plan and its related records (e.g., exposure monitoring, respiratory protection program implementation, dermal protection program implementation) available to potentially exposed persons and their designated representatives. The exposure control plan must be reviewed and updated as necessary, and at least every 5 years, to reflect any significant changes in the status of the owner or operator's approach to compliance, in accordance with § 751.315(c)(2)(ii)(C). Owners or operators must make available this information (e.g., the exposure control plan and monitoring information) plus additional records to the EPA for enforcement purposes upon request.

Owners or operators must notify potentially exposed persons within 30 days of the date of the exposure control plan's completion, and at least annually thereafter in accordance with § 751.315(c)(2)(iii)(B). Upon request by the potentially exposed person, the owner or operator must provide the requested records at a reasonable time, place, and manner, but at least within 15 days. If the owner or operator is not able to provide the requested records within 15 days, they must notify the potentially exposed person or designated representative within those 15 days explaining the reason for the delay and providing the earliest date when the record(s) will be made available, in accordance with § 751.315(c)(2)(iii)(D).

I. When should respiratory protection and personal protective equipment (PPE) be used?

Respiratory protection must be used where the feasible elimination, substitution, engineering, and administrative controls do not reduce exposures below the interim ECEL. In accordance with the hierarchy of controls, the EPA requires that owners or operators implementing the WCPP use, where feasible, elimination, substitution, engineering controls, administrative controls, and work practices prior to turning to respiratory protection (i.e., respirators) as a means of reducing inhalation exposures below the EPA's interim ECEL, see also Unit IV.C.7 in the TCE rule. Respiratory protection is meant to supplement other efforts to manage exposure, as described in the previous section.

Use the following information to select the appropriate respiratory protection or PPE in tandem with other efforts to control exposure.

Respiratory Protection

The respiratory protection measures are based on the measured concentration of TCE, as part of the initial monitoring, periodic monitoring, or other additional monitoring. Table 6 (based on § 751.315(e)(1)) summarizes the requirements for respiratory protection.

Table 6: Respiratory Protection Conditions and Requirements

Concentration Condition	Minimum Required Respirator Protection: Respirators Must Be NIOSH Approved®
At or below the interim ECEL of 0.2 ppm	No respirator required
Above 0.2 ppm and less than or equal to 2 ppm (10 times the interim ECEL)	One of the following with an assigned protection factor (APF) 10 rating: • Any air-purifying half mask respirator equipped with organic vapor cartridges or canisters; or • Any Supplied-Air Respirator (SAR) or airline respirator in demand mode equipped with a half mask; or • Self-Contained Breathing Apparatus (SCBA) in a demand mode equipped with a half mask.

Concentration Condition	Minimum Required Respirator Protection: Respirators Must Be NIOSH Approved®
Above 2 ppm and less than or equal to 5 ppm (25 times the interim ECEL)	Either of the following with an APF 25 rating: • Any Powered Air-Purifying Respirator (PAPR) equipped with a loose-fitting facepiece or hood/helmet equipped with organic vapor cartridges or canisters; or • any SAR or airline respirator in a continuous-flow mode equipped with a loose-fitting facepiece or helmet/hood.
Above 5 ppm and less than or equal to 10 ppm (50 times the interim ECEL)	One of the following with an APF 50 rating: • Air-purifying full facepiece respirator equipped with organic vapor cartridges or canisters; or • Any PAPR equipped with a half mask equipped with organic vapor cartridges or canisters; • Any SAR or airline respirator in a continuous flow mode equipped with a half mask facepiece; or • any SAR or Airline Respirator operated in a pressure-demand or other positive-pressure mode with a half mask; or • Any SCBA in demand-mode equipped with a full facepiece or helmet/hood.
Any air concentration value above 10 ppm and up to 200 ppm (1,000 times the interim ECEL)	One of the following with an APF 1,000 rating: • Any PAPR equipped with a full facepiece and organic vapor cartridges or canisters; or • Any SAR or Airline Respirator in a continuous-flow mode equipped with a full facepiece; or • Any SAR or Airline Respirator in pressure-demand or other positive-pressure mode equipped with a full facepiece and an auxiliary self-contained air supply; • Any SAR or Airline Respirator in a continuous-flow mode equipped with a certified hood/helmet tested to demonstrate performance.
Measured air concentration above 200 ppm	Any SCBA in a pressure-demand or other positive-pressure mode equipped with a full facepiece or helmet/hood (APF 10,000).
Unknown air concentration	Any NIOSH Approved combination SAR equipped with a full facepiece and operated in pressure demand or other positive pressure mode with an auxiliary self-contained air supply; or any NIOSH SCBA operated in pressure demand or other positive pressure mode and equipped with a full facepiece or hood/helmet (APF 1,000+).

Dermal Protection

Owners or operators must provide chemically resistant gloves and training on proper glove use to potential exposed persons for tasks where dermal exposure may occur (see § 751.315(e)(2)). Training should include glove selection (type, material), expected duration of glove effectiveness, actions to take when glove integrity is compromised, storage requirements, procedure for glove removal and disposal, and chemical hazards. This specific activity training must be for all persons required to use gloves prior to or at the time of initial assignment to a job involving potential dermal exposure to TCE. For more information, see § 751.315(e)(2) and OSHA regulations at 29 CFR 1910.132(f).

J. What are the additional components of the WCPP?

Workplace Protection

The EPA encourages owners or operators to consult with potentially exposed persons when developing the exposure control plan and any necessary PPE program. The EPA requires owners or operators to provide potentially exposed persons regular access to the following:

- Exposure control plans;
- Exposure monitoring records; and
- Dermal and respiratory PPE program implementation information (such as fit-testing and other requirements).

Keep in mind that owners or operators must inform potentially exposed persons of monitoring results within 15 working days (see "Notification of WCPP Monitoring Results" above and § 751.315(b)(3)(vi)).

WCPP Recordkeeping

Records are an important component of demonstrating compliance with the WCPP provisions. Owners or operators must retain compliance records for 5 years, and they must be available upon request for inspection. Records may be kept in the most convenient form for the owner or operator (electronic or paper). For additional information on WCPP recordkeeping see Unit IV.F.1 and § 751.323 in the TCE rule.

WCPP records that must be kept include records associated with:

- Implementation of the exposure control plan, such as any inspections, evaluations, and updates of exposure controls;
- Implementation of a PPE program, such as information related to PPE selection and fit-testing;
- Training; and
- Availability of the exposure control plan and associated records for potentially exposed persons and their designated representatives.

For each monitoring event, the EPA requires that the owner or operator record and maintain the following information:

- Dates, duration, and results of each sample taken;
- The quantity, location(s), and manner of TCE in use at the time of each monitoring event;
- All measurements that may be necessary to determine the conditions that may affect the monitoring results;
- Sampling and analytical methods used with appropriate limits of detection and accuracy in accordance with § 751.315(b)(3)(i)(D);
- Type of respirator worn (if any);
- Name, workplace address, work shift, job classification, and work area of each monitored person;
- Identification of all potentially exposed persons that a monitored person is intended to represent if using a representative sample;
- Compliance with the Good Laboratory Practice Standards at 40 CFR Part 792 or any accredited lab including American Industrial Hygiene Association (AIHA) (e.g., AIHA LAP, LLC Policy Module 2A/B/E of Revision 17.3), or other analogous industry-recognized program;
- Information regarding air monitoring equipment, including type, maintenance, calibrations, performance tests, limits of detection, and any malfunctions;
- Re-monitoring determinations conducted by an Environmental Professional as defined at 40 CFR 312.10 or a Certified Industrial Hygienist, if results indicated non-detect; and
- Notification of exposure monitoring results for workers in accordance with § 751.315(b)(3)(vi).

VI: Workplace Controls for Select Conditions of Use

A. Overview of prohibitions of TCE

For some conditions of use of TCE, workplace controls that are different from the WCPP are required or available in lieu of the WCPP to protect workers or others in the workplace before prohibitions occur. Because of the way the workers or others in the workplace are exposed to TCE, or because of current measures in place to protect against chemical or other hazards, the EPA has determined that these workplace controls are appropriate.

B. Industrial and commercial use of TCE as an energized electrical cleaner

Who does this apply to?

The industrial and commercial use of TCE in energized electrical cleaner refers to the use of TCE in a product to clean and/or degrease electrical equipment, where cleaning and/or degreasing is accomplished when electrical current exists, or when there is a residual electrical potential from a component, such as a capacitor (i.e., energized equipment use only). In this final rule, energized electrical cleaner does not include general purpose degreaser, electrical cleaner, or electronic cleaner. For example, use in motorized vehicle maintenance and their parts is subject to the more immediate prohibitions within one year.

The industrial and commercial use of TCE in energized electrical cleaner is prohibited after **December 18, 2027.**
During the timeframe before prohibition, the EPA is requiring that users of TCE in energized electrical cleaner comply with *either* specific prescriptive controls (described below) *or* the WCPP (described in Unit V of this guide).

What requirements must owners or operators of industrial and commercial use of energized electrical cleaner products follow under the TCE rule?

The EPA is requiring that owners or operators must either implement (i) specific prescriptive controls that provide dermal PPE and respiratory protection or (ii) implement the WCPP for industrial and commercial use in energized electrical cleaner. Owners or operators must maintain a statement regarding whether the business is complying with the specified prescriptive controls or with the WCPP (§ 751.323(e)(1)(i)).

The upstream manufacturing and processing of TCE for the use in energized electrical cleaner must follow the WCPP.

What are the specific prescriptive controls for industrial and commercial use of energized electrical cleaner?

If owners or operators implement prescriptive workplace controls for use of TCE in energized electrical cleaning, they must:

- For respiratory protection, provide to potentially exposed persons, and potentially exposed persons must use, the following (see § 751.317(b)(1)(iii)):
  - Any NIOSH Approved air-purifying full facepiece respirator equipped with organic vapor cartridges or canisters (APF 50);
  - Any NIOSH Approved PAPR with a half mask equipped with organic vapor cartridges or canisters (APF 50);
  - Any NIOSH Approved® SAR or Airline Respirator in a continuous flow mode equipped with a half mask (APF 50);
  - Any NIOSH Approved® SAR or Airline Respirator operated in a pressure-demand or other positive-pressure mode with a half mask (APF 50);
  - Any NIOSH Approved® SCBA in demand-mode equipped with a full facepiece or helmet/hood (APF 50); OR
  - Any respirator affording a higher degree of protection.
- Administer a PPE program with procedures and elements for required respirator use as described in the WCPP for proper use, maintenance, fit-testing, medical evaluation, and training consistent with specific provisions in the OSHA Respiratory Protection Standard at 29 CFR 1910.134 (see Unit V.I. of this guide and § 751.315(e)(1)).
- For dermal protection, provide dermal PPE, including chemically resistant gloves, for all potentially exposed persons.
  - This requires compliance with the dermal PPE selection and training requirements in the WCPP (see Unit V.I. of this guide and § 751.315(e)(2)).
- Additionally, owners or operators implementing workplace controls for use of TCE in energized electrical cleaning must:

- Maintain records in accordance with the WCPP (see Unit V.J.2. of this guide).
- Cease this use of TCE by **December 18, 2027**.

For energized electrical cleaning I am choosing to comply with the WCPP instead of the prescriptive workplace controls. What do I need to do?

Owners or operators who choose to follow the WCPP as an alternative to the prescriptive workplace controls for energized electrical cleaner (see above) must:

- Document and maintain a statement indicating the choice to comply with the WCPP; and
- Comply with the WCPP provisions as described in Unit V of this guide and document compliance as described in Unit VIII of this guide.

The requirements of the WCPP are described in the final rule at § 751.315 and the recordkeeping requirements at § 751.323.

Note that products for this use containing TCE may be reformulated to contain PCE; please consult the PCE Energized Electrical Cleaning Compliance Guide for more information.

C. Disposal of TCE from clean-up projects of TCE-contaminated water and groundwater

Who does this apply to?

These specific workplace controls apply to owners or operators of facilities or sites involved in the industrial treatment and pre-treatment of TCE wastewater at cleanup sites, which fall under the 50 year TSCA section 6(g) exemption for disposal of TCE for the purposes of facilitating cleanup projects of TCE-contaminated water and groundwater. Owners or operators of cleanup sites where potentially exposed persons are involved in the disposal of TCE-contaminated water or groundwater to industrial pre-treatment and industrial treatment, must ensure that potentially exposed persons involved with the activity of removing the contaminated water or groundwater from the location where it was found and treating the removed contaminated water or groundwater on site are protected under the workplace requirements described in the next section, below. The standard would apply, for example, to workers conducting remediation through pump and treat systems or workers sampling wastewater in conjunction with wastewater extraction or treatment (e.g., remediation or cleanup) activities.

To further clarify, the workplace protections for this exemption are not intended to cover persons who may be exposed to TCE from other contaminated media. Additionally, the workplace protections for this exemption are not intended to cover potentially exposed persons who are sampling groundwater to monitor the presence of a plume, but specifically only those sampling wastewater at the site of extraction and active treatment activities. For more information, see Unit III.A.2. of the TCE rule.

For this specific exemption, owners or operators may dispose of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works ONLY for cleanup projects of TCE-contaminated water and groundwater. This is limited to sites undergoing cleanup under CERCLA, RCRA, or other Federal, state, and local government laws, regulations, or requirements.

What are the workplace requirements for facilitating cleanup projects of TCE-contaminated groundwater and other wastewater?

Owners or operators of facilities or sites involved in the disposal of TCE-containing wastewater for the purposes of cleanup projects of TCE-contaminated water and groundwater must continue to comply with specific requirements set forth in 29 CFR 1910.120(h), known as the Hazardous Waste Operations and Emergency Response standard (or HAZWOPER), with notable modifications: the TCE rule requires that, for those provisions in 29 CFR 1910.120 that reference a PEL, owners or operators must instead comply with the TSCA interim ECEL of 0.2 ppm as an 8-hour TWA. See Unit V.D. of this guide for more information on the interim ECEL and EPA action level.

Specific HAZWOPER requirements included in the TCE Final Rule include a written site-specific safety and health plan; training; engineering controls, work practices and PPE; and exposure monitoring (see § 751.319(b)).

D. Disposal of TCE at publicly owned treatment works

Who does this apply to?

These specific workplace requirements apply to owners or operators of POTWs that receive wastewater associated with TCE disposal for: industrial and commercial use as a processing aid for lithium battery separator manufacturing, industrial and commercial use of TCE as a processing aid for lead-

acid battery separator manufacturing, industrial and commercial use of TCE as a processing aid for specialty polymeric microporous sheet material manufacturing, and facilitating cleanup projects of TCE-contaminated groundwater and other wastewater.

What are the workplace requirements for publicly owned treatment works?

Owners or operators of POTWs where there is a reasonable possibility of the presence of TCE must either:

- Screen the wastewater they receive by sampling and analyzing for a water concentration of TCE as described in the EPA's Guidance To Protect POTW Workers From Toxic And Reactive Gases And Vapors;
  - If the concentration of TCE in wastewater is less than 0.00284 mg/L of TCE, no action is required. This is because the screen indicates that the concentration of TCE in air that would result from TCE volatilization from wastewater is less than the interim ECEL.
  - If the concentration of TCE in wastewater exceeds 0.00284 mg/L of TCE, owners or operators must comply with most provisions of the WCPP (see Unit V of this guide and § 751.315 in the final rule), excluding the requirement that owners or operators do not have to perform initial air monitoring.
- Alternatively, implement the WCPP and forgo first sampling and analyzing for a water concentration of TCE. This would require compliance with all provisions of the WCPP (see Unit V of this guide and § 751.315 in the TCE rule).

VII: Laboratory Use

The TCE rule specifies that industrial and commercial use of TCE as a laboratory chemical is prohibited after **September 15, 2025**, with certain specific subsets of lab use being allowed to continue for longer timeframes under a phaseout or an exemption, subject to the WCPP for that interim period (see § 751.315 or Unit IV.C.1. of the TCE rule). This unit covers those laboratory uses allowed to continue beyond the initial prohibition on **September 15, 2025**.

Use of TCE in laboratories includes the use of TCE in a laboratory process or in specialized laboratory equipment for instrument calibration and maintenance, chemical analysis, chemical synthesis, extracting and purifying other chemicals, dissolving other substances, executing research, development, test and evaluation methods, and similar activities, such as use as a solvent, reagent, analytical standard, or other experimental use. This also includes the use of TCE in EPA analytical methods.

What types of labs does this apply to?

For the purposes of the TCE rule, the EPA emphasizes that industrial and commercial use of TCE as a laboratory chemical applies to research, government, and academic institutions, as well as to industrial and commercial laboratories.

All uses of TCE, including laboratory uses, are subject to the recordkeeping requirements in § 751.323 and described in Unit VIII of this guide.

A. Lab use for asphalt testing and recovery

Who does this apply to?

This use applies to the use of TCE in laboratory settings for the testing and recovery of asphalt.

What are the timelines and requirements for this phaseout?

Until **December 18, 2029**, TCE may continue to be used in laboratories for asphalt testing or recovery with any method, and must be performed on the premises of a laboratory. During this timeframe, and until the prohibition takes effect, owners or operators must comply with the WCPP, described in Unit V.

After **December 18, 2029**, TCE cannot be used in manual centrifuge processes in laboratories for asphalt testing and recovery. Another method must be used.

For example, owners or operators of laboratories using TCE for asphalt testing and recovery at this time must either use TCE in automated machines only, or use alternative solvents in automated machines or manual centrifuge processes.

After **December 18, 2034**, the lab use of TCE for asphalt testing or recovery is prohibited.

B. Lab use for essential laboratory activities associated with cleanup and exposure monitoring

Who does this apply to?

This applies to laboratory activities associated with TCE cleanup and exposure monitoring activities, including chemical analysis, chemical synthesis, extracting or purifying other chemicals, dissolving other substances, research and development for the advancement of cleanup activities, and as an analytical standard for monitoring related to TCE contamination or exposure monitoring. As noted above, this applies to research, government, and academic institutions, as well as to industrial and commercial laboratories. The use of TCE as a laboratory chemical must be performed on the premises of a laboratory, and owners or operators must comply with the WCPP, described in Unit V.

What is the timeline for prohibition?

This use is prohibited after **December 18, 2074**, and falls under a TSCA section 6(g) exemption.

C. Lab use for essential laboratory activities conducted by Federal agencies and their contractors

Who does this apply to?

Federal agencies and their contractors are permitted to conduct research and development activities, test and evaluation method activities, and similar laboratory activities, provided the use is essential to the agency's mission.

This specifically includes the use by NASA of TCE in essential laboratory activities as a laboratory reagent, calibration standard, and for dissolving other

substances. The use of TCE as a laboratory chemical must be performed on the premises of a laboratory, and owners or operators must comply with the WCPP, as described in Unit V.

What is the timeline for prohibition?

This use is prohibited after **December 18, 2074**, and falls under a TSCA section 6(g) exemption.

D. Workplace protection requirements

What requirements must laboratories with longer timeframes until prohibition follow under the TCE rule?

Laboratory uses of TCE that meet the criteria above, regardless of scale or volume, are regulated by the WCPP. The WCPP includes an interim ECEL to reduce risks to workers and others in the workplace from TCE, and ancillary requirements to support those limits, including initial and periodic monitoring, a requirement to reduce exposures to the extent feasible according to the hierarchy of controls, and PPE guidance to address remaining risks above the interim ECEL. For more information, see Unit V of this guide, or § 751.315 or Unit IV.C. of the TCE rule.

How can current practices in laboratories aid with complying with the TCE rule?

Laboratories may be required to be in compliance with the OSHA laboratory standard at 29 CFR 1910.1450. The EPA's TCE rule does not modify those requirements. The measures in the WCPP will mitigate the risk identified by EPA from TCE laboratory use in the interim period until prohibition.

Owners or operators of laboratories must conduct initial monitoring to demonstrate the extent to which fume hoods mitigate exposure to TCE, and follow appropriate periodic monitoring based on that result. This monitoring could occur as infrequently as every 5 years if monitoring is below the interim action level.

An institution's existing Chemical Hygiene Plan required by OSHA's Occupational Exposure to Hazardous Chemicals in Laboratories standard may be augmented to include the details needed for the TCE WCPP exposure control plan. In the event that it is not feasible to mitigate occupational exposure below the interim ECEL value through exposure controls and work practices, laboratories must consider personal protective equipment such as respiratory protection to mitigate worker exposure to TCE.

VIII: Recordkeeping and Downstream Notification

A. Recordkeeping: Overview and requirements

Manufactures (including importers), processors, distributors (excluding retailers), or use TCE, there are requirements for recordkeeping regarding TCE. These are in addition to the WCPP recordkeeping requirements described earlier.

Owners or operators are required to maintain ordinary business records that relate to compliance with the EPA's regulation of TCE under TSCA. These records are necessary to demonstrate that TCE is being manufactured, processed, distributed, used, or disposed of only in compliance with the restrictions of the TCE rule.

These records must be maintained for 5 years from the date of the record's creation (see § 751.323(g)). This requirement begins on **February 18, 2025**.

Examples of ordinary business records:

- Bills-of-lading
- Invoices
- Receipts

There are additional recordkeeping requirements specific to the phaseouts, exemptions, and WCPP, also in § 751.323(b)-(f).

B. Import certification and export notification

Persons who import TCE in bulk form, or as part of a mixture, are subject to TSCA section 13 import certification requirements and the corresponding regulations at 19 CFR 12.118 through 12.127; see also 19 CFR 127.28(i).

Those persons must certify that the shipment of TCE complies with all applicable rules and orders under TSCA. The EPA policy in support of import certification appears at 40 CFR Part 707, subpart B. In addition, any persons who export or intend to export a chemical substance that is the subject of this final rule are subject to the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b)), and must comply with the export notification requirements in 40 CFR Part 707, subpart D.

C. Downstream notification

The EPA requires that manufacturers (including importers), processors, and distributors (excluding retailers, see § 751.303), of TCE and TCE-containing products provide downstream notification of certain prohibitions by updating language in SDSs.

Why is downstream notification important?

Downstream notification informs processors, distributors, and users of the prohibitions and restrictions on TCE under TSCA. This ensures that essential information on regulatory requirements is available throughout the supply chain and provides information to commercial end-users about allowable uses of TCE. This helps prevent the continuation of prohibited uses of TCE.

What do I have to do?

Downstream notification must occur by adding the text below (see box) to two places in the product SDS (to section 1(c) and section 15). This text describes the restrictions in the rule and must be provided in writing prior to or with the shipment of the TCE (see § 751.321).

If you manufacture (including import)) TCE for any use, you must update relevant SDSs by **February 18, 2025**, and by **June 16, 2025**, for processors and distributors.

Note: Products that include TCE below 0.1% by weight are not subject to the restrictions and prohibitions outlined in this regulation (see § 751.301(b)).

What are Safety Data Sheets (SDSs)?

SDSs are required under OSHA's Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)). They include information about the chemical's properties; the physical, health, and environmental hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. For more detailed information on SDSs, visit OSHA's HCS SDS page (see https://www.osha.gov/publications/osha3514.html).

Downstream notification must occur by inserting the following text in the SDS provided with the TCE or any product containing TCE. Updates must be made to section 1(c) and section 15 of the SDS:

After June 16, 2025, this chemical/product is and can only be domestically manufactured, imported, processed, or distributed in commerce for the following purposes until the following prohibitions take effect: (1) Processing as an intermediate a) for the manufacture of HFC-134a until June 18, 2033, and b) for all other processing as a reactant/intermediate until December 18, 2026; (2) Industrial and commercial use as a solvent for open-top batch vapor degreasing until December 18, 2025; (3) Industrial and commercial use as a solvent for closed-loop batch vapor degreasing until December 18, 2025, except for industrial and commercial use in batch vapor degreasing for land-based DoD defense systems by Federal agencies and their contractors until December 18, 2029, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing necessary for rocket engine cleaning by Federal agencies and their contractors until December 18, 2031, and except for industrial and commercial use of TCE in closed-loop and open-top batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices until December 18, 2031, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing for rayon fabric scouring for end use in rocket booster nozzle production by Federal agencies and their contractors until December 18, 2034; (4) Industrial and commercial use in processing aid (a) for lithium battery separator manufacturing until December 18, 2029, and (b) for lead-acid battery separator manufacturing until December 18, 2044, and (c) for specialty polymeric microporous sheet material manufacturing until December 18, 2039, and (d) in process solvent used in battery manufacture; in process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; in extraction solvent used in caprolactam manufacture; and in precipitant used in beta-cyclodextrin manufacture until December 18, 2026; (5) Industrial and commercial uses for vessels of the Armed Forces and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems until December 18, 2034; and (6) Industrial and commercial use for laboratory use (a) for essential laboratory activities until December 18, 2074 and (b) for asphalt testing and recovery using manual centrifuge processes until December 18, 2029 and for asphalt testing and recovery until December 18, 2034.

IX: Violations for Non-Compliance

A. What if the EPA discovers a violation?

In accordance with section 15 of TSCA, it is unlawful to fail or refuse to comply with any requirement under TSCA, or with any rule promulgated under TSCA. Therefore, any failure to comply with the final rule would be a violation of section 15 of TSCA. It is also unlawful under section 15 of TSCA for any person to use for commercial purposes a chemical substance or mixture which such person knew or had reason to know was manufactured, processed, or distributed in commerce in violation of TSCA section 6. In addition, under section 15 of TSCA, it is unlawful for any person to: (1) fail or refuse to establish or maintain records as required by the final rule or other regulations promulgated under this chapter; (2) fail or refuse to permit access to or copying of records, as required by TSCA; or (3) fail or refuse to permit entry or inspection as required by section 11 of TSCA. Violators of the regulations under TSCA section 6 may be subject to both civil and criminal liability. Under the penalty provision of section 16 of TSCA, any person who violates section 15 could be subject to a civil penalty for each violation. Each day in violation of the final rule could constitute a separate violation. Knowing or willful violations could lead to the imposition of criminal penalties for each day of violation and imprisonment. In addition, other remedies are available to the EPA under TSCA. In addition, it is unlawful to knowingly and willfully make or submit in writing materially false, fictitious, or fraudulent statements.

Individuals, as well as companies, could be subject to enforcement actions. Sections 15 and 16 of TSCA apply to "any person" who violates various provisions of TSCA. The EPA may, at its discretion, proceed against individuals as well as companies.

B. How does the EPA address violations by small businesses?

To maximize compliance, the EPA implements a balanced program of compliance assistance, compliance incentives, and traditional law enforcement. Compliance assistance information and technical advice helps small businesses to understand and meet their regulatory requirements of protecting potentially exposed persons' health and the environment.[5] Compliance incentives, such as the EPA's Small Business Policy, apply to businesses with 100 or fewer employees and encourage persons to voluntarily discover, disclose, and correct violations before they are identified by the government (more information about the EPA's Small Business Policy is available at https://www.epa.gov/enforcement/small-businesses-and-enforcement). The EPA's enforcement program is aimed at protecting the public by ensuring compliance with regulations under TSCA section 6.

The EPA encourages small businesses to work with the Agency to discover, disclose, and correct violations. The EPA's Audit Policy, which provides incentives for regulated entities to voluntarily discover and fix violations of Federal environmental laws and regulations, may be helpful for this process. The Agency has developed self-disclosure, small business, and small community policies to mitigate penalties for small and large entities that cooperate with the EPA to address compliance problems. For more information on compliance assistance and other EPA programs for small businesses, please see the "Frequency Asked Questions (FAQs)" section of this guide (below).

[5] For more information, visit https://www.epa.gov/resources-small-businesses/resource-list-small-entity-compliance-assistance and https://www.epa.gov/compliance/compliance-assistance-centers.

Frequently Asked Questions (FAQs)

A. Where can I go if I have questions or need further assistance?

Please contact the EPA's TSCA Hotline with your technical questions by telephone at (202) 554-1404 or by email at tsca-hotline@epa.gov or TCE.TSCA@epa.gov. For small businesses, please see the EPA's Small Business Ombudsman (ASBO) Program Website. For questions and inquiries by telephone contact the ASBO Hotline at (800) 368-5888 or by email at asbo@epa.gov. Small businesses seeking technical compliance assistance may find the National Small Business Environmental Assistance Programs (SBEAP) helpful for providing resources and information about this rule. For one-on-one compliance assistance locate and contact your state SBEAP representative.

B. How can I dispose of TCE?

Under RCRA, the disposal standards for TCE depend on the form of the waste containing the chemical. If it is determined to be hazardous waste, see the small business guide for managing hazardous waste. If it is not hazardous waste, see the guide on industrial non-hazardous waste management.

The disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works (i.e., wastewater that contains TCE that is collected and/or treated on site or transported to a third party site, and includes the mixing of TCE with wastewater and the discharge of TCE-contaminated wastewater) is prohibited after **September 15, 2025**, unless otherwise noted in this guide in Unit IV.E. or IV.F.

For further questions, you may also contact the EPA's TSCA Hotline with questions by telephone at (202) 554-1404 or by email at tsca-hotline@epa.gov or TCE.TSCA@epa.gov. For small businesses, please see the EPA's Small Business Ombudsman Website, https://www.epa.gov/resources-small-businesses/asbestos-and-small-business-ombudsman.

C. Is this guide updated?

This manual is the first version of the compliance guide. The EPA will ensure that the latest updated compliance guides are available at https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-trichloroethylene-tce.

D. What if I become aware of a violation?

To report a violation, please see instructions at https://www.epa.gov/report-violation.

E. Are there alternatives to TCE?

The EPA identified numerous formulated or procedural alternatives for the vast majority of uses of TCE. While the EPA cannot recommend specific products or alternatives, information on alternatives is in the Alternatives Assessment and Economic Analysis, both posted in the docket (EPA-HQ-OPPT-2020-0642). Information on alternatives is also available from the Toxics Use Reduction Institute at https://www.turi.org/resources-for-switching-from-tce-and-other-halogenated-solvents/.

F. Where can I find more information?

More information on how the EPA is addressing the unreasonable risk from chemical substances is at https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-existing-chemicals-under-tsca. You may also contact the EPA's TSCA Hotline by telephone at (202) 554-1404 or by email at tsca-hotline@epa.gov.

For TCE, additional information is available at https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-trichloroethylene-tce. The regulations can be found in the Federal Register at https://www.federalregister.gov/documents/2024/12/17/2024-29274/trichloroethylene-tce-regulation-under-the-toxic-substances-control-act-tsca or at docket EPA-HQ-OPPT-2020-0642 at https://www.regulations.gov. You can also email TCE.TSCA@epa.gov with information or questions.

Appendix A: Abbreviation List and Glossary

Abbreviation List

AIHA	American Industrial Hygiene Association
AIM Act	American Innovation and Manufacturing Act
APF	Assigned protection factor
ASBO	EPA Small Business Ombuds Program
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DoD	Department of Defense
ECEL	Existing chemical exposure limit
EPA	U.S. Environmental Protection Agency
FAQ	Frequently asked questions
FR	Federal Register
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCS	Hazard Communication Standard
HFC	hydrofluorocarbon
HFC-134a	hydrofluorocarbon-134a
NASA	National Aeronautics and Space Administration
NAICS	North American Industrial Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
OTVD	Open-top vapor degreaser
PAPR	Powered air-purifying respirator
PBZ	Personal breathing zone
PCE	Perchloroethylene
PEL	Permissible Exposure Limit
POTW	Publicly owned treatment works
PPE	Personal protective equipment
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
SAR	Supplied-air respirator
SBEAP	Small Business Environmental Assistance Program
SCBA	Self-contained breathing apparatus
SDS	Safety data sheet
TCE	Trichloroethylene
TSCA	Toxic Substances Control Act
TWA	Time-weighted average
WCPP	Workplace Chemical Protection Program

Glossary

Article – (§ 751.5) A manufactured item: (1) Which is formed to a specific shape or design during manufacture; (2) Which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (3) Which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the article, and that result from a chemical reaction that occurs upon end use of other chemical substances, mixtures, or articles; except that fluids and particles are not considered articles regardless of shape or design.

Chemical substance – Defined in TSCA section 3(2) to mean organic or inorganic substance of a particular molecular identity, including: (1) Any combination of such substances occurring in whole or in part as a result of a chemical reaction or occurring in nature, and (2) Any element or uncombined radical. However, the term "chemical substance" does not include any mixture; any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide; tobacco or any tobacco product; any source material, special nuclear material, or byproduct material (as such terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act); any article the sale of which is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or 4221 or any other provision of such Code) and any component of such an article (limited to shot shells, cartridges, and components of shot shells and cartridges); and any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device. (The term "food" includes poultry and poultry products (as defined in sections 4(e) and 4(f) of the Poultry Products Inspection Act), meat and meat food products (as defined in section 1(j) of the Federal Meat Inspection Act), and eggs and egg products (as defined in section 4 of the Egg Products Inspection Act)).

Condition of use – Defined in TSCA section 3(4) to mean the circumstances, as determined by the EPA, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of. Each TCE condition of use is described in Appendix B.

Interim ECEL – Defined in this rule as a concentration of airborne TCE of 0.2 parts per million (ppm) calculated as an eight (8)-hour time weighted average (TWA) that will be in place only for the timeframes indicated for specified conditions of use, after which prohibitions would take effect.

Interim ECEL action level – (§ 751.103) An air concentration that indicates when certain compliance activities would need to be taken, and at which frequency, to prevent exceedances of the ECEL. For TCE, the ECEL action level is a concentration of airborne TCE of 1 part per million (1 ppm) calculated as an 8-hour time weighted average (TWA).

Owner or operator – (§ 751.5) Any person who owns, leases, operates, controls, or supervises a workplace.

Personal breathing zone (PBZ) – A hemispheric area forward of the shoulders within a six- to nine-inch radius of a worker's nose and mouth and requires that exposure monitoring air samples be collected from within this space.

Potentially exposed person – (§ 751.5) Any person who may be exposed to a chemical substance or mixture in a workplace as a result of a condition of use of that chemical substance or mixture.

Products – (§ 751.5) Means the chemical substance, a mixture containing the chemical substance, or any object that contains the chemical substance or mixture containing the chemical substance that is not an article.

Regulated area – (§ 751.5) An area established by the regulated entity to demarcate areas where airborne concentrations of a specific chemical substance exceed, or there is a reasonable possibility they may exceed, the applicable interim ECEL.

Regulatory Threshold – (§ 751.101) Products that include TCE below 0.1% by weight are not subject to the restrictions outlined in the regulation described by this guide.

Retailer – (§ 751.5) Any person or business entity that distributes or makes available products to consumers, including through e-commerce internet sales or distribution. Any distributor with at least one consumer end user customer is considered a retailer. A person who distributes in commerce or makes available a chemical substance or mixture solely to commercial or industrial end users or solely to commercial or industrial businesses is not considered a retailer.

Worker – A person who performs work in areas where TCE is present, including both those who handle TCE and those who do not directly handle TCE.

Workplace Chemical Protection Program (WCPP) – A program to protect workers from unreasonable risk posed by exposure to a regulated substance for certain conditions of use under TSCA. The WCPP includes a suite of measures to work together to create a workplace safety program for TCE. WCPP provisions for TCE include an interim ECEL, initial and periodic monitoring, respirator selection criteria, recordkeeping, and downstream notification for TCE to reduce worker risk until eventual prohibition.

Appendix B: Conditions of Use Descriptions

Descriptions of the conditions of use for TCE were obtained from EPA sources such as chemical data reporting use codes, the 2020 Risk Evaluation for TCE and related documents, as well as the Organisation for Economic Co-operation and Development (OECD) harmonized use codes, and stakeholder engagements. The descriptions of the conditions of use specific to the TCE rule are described below:

Manufacturing.

- **Domestic manufacture:** This condition of use refers to the making or producing of a chemical substance within the United States (including manufacturing for export), or the extraction of a component chemical substance from a previously existing chemical substance or a complex combination of substances. This description does not apply to TCE production as a byproduct, including during the manufacture of 1,2-dichloroethane, which the EPA intends to consider in the risk evaluation for 1,2-dichloroethane.
- **Import:** This condition of use refers to the act of causing a chemical substance or mixture to arrive within the customs territory of the United States.

Processing.

- **Processing as a reactant/intermediate**: This condition of use refers to processing TCE in chemical reactions for the manufacturing of another chemical substance or product, notably including but not limited to 1,1,1,2-tetrafluoroethane, an HFC also known as HFC-134a, which is used as a refrigerant and in fluorocarbon blends for refrigerants. This condition of use includes reuse of byproduct or residual TCE as a reactant.
- **Processing: incorporation into a formulation, mixture, or reaction product.** This condition of use refers to when TCE is added to a product (or product mixture) prior to further distribution of the product; such products include but are not limited to solvents (for cleaning or degreasing), adhesives and sealant chemicals, and solvents that become part of a product formulation or mixture (e.g., lubricants and greases, paints and coatings, other uses).
- **Processing: incorporation into articles.** This condition of use refers to when a chemical substance becomes an integral component of an article distributed for industrial, commercial, or consumer use.
- **Processing: repackaging.** This condition of use refers to the preparation of a chemical substance for distribution in commerce in a different form, state, or quantity. This includes but is not limited to transferring the chemical from a bulk container into smaller containers.
- **Processing: recycling.** This condition of use refers to the process of managing used solvents that are collected, either on-site or transported to a third-party site, for commercial purpose other than disposal. Spent solvents can be restored via solvent reclamation/recycling. The recovery process may involve an initial vapor recovery or mechanical separation step followed by distillation, purification, and final packaging.

Industrial and commercial use.

- Industrial and commercial use as solvent for open-top batch vapor degreasing. This condition of use refers to the process of heating TCE to its volatilization point and using its vapor to remove dirt, oils, greases, and other surface contaminants (such as drawing compounds, cutting fluids, coolants, solder flux, and lubricants) from metal parts, electronics, or other articles in batch open-top vapor degreasers (OTVDs).
- Industrial and commercial use as solvent for closed-loop batch vapor degreasing. This condition of use refers to the process of heating TCE to its volatilization point and using its vapor to remove dirt, oils, greases, and other surface contaminants (such as drawing compounds, cutting fluids, coolants, solder flux, and lubricants) from metal parts, electronics, or other articles in batch closed-loop vapor degreasers.
- Industrial and commercial use as solvent for in-line conveyorized vapor degreasing. This condition of use refers to the process of heating TCE to its volatilization point and using its vapors to remove dirt, oils, greases, and other surface contaminants from textiles, glassware, metal surfaces, and other articles using in-line conveyorized degreasing machines.

- Industrial and commercial use as solvent for in-line web cleaner vapor degreasing. This condition of use refers to the process of heating TCE to its volatilization point and using its vapors to remove dirt, oils, greases, and other surface contaminants from textiles, glassware, metal surfaces, and other articles using in-line web cleaning degreasing machines.
- Industrial and commercial use as solvent for cold cleaning. This condition of use refers to the industrial and commercial use of TCE as a non-boiling solvent in cold cleaning to dissolve oils, greases and other surface contaminants from textiles, glassware, metal surfaces, and other articles.
- Industrial and commercial use as a solvent for aerosol spray degreaser/cleaner and mold release.
  This condition of use refers to industrial and commercial use of TCE in aerosol degreasing as an aerosolized solvent spray, typically applied from a pressurized can, to remove residual contaminants from fabricated parts or machinery (including circuit boards and electronics). This description also applies to the use of TCE in products to remove dirt, grease, stains, spots, and foreign matter, including but not limited to release agent residues, from molds and casting surfaces.
- Industrial and commercial use as a lubricant and grease in tap and die fluid.
  This condition of use refers to industrial and commercial use of TCE in products such as, but not limited to, metalworking, cutting, and tapping fluid to reduce friction, heat generation and wear, to assist in metal shaping, and to protect the part being shaped from oxidation. This description does not apply to use of TCE in products intended as penetrating lubricant, which are described in a different condition of use.
- Industrial and commercial use as a lubricant and grease in penetrating lubricant.
  This condition of use refers to the industrial and commercial use of TCE in products as a lubricant and grease in penetrating lubricant, to reduce friction, heat generation and wear between surfaces. This description does not apply to use of TCE in products intended as metalworking, cutting and tapping fluids, which are described in a different condition of use.
- Industrial and commercial use as an adhesive and sealant in solvent-based adhesives and sealants; tire repair cement/sealer; mirror edge sealant.
  This condition of use refers to industrial and commercial use of TCE in adhesive and sealant products to promote bonding between other substances, promote adhesion of surfaces, or prevent seepage of moisture or air.
- Industrial and commercial use as a functional fluid in heat exchange fluid.
  This condition of use refers to the industrial and commercial use of TCE as a functional fluid in heat exchange fluid used to transmit or to remove heat from another material in a closed system.
- Industrial and commercial use in paints and coatings as a diluent in solvent-based paints and coating.
  This condition of use refers to industrial and commercial use of TCE in paints and coatings that are applied to surfaces to enhance properties such as, but not limited to, water repellency, gloss, fade resistance, ease of application, or foam prevention.
- Industrial and commercial use in cleaning and furniture care products in carpet cleaner and wipe cleaning.
  This condition of use refers to the industrial and commercial use of TCE in products to remove dirt, grease, stains, spots, and foreign matter from furniture and furnishings, including but not limited to carpets and rugs. This description also applies to use of TCE in degreasing and cleaning products to remove dirt, grease, stains, spots, and foreign matter from furniture and furnishings or to cleanse, sanitize, bleach, scour, polish, protect, or improve the appearance of surfaces through wipe cleaning. This description does not apply to the use of TCE as a spot remover for laundry and dishwashing, which is described in a different condition of use.
- Industrial and commercial use in laundry and dishwashing products in spot remover.
  This condition of use refers to industrial and commercial use of TCE as a solvent in products for cleaning in laundry and dishwashing applications to remove dirt, grease, stains, spots, and foreign matter from garments and dishware.
- Industrial and commercial use in arts, crafts, and hobby materials in fixatives and finishing spray coatings.
  This condition of use refers to the industrial and commercial use of TCE in aerosol products, such as, but not limited to, fixatives, shellacs, or other spray applied coatings intended to cover or hold other arts and crafts materials to a surface.

- Industrial and commercial use in corrosion inhibitors and anti-scaling agents.
  This condition of use refers to the industrial and commercial use of TCE in corrosion inhibitors and anti-scaling agents as a chemical substance used to prevent or retard corrosion or the formation of scale. As a corrosion inhibitor, TCE is used to prevent or retard corrosion on metallic materials. As an anti-scaling agent, TCE is added to products to prevent the build-up of inorganic oxide deposits.
- Industrial and commercial use in processing aids in process solvent used in battery manufacture; process solvent used in polymer fabric spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; precipitant used in beta-cyclodextrin manufacture.
  This condition of use refers to industrial and commercial use of TCE as a processing aid. A process solvent is a chemical substance used to improve the processing characteristics or the operation of process equipment when added to a process or to a substance or mixture to be processed. The chemical substance is not intended to become a part of the reaction product nor has function in the reaction product.
- Industrial and commercial use as ink, toner, and colorant products in toner aid.
  This condition of use refers to the industrial and commercial use of TCE in ink, toner, and colorant products in toner aid as chemical substance used for writing, printing, creating an image on paper and other substrates, or applied to substrates to change their color or hide images. This includes but is not limited to pigmented liquids, toners or powders contained in cartridges, bottles, or other dispensers used in printers and copy machines. This category includes printing inks for commercial applications.
- Industrial and commercial use in automotive care products in brake and parts cleaner.
  This condition of use refers to the industrial and commercial use of TCE in products to remove dirt, grease, stains, and foreign matter from interior and exterior vehicle surfaces. This description includes but is not limited to use of products for motorized vehicle maintenance and their parts.
- xix. Industrial and commercial use in apparel and footwear care products in shoe polish.
  This condition of use refers to the industrial or commercial use of TCE in apparel and footwear care products as post-market waxes, polishes, or other mediums and applied to footwear, textiles, or fabrics to impart color or other desirable properties.
- Industrial and commercial use in hoof polish, gun scrubber, pepper spray, other miscellaneous industrial and commercial uses.
  This condition of use refers to the industrial and commercial use of TCE in which it is expected to act similar to a cleaning solvent used to remove dirt or other contaminants from substrates. This description also refers to other miscellaneous products which contain TCE as an additive to impart or enhance desirable properties of another material (e.g., adhesive, sealant, propellant). Additionally, this condition of use refers to the industrial and commercial use of TCE, often in small quantities, in a laboratory for chemical analysis (e.g., to test hot mix asphalt binder content, as a reference standard, etc.), chemical synthesis, extracting and purifying other chemicals, dissolving other substances, and similar activities.

Consumer use.

- Consumer use as a solvent in brake and parts cleaner.
  This condition of use refers to the consumer use of TCE in products to remove dirt, grease, stains, and foreign matter from interior and exterior vehicle surfaces, particularly in brake cleaner and parts cleaner.
- Consumer use as a solvent in aerosol electronic degreaser/cleaner.
  This condition of use refers to the consumer use of TCE as a solvent in degreasing and cleaning products used to remove dirt, grease, stains, spots, and foreign matter through a process that uses an aerosolized solvent spray, typically applied from a pressurized can, to remove residual contaminants from electronics.
- Consumer use as a solvent in liquid electronic degreaser/cleaner.
  This condition of use refers to the consumer use of TCE as a solvent in degreasing and cleaning products used to remove dirt, grease, stains, spots, and foreign matter through a process that uses a liquid solvent to remove residual contaminants from electronics.
- Consumer use as a solvent in aerosol spray degreaser/cleaner.
  This condition of use refers to the consumer use of TCE as a solvent in degreasing and cleaning products used to

remove dirt, grease, stains, spots, and foreign matter through a process that uses an aerosolized solvent spray, typically applied from a pressurized can, to remove residual contaminants from metals and other fabricated materials not described elsewhere in this unit.

- Consumer use as a solvent in liquid degreaser/cleaner.
  This condition of use refers to the consumer use of TCE as a solvent in liquid degreasing and cleaning products used to remove dirt, grease, stains, spots, and foreign matter from metals and other fabricated materials not described elsewhere.
- Consumer use as a solvent in aerosol gun scrubber.
  This condition of use refers to the consumer use of TCE as a solvent in aerosol products in which it is expected to act similar to a cleaning solvent used to remove residue, dirt, grease, or other contaminants, in particular but not limited to gun scrubber.
- vii. Consumer use as a solvent in liquid gun scrubber.
  This condition of use refers to the consumer use of TCE as a solvent in liquid products in which it is expected to act similar to a cleaning solvent used to remove residue, dirt, grease, or other contaminant, in particular but not limited to gun scrubber.
- Consumer use as a solvent in mold release.
  This condition of use refers to the consumer use of TCE in mold release products to create barriers to prevent certain materials from adhering to each other, and assist in the removal of dirt, grease, oils, and other contaminants from metal molds.
- Consumer use as a solvent in aerosol tire cleaner.
  This condition of use refers to the consumer use of TCE as an additive in aerosol products to impart or enhance desirable properties of another material, particularly in use as tire cleaner.
- Consumer use as a solvent in liquid tire cleaner.
  This condition of use refers to the consumer use of TCE as an additive in liquid products to impart or enhance desirable properties of another material, particularly in use as tire cleaner.
- Consumer use as a lubricant and grease in tap and die fluid.
  This condition of use refers to the consumer use of TCE in products to reduce friction, heat generation and wear between solid surfaces, particularly in tap and die fluid.
- Consumer use as a lubricant and grease in penetrating lubricant.
  This condition of use refers to the consumer use of TCE in products to reduce friction, heat generation and wear between solid surfaces, particularly in penetrating lubricant.
- Consumer use as an adhesive and sealant in solvent-based adhesive and sealants.
  This condition of use refers to the consumer use of TCE as a solvent in single or two component products used to fasten other materials together or prevent the passage of liquid or gas. This description does not apply to products for mirror edge sealant or tire repair, which are described in different conditions of use.
- Consumer use as an adhesive and sealant in mirror edge sealant.
  This condition of use refers to the consumer use of TCE in single or two component products used to fasten other materials together or prevent the passage of liquid or gas, particularly in mirror edge sealant.
- Consumer use as an adhesive and sealant in tire repair cement/sealer.
  This condition of use refers to the consumer use of TCE in single or two component products used to fasten other materials together or prevent the passage of liquid or gas, particularly in cement or sealant for tire repair.
- Consumer use as a cleaning and furniture care product in carpet cleaner.
  This condition of use refers to the consumer use of TCE as a solvent in cleaning and furniture care products used to remove dirt, grease, stains, spots, foreign matter, and residual contaminants, particularly in carpet cleaner.
- Consumer use as a cleaning and furniture care product in aerosol spot remover.
  This condition of use refers to the consumer use of TCE as a solvent in cleaning and furniture care products used to remove dirt, grease, stains, spots, and foreign matter through a process that uses an aerosolized solvent spray, typically applied from a pressurized can, to remove residual contaminants, particularly in aerosol spot remover.
- Consumer use as a cleaning and furniture care product in liquid spot remover.
  This condition of use refers to the consumer use of TCE as a solvent in cleaning and furniture care products in the

form of a solid or liquid cleaner, used to remove dirt, grease, stains, spots, foreign matter, and residual contaminants, particularly in liquid spot remover.

- Consumer use in arts, crafts, and hobby materials in fixative and finishing spray coatings.
  This condition of use refers to the consumer use of TCE in arts, crafts, and hobby products that uses an aerosolized solvent spray, typically applied from a pressurized can, intended to cover or hold other arts and crafts materials to a surface, particularly in fixative and finishing spray coatings.
- Consumer use in apparel and footwear products in shoe polish.
  This condition of use refers to the consumer use of TCE in apparel and footwear care products as post-market waxes, polishes, or other mediums and applied to footwear, textiles, or fabrics to impart color or other desirable properties.
- Consumer use in fabric spray.
  This condition of use refers to the consumer use of TCE in aerosol products, typically applied from a pressurized can, as an additive to enhance desirable properties of another material, particularly in fabric spray and as an anti-fray spray.
- Consumer use in film cleaner.
  This condition of use refers to the consumer use of TCE in products as an additive to impart or enhance the desirable properties of another material, particularly in film cleaner.
- Consumer use in hoof polish.
  This condition of use refers to the consumer use of TCE as an additive to impart or enhance desirable properties of another material, particularly in hoof polish.
- Consumer use in toner aid.
  This condition of use refers to the consumer use of TCE in products as an additive to impart or enhance the desirable properties of another material, particularly in toner aid.

Disposal.

This condition of use refers to the process of disposing of generated waste streams of TCE that are collected either on-site or transported to a third-party site. This includes the mixing of TCE with wastewater and the discharge of TCE-contaminated wastewater pursuant to a National Pollutant Discharge Elimination System (NPDES) permit, and specifically includes discharge to industrial pre-treatment, industrial treatment, or publicly owned treatment works.

Appendix C: List of Potentially Affected Entities

The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. This list is in Unit I.A. of the TCE rule, published on December 17, 2024, in the Federal Register. The list has been provided below for your convenience.

Potentially affected entities include:

- Crude Petroleum Extraction (NAICS code 211120);
- Fossil Fuel Electric Power Generation (NAICS code 221112);
- Other Electric Power Generation (NAICS code 221118);
- Broadwoven Fabric Mills (NAICS code 313210);
- Narrow Fabric Mills and Schiffli Machine Embroidery (NAICS code 313220);
- Nonwoven Fabric Mills (NAICS code 313230);
- Textile and Fabric Finishing Mills (NAICS code 313310);
- Fabric Coating Mills (NAICS code 313320);
- Wood Window and Door Manufacturing (NAICS code 321911);
- Prefabricated Wood Building Manufacturing (NAICS code 321992);
- Paper Bag and Coated and Treated Paper Manufacturing (NAICS code 322220);
- Petroleum Refineries (NAICS code 324110);
- All Other Petroleum and Coal Products Manufacturing (NAICS code 324199);
- Petrochemical Manufacturing (NAICS code 325110);
- Other Basic Inorganic Chemical Manufacturing (NAICS code 325180);
- Ethyl Alcohol Manufacturing (NAICS code 325193);
- All Other Basic Organic Chemical Manufacturing (NAICS code 325199);
- Plastics Material and Resin Manufacturing (NAICS code 325211);
- Medicinal and Botanical Manufacturing (NAICS code 325411);
- Pharmaceutical Preparation Manufacturing (NAICS code 325412);
- Paint and Coating Manufacturing (NAICS code 325510);
- Adhesive Manufacturing (NAICS code 325520);
- Polish and Other Sanitation Good Manufacturing (NAICS code 325612);
- Photographic Film, Paper, Plate and Chemical Manufacturing (NAICS code 325992);
- All Other Miscellaneous Chemical Product and Preparation Manufacturing (NAICS code 325998);
- Polystyrene Foam Product Manufacturing (NAICS code 326140);
- Urethane and Other Foam Product (except Polystyrene) Manufacturing (NAICS code 326150);
- Tire Manufacturing (except Retreading) (NAICS code 326211);
- Tire Retreading (NAICS code 326212);
- Rubber and Plastics Hoses and Belting Manufacturing (NAICS code 326220);
- Rubber Product Manufacturing for Mechanical Use (NAICS code 326291);
- All Other Rubber Product Manufacturing (NAICS code 326299);
- Pottery, Ceramics, and Plumbing Fixture Manufacturing (NAICS code 327110);
- Gypsum Product Manufacturing (NAICS code 327420);
- Iron and Steel Mills and Ferroalloy Manufacturing (NAICS code 331110);
- Iron and Steel Pipe and Tube Manufacturing from Purchased Steel (NAICS code 331210);

- Rolled Steel Shape Manufacturing (NAICS code 331221);
- Steel Wire Drawing (NAICS code 331222);
- Nonferrous Metal (except Aluminum) Smelting and Refining (NAICS code 331410);
- Copper Rolling, Drawing, Extruding, and Alloying (NAICS code 331420);
- Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing and Extruding (NAICS code 331491);
- Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum) (NAICS code 331492);
- Nonferrous Metal Die-Casting Foundries (NAICS code 331523);
- Iron and Steel Forging (NAICS code 332111);
- Nonferrous Forging (NAICS code 332112);
- Custom Roll Forming (NAICS code 332114);
- Powder Metallurgy Part Manufacturing (NAICS code 332117);
- Metal Crown, Closure, and Other Metal Stamping (except Automotive) (NAICS code 332119);
- Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing (NAICS code 332215);
- Saw Blade and Handtool Manufacturing (NAICS code 332216);
- Metal Window and Door Manufacturing (NAICS code 332321);
- Sheet Metal Work Manufacturing (NAICS code 332322);
- Ornamental and Architectural Metal Work Manufacturing (NAICS code 332323);
- Power Boiler and Heat Exchanger Manufacturing (NAICS code 332410);
- Metal Tank (Heavy Gauge) Manufacturing (NAICS code 332420);
- Metal Can Manufacturing (NAICS code 332431);
- Other Metal Container Manufacturing (NAICS code 332439);
- Hardware Manufacturing (NAICS code 332510);
- Spring Manufacturing (NAICS code 332613);
- Other Fabricated Wire Product Manufacturing (NAICS code 332618);
- Machine Shops (NAICS code 332710);
- Precision Turned Product Manufacturing (NAICS code 332721);
- Bolt, Nut, Screw, Rivet and Washer Manufacturing (NAICS code 332722);
- Metal Heat Treating (NAICS code 332811);
- Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers (NAICS code 332812);
- Electroplating, Plating, Polishing, Anodizing and Coloring (NAICS code 332813);
- Industrial Valve Manufacturing (NAICS code 332911);
- Fluid Power Valve and Hose Fitting Manufacturing (NAICS code 332912);
- Plumbing Fixture Fitting and Trim Manufacturing (NAICS code 332913);
- Other Metal Valve and Pipe Fitting Manufacturing (NAICS code 332919);
- Ball and Roller Bearing Manufacturing (NAICS code 332991);
- Small Arms Ammunition Manufacturing (NAICS code 332992);
- Ammunition (except Small Arms) Manufacturing (NAICS code 332993);
- Small Arms, Ordnance, and Ordnance Accessories Manufacturing (NAICS code 332994);
- Fabricated Pipe and Pipe Fitting Manufacturing (NAICS code 332996);
- All Other Miscellaneous Fabricated Metal Product Manufacturing (NAICS code 332999);
- Farm Machinery and Equipment Manufacturing (NAICS code 333111);
- Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing (NAICS code 333112);

- Construction Machinery Manufacturing (NAICS code 333120);
- Mining Machinery and Equipment Manufacturing (NAICS code 333131);
- Oil and Gas Field Machinery and Equipment Manufacturing (NAICS code 333132);
- Food Product Machinery Manufacturing (NAICS code 333241);
- Semiconductor Machinery Manufacturing (NAICS code 333242);
- Sawmill, Woodworking, and Paper Machinery Manufacturing (NAICS code 333243);
- Printing Machinery and Equipment Manufacturing (NAICS code 333244);
- Other Industrial Machinery Manufacturing (NAICS code 333249);
- Optical Instrument and Lens Manufacturing (NAICS code 333314);
- Photographic and Photocopying Equipment Manufacturing (NAICS code 333316);
- Other Commercial and Service Industry Machinery Manufacturing (NAICS code 333318);
- Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing (NAICS code 333413);
- Heating Equipment (except Warm Air Furnaces) Manufacturing (NAICS code 333414);
- Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (NAICS code 333415);
- Industrial Mold Manufacturing (NAICS code 333511);
- Special Die and Tool, Die Set, Jig and Fixture Manufacturing (NAICS code 333514);
- Cutting Tool and Machine Tool Accessory Manufacturing (NAICS code 333515);
- Machine Tool Manufacturing (NAICS code 333517);
- Rolling Mill and Other Metalworking Machinery Manufacturing (NAICS code 333519);
- Turbine and Turbine Generator Set Unit Manufacturing (NAICS code 333611);
- Speed Changer, Industrial High-Speed Drive and Gear Manufacturing (NAICS code 333612);
- Mechanical Power Transmission Equipment Manufacturing (NAICS code 333613);
- Other Engine Equipment Manufacturing (NAICS code 333618);
- Air and Gas Compressor Manufacturing (NAICS code 333912);
- Measuring, Dispensing, and Other Pumping Equipment Manufacturing (NAICS code 333914);
- Elevator and Moving Stairway Manufacturing (NAICS code 333921);
- Conveyor and Conveying Equipment Manufacturing (NAICS code 333922);
- Overhead Traveling Crane, Hoist and Monorail System Manufacturing (NAICS code 333923);
- Industrial Truck, Tractor, Trailer and Stacker Machinery Manufacturing (NAICS code 333924);
- Power-Driven Hand Tool Manufacturing (NAICS code 333991);
- Welding and Soldering Equipment Manufacturing (NAICS code 333992);
- Packaging Machinery Manufacturing (NAICS code 333993);
- Industrial Process Furnace and Oven Manufacturing (NAICS code 333994);
- Fluid Power Cylinder and Actuator Manufacturing (NAICS code 333995);
- Fluid Power Pump and Motor Manufacturing (NAICS code 333996);
- Scale and Balance Manufacturing (NAICS code 333997);
- All Other Miscellaneous General Purpose Machinery Manufacturing (NAICS code 333999);
- Audio and Video Equipment Manufacturing (NAICS code 334310);
- Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing (NAICS code 334416);
- Electronic Connector Manufacturing (NAICS code 334417);
- Printed Circuit Assembly (Electronic Assembly) Manufacturing (NAICS code 334418);
- Other Electronic Component Manufacturing (NAICS code 334419);

- Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing (NAICS code 334511);
- Automatic Environmental Control Manufacturing for Residential, Commercial and Appliance Use (NAICS code 334512);
- Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables (NAICS code 334513);
- Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals (NAICS code 334515);
- Electric Lamp Bulb and Part Manufacturing (NAICS code 335110);
- Residential Electric Lighting Fixture Manufacturing (NAICS code 335121);
- Commercial, Industrial and Institutional Electric Lighting Fixture Manufacturing (NAICS code 335122);
- Other Lighting Equipment Manufacturing (NAICS code 335129);
- Major Household Appliance Manufacturing (NAICS code 335220);
- Power, Distribution and Specialty Transformer Manufacturing (NAICS code 335311);
- Motor and Generator Manufacturing (NAICS code 335312);
- Switchgear and Switchboard Apparatus Manufacturing (NAICS code 335313);
- Relay and Industrial Control Manufacturing (NAICS code 335314);
- Storage Battery Manufacturing (NAICS code 335911);
- Fiber Optic Cable Manufacturing (NAICS code 335921);
- Current-Carrying Wiring Device Manufacturing (NAICS code 335931);
- Carbon and Graphite Product Manufacturing (NAICS code 335991);
- Automobile Manufacturing (NAICS code 336111);
- Light Truck and Utility Vehicle Manufacturing (NAICS code 336112);
- Heavy Duty Truck Manufacturing (NAICS code 336120);
- Motor Vehicle Body Manufacturing (NAICS code 336211);
- Truck Trailer Manufacturing (NAICS code 336212);
- Motor Home Manufacturing (NAICS code 336213);
- Travel Trailer and Camper Manufacturing (NAICS code 336214);
- Motor Vehicle Gasoline Engine and Engine Parts Manufacturing (NAICS code 336310);
- Motor Vehicle Electrical and Electronic Equipment Manufacturing (NAICS code 336320);
- Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing (NAICS code 336330);
- Motor Vehicle Brake System Manufacturing (NAICS code 336340);
- Motor Vehicle Transmission and Power Train Parts Manufacturing (NAICS code 336350);
- Motor Vehicle Seating and Interior Trim Manufacturing (NAICS code 336360);
- Motor Vehicle Metal Stamping (NAICS code 336370);
- Other Motor Vehicle Parts Manufacturing (NAICS code 336390);
- Aircraft Manufacturing (NAICS code 336411);
- Aircraft Engine and Engine Parts Manufacturing (NAICS code 336412);
- Other Aircraft Part and Auxiliary Equipment Manufacturing (NAICS code 336413);
- Guided Missile and Space Vehicle Manufacturing (NAICS code 336414);
- Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing (NAICS code 336415);
- Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing (NAICS code 336419);
- Railroad Rolling Stock Manufacturing (NAICS code 336510);
- Ship Building and Repairing (NAICS code 336611);
- Boat Building (NAICS code 336612);

- Motorcycle, Bicycle and Parts Manufacturing (NAICS code 336991);
- Military Armored Vehicle, Tank and Tank Component Manufacturing (NAICS code 336992);
- All Other Transportation Equipment Manufacturing (NAICS code 336999);
- Wood Kitchen Cabinet and Counter Top Manufacturing (NAICS code 337110);
- Upholstered Household Furniture Manufacturing (NAICS code 337121);
- Nonupholstered Wood Household Furniture Manufacturing (NAICS code 337122);
- Metal Household Furniture Manufacturing (NAICS code 337124);
- Institutional Furniture Manufacturing (NAICS code 337127);
- Wood Office Furniture Manufacturing (NAICS code 337211);
- Surgical Appliance and Supplies Manufacturing (NAICS code 339113);
- Dental Equipment and Supplies Manufacturing (NAICS code 339114);
- Jewelry and Silverware Manufacturing (NAICS code 339910);
- Sporting and Athletic Goods Manufacturing (NAICS code 339920);
- Gasket, Packing, and Sealing Device Manufacturing (NAICS code 339991);
- Fastener, Button, Needle and Pin Manufacturing (NAICS code 339993);
- All Other Miscellaneous Manufacturing (NAICS code 339999);
- Metal Service Centers and Other Metal Merchant Wholesalers (NAICS code 423510);
- Industrial Supplies Merchant Wholesalers (NAICS code 423510);
- Other Chemical and Allied Products Merchant Wholesalers (NAICS code 424690);
- Paint, Varnish, and Supplies Merchant Wholesalers (NAICS code 424950);
- New Car Dealers (NAICS code 441110);
- Used Car Dealers (NAICS code 441120);
- Sporting Goods Stores (NAICS code 451110);
- Scheduled Passenger Air Transportation (NAICS code 481111);
- Other Support Activities for Air Transportation (NAICS code 481111);
- Other Warehousing and Storage (NAICS code 493190);
- Motion Picture and Video Production (NAICS code 512110);
- Other Financial Vehicles (NAICS code 525990);
- Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (NAICS code 541715);
- Research and Development in the Social Sciences and Humanities (NAICS code 541720);
- Offices of Other Holding Companies (NAICS code 551112);
- Carpet and Upholstery Cleaning Services (NAICS code 561740);
- Hazardous Waste Treatment and Disposal (NAICS code 562211);
- Solid Waste Landfill (NAICS code 562212);
- Materials Recovery Facilities (NAICS code 562920);
- Junior Colleges (NAICS code 611210);
- Colleges, Universities and Professional Schools (NAICS code 611310);
- General Automotive Repair (NAICS code 811111);
- Automotive Exhaust System Repair (NAICS code 811112);
- Automotive Transmission Repair (NAICS code 811113);
- Other Automotive Mechanical and Electrical Repair and Maintenance (NAICS code 811118);
- Automotive Body, Paint and Interior Repair and Maintenance (NAICS code 811121);

- Automotive Glass Replacement Shops (NAICS code 811122);
- Automotive Oil Change and Lubrication Shops (NAICS code 811191);
- All Other Automotive Repair and Maintenance (NAICS code 811198);
- Consumer Electronics Repair and Maintenance (NAICS code 811211);
- Computer and Office Machine Repair and Maintenance (NAICS code 811212);
- Communication Equipment Repair and Maintenance (NAICS code 811213);
- Other Electronic and Precision Equipment Repair and Maintenance (NAICS code 811219);
- Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS code 811310);
- Home and Garden Equipment Repair and Maintenance (NAICS code 811411);
- Other Personal and Household Goods Repair and Maintenance (NAICS code 811490);
- Coin-Operated Laundries and Drycleaners (NAICS code 812310);
- Drycleaning and Laundry Services (except Coin-Operated) (NAICS code 812320); and
- Industrial Launderers (NAICS code 812332).

Appendix D: Fact Sheet

The next three pages reproduce the EPA's fact sheet providing an overview of the 2024 regulation of TCE under TSCA. The fact sheet is available at https://www.epa.gov/system/files/documents/2024-12/tce-fact-sheet.pdf.

What is Trichloroethylene (TCE)?

Trichloroethylene (CASRN 79-01-6) – also called TCE – is a nonflammable, colorless liquid and a volatile chemical with a somewhat sweet odor. TCE is used in a variety of industrial, commercial, and consumer applications including in industrial cleaning and degreasing, lubricants, adhesives and sealants, paints and coatings, automotive care products, cleaning and furniture care products, and other miscellaneous products.

In December 2024, EPA issued a final rule regulating TCE under the Toxic Substances Control Act (TSCA) to protect people from health risks including liver cancer, kidney cancer, and non-Hodgkin's lymphoma. TCE also causes damage to the central nervous system, liver, kidneys, immune system, reproductive organs, and causes fetal heart defects.

Who is subject to the TCE regulation?

Anyone who manufactures (including imports), processes, distributes in commerce, uses, or disposes of TCE or products containing TCE may be impacted by EPA's regulation of the chemical. The table below is a summary of key points; full details are in the final rule.

What is the TCE regulation[1] under TSCA?

All uses of TCE are eventually prohibited.

Workplace Chemical Protection Program

A workplace chemical protection program (WCPP) is required for a limited number of conditions of use of TCE where a phase-out will take longer than one year. Some of these uses include:

- Domestic manufacturing.
- Import.
- Processing as a reactant/intermediate.
- Processing into formulation, mixture or reaction product.
- Recycling.
- Use as a processing aid in select manufacturing applications.
- Use as an adhesive and sealant for essential aerospace applications.
- Use in batch vapor degreasing for land-based DoD defense systems.
- Use as a solvent in closed-loop batch vapor degreasing for rayon fabric scouring for end use in rocket booster nozzle production.
- Use in closed-loop or open-top batch vapor degreasing for essential aerospace parts and narrow tubing used for medical devices.
- Use for vessels of the Armed Forces and their systems.
- Use as a solvent in closed-loop vapor degreasing necessary for rocket engine cleaning.
- Certain types of disposal.

The WCPP requires owners and operators of facilities using TCE to meet new inhalation exposure limits (e.g., interim ECEL: 0.2 ppm as an 8-hour TWA). Additional details on the WCPP requirements and compliance timeframes are available on page 3.

Prohibitions for Consumer Uses

Manufacturing TCE for consumer uses is prohibited after **March 17, 2025**. Processing and distributing TCE for consumer uses is prohibited after **June 16, 2025**.

Prohibitions for Industrial and Commercial Uses

Manufacturing TCE for industrial and commercial uses is prohibited after **March 17, 2025**. Processing TCE for industrial and commercial uses is prohibited after **June 16, 2025,** and industrial and commercial uses of TCE are prohibited after **September 15, 2025**. Select uses may continue temporarily under an extended phase-out or TSCA Section 6(g) exemption.

Regulatory Threshold

Products containing TCE up to 0.1% by weight are excluded from this regulation.

Other Workplace Controls

There are other workplace controls for use in energized electrical cleaner and disposal at cleanup sites and water treatment facilities (see § 751.317 and § 751.319).

[1] Details of these requirements, including longer phases-outs and time-limited section 6(g) exemptions, are in 40 CFR Part 751, subpart D, available at https://www.federalregister.gov/documents/2024/12/17/2024-29274/trichloroethylene-tce-regulation-under-the-toxic-substances-control-act-tsca and https://www.ecfr.gov/current/title-40/part-751.

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Compliance Timelines for Prohibitions

EPA prohibits the manufacturing (including importing), processing, and distribution in commerce of TCE for all uses. The final rule imposes prohibitions in a staggered timeframe, beginning at the top of the supply chain.[1]

Requirement	Compliance Date
Prohibition on manufacturing (including importing)	
All persons are prohibited from manufacturing (including importing) TCE except for certain uses (see § 751.305(b)(1)).	**March 17, 2025**
Prohibition on processing and distribution in commerce	
All persons are prohibited from processing TCE and distributing TCE in commerce, including any TCE-containing products, except for certain uses (see § 751.305(b)(2)).	**June 16, 2025**
Prohibition on industrial and commercial use	
All persons are prohibited from industrial or commercial use of TCE, including any TCE-containing products, except for certain uses (see § 751.305(b)(3)).	**September 15, 2025**
Prohibition on certain types of disposal	
All persons are prohibited from disposal of TCE wastewater to industrial pre-treatment, industrial treatment, or publicly owned treatment works except for certain uses (see § 751.305(b)(4)).	**September 15, 2025**
Prohibition on manufacturing (including importing), processing and use for vapor degreasing	
• All persons are prohibited from manufacturing (including importing) TCE for industrial and commercial use for batch vapor degreasing in open-top and closed-loop degreasing equipment except for certain uses (see § 751.305(b)(5)).	**June 16, 2025**
• All persons are prohibited from processing TCE for industrial and commercial use for batch vapor degreasing in open-top and closed-loop degreasing equipment except for certain uses (see § 751.305(b)(6)).	**September 15, 2025**
• All persons are prohibited from the industrial and commercial use of TCE for batch vapor degreasing in open-top and closed-loop degreasing equipment except for certain uses (see § 751.305(b)(7)).	**December 18, 2025**
Prohibition on manufacturing (including importing) and processing for use as a processing aid	
• All persons are prohibited from manufacturing (including importing) TCE for the industrial and commercial use of TCE as a processing aid in: process solvent used in battery manufacture; process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; precipitant used in beta-cyclodextrin manufacture; except for certain uses (see § 751.305(b)(8)).	**June 10, 2026**
• All persons are prohibited from processing for and the industrial and commercial use of TCE as a processing aid in: process solvent used in battery manufacture; process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; extraction solvent used in caprolactam manufacture; precipitant used in beta-cyclodextrin manufacture; except for certain uses (see § 751.305(b)(9)).	**December 18, 2026**
Prohibitions with longer phaseout timeframes and TSCA section 6(g) exemptions	
For manufacturing, processing, distribution in commerce, use, and disposal of TCE under an extended phase-out or TSCA Section 6(g) exemption under which TCE may be used, in conjunction with workplace controls, for longer timeframes until prohibitions.	see § 751.305-325

[1] **This is not an exhaustive list.** For a list of all timeframes, please consult the final rule, 40 CFR Part 751, subpart D, available at https://www.federalregister.gov/documents/2024/12/17/2024-29274/trichloroethylene-tce-regulation-under-the-toxic-substances-control-act-tsca and https://www.ecfr.gov/current/title-40/part-751.

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Compliance Timelines* for the Workplace Chemical Protection Program until Prohibition

Initial Monitoring	Exposure Limits and Dermal Protections	Workplace Information and Training Program	Exposure Control Plan	Other Exposure Monitoring
Complete initial monitoring within 180 days, or within 30 days of initiating use. Demarcate regulated area within 90 days of initial monitoring data. Provide respiratory protection within 90 days of initial monitoring data. Existing Facilities Before **June 16, 2025** (180 days after final rule publication). Facilities with New TCE Use Within 30 days of initiating use.	Ensure that TCE inhalation exposures do not exceed the interim ECEL for all potentially exposed persons (e.g., workers and others in the workplace). Provide respiratory and/or dermal protection as applicable. Existing Facilities Before **September 15, 2025** (270 days after final rule publication). Facilities with New TCE Use Within 90 days after receipt of any exposure monitoring that indicates exposures above the interim ECEL.	Develop and implement a program to train potentially exposed persons (e.g., workers and others in the workplace) on the rule's requirements. Ensure participation in a training and information program for potentially exposed persons by **September 15, 2025** (270 days after final rule publication).	Develop and implement an exposure control plan within 1 year, or before **December 18, 2025**. Notify potentially exposed persons of completion of exposure control plan within 30 days of its completion. Provide requested records by a potentially exposed person within 15 days of request. Update Exposure Control Plan at least every 5 years or when circumstances change significantly.	Periodic Monitoring Conduct at a minimum **every 5 years but could occur as frequently as every 90 days,** dependent upon initial monitoring results. As Needed Monitoring Conduct additional monitoring within 30 days after any change that may reasonable be expected to introduce new or additional sources of TCE exposure or where there is a reason to believe exceedances of the interim ECEL level have occurred.

* There are longer timeframes for Federal agencies and contractors acting for or on behalf of those agencies. See final rule for details.

For More Information

- For information or questions on the regulation of TCE under TSCA, and for additional compliance guidance that the EPA intends to release, visit https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-trichloroethylene-tce or contact TCE.TSCA@epa.gov.
- For general questions and document requests about TSCA requirements, contact the TSCA Hotline at (800)-471-7127 or tsca-hotline@epa.gov.
- To read a non-technical summary of the risk evaluation for TCE, visit https://www.epa.gov/system/files/documents/2023-01/TCE_Non%20Technical%20Summary_12-21-22-final-v2.pdf.
- For general information or questions on environmental regulations and compliance for small business owners, visit https://www.epa.gov/resources-small-businesses or contact asbo@epa.gov. The National SBEAP Program also provides one-on-one compliance assistance in most states.

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