E 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 751

[EPA-HQ-OPPT-2020-0642; FRL-8317.2-01-OCSPP]

RIN 2070-AL32

Trichloroethylene; Regulation under the Toxic Substances Control Act (TSCA); Compliance Date Extension

AGENCY: Environmental Protection Agency (EPA).

ACTION: Interim final rule.

SUMMARY: The Environmental Protection Agency (EPA or Agency) is taking interim final action on the Regulation of Trichloroethylene (TCE) under the Toxic Substances Control Act (TSCA) to revise certain compliance deadlines finalized in 2024. Specifically, EPA is amending the prohibition compliance date for the use of TCE as a processing aid in the manufacture of nuclear fuel, with corresponding changes to the compliance dates for the manufacturing, processing and distribution in commerce of TCE to support such use, to a prohibition on September 15, 2028. EPA is also amending the prohibition compliance date for the disposal of TCE to wastewater by processors of TCE and processors and industrial and commercial users of TCE as a processing aid, to begin on December 18, 2026. EPA is also amending the compliance deadline for downstream notification, and the text required to be present in Safety Data Sheets, to accurately reflect the new prohibition compliance deadline for TCE used as a processing aid in the manufacture of nuclear fuel. EPA is amending this compliance deadline to allow for 90 days after the publication of the final rule for manufacturers, processors, and distributors in commerce of TCE to make such a change. These revisions are necessary to address new information presented to EPA about inadvertent oversights in the original rulemaking and serious concerns that the facilities at issue will be unable to comply with the relevant requirements by the existing deadlines. EPA is requesting comments on all aspects of this interim final rule and will consider

all comments received in determining whether amendments to this rule are appropriate after the conclusion of the comment period.

DATES: This interim final rule is effective on September 15, 2025. Comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].**

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPPT-2020-0642 using the Federal eRulemaking Portal at *https://www.regulations.gov*. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *https://www.epa.gov/dockets/*.

FOR FURTHER INFORMATION CONTACT: *For technical information contact*: Gabriela Rossner, Existing Chemicals Risk Management Division, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: 202-564-2426; email address: *TCE.TSCA@epa.gov.*

For general information contact: The TSCA Assistance Information Service Hotline, Goodwill of the Finger Lakes, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (800) 471-7127 or (202) 554-1404; email address: *TSCA-Hotline@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. Executive Summary

A. *Does this action apply to me?*

This action may apply to you if you manufacture, process, distribute in commerce, or are an industrial and commercial user of TCE used as a processing aid in the manufacture of nuclear fuel. Additionally, you may be potentially affected by this rule if you process TCE as a reactant/intermediate, process TCE for use as a processing aid in certain industries, or use TCE

as a processing aid in such industries. 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. Potentially affected entities may include:

- 211120 - Crude Petroleum Extraction
- 221118 - Other Electric Power Generation
- 325180 - Other Basic Inorganic Chemical Manufacturing
- 325193 - Ethyl Alcohol Manufacturing
- 325199 - All Other Basic Organic Chemical Manufacturing
- 325211 - Plastics Material and Resin Manufacturing
- 325998 - All Other Miscellaneous Chemical Product and Preparation Manufacturing
- 332313 - Plate Work Manufacturing
- 332410 - Power Boiler and Heat Exchanger Manufacturing
- 334513 - Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
- 335312 - Motor and Generator Manufacturing
- 424690 - Other Chemical and Allied Products Merchant Wholesalers
- 424720 - Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)
- 541330 - Engineering Services

This list details the types of entities that EPA is aware could potentially be impacted by this action. Other types of entities not listed could also be impacted. To determine whether your entity is impacted by this action, you should carefully examine the applicability criteria found in 40 CFR 751.305 and 705.313. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

B. *What is the agency's authority for taking this action?*

Under TSCA section 6(a) (15 U.S.C. 2605(a)), if EPA determines through a TSCA section 6(b) risk evaluation that a chemical substance presents an unreasonable risk of injury to health or the environment under its conditions of use, EPA must by rule apply one or more requirements listed in TSCA section 6(a) to the extent necessary so that the use or uses of the chemical substance or mixture no longer presents such risk.

Unless provided otherwise by law, an agency may change existing positions (e.g., reconsider, revise, or rescind prior actions) so long as it acknowledges the change in position, provides a reasoned explanation for the change, and takes any serious reliance interests into account. *See, e.g.*, *FDA v. Wages & White Lion Invs., L.L.C.*, 145 S. Ct. 898, 917 (2025); *Encino Motorcars v. Navarro*, 579 U.S. 211, 221 (2016); *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Here, and as explained further in Unit II.C, based on new information submitted by regulated entities, the Agency is amending compliance dates to address recently-received information that the original compliance dates for 1) a subset of industrial and commercial use of TCE previously categorized as miscellaneous and now specified as the manufacture of nuclear fuel and 2) the disposal of TCE to wastewater by processors of TCE and processors and industrial and commercial users of TCE as a processing aid are not practicable and do not provide adequate transition time. EPA does not believe that the Agency took a contrary position in the original rule with respect to these issues because the information and concerns discussed here were not before the Agency at the time and the Agency did not intend to create the compliance concerns addressed in this action. Further, EPA does not believe there are significant reliance interests in the current deadline with respect to the narrow issues addressed in this action. Nevertheless, EPA seeks comments on any potential reliance interests and how those reliance interests should be taken into account when assessing whether to revise this action after the close of the comment period.

In addition, under the Administrative Procedure Act (APA) at 5 U.S.C. 553(b)(B), an

agency may issue a final rule without providing notice and an opportunity for public comment if it for good cause finds that notice and public procedures are "impracticable, unnecessary, or contrary to the public interest." Further, under the APA at 5 U.S.C. 553(d)(1), an agency may make a rule effective immediately if it "grants or recognizes an exemption or relieves a restriction," which includes this action as it relieves restrictions by extending several of the 2024 rule's compliance deadlines.

As explained further in Unit III, EPA finds good cause to make the rule immediately effective without prior notice and comment because new information has revealed that EPA inadvertently established impracticable compliance deadlines for an application of TCE in the nuclear sector not specifically considered in the rulemaking and, separately, unintentionally established a reasonable transition period under TSCA section 6(d) for certain processing conditions of use without establishing a similar reasonable transition period for wastewater activities necessitated by such processing.

C. *What action is the agency taking?*

EPA is amending the 2024 Regulation of Trichloroethylene (TCE) under TSCA codified in subpart D of 40 CFR 751, referred to hereafter as the 2024 final rule (Ref. 1), in the following ways. First, EPA is amending the prohibition compliance date for the use of TCE as a processing aid in the manufacture of nuclear fuel, with corresponding changes to supporting compliance dates, to begin on September 15, 2028. Second, EPA is amending the prohibition compliance date for the disposal of TCE to wastewater by processors of TCE as a reactant/intermediate and processors for and industrial and commercial users of TCE as a processing aid for: 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 (hereinafter referred to as "chemical processors"), to begin on December 18, 2026. Third, EPA is amending the compliance date and required safety data sheet text for downstream notification, for an updated compliance

date on **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].**

1. *TCE as a processing aid in the manufacture of nuclear fuel*

EPA is amending the prohibition compliance date for the industrial and commercial use of TCE in other miscellaneous industrial and commercial uses, specifically for the use of TCE as a processing aid in the manufacture of nuclear fuel. EPA is extending the prohibition compliance date by three years, to September 15, 2028, for the industrial and commercial use of TCE as a processing aid in the manufacture of nuclear fuel, and the manufacturing, processing, and distribution of commerce of TCE to support such use (as opposed to the 2024 final rule's compliance date of September 15, 2025). These changes respond to new information received after promulgation of the 2024 final rule about a condition of use with critical national security and energy implications that EPA did not consider during the rulemaking and, as a result, was not reflected in EPA's analysis of the appropriate prohibition compliance date (currently September 15, 2025).

2. *Disposal of TCE to wastewater by chemical processors*

EPA is also amending the compliance deadline from September 15, 2025, to December 18, 2026, for the prohibition on disposal of TCE to wastewater for processors of TCE as a reactant/intermediate and processors for and industrial and commercial users of TCE as a processing aid for certain industrial sectors. This action aligns the disposal prohibition with the December 18, 2026, prohibition on such uses in the 2024 final rule. This change responds to serious concerns raised to EPA that processing conditions of use subject to a time-limited exemption from the prohibition compliance date (currently September 15, 2025) also involve disposal of TCE to wastewater that inadvertently was not similarly subject to a time-limited exemption.

3. *Downstream notification*

As a result of the new prohibition compliance date for the industrial and commercial use

of TCE as a processing aid in the manufacture of nuclear fuel, EPA is amending the downstream notification requirements to allow for 90 days from the publication of this rule in the *Federal Register* for manufacturers and processors of TCE to amend their Safety Data Sheets to reflect this new use's prohibition compliance deadline.

D. *Why is the agency taking this action?*

EPA received petitions on May 29 and June 19, 2025, that provided new information about regulated entities with uses that would be prohibited by the 2024 final rule after September 15, 2025, jeopardizing activities of significant importance. As discussed further in Unit II.C, EPA has considered the information and is taking this action to provide urgent regulatory relief for these regulated entities.

E. *What are the incremental economic impacts?*

1. *TCE as a processing aid in the manufacture of nuclear fuel*

EPA identified five companies that have capabilities to produce Tri-structural Isotropic (TRISO) particle fuel, with only a single primary producing company capable of production at scale. That company uses TCE as a forming fluid. One company may also be using TCE to produce TRISO fuel, although they are not currently licensed by NRC and are not producing TRISO fuel at production scale but would need to transition to a TCE alternative to comply with the 2024 final rule. EPA presumes that the transition costs for this company would be smaller than the costs for the at scale producer because their production is smaller capacity.

The primary producing company estimated that the costs of executing the testing of the manufacturing ability of alternatives and fuel quality analysis studies would be approximately $4 million (Ref. 4). The company notes that there would be additional costs that it was unable to quantify such as equipment testing, operator training, additional irradiation testing, and fuel certification (Ref. 4). The three-year delay in prohibition of TCE for this use would delay the occurrence of these transition costs. The social costs avoided under the interim final rule would be those associated with the critical infrastructure and national security impacts that would occur

without it. EPA is unable to address the cost savings from avoiding the delays in the production of TRISO fuel that would occur without the interim final rule.

EPA does not have exposure monitoring data specific to this use and therefore, EPA does not have information to quantify exposure reductions that may occur if facilities continue operations past September 15, 2025. Under the December 2024 rule, the use of TCE by these facilities would be prohibited after September 15, 2025, so exposures to workers would cease at that time. This interim final rule allows operations using TCE to continue additional 3 years allowing for workers' continued exposure to TCE and reducing potential health benefits to those workers. EPA does not have exposure monitoring data specific to this use and therefore, can not quantify that exposure and potential loss of benefits.

2. *Disposal of TCE to wastewater by chemical processors*

EPA identified 24 facilities that appear to be creating TCE as a byproduct or using byproduct TCE as reactant/intermediate (e.g., as a feedstock for the production of other chemicals) that could potentially have wastewater containing TCE. Without the compliance date extension, these facilities would not be able to dispose of their wastewater and would effectively be forced to cease their operations. EPA does not have an estimated social value for the closure of these facilities. However, the median employment and revenue at the affected facilities is 49 employees and $20 million, respectively. Total employment and revenue at affected facilities is estimated to be 3,465 employees and $1 billion, respectively.

EPA does not have exposure monitoring data specific to this use and therefore, EPA is not able to quantify the foregone exposure reductions that may occur as a result of facilities continuing operations. Under the December 2024 rule, the use of TCE by these facilities would be prohibited after September 15, 2025, so exposures to workers would cease at that time. This interim final rule allows operations using TCE to continue until December 18, 2026, allowing for workers' continued exposure to TCE and reducing potential health benefits to those workers. EPA does not have exposure monitoring data specific to this use and therefore, can not quantify

that exposure and loss of potential benefits.

II. Regulatory Revisions

A. *Rule Background and Summary*

1. *The October 2023 Notice of Proposed Rulemaking*

In October 2023, EPA proposed a rule under TSCA section 6(a) to address unreasonable risk of injury to human health presented by TCE under 52 of its 54 total conditions of use (Ref. 21). In the TSCA section 6(b) 2020 Risk Evaluation for TCE, EPA identified non-cancer adverse effects from acute and chronic inhalation exposures to TCE, and for cancer from chronic inhalation exposures to TCE (Ref. 21). The 2023 proposed rule sought to prohibit the manufacture, processing, and distribution in commerce of TCE for all consumer uses; and prohibit the manufacture, processing, distribution in commercefor all industrial and commercial uses, with certain processing and industrial and commercial uses that needed compliance timeframes longer than one year required to implement a workplace chemical protection program (WCPP) in the interim (Ref. 21). In 2023 EPA also proposed providing certain time-limited TSCA section 6(g) exemptions from the prohibition for uses of TCE that would otherwise significantly disrupt national security or critical infrastructure (Ref. 21).

2. *The December 2024 Final Rule*

On December 17, 2024, EPA published the final regulation for TCE under TSCA section 6(a) (Ref. 1). Many of the provisions in the 2023 proposed rule were finalized as proposed, namely the regulatory action being the eventual prohibition of all conditions of use (Ref. 1). EPA considered information received through public comments, making a number of revisions such as: provide a delayed prohibition for five conditions of use, include a regulatory threshold, revise specific provisions of the WCPP, and modify the times and provisions of the TSCA section 6(g) exemption (Ref. 1). The 2024 final rule addressed the unreasonable risk from TCE through the eventual prohibition of all conditions of use, with certain conditions of use having longer timeframes until prohibition or TSCA section 6(g) exemptions to the prohibition (Ref. 1). The

prohibition of the majority of industrial and commercial uses has a compliance date of September 15, 2025 (Ref. 1).

With respect to the use described in Unit I.C.1, while EPA responded to comments and revised provisions of the 2024 final rule in consideration of commenters' concerns on industrial and commercial use of TCE as a processing aid and other miscellaneous industrial and commercial uses of TCE, EPA did not have any information at the time of the 2024 final rule publication related to use of TCE in nuclear fuel manufacturing (Ref. 1).

Similarly, EPA responded to public comments and revised several aspects of the prohibition and phaseout timeline regarding the disposal of TCE to wastewater in the 2024 final rule (Ref. 1). Specifically, based on public comments, EPA revised the prohibition date between the 2023 proposed and 2024 final rules to allow for disposal of TCE to wastewater to continue for the length of time for certain uses of TCE as a processing aid in various aspects of battery separator manufacturing, until that use would be prohibited (after December 18, 2029; December 18, 2039; or December 18, 2044), in recognition of information received on the essential nature of disposal of wastewater for the specific processes described in public comments (Ref. 1). During public comments, EPA did not receive any explicit information about wastewater disposal being essential for other processing uses (Ref. 1).

3. *Other TSCA section 6(a) Risk Management Rules*

In 2024, EPA also issued final risk management rules for several other chlorinated solvents, including methylene chloride, perchloroethylene (PCE), and carbon tetrachloride (CTC). Unlike TCE, the manufacturing of each of these chemicals was permitted to continue under a WCPP. EPA determined that ongoing manufacturing, processing, and use of these chemicals would provide several significant benefits, including complementing the Agency's efforts to address climate-damaging hydrofluorocarbons (HFCs) under the American Innovation and Manufacturing Act of 2020 (AIM Act) (42 U.S.C. 7675). More specifically, PCE and CTC will continue to be used in tandem with strict workplace controls for the generation of HFC-125

and HFC-134a, two of the regulated substances that are subject to a 15-year phasedown under the AIM Act. HFCs-134a and -125 can be mixed with other substances to make lower global warming potential blends that are likely to be used to facilitate the transition away from HFC blends with higher global warming potentials in certain applications.

B. *Petitions*

In June 2025, BWXT, a manufacturer of TRISO nuclear fuel, contacted EPA with concerns regarding the impact of the prohibition of TCE on their nuclear fuel production which has national security and critical use applications, and furnishes several existing Department of Defense (DOD) and Department of Energy (DOE) contracts and requested EPA provide an exemption from the prohibition (Ref. 2). EPA treated this request as a petition under the APA, 5 U.S.C. 553(e). EPA conducted outreach to the nuclear fuel manufacturer, as well as with DOD, DOE, and the Nuclear Regulatory Commission (NRC) to gather information related to this newly identified use of TCE (Refs. 2, 3, 4, 5, 6, and 7).

In May 2025 EPA received a TSCA Section 21 Petition from the American Chemistry Council (ACC) with concerns regarding the impact of the September 15, 2025, prohibition on disposal of TCE to wastewater on other processors of TCE and industrial and commercial users of TCE as a processing aid (Ref. 16). EPA conducted outreach with ACC and several of its member companies to gather information about processing and disposal to wastewater (Ref. 17).

C. *Compliance Challenges*

1. *TCE as a processing aid in the manufacture of nuclear fuel*

EPA is issuing this interim final rule to address an unanticipated emergency that the Agency inadvertently created for nuclear fuel manufacturers and Federal Agencies with advanced nuclear reactor projects by imposing a general prohibition compliance date of September 15, 2025, for a miscellaneous condition of use not specifically analyzed or discussed in the 2024 final rule. Until receipt of the June 19, 2025, petition from BWXT, EPA was not aware of this particular condition of use of TCE (Ref. 1). EPA now understands that TCE is used

as a processing aid in the manufacture of nuclear fuel, specifically Tri-structural Isotropic (TRISO) nuclear fuel pellets (Refs. 2, 3, 4, 5, 6, and 7). These TRISO pellets are the nuclear fuel for advanced nuclear reactors (Refs. 2, 3, 4, 5, 6, and 7).

TRISO nuclear fuel pellets are a type of nuclear fuel in which each pellet is made of a uranium, carbon, and oxygen fuel kernel encapsulated in carbon- and ceramic-based materials (Refs. 2, 3 and 4). An important characteristic of TRISO pellets is that they cannot melt in a commercial high-temperature reactor, and are able to be heated to high temperatures that are beyond the threshold of current nuclear fuels (Refs. 2, 3, 4, 5, 6, and 7). TRISO pellets also represent a significant safety advancement in that they encapsulate small amounts of uranium, whereas traditional nuclear fuel rods contain significantly larger amounts of uranium (Refs. 2, 3, 4, 5, 6, and 7). This encapsulation of radioactive material means that nuclear reactors that use TRISO may not have to build a traditional nuclear containment dome, which eliminates the traditional need for a significant physical footprint with high engineering demands (Ref. 7). As such, TRISO fuel is key for advanced nuclear reactors, and in particular advanced nuclear reactors that do not need containment domes such as those needed for DOD installations (Refs. 2, 6, and 7).

TCE is used as processing aid for a forming fluid during the first steps of TRISO pellet manufacture, as part of the internal gelation sol-gel production pathway (Refs. 2, 3, 4, and 5). In this process, a chilled uranium solution is pumped to a forming nozzle with very small holes, which then drops the uranium organic solution into a TCE forming fluid bath (Refs. 2, 3, 4, and 5). TCE has specific qualities that allow it to serve two purposes in the forming process. The TCE is used as a method for heat transfer, which warms the chilled uranium that is dropped into a TCE bath and triggers the chemical reaction that is the gelation part of the process, transforming the liquid droplet into a semi solid sphere. TCE also has a specific surface tension and density relative to the uranium mixture that ensures that as the uranium passes through the TCE bath it retains a spherical shape (Refs. 3 and 4). The use of TCE as a processing aid is one

of the first steps in the manufacture of TRISO fuel. This step is a critical part of the process which ensures that the uranium is safely encapsulated through gelation and that the TRISO pellets are as spherical as possible – both of which are criteria in the highly specific safety standards TRISO fuel must meet (Refs. 3, 4, and 5).

EPA received information in June 2025 regarding the importance of TCE as processing aid currently used in the manufacture of nuclear fuel, specifically TRISO nuclear fuel pellets, and an extension is necessary to avoid disruption to national security and critical infrastructure. EPA received the initial request from the nuclear fuel manufacturer less than 90 days before the use would be prohibited by the September 15, 2025, compliance timeframe in the 2024 final rule. The time between being notified about this use and the prohibition was insufficient for EPA to prepare and propose a rule, seek public comment, and finalize a rule. Given this short timeframe, EPA is promulgating this interim final rule in order to avoid the critical impacts on national security of a TCE ban on manufacturing nuclear fuel. TRISO fuel has many critical infrastructure and national security applications, and the timing of TRISO manufacturers transitioning out of TCE is linked to the need to fulfill critical military and government contracts (Refs. 2, 3, 4, 5, 6, and 7). DOD has indicated that TRISO fuel is an essential part of Project Pele, a program in which an advanced nuclear reactor fueled by TRISO would help power an installation for DOD (Refs. 3, 7, 8, 9, and 10). Project Pele is a DOD effort to meet the goals set out in Executive Order (EO) 14299, "Deploying Advanced Nuclear Reactor Technologies for National Security" (Refs. 3, 7, 8, 9, 10, and 11). At DOE, TRISO fuel is used in the Idaho National Lab's advanced nuclear reactor and microreactor program. Furthermore, TRISO fuel is planned to be used for testing at the National Reactor Innovation Center's Demonstration of Microreactor Experiments (Ref. 4).

Currently, only one company is licensed at a Category I level by the Nuclear Regulatory Commission (NRC) to manufacture TRISO fuel – BWX Technologies (BWXT), which uses TCE in their nuclear fuel manufacturing process (Refs. 2, 3, 4, 5, 6, and 7). There are several

other companies that manufacture TRISO fuel, but at a much smaller production volume and not at an industrial scale (Refs. 4, 5, 6, 7, 22, and 23). BWXT, as the only TRISO nuclear fuel manufacturer at a large production scale, is the primary supplier of TRISO fuel used in DOD and DOE advanced nuclear reactors (Refs. 2, 3, 4, 5, 6, and 7). In its petition, BWXT credibly represented that the company cannot discontinue using TCE by September 15, 2025, because there is no readibly available alternative at the scale needed by DOD and DOE (Refs. 2, 3, 4, 5, 6, and 7). Additionally, BWXT cannot immediately begin a transition away from TCE because critical infrastructure and national security needs for TRISO nuclear fuel are only growing (Refs. 2, 3, 4, 5, 6, and 7). BWXT is under several existing contracts with the Federal government to provide TRISO fuel for critical projects (Refs. 2, 3, 4, 5, 6, and 7). For example, all of Project Pele's fuel is provided by BWXT, and it is critical that DOD be able to rely on consistent production of TRISO fuel through the Project Pele and EO 14299 timeframe of 2028 (Refs. 3, 7, and 11). This is an active contract, with BWXT expected to start production on more TRISO fuel to fulfill DOD requirements as soon as uranium is released to furnish the contract (Refs. 3 and 5). Additionally, BWXT is set to provide TRISO fuel for the National Reactor Innovation Center's Demonstration of Microreactor Experiments in the coming years (Ref. 4).

In order to continue to meet the existing demands from critical national security programs for TRISO fuel, and in consideration of the time it would take for regulatory licensing and testing of alternative technologies, a reasonable transition timeline away from TCE must extend beyond the September 15, 2025, prohibition deadline. As discussed earlier in this unit, this is because there are limited manufacturers able to produce TRISO fuel at scale for military and government applications (Refs. 2, 5, 6, and 7). BWXT is the only major supplier of TRISO fuel at a Category 1 facility in the US, which is able to make TRISO at a production scale and does so using TCE (Refs. 3, 4, 5, 6, and 7). There are several other manufacturers of TRISO that manufacture the nuclear fuel at a smaller scale, in quantities more appropriate for lab use and testing (Refs. 5, 6, and 7). Some of these other smaller scale manufacturers use TCE in their

production process, while others use alternative processing aids, such as a silicon based forming fluid (Refs. 5, 6, and 7). Because TCE used as a processing aid is one of the first steps of making TRISO fuel, transitioning away from TCE temporarily halts all the manufacturing of nuclear fuel in a production line (Refs. 3, 4, 5, and 6). However, in order to meet current existing needs for TRISO for critical Federal applications, the TRISO primary supplier would need to continue producing a supply of TRISO for at least 2.5 years before shutting down their production line to implement an alternative forming fluid to replace TCE (Refs. 3, 4, 5, 6, aand 7). Regarding military and national security applications, the primary TRISO supplier cannot take down their production line until Project Pele's test of an advanced nuclear reactor to power a military installation which is projected to occur at the end of 2028 (Refs. 3, 7, 8, and 9). There is additionally the need for the primary supplier to be continuously producing TRISO fuel for the next 2.5 years to supply the reactors planned for testing at the National Reactor Innovation Center's Demonstration of Microreactor Experiments (Ref. 4). Only after the time that current contracts for critical military and government applications are satisfied would the primary TRISO supplier be able to cease operations for their manufacturing line of TRISO fuel (Refs. 3, 4, 5, 6, 7). News sources suggest that there are likely to be other producers of TRISO fuel that do not use TCE for manufacturing TRISO fuel at production scale in a few years (Refs. 24).

Potential alternatives to TCE as a processing aid in the manufacture of nuclear fuel have been identified, but as previously noted, this transition is not immediate, and must be timed with consideration for production needs. First a company would have to research alternative forming fluids (Ref. 4). Once a suitable alternative was identified, a nuclear fuel manufacturer would have to update its safety analysis and submit a license amendment to NRC, which could take six months to one year to process (Ref. 6). In order to begin testing the actual manufacturing ability with alternative forming fluids, a TRISO nuclear manufacturer would need to shut down its entire production line and retrofit its currently existing space and process (Refs. 2, 3, and 4). This is due to restrictions placed on a Category 1 nuclear fuel production facility, in which licensees

are often not allowed to change the physical footprint of their building and as such the supplier could not create a new production area to test TCE alternatives while also continuing to run its TRISO production line simultaneously (Ref.15). This aspect of the transition would take six to 18 months (Refs. 2, 3, and 4). Once a new forming fluid is in place in the manufacturing process, the TRISO produced would need to undergo quality analysis studies and potential irradiation testing at a National Laboratory (Ref. 4). The TRISO fuel produced by a nuclear fuel manufacturer using a non-TCE alternative may also have to undergo post-production irradiation testing, depending on specifications on the contract for DOE or DOD. This irradiaition testing could take from 18 months to three years before the TRISO fuel pellets can be used (Refs. 3, 4, 5, and 6). This compliance extension represents the minimum timeframe possible to transition out of TCE, with BWXT continuously producing TRISO fuel for the next 2.5 years and then indicating that they could retrofit their production process in the subsequent six months (Refs. 2, 3, 4, and 7).

For similar reasons as noted above, EPA is not finalizing a WCPP for this continuing use. EPA expects that users of TCE in the manufacture of nuclear fuel reduce risks to the extent practicable due to the exposure controls typical of nuclear processing facilities until prohibition (Refs. 3 and 4). At BWXT, TCE is used only in a ventilated enclosure with an air flow of 125 linear feet per minute (Refs. 3 and 4). During use of TCE as a processing aid, workers wear PPE that includes coveralls, gloves, and eye protection (Refs. 3 and 4). When repackaging the TCE, workers at BWXT wear the aforementioned PPE, as well as respirators (Refs. 3 and 4). As explained above, there are time sensitive emergency national security needs for TRISO fuel, and EPA placing additional workplace protection requirements beyond the highly specialized workplace practices already in place on this use could significantly disrupt national security or critical infrastructure. The implementation of the TSCA WCPP would itself take time, as well as potentially require the amendment of a license with NRC which would delay production for months.

Additionally, Executive Order (EO) 14299, "Deploying Advanced Nuclear Reactor Technologies for National Security," signed in May 2025, highlights this Administration's priorities, which include using advanced nuclear technology for both installation and operational energy (Ref. 11). The EO directs DOD to commence the operation of a nuclear reactor, regulated by the United States Army, at a domestic military base or installation no later than Sept. 30, 2028 (Ref. 11). DOD is explicit that TRISO fuel is necessary to meet the timeline and goal of having a operational DOD advanced nuclear reactor – TRISO fuel has already been rigorously tested by DOE, and its unique design of encapsulating each nucelar particle meets specific DOD needs for nuclear safety and portability without requiring large containment physical infrastructure (Refs. 7, 8, 9, and 10). Furthermore, a slate of four recent Executive Orders regarding nuclear energy will also lead to commercial demand for TRISO fuel in order to power commercial advanced nuclear reactors (Refs. 5, 6, 11, 12, 13, and 14). These Executive Orders have underscored this Administration's commitment to nuclear power and specifically call on advanced nuclear reactors (which use TRISO fuel) to support our national security and critical infrastructure (Refs. 11, 12, 13, and 14).

Due to the critical infrastructure and national security impacts of TRISO fuel that is currently manufactured with TCE, EPA finds it appropriate to amend the 2024 final rule to allow for three more years until the prohibition. This timeframe would immediately allow the primary TRISO manufacturer to finish fulfilling current government contracts before shutting down production in order to reformulate (Refs. 2, 3, 4, 5, 6, and 7).

2. *Disposal of TCE to wastewater by chemical processors*

EPA is issuing this interim final rule to address the significant compliance challenges that certain TCE users would face due to the September 15, 2025, prohibition on disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works (Ref. 1). In particular, this restriction would have adverse effects on processors and users of TCE that were permitted to continue their activities beyond the prohibition date, yet the disposal prohibition

would result in the unanticipated cessation of such activities and the manufacture of other essential chemistries, described in more detail in this unit (Refs. 16 and 17).

More specifically EPA's 2024 final rule promulgated a prohibition, beginning December 18, 2026, on processing TCE as a reactant/intermediate, and the industrial and commercial use of TCE as a processing aid (and processing for such use) 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 (hereinafter referred to as "chemical processors"). In the preamble to the 2024 final rule, EPA explained that the processing as a reactant/intermediate condition of use includes reuse of byproduct or residual TCE as a reactant. The reuse of TCE that was manufactured as a byproduct frequently occurs in the production of other chlorinated solvents, namely methylene chloride, perchloroethylene (PCE), and carbon tetrachloride (CTC) (Refs. 1, 16, and 17).

In May 2025, EPA was made aware of concerns regarding the impact of the prohibition of disposal of TCE to wastewater for those chemical processors (Ref. 16). Namely, chemical processors of TCE, who also process other chlorinated organics such as methylene chloride, PCE, and CTC), reuse TCE that is unintentionally present as a byproduct in their feedstock streams as a reactant/intermediate in further manufacturing of such chemicals. The manufacturers of these other chlorinated solvents provided new information explaining that wastewater from these processes contains TCE, and cannot be disposed of using an alternative disposal method (e.g., landfill) (Refs. 16 and 17). If these manufacturers are not permitted to dispose of TCE wastewater to industrial treatment or pre-treatment (as a necessary pre-cursor to surface water disposal as regulated by Clean Water Act permits), the manufacture of these other chlorinated solvents may cease or be significantly disrupted if they have no method for disposal (Refs 16 and 17). Such wastewater discharges are regulated under existing wastewater discharge permits and have limits for volatile organic compounds such as TCE. More specifically, EPA has

been informed that chemical processors with feedstock and waste streams that contain TCE need to dispose of millions of gallons of wastewater per year, a volume that any other form of disposal other than wastewater discharge (such as incineration) does not have the capacity to handle (Refs. 16 and 17). If these chemical processors were not able to dispose of TCE to wastewater, the cost would be so great it could cause company closures (Ref. 17).

Given this new information, EPA understands that chemical processors need to dispose of wastewater containing TCE in order to continue operations (Refs. 16 and 17). TCE is present as an unintentional byproduct of many important industrial solvents - including methylene chloride, perchloroethylene, carbon tetrachloride, and 1,2-dichloroethane, simply due to the nature of how chlorinated organics gain and lose chlorine atoms (Refs. 16 and 17). Due to this, the ability to dispose of TCE to wastewater is critical not only for the processing of TCE, but for the processing of these various other solvents (Refs. 16 and 17). EPA has published other section 6 TSCA rules for other chlorinated solvents, namely methylene chloride, PCE, and CTC (Refs. 18, 19, and 20). In these rules, EPA has determined the necessity of allowing certain uses of those chemicals to continue to meet various critical needs (Refs. 18, 19, and 20). In order to fulfill the intent of those TSCA section 6(a) regulations, this interim final rule for TCE amends the 2024 final rule as to not inadvertently shut down the chemical manufacturing and processing for methylene chloride, PCE, and CTC.

Moreover, in the 2024 final rule, EPA permitted several other users with extended compliance timeframes to continue to dispose of TCE to for the timeframe of the phase-out. At the time, EPA was not aware of the need for chemical processors to continue to dispose of TCE to to industrial treatment or pre-treatment. This rule merely aligns the disposal options for these ongoing uses with other proessing aid uses with extended phase-outs.

EPA expects that owners and operators that will be permitted to continue to dispose of TCE-containing wastewater to industrial treatment or pre-treatment under this rule will already be complying with the workplace chemical protection program (WCPP) at 40 CFR 751.315.

Uses that were permitted to continue beyond one year, including chemical processors, were required to complete initial monitoring by June 16, 2025, and ensure that TCE inhalation exposures do not exceed the interim ECEL for all potentially exposed persons by September 15, 2025. Based on the new information received, chemical processors are not sending the TCE-containing wastewater to POTWs, and therefore, EPA believes that the industrial treatment or pre-treatment is occuring at the same workplace already complying with the WCPP. To avoid unnecessary and potentially duplicative workplace protections, EPA is not extending the workplace requirements for wastewater to chemical processors and clarifying that the workplace requirements for chemical processors are sufficient for the remaining, short duration of those uses (*i.e.*, until December 2026) and therefore adding an exclusion to 40 CFR 751.315(a)(15) to make this point clear.

3. *Downstream notification*

As a result of the new compliance date for industrial and commercial use of TCE as a processing aid in the manufacture of nuclear fuel, EPA needs to amend the downstream notification requirements of the 2024 final rule to reflect accurately the restrictions on TCE. Accurate downstream notification is necessary to spread awareness throughout the supply chain of the restrictions on use of TCE under TSCA, as well as provide information to commercial end users about allowable uses of TCE until the prohibition compliance dates. EPA recognizes that the 2024 final rule compliance deadline for updating the SDS of June 16, 2025, has already passed and as such, manufacturers, processors, and distributors in commerce of TCE would need to update or amend their SDS shortly after doing so already. EPA finds that 90 days is a practicable time to update the SDS for manufacturers, processors, and distributors in commerce of TCE.

D. *Specific Regulatory Revisions*

1. *TCE as a processing aid in the manufacture of nuclear fuel*

EPA is amending the prohibition compliance date for the industrial and commercial use

of TCE in other miscellaneous industrial and commercial uses, specifically for the use of TCE as a processing aid in the manufacture of nuclear fuel to September 15, 2028. EPA is extending the prohibition compliance date for the industrial and commercial use of TCE as a processing aid in the manufacture of nuclear fuel, and the manufacturing, processing, and distribution in commerce of TCE to support such use, with full compliance with the prohibition to be required on September 15, 2028, three years from the 2024 final rule's compliance date of September 15, 2025.

2. *Disposal of TCE to wastewater by chemical processors*

EPA is also amending the compliance deadline for the prohibition on disposal of TCE to wastewater from September 15, 2025, to December 18, 2026, for processors of TCE as a reactant/intermediate and processors and industrial and commercial users of TCE as a processing aid (and processing for such use) 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. This compliance date aligns with the December 18, 2026, prohibition on processing TCE and with the prohibition on the processing and industrial and commercial use of TCE as a processing aid for those uses.

3. *Downstream notification*

EPA is amending the downstream notification requirements to allow for 90 days from the publication of this rule in the Federal Register for manufacturers, processors, and distributors in commerce of TCE amend their SDS to reflect this new use's prohibition compliance deadline for the industrial and commercial use of TCE in nuclear fuel manufacturing.

III. Rulemaking Procedures

As noted in section I.B. of this preamble, EPA's authority for the rulemaking procedures followed in this action is provided by APA at 5 U.S.C. 553(b)(B), which allows an agency to forgo notice-and-comment requirements "when the agency for good cause finds (and

incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest."

EPA finds good cause to issue this notice without prior notice and comment because such procedures are impracticable. Specifically, there is insufficient time before the September 15, 2025, compliance dates to address the new information submitted by petitioners on compliance difficulties absent immediate action. It is urgent to address these compliance difficulties because of the expected negative consequences. Although the information available to EPA at the time of rulemaking indicated that the manufacture of nuclear fuel either did not involve TCE or did not require an extended compliance deadline to avoid disruption to national security and critical infrastructure, EPA subsequently received information indicating additional time was needed for compliance. Specifically, information provided in the June 19, 2025, petition submitted by BWXT, as discussed in detail in section II.C.1. Similarly, information available to EPA at the time of rulemaking indicated ACC petitioners could meet certain deadlines regarding the disposal of wastewater in the 2024 final rule without disrupting critical infrastructure and the national economy. However, subsequent information provided in the May 27, 2025, petition submitted by ACC, as discussed in detail in section II.C.2, informed EPA of significant compliance issues that could result in the shutting down of chemical processors and manufacturers for multiple chlorinated organics to reach compliance. The information provided by the petitioners supports the need for extending the compliance dates.

Because the September 15, 2025, compliance deadlines for both petitioners are imminent, EPA has determined that it would be impracticable to undertake prior notice and comment before the compliance deadlines to provide petitioners sufficient time to comply without adverse consequences to national security and the manufacture of multiple chlorinated organics. Under these circumstances, refraining from amending the compliance deadlines before they go into effect would mean meaningful compliance by petitioners would not be possible by the existing deadline. Further, this would needlessly jeopardize EPA's ability to work with petitioners to

achieve the long-term protective outcomes in the 2024 final rule.

EPA is making this rule effective immediately as a rule which "grants or recognizes an exemption or relieves a restriction" under the APA at 5 U.S.C. 553(d)(1). This action relieves restrictions by extending several of the 2024 final rule's compliance deadlines.

IV. Requests for Comment

As explained above, EPA finds good cause to take this interim final action without prior notice or opportunity for public comment. However, EPA is providing an opportunity for comment on the extension of the compliance dates and requests comment on the revisions described in this rule. EPA will review and respond to any comments received, including by making changes to this action, if appropriate. EPA is not reopening for comment any provisions of the 2024 final rule other than the specific provisions that are expressly amended in this interim final rule.

A. *TCE as a processing aid in the manufacture of nuclear fuel*

As a result of the information from stakeholders and Federal Agencies, EPA is amending the compliance dates applicable to industrial and commercial use of TCE as a processing aid in the manufacture of nuclear fuel. Under this interim final rule, the prohibition for users of TCE in industrial and commercial use for the manufacture of nuclear fuel, and the upstream manufacturing, processing, and distribution to support such use, would be extended by three years. Manufacturers of nuclear fuel would have until September 15, 2028, to comply with the prohibition on TCE use. In EPA's view, this newly finalized compliance date will prevent an emergency in national security and critical infrastructure, and represents a reasonable transition period under TSCA section 6(d).

EPA requests comments and specific information addressing:

• The ability of TRISO nuclear fuel manufacturers to comply with the phaseout timeframe in this interim final rule.

• Alternative compliance timeframes for manufacturers of nuclear fuel to comply with a

prohibition on TCE that are as soon as practicable and provide a reasonable transition period.

• Information related to use of TCE in the manufacture of nuclear fuel, that may not have been previously available to EPA during risk management and should now be considered.

• The number of potentially exposed persons who operate in various facilities that manufacture nuclear fuel and the worker protections in place at such facilities.

• Information related to use of TCE that may not have been previously available to EPA during risk management and should now be considered.

B. *Disposal of TCE to wastewater by chemical processors*

As a result of the information from stakeholders, EPA is delaying the compliance with the prohibition of disposal of TCE to wastewater for chemical processors until December 2026. EPA requests comments and specific information addressing:

• Information related to disposal of TCE that may not have been previously available to EPA during risk management and should now be considered.

• The ability of chemical processors to comply with the Workplace Chemical Protection Program for disposal of TCE to wastewater until prohibition.

V. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

1. EPA. Trichloroethylene; Regulation under the Toxic Substances Control Act; Final Rule. RIN 2070-AK83. *Federal Register* (89 FR 102568, December 17, 2024) (FRL-8317-02-OCSPP). *https://www.govinfo.gov/content/pkg/FR-2024-12-17/pdf/2024-29274.pdf*.

2. Howard B. Markle II. BWXT– Nuclear Operations Group Inc (BWXT). BWX

Technologies, Inc. - Nuclear Operations Group (BWXT NOG) Exemption Request to 40 CFR 751 Subpart D.. June 19, 2025.

3. EPA. BWX Technologies Inc Meeting Memo. July 15, 2025.

4. Howard B. Markle II. BWXT– Nuclear Operations Group Inc (BWXT). Additional Information supporting BWX Technologies, Inc. - Nuclear Operations Group (BWXT NOG) Exemption Request to 40 CFR 751 Subpart D. . August 6, 2025.

5. EPA. Department of Energy Meeting Memo. July 16, 2025.

6. EPA. Nuclear Regulatory Commission Meeting Memo. July 29, 2025.

7. EPA. Department of Defense Meeting Memo. August 4, 2025.

8. Department of Defense, Office of the Under Secretary of Defense, Research and Engineering. Project Pele Mobile Nuclear Reactor. Accessed July 15, 2025. *https://www.cto.mil/pele_eis/*.

9. BWXT. Project Pele Begins Taking Shape with Start of Core Manufacturing. Accessed July 15, 2025. *https://www.bwxt.com/project-pele-begins-taking-shape-with-start-of-core-manufacturing/*.

10. Jeff Waksman. Project Pele Overview Mobile Nuclear Power For Future DoD Need, Slides Supporting Presentation Materials for May 2022. Accessed July 15, 2025. *https://www.nrc.gov/docs/ML2212/ML22126A059.pdf*.

11. Executive Order 14299. Deploying Advanced Nuclear Reactor Technologies for National Security. *Federal Register* (90 FR 22581, May 29, 2025). *https://www.govinfo.gov/content/pkg/FR-2025-05-29/pdf/2025-09796.pdf*.

12. Executive Order 14300. Ordering the Reform of the Nuclear Regulatory Commission. *Federal Register* (90 FR 22587, May 29, 2025). *https://www.govinfo.gov/content/pkg/FR-2025-05-29/pdf/2025-09798.pdf*.

13. Executive Order 14301. Reforming Nuclear Reactor Testing at the Department of Energy. *Federal Register* (90 FR 22591, May 29, 2025). *https://www.govinfo.gov/content/pkg/*

FR-2025-05-29/pdf/2025-09799.pdf.

14. Executive Order 14302. Reinvigorating the Nuclear Industrial Base. *Federal Register* (90 FR 22595, May 29, 2025). *https://www.govinfo.gov/content/pkg/FR-2025-05-29/pdf/2025-09801.pdf*.

15. Nuclear Regulatory Commission. BWXT Materials License SNM-0042, Renewed 2007. March 29, 2007. Accessed August 8, 2025. *https://www.nrc.gov/docs/ML0813/ML081330687.pdf*.

16. Robert Simon. American Chemistry Council's Petition for Rulemaking to Reconsider Provisions of the Trichloroethylene TSCA Risk Management Rule, 89 Fed. Reg. 102568 (Dec. 17, 2024). May 27, 2025. *https://www.epa.gov/system/files/documents/2025-06/sec.-21-petition-acc-reconsider-tce-rm-rule-25-04529-ao-ex-1.pdf*.

17. EPA. American Chemistry Council Meeting Memo. July 23, 2025.

18. EPA. Methylene Chloride; Regulation under the Toxic Substances Control Act; Final Rule. RIN 2070-AK70. *Federal Register* (89 FR 39254, May 8, 2024) (FRL-8155-01-OCSPP). *https://www.govinfo.gov/content/pkg/FR-2024-05-08/pdf/2024-09606.pdf*.

19. EPA. Perchloroethylene: Regulation under the Toxic Substances Control Act; Final Rule. RIN 2070-AK84. *Federal Register* (88 FR 39652. June 16, 2023) (FRL-8329-02-OCSPP). *https://www.govinfo.gov/content/pkg/FR-2024-12-18/pdf/2024-30117.pdf*

20. EPA. Carbon Tetrachloride: Regulation under the Toxic Substances Control Act; Final Rule. RIN 2070-AK82. *Federal Register* (88 FR 49180. July 28, 2023) (FRL-8206-01-OCSPP). *https://www.govinfo.gov/content/pkg/FR-2024-12-18/pdf/2024-29517.pdf*.

21. EPA. Trichloroethylene (TCE); Regulation Under the Toxic Substances Control Act (TSCA); Proposed Rule. RIN 2070-AK83. *Federal Register* (88 FR 74712, October 31, 2023) (FRL-8317-01-OCSPP). *https://www.govinfo.gov/content/pkg/FR-2023-10-31/pdf/2023-23010.pdf*.

22. United States Nuclear Regulatory Commission. TRISO-X. Accessed August 8, 2025.

https://www.nrc.gov/info-finder/fc/triso-x.html.

23. United States Nuclear Regulatory Commission. FRAMATOME. Accessed August 8, 2025. https://www.nrc.gov/info-finder/fc/areva-np-lc.html.

24. EPA. Economic Analysis of the Regulation of Trichloroethylene Under TSCA Section 6(a) Amendment to the 2024 Final Rule - Interim Final Rule. September 10, 2025.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders*.

A. *Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011). Any changes made in response to OMB recommendations have been documented in the docket. In addition, EPA prepared an economic analysis of the potential costs and benefits associated with this action (Ref. 24). This analysis is also available in the docket.

B. *Executive Order 14192: Unleashing Prosperity Through Deregulation*

This action is an Executive Order 14192 deregulatory action. This interim final rule provides burden reduction by providing relief against existing compliance deadlines.

C. *Paperwork Reduction Act (PRA)*

The information collection activities in this interim final rule have been submitted for approval to OMB under the PRA, 44 U.S.C. 3501 *et seq*. The underlying requirements are approved under OMB control number 2070-0232. However, EPA has submitted a request for additional approval to OMB under PRA because the interim final rule alters the language of a required language of a disclosure statement that is covered by the currently approved collection of information. The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2775.03. You can find a copy of the ICR in the docket for this

rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The provision that may increase burden under the PRA is downstream notification, which is required to be carried out by updates to the relevant SDS and required for manufacturers, processors, and distributors in commerce of TCE for the industrial and commercial use of TCE in nuclear fuel manufacturing, who would provide notice to companies downstream upon shipment of TCE about the prohibitions. The information submitted to downstream companies through the SDS would provide knowledge and awareness of the restrictions to these companies.

Respondents/affected entities: Persons that manufacture (including import), process, and distribute in commerce products containing TCE.

Respondent's obligation to respond: Mandatory. 15 U.S.C. 2605(a) and 40 CFR part 751**.**

Estimated number of respondents: 11

Frequency of response: Once

Total estimated burden: 7.3 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $744, (per year), includes $0 annualized capital or operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the *Federal Register* and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this interim final rule.

D. *Regulatory Flexibility Act (RFA)*

This action is not subject to the RFA, 5 U.S.C. 601 *et seq.* The RFA applies only to rules subject to notice and comment rulemaking requirements under the Administrative Procedure Act (APA), 5 U.S.C. 553, or any other statute. This rule is not subject to notice and comment

requirements because the Agency has invoked the APA "good cause" exemption under 5 U.S.C. 553(b). Regardless, EPA's analysis concludes that only 5 entities affected by this action meet the SBA definition of a small entity and none of these affected entities would have cost impacts exceeding 1% of their revenues. Therefore this action will not have a significant economic impact on a substantial number of small entities.

E. *Unfunded Mandates Reform Act (UMRA)*

This action does not contain an unfunded mandate of $100 million (in 1995 dollars and adjusted annually for inflation) or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The costs involved in this action are estimated not to exceed $187 million in 2024$ ($100 million in 1995$, adjusted for inflation using the GDP implicit price deflator) in any one year.

F. *Executive Order 13132: Federalism*

This action does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999) because it will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. *Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000) because it does not have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes. Thus, Executive Order 13175 does not apply to this action.

H. *Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

This action is not a "covered regulatory action" under Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not a significant regulatory action under section 3(f)(1) of

Executive Order 12866 and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

I. *Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use*

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. Further, we have concluded that this action is not likely to have any adverse energy effects because it will avert substantial, negative near-term consequences for national security and critical infrastructure, including for the supply of energy, in particular by allowing for continuity of operations with respect to the manufacture of TRISO nuclear fuel.

J. *National Technology Transfer and Advancement Act (NTTAA)*

This action does not involve technical standards under the NTTAA section 12(d), 15 U.S.C. 272.

K. *Congressional Review Act (CRA)*

This action is subject to the CRA, 5 U.S.C. 801 *et seq.*, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 751

Environmental protection, Chemicals, Export notification, Hazardous substances, Import certification, Reporting and recordkeeping.

Lee Zeldin,

Administrator.

For the reasons set forth in the preamble, 40 CFR part 751 is amended as follows:

PART 751—REGULATION OF CERTAIN CHEMICAL SUBSTANCES AND MIXTURES UNDER SECTION 6 OF THE TOXIC SUBSTANCES CONTROL ACT

1. The authority citation for part 751 continues to read as follows:

Authority: 15 U.S.C. 2605, 15 U.S.C. 2625(l)(4).

2. Amend § 751.305 by:

a. Revising paragraph (b)(9); and

b. Adding paragraph (b)(27).

The revisions and additions read as follows:

§ 751.305 Prohibitions of manufacturing, processing, distribution in commerce, use and disposal.

* * * * *

(b) * * *

(9) After December 18, 2026, except for those uses specified in paragraphs (b)(14), (23), (24), and (27) of this section, all persons are prohibited from:

(i) Processing TCE as a reactant/intermediate, except for the use as specified in paragraph (b)(18) of this section;

(ii) Processing for and 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; and

(iii) The disposal of TCE from the uses specified in (b)(9)(i) and (ii) of this section to industrial pre-treatment, industrial treatment, or publicly owned treatment works.

* * * * *

(27) After September 15, 2028, all persons are prohibited from the industrial and commercial use of TCE as a processing aid in the manufacture of nuclear fuel, and

manufacturing (including importing), processing, and distribution in commerce of TCE for such use.

3. Amend § 751.313 by:

a. Revising paragraph (e); and

b. Adding paragraph (h)

The revisions and additions read as follows:

§ 751.313 Phase-out of disposal of TCE to industrial pre-treatment, treatment, or publicly owned treatment works.

* * * * *

(e) The owner or operator of the location where disposal of TCE to industrial pre-treatment, treatment, or to a publicly owned treatment works occurs must comply with the Workplace Chemical Protection Program provisions in § 751.315, except for the disposal permitted in § 751.305(b)(9).

* * * * *

(h) Except for those uses specified in paragraphs (b), (c), and (d) of this section, all persons engaged in the uses specified in paragraphs (h)(i) or (ii) of this section are prohibited from disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works after December 18, 2026:

(i) Processing TCE as a reactant/intermediate;

(ii) Processing TCE for industrial and commercial use of TCE as a processing aid, or are the industrial and commercial users 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.

4. Amend § 751.315 by revising paragraph (a)(15) to read as follows:

§ 751.315 Workplace chemical protection program.

* * * * *

(a) * * *

(15) Disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works, except for the disposal permitted in § 751.305(b)(9) and to the extent that the activity is covered by the workplace protections in § 751.319.

* * * * *

5. Revise and republish § 751.321 to read as follows:

§ 751.321 Downstream notification.

(a) After February 18, 2025, and before **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*],** each person who manufactures (including imports) TCE for any use must, prior to or concurrent with the shipment, notify companies to whom TCE is shipped, in writing, of the restrictions described in this subpart in accordance with paragraph (c) of this section.

(b) After June 16, 2025, and before **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*],** each person who processes or distributes in commerce TCE or any TCE-containing products for any use must, prior to or concurrent with the shipment, notify companies to whom TCE is shipped, in writing, of the restrictions described in this subpart in accordance with paragraph (c) of this section.

(c) The notification required under paragraphs (a) and (b) of this section must occur by inserting the following text in section 1(c) and 15 of the Safety Data Sheet (SDS) provided with the TCE or with any TCE-containing product:

"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."

(d) Beginning on **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*],** each person who manufactures (including imports), processes, or distributes in commerce TCE or any TCE-containing products must, prior to or concurrent with the shipment, notify companies to whom TCE is shipped, in writing, of the restrictions

described in this subpart in accordance with paragraph (e) of this section.

(e) The notification required under paragraph (d) of this section must occur by inserting the following text in section 1(c) and 15 of the Safety Data Sheet (SDS) provided with the TCE or with any TCE-containing product:

"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; (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; and (7) Industrial and commercial use as a processing aid in the manufacture of nuclear fuel until September 15, 2028."

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