
**Initial Regulatory Flexibility Analysis for
Trichloroethylene; Regulation of Trichloroethylene under TSCA §6(a)
Proposed Rule; RIN 2070-AK83**

U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics,
October 2023

Pursuant to section 603 of the Regulatory Flexibility Act (RFA) (5 U.S.C. § 601 et seq.), EPA has prepared this initial regulatory flexibility analysis (IRFA) for the “Trichloroethylene; Regulation under TSCA §6(a)” proposed rule.

As required by section 609(b) of the RFA, EPA convened a Small Business Advocacy Review (SBAR) Panel to obtain advice and recommendations from small entity representatives (SERs) that potentially would be subject to the rule's requirements. The SBAR Panel evaluated the assembled materials and small-entity comments on issues related to elements of the IRFA. A copy of the full SBAR Panel Report is available in the rulemaking docket.

1. Why is This Action Being Considered?

Under TSCA section 6(a) (15 U.S.C. 2605(a)), if EPA determines after a TSCA section 6(b) risk evaluation that a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other non-risk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation (PESS) identified as relevant to the risk evaluation, under the 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 chemical substance or mixture no longer presents such risk. Trichloroethylene (TCE) was the subject of a risk evaluation under TSCA section 6(b)(4)(A) that was issued in November 2020. In addition, in January 2023, EPA issued a revised unreasonable risk determination that TCE as a whole chemical substance presents an unreasonable risk of injury to health under the conditions of use.

Fifty-two out of the 54 conditions of use evaluated contribute to the unreasonable risk from TCE. These conditions of use that contribute to the unreasonable risk are all manufacturing (including import) (two conditions of use), all processing (five conditions of use), all industrial and commercial uses (20 conditions of use), all but one consumer use (24 out of 25 conditions of use), and disposal to industrial pre-treatment, industrial treatment, or publicly owned treatment works (one condition of use). Only two conditions of use, consumer use of TCE in pepper spray and distribution in commerce, were not found to contribute to the unreasonable risk. As a result, EPA is proposing to take action to the extent necessary so that TCE no longer presents such risk.

To address the unreasonable risk EPA has identified, EPA is proposing to: prohibit the manufacture (including import), processing, and distribution in commerce of TCE for all uses (including all consumer uses); prohibit the industrial and commercial use of TCE while providing longer compliance timeframes for certain processing and commercial uses (including proposed TSCA section 6(g) exemptions), and strict workplace controls (including requirements for an inhalation exposure limit and dermal protection) for conditions of use permitted to continue for longer than one year until prohibition; prohibit, due to worker risks, the disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works with a time-limited exemption for cleanup projects; and establish recordkeeping and downstream notification requirements.

2. What are the Objectives and Legal Basis for the Rule?

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, EPA must by rule apply one or more requirements listed in section 6(a) to the extent necessary so that the chemical substance or mixture no longer presents such

risk. EPA has determined through a TSCA section 6(b) risk evaluation that TCE presents an unreasonable risk under the conditions of use.

3. Description and Number of Small Entities to Which the Rule Will Apply

The proposed rule potentially affects small manufacturers (including importers), processors, distributors, retailers, users of TCE or of products containing TCE, and entities engaging in disposal. EPA estimates that the proposal would affect approximately 22,113 overall firms, of which 21,571 small entities have estimated impacts. These may include, but are not limited to, entities in the industries listed in Table 1. Table 2 shows the estimated number of small firms by condition of use.

Besides vapor degreasers, end users with economic and technologically feasible alternatives available do not have impacts that are estimated beyond rule familiarization costs. Alternative products that are drop-in substitutes (i.e., requiring no changes by the user in how the product is used) are generally available. However, in some cases some effort might be required by firms using TCE products to identify suitable alternatives, test them for their desired applications, learn how to use them safely and effectively, and implement new processes for using the alternative products. The information to estimate how often these costs might be incurred or what the specific costs would be per-user or per-firm when they are incurred is not available. Therefore, EPA is unable to consider these costs quantitatively in the IRFA or Economic Analysis. Additionally, EPA does not have information on alternatives and costs for certain industrial uses (e.g., fluoroelastomer production and HCL production) and these are described as unquantified costs in Chapter 7 of the Economic Analysis.

Table 1 - Potential Industry Sectors Impacted by Proposed Regulation

NAICS	NAICS description	SBA Size Standard
111421	Nursery and Tree Production	\$3.25 Million
111422	Floriculture Production	\$3.75 Million
111998	All Other Miscellaneous Crop Farming	\$2.5 Million

NAICS	NAICS description	SBA Size Standard
112210	Hog and Pig Farming	\$4 Million
112990	All Other Animal Production	\$2.75 Million
211120	Crude Petroleum Extraction	1,250 Employees
212111	Bituminous Coal and Lignite Surface Mining	1,250 Employees
212210	Iron Ore Mining	1,400 Employees
212312	Crushed and Broken Limestone Mining and Quarrying	750 Employees
212321	Construction Sand and Gravel Mining	500 Employees
212399	All Other Nonmetallic Mineral Mining	600 Employees
221112	Fossil Fuel Electric Power Generation	950 Employees
221113	Nuclear Electric Power Generation	1,150 Employees
221117	Biomass Electric Power Generation	550 Employees
221118	Other Electric Power Generation	650 Employees
221121	Electric Bulk Power Transmission and Control	950 Employees
221122	Electric Power Distribution	1,100 Employees
221210	Natural Gas Distribution	1,150 Employees
221310	Water Supply and Irrigation Systems	\$41 Million
221320	Sewage Treatment Facilities	\$35 Million
221330	Steam and Air-Conditioning Supply	\$30 Million
237310	Highway, Street, and Bridge Construction	\$45 Million
2383	Building Finish Contractors	\$19 Million
311119	Other Animal Food Manufacturing	650 Employees
311211	Flour Milling	1,050 Employees
311221	Wet Corn Milling	1,300 Employees
311224	Soybean and Other Oilseed Processing	1,250 Employees
311423	Dried and Dehydrated Food Manufacturing	750 Employees
311611	Animal (except Poultry) Slaughtering	1,150 Employees
311615	Poultry Processing	1,250 Employees
311812	Commercial Bakeries	1,000 Employees
311911	Roasted Nuts and Peanut Butter Manufacturing	750 Employees
311919	Other Snack Food Manufacturing	1,250 Employees
312120	Breweries	1,250 Employees
312130	Wineries	1,000 Employees
312140	Distilleries	1,100 Employees
312230	Tobacco Manufacturing	1,500 Employees
313210	Broadwoven Fabric Mills	1,000 Employees
313230	Nonwoven Fabric Mills	850 Employees
313310	Textile and Fabric Finishing Mills	1,000 Employees

NAICS	NAICS description	SBA Size Standard
313320	Fabric Coating Mills	1,000 Employees
314999	All Other Miscellaneous Textile Product Mills	550 Employees
321113	Sawmills	550 Employees
321114	Wood Preservation	550 Employees
321211	Hardwood Veneer and Plywood Manufacturing	600 Employees
321212	Softwood Veneer and Plywood Manufacturing	1,250 Employees
321213	Engineered Wood Member (except Truss) Manufacturing	500 Employees
321214	Truss Manufacturing	500 Employees
321219	Reconstituted Wood Product Manufacturing	750 Employees
321911	Wood Window and Door Manufacturing	1,000 Employees
321912	Cut Stock, Resawing Lumber, and Planing	500 Employees
321918	Other Millwork (including Flooring)	500 Employees
321920	Wood Container and Pallet Manufacturing	500 Employees
321992	Prefabricated Wood Building Manufacturing	500 Employees
321999	All Other Miscellaneous Wood Product Manufacturing	500 Employees
322110	Pulp Mills	1,050 Employees
322121	Paper (except Newsprint) Mills	1,250 Employees
322122	Newsprint Mills	1,250 Employees
322130	Paperboard Mills	1,250 Employees
322211	Corrugated and Solid Fiber Box Manufacturing	1,250 Employees
322220	Paper Bag and Coated and Treated Paper Manufacturing	750 Employees
323111	Commercial Printing (except Screen and Books)	650 Employees
323113	Commercial Screen Printing	500 Employees
324110	Petroleum Refineries	1,500 Employees
324121	Asphalt Paving Mixture and Block Manufacturing	500 Employees
324122	Asphalt Shingle and Coating Materials Manufacturing	1,100 Employees
324191	Petroleum Lubricating Oil and Grease Manufacturing	900 Employees
324199	All Other Petroleum and Coal Products Manufacturing	950 Employees
325110	Petrochemical Manufacturing	1,300 Employees
325120	Industrial Gas Manufacturing	1,200 Employees
325130	Synthetic Dye and Pigment Manufacturing	1,050 Employees
325180	Other Basic Inorganic Chemical Manufacturing	1,000 Employees
325193	Ethyl Alcohol Manufacturing	1,000 Employees

NAICS	NAICS description	SBA Size Standard
325194	Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing	1,250 Employees
325199	All Other Basic Organic Chemical Manufacturing	1,250 Employees
325211	Plastics Material and Resin Manufacturing	1,250 Employees
325212	Synthetic Rubber Manufacturing	1,000 Employees
325220	Artificial and Synthetic Fibers and Filaments Manufacturing	1,050 Employees
325311	Nitrogenous Fertilizer Manufacturing	1,050 Employees
325320	Pesticide and Other Agricultural Chemical Manufacturing	1,150 Employees
325411	Medicinal and Botanical Manufacturing	1,000 Employees
325412	Pharmaceutical Preparation Manufacturing	1,300 Employees
325510	Paint and Coating Manufacturing	1,000 Employees
325520	Adhesive Manufacturing	550 Employees
325611	Soap and Other Detergent Manufacturing	1,100 Employees
325612	Polish and Other Sanitation Good Manufacturing	900 Employees
325613	Surface Active Agent Manufacturing	1,100 Employees
325910	Printing Ink Manufacturing	750 Employees
325992	Photographic Film, Paper, Plate and Chemical Manufacturing	1,500 Employees
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	650 Employees
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	750 Employees
326122	Plastics Pipe, Pipe Fitting, and Unlaminated Profile Shape Manufacturing	750 Employees
326140	Polystyrene Foam Product Manufacturing	1,000 Employees
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	750 Employees
326199	All Other Plastics Product Manufacturing	750 Employees
326211	Tire Manufacturing (except Retreading)	1,500 Employees
326212	Tire Retreading	500 Employees
326220	Rubber and Plastics Hoses and Belting Manufacturing	800 Employees
326299	All Other Rubber Product Manufacturing	650 Employees
327310	Cement Manufacturing	1,000 Employees
327320	Ready-Mix Concrete Manufacturing	500 Employees
327390	Other Concrete Product Manufacturing	500 Employees
327420	Gypsum Product Manufacturing	1,500 Employees
331110	Iron and Steel Mills and Ferroalloy Manufacturing	1,500 Employees

NAICS	NAICS description	SBA Size Standard
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	1,000 Employees
331221	Rolled Steel Shape Manufacturing	1,000 Employees
331222	Steel Wire Drawing	1,000 Employees
331315	Aluminum Sheet, Plate, and Foil Manufacturing	1,400 Employees
331410	Nonferrous Metal (except Aluminum) Smelting and Refining	1,000 Employees
331420	Copper Rolling, Drawing, Extruding, and Alloying	1,050 Employees
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing and Extruding	900 Employees
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	850 Employees
331511	Iron Foundries	1,000 Employees
331513	Steel Foundries (except Investment)	700 Employees
331523	Nonferrous Metal Die-Casting Foundries	700 Employees
332111	Iron and Steel Forging	750 Employees
332112	Nonferrous Forging	950 Employees
332114	Custom Roll Forming	600 Employees
332117	Powder Metallurgy Part Manufacturing	550 Employees
332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)	500 Employees
332215	Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing	1,000 Employees
332216	Saw Blade and Handtool Manufacturing	750 Employees
332321	Metal Window and Door Manufacturing	750 Employees
332322	Sheet Metal Work Manufacturing	500 Employees
332323	Ornamental and Architectural Metal Work Manufacturing	500 Employees
332410	Power Boiler and Heat Exchanger Manufacturing	750 Employees
332420	Metal Tank (Heavy Gauge) Manufacturing	750 Employees
332431	Metal Can Manufacturing	1,500 Employees
332439	Other Metal Container Manufacturing	600 Employees
332510	Hardware Manufacturing	750 Employees
332613	Spring Manufacturing	600 Employees
332618	Other Fabricated Wire Product Manufacturing	500 Employees
332710	Machine Shops	500 Employees
332721	Precision Turned Product Manufacturing	500 Employees
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	600 Employees
332811	Metal Heat Treating	750 Employees

NAICS	NAICS description	SBA Size Standard
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	600 Employees
332813	Electroplating, Plating, Polishing, Anodizing and Coloring	500 Employees
332911	Industrial Valve Manufacturing	750 Employees
332912	Fluid Power Valve and Hose Fitting Manufacturing	1,000 Employees
332913	Plumbing Fixture Fitting and Trim Manufacturing	1,000 Employees
332919	Other Metal Valve and Pipe Fitting Manufacturing	750 Employees
332991	Ball and Roller Bearing Manufacturing	1,250 Employees
332992	Small Arms Ammunition Manufacturing	1,300 Employees
332993	Ammunition (except Small Arms) Manufacturing	1,500 Employees
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing	1,000 Employees
332996	Fabricated Pipe and Pipe Fitting Manufacturing	550 Employees
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	750 Employees
333111	Farm Machinery and Equipment Manufacturing	1,250 Employees
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	1,500 Employees
333120	Construction Machinery Manufacturing	1,250 Employees
333131	Mining Machinery and Equipment Manufacturing	900 Employees
333132	Oil and Gas Field Machinery and Equipment Manufacturing	1,250 Employees
333241	Food Product Machinery Manufacturing	500 Employees
333242	Semiconductor Machinery Manufacturing	1,500 Employees
333243	Sawmill, Woodworking, and Paper Machinery Manufacturing	550 Employees
333244	Printing Machinery and Equipment Manufacturing	750 Employees
333249	Other Industrial Machinery Manufacturing	750 Employees
333314	Optical Instrument and Lens Manufacturing	1,000 Employees
333316	Photographic and Photocopying Equipment Manufacturing	1,000 Employees
333318	Other Commercial and Service Industry Machinery Manufacturing	1,000 Employees
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	500 Employees
333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	500 Employees
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	1,250 Employees

NAICS	NAICS description	SBA Size Standard
333511	Industrial Mold Manufacturing	500 Employees
333514	Special Die and Tool, Die Set, Jig and Fixture Manufacturing	500 Employees
333515	Cutting Tool and Machine Tool Accessory Manufacturing	500 Employees
333517	Machine Tool Manufacturing	500 Employees
333519	Rolling Mill and Other Metalworking Machinery Manufacturing	500 Employees
333611	Turbine and Turbine Generator Set Units Manufacturing	1,500 Employees
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	750 Employees
333613	Mechanical Power Transmission Equipment Manufacturing	750 Employees
333618	Other Engine Equipment Manufacturing	1,500 Employees
333912	Air and Gas Compressor Manufacturing	1,000 Employees
333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing	750 Employees
333921	Elevator and Moving Stairway Manufacturing	1,000 Employees
333922	Conveyor and Conveying Equipment Manufacturing	500 Employees
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	1,250 Employees
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	900 Employees
333991	Power-Driven Handtool Manufacturing	950 Employees
333992	Welding and Soldering Equipment Manufacturing	1,250 Employees
333993	Packaging Machinery Manufacturing	600 Employees
333994	Industrial Process Furnace and Oven Manufacturing	500 Employees
333995	Fluid Power Cylinder and Actuator Manufacturing	800 Employees
333996	Fluid Power Pump and Motor Manufacturing	1,250 Employees
333997	Scale and Balance Manufacturing	700 Employees
333999	All Other Miscellaneous General Purpose Machinery Manufacturing	700 Employees
334111	Electronic Computer Manufacturing	1,250 Employees
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing	1,000 Employees
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	1,250 Employees
334310	Audio and Video Equipment Manufacturing	750 Employees
334413	Semiconductor and Related Device Manufacturing	1,250 Employees

NAICS	NAICS description	SBA Size Standard
334416	Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing	550 Employees
334417	Electronic Connector Manufacturing	1,000 Employees
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	750 Employees
334419	Other Electronic Component Manufacturing	750 Employees
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	1,350 Employees
334512	Automatic Environmental Control Manufacturing for Residential, Commercial and Appliance Use	650 Employees
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	750 Employees
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	750 Employees
335110	Electric Lamp Bulb and Part Manufacturing	1,250 Employees
335121	Residential Electric Lighting Fixture Manufacturing	750 Employees
335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	600 Employees
335129	Other Lighting Equipment Manufacturing	1,250 Employees
335220	Major Household Appliance Manufacturing	1,500 Employees
335311	Power, Distribution, and Specialty Transformer Manufacturing	800 Employees
335312	Motor and Generator Manufacturing	1,250 Employees
335313	Switchgear and Switchboard Apparatus Manufacturing	1,250 Employees
335314	Relay and Industrial Control Manufacturing	750 Employees
335912	Primary Battery Manufacturing	1,250 Employees
335921	Fiber Optic Cable Manufacturing	1,000 Employees
335931	Current-Carrying Wiring Device Manufacturing	600 Employees
335932	Noncurrent-Carrying Wiring Device Manufacturing	1,000 Employees
335991	Carbon and Graphite Product Manufacturing	900 Employees
336111	Automobile Manufacturing	1,500 Employees
336112	Light Truck and Utility Vehicle Manufacturing	1,500 Employees
336120	Heavy Duty Truck Manufacturing	1,500 Employees
336211	Motor Vehicle Body Manufacturing	1,000 Employees
336212	Truck Trailer Manufacturing	1,000 Employees
336213	Motor Home Manufacturing	1,250 Employees

NAICS	NAICS description	SBA Size Standard
336214	Travel Trailer and Camper Manufacturing	1,000 Employees
336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	1,050 Employees
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing	1,000 Employees
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	1,000 Employees
336340	Motor Vehicle Brake System Manufacturing	1,250 Employees
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	1,500 Employees
336360	Motor Vehicle Seating and Interior Trim Manufacturing	1,500 Employees
336370	Motor Vehicle Metal Stamping	1,000 Employees
336390	Other Motor Vehicle Parts Manufacturing	1,000 Employees
336411	Aircraft Manufacturing	1,500 Employees
336412	Aircraft Engine and Engine Parts Manufacturing	1,500 Employees
336413	Other Aircraft Part and Auxiliary Equipment Manufacturing	1,250 Employees
336414	Guided Missile and Space Vehicle Manufacturing	1,300 Employees
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	1,250 Employees
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	1,050 Employees
336510	Railroad Rolling Stock Manufacturing	1,500 Employees
336611	Ship Building and Repairing	1,300 Employees
336612	Boat Building	1,000 Employees
336991	Motorcycle, Bicycle, and Parts Manufacturing	1,050 Employees
336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing	1,500 Employees
336999	All Other Transportation Equipment Manufacturing	1,000 Employees
337110	Wood Kitchen Cabinet and Counter Top Manufacturing	750 Employees
337121	Upholstered Household Furniture Manufacturing	1,000 Employees
337122	Nonupholstered Wood Household Furniture Manufacturing	750 Employees
337124	Metal Household Furniture Manufacturing	950 Employees
337125	Household Furniture (except Wood and Metal) Manufacturing	950 Employees
337127	Institutional Furniture Manufacturing	500 Employees
337211	Wood Office Furniture Manufacturing	1,000 Employees

NAICS	NAICS description	SBA Size Standard
337212	Custom Architectural Woodwork and Millwork Manufacturing	500 Employees
337215	Showcase, Partition, Shelving, and Locker Manufacturing	500 Employees
339112	Surgical and Medical Instrument Manufacturing	1,000 Employees
339113	Surgical Appliance and Supplies Manufacturing	800 Employees
339114	Dental Equipment and Supplies Manufacturing	750 Employees
339910	Jewelry and Silverware Manufacturing	700 Employees
339920	Sporting and Athletic Goods Manufacturing	750 Employees
339991	Gasket, Packing, and Sealing Device Manufacturing	600 Employees
339993	Fastener, Button, Needle and Pin Manufacturing	750 Employees
339995	Burial Casket Manufacturing	1,000 Employees
339999	All Other Miscellaneous Manufacturing	550 Employees
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	150 Employees
423510	Metal Service Centers and Other Metal Merchant Wholesalers	200 Employees
423830	Industrial Machinery and Equipment Merchant Wholesalers	100 Employees
423840	Industrial Supplies Merchant Wholesalers	125 Employees
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	100 Employees
423930	Recyclable Material Merchant Wholesalers	125 Employees
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	100 Employees
424690	Other Chemical and Allied Products Merchant Wholesalers	175 Employees
424710	Petroleum Bulk Stations and Terminals	225 Employees
441110	New Car Dealers	200 Employees
441120	Used Car Dealers	\$30.5 Million
443142	Electronics Stores	\$40 Million
444110	Home Centers	\$47 Million
451110	Sporting Goods Stores	\$26.5 Million
454310	Fuel Dealers	100 Employees
481111	Scheduled Passenger Air Transportation	1,500 Employees
484121	General Freight Trucking, Long-Distance, Truckload	\$34 Million
488190	Other Support Activities for Air Transportation	\$40 Million
488210	Support Activities for Rail Transportation	\$34 Million
493110	General Warehousing and Storage	\$34 Million

NAICS	NAICS description	SBA Size Standard
493190	Other Warehousing and Storage	\$36.5 Million
512110	Motion Picture and Video Production	\$40 Million
512290	Other Sound Recording Industries	\$22.5 Million
517311	Wired Telecommunication Carriers	1,500 Employees
525990	Other Financial Vehicles	\$40 Million
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	\$34 Million
531190	Lessors of Other Real Estate Property	\$34 Million
541330	Engineering Services	\$25.5 Million
541380	Testing Laboratories	\$19 Million
541512	Computer Systems Design Services	\$34 Million
541620	Environmental Consulting Services	\$19 Million
541714	Research and Development in Biotechnology (Except Nanobiotechnology)	1,000 Employees
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	1,000 Employees
541720	Research and Development in the Social Sciences and Humanities	\$28 Million
541940	Veterinary Services	\$10 Million
551112	Offices of Other Holding Companies	\$45.5 Million
561499	All Other Business Support Services	\$21.5 Million
561599	All Other Travel Arrangement and Reservation Services	\$32.5 Million
561740	Carpet and Upholstery Cleaning Services	\$8.5 Million
561790	Other Services to Buildings and Dwellings	\$9 Million
561990	All Other Support Services	\$16.5 Million
562111	Solid Waste Collection	\$47 Million
562112	Hazardous Waste Collection	\$47 Million
562211	Hazardous Waste Treatment and Disposal	\$47 Million
562212	Solid Waste Landfill	\$47 Million
562213	Solid Waste Combustors and Incinerators	\$47 Million
562219	Other Nonhazardous Waste Treatment and Disposal	\$47 Million
562910	Remediation Services	\$25 Million
562920	Materials Recovery Facilities	\$25 Million
562998	All Other Miscellaneous Waste Management Services	\$16.5 Million
611110	Elementary and Secondary Schools	\$20 Million
611210	Junior Colleges	\$32.5 Million

NAICS	NAICS description	SBA Size Standard
611310	Colleges, Universities, and Professional Schools	\$34.5 Million
622110	General Medical and Surgical Hospitals	\$47 Million
624110	Child and Youth Services	\$15.5 Million
721110	Hotels (except Casino Hotels) and Motels	\$40 Million
811111	General Automotive Repair	\$9 Million
811112	Automotive Exhaust System Repair	\$9 Million
811113	Automotive Transmission Repair	\$9 Million
811118	Other Automotive Mechanical and Electrical Repair and Maintenance	\$9 Million
811121	Automotive Body, Paint and Interior Repair and Maintenance	\$9 Million
811122	Automotive Glass Replacement Shops	\$17.5 Million
811191	Automotive Oil Change and Lubrication Shops	\$11 Million
811198	All Other Automotive Repair and Maintenance	\$10 Million
811211	Consumer Electronics Repair and Maintenance	\$34 Million
811212	Computer and Office Machine Repair and Maintenance	\$34 Million
811213	Communication Equipment Repair and Maintenance	\$34 Million
811219	Other Electronic and Precision Equipment Repair and Maintenance	\$34 Million
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	\$12.5 Million
811411	Home and Garden Equipment Repair and Maintenance	\$9 Million
811412	Appliance Repair and Maintenance	\$19 Million
811430	Footwear and Leather Goods Repair	\$9 Million
811490	Other Personal and Household Goods Repair and Maintenance	\$9 Million
812210	Funeral Homes and Funeral Services	\$12.5 Million
812220	Cemeteries and Crematories	\$25 Million
812310	Coin-Operated Laundries and Drycleaners	\$13 Million
812320	Drycleaning and Laundry Services (except Coin-Operated)	\$8 Million
812332	Industrial Launderers	\$47 Million
812910	Pet Care (except Veterinary) Services	\$9 Million
921110	Executive Offices	NA*
921120	Legislative Bodies	NA*
921190	Other General Government Support	NA*
922140	Correctional Institutions	NA*

NAICS	NAICS description	SBA Size Standard
922190	Other Justice, Public Order, and Safety Activities	NA*
924110	Administration of Air and Water Resource and Solid Waste Management Programs	NA*
924120	Administration of Conservation Programs	NA*
926120	Regulation and Administration of Transportation Programs	NA*
927110	Space Research and Technology	NA*
928110	National Security	NA*

* Small business size standards are not established for these Sectors. Establishments in the Public Administration Sectors are Federal, state, and local government agencies which administer and oversee government programs and activities that are not performed by private establishments.

Source: U.S. Small Business Administration Table of Small Business Size Standards, available at: <https://www.sba.gov/document/support-table-size-standards>, Version March 2023.

Table 2 - Estimated Number of Small Firms by Condition of Use (COU)

Use Category	NAICS of Small Entities ¹	Estimated Number of Affected Facilities (including large businesses)	Estimated Number of Small Firms with Estimated Impacts
Laboratory Use	561990	10	1
Manufacturing	-	2	-
Import/Repackage	-	9	No impacts estimated
Battery Separator Manufacture	326291	4	1
HFC Manufacturing	-	2	-
Intermediate in HCl Production	325193	30	1
Fluoroelastomer Manufacture	-	2	-
Open-Top Vapor Degreasing	333415, 333515, 333612, 333912, 333914, 333921, 333922, 333923, 333924, 333991, 333992, 333993, 333994, 333995, 333996, 333997, 333999, 334416, 334417, 334418, 334419, 334512, 334513, 334515, 335110, 335121, 335122, 335129, 335311, 335312, 335313, 335314, 335921, 335991, 336310, 336320, 336330, 336340, 336350, 336360, 336370, 336390, 336411, 336412, 336413, 336415, 336510, 337127, 339113, 339114, 339910, 339993, 339999, 488190, 811212, 811310	350	276
Enclosed Vapor Degreasing	331210, 331221, 331222, 332721, 332722, 332911, 332912, 332913, 332919, 332991, 332992, 332993, 332994, 332996, 332999	7	6
Conveyorized Vapor Degreasing	331210, 331221, 331222, 331410, 331420, 331491, 331492, 332111, 332112, 332114, 332117, 332119, 332215, 332216, 332710, 332721, 332722	8	6
Web Vapor Degreasing	331110	1	1

Batch Cold Cleaning	324110, 325612, 325992, 327420, 331110, 331210, 332119, 332721, 332811, 332812, 332994, 332999, 334511, 336111, 336214, 336412, 336414, 336415, 336611, 339991, 423510, 493190, 811219, 812332	52	41
Disposal and Recycling	562211, 562920	20	17
Incorporation Into Formulation, Mixture, or Reaction Product	333249, 423830, 325612, 424690, 424690, 424690, 325612, 325120, 424690, 339993, 423840, 325180, 424690, 561499, 325612, 424690	28	16
Mold Release	326211, 326212, 332919, 335220, 336320, 336390, 812332	17	15
Liquid Cleaners and Degreasers	313230, 333514, 334310, 441110, 441120, 451110, 811111, 811112, 811113, 811118, 811121, 811122, 811191, 811198, 811211, 811212, 811213, 811219, 811310, 811411, 811490	11,815	11,574
Aerosol Spray Cleaning/Degreasing	313230, 333514, 334310, 441110, 441120, 451110, 811111, 811112, 811113, 811118, 811121, 811122, 811191, 811198, 811211, 811212, 811213, 811219, 811310, 811411, 811490	4,366	4,277

Lubricants and Greases	332321, 332322, 332323, 332410, 332420, 332431, 332439, 332510, 332613, 332618, 332710, 332721, 332722, 332911, 332912, 332913, 332919, 332991, 332992, 332993, 332994, 332996, 332999, 333111, 333112, 333120, 333131, 333132, 333241, 333242, 333243, 333244, 333249, 333314, 333316, 333318, 333413, 333414, 333415, 333511, 333514, 333515, 333517, 333519, 333611, 333612, 333613, 333618, 333912, 333914, 333921, 333922, 333923, 333924, 333991, 333992, 333993, 333994, 333995, 333996, 333997, 333999, 336111, 336112, 336120, 336211, 336212, 336213, 336214, 336310, 336320, 336330, 336340, 336350, 336360, 336370, 336390, 336411, 336412, 336413, 336414, 336415, 336419, 336510, 336611, 336612, 336991, 336992, 336999, 337124	345	332
Adhesives, Sealants, Paints and Coatings	313210, 313320, 321992, 322220, 324199, 325510, 325520, 325998, 326140, 326150, 326211, 326212, 326220, 326299, 331523, 332321, 332812, 332813, 332993, 332994, 332999, 333515, 333914, 334417, 334511, 335312, 335931, 336211, 336213, 336350, 336360, 336390, 336411, 336415, 336611, 337110, 337121, 337122, 337211, 339113, 339920, 339991, 481111, 928110	65	58
Spot Removers	561740, 812310, 812320	4,980	4,949
Film Cleaner	512110	0	No impacts estimated
Toner Aid	-	0	No impacts estimated
Polish	-	0	No impacts estimated
Pepper Spray	-	-	No impacts estimated
Total		22,113	21,571
¹ See Table 1 for corresponding NAICS descriptions			

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities could also be affected.

For purposes of assessing the impacts of the proposed rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

4. Projected Compliance Requirements, Classes of Small Entities Subject to the Compliance Requirements, and Professional Skills Needed to Comply

A. What are the Projected Compliance Requirements, Including Projected Reporting and Recordkeeping Requirements?

EPA is proposing to prohibit all conditions of use. EPA is proposing longer timeframes (with workplace controls) for prohibitions on certain conditions of use. For the reasons described in Unit VI of the proposed rule, including the high cost of implementing the WCPP and difficulty of achieving the ECEL, EPA notes that long-term implementation of the WCPP is not a feasible means of addressing unreasonable risk and that prohibition of the COUs is ultimately necessary to address the unreasonable risk. Furthermore, when selecting among proposed prohibitions and other restrictions that would apply to those occupational conditions of use, EPA has also factored in considerations relating to health effects on PESS, including older pregnant women (the group identified as most susceptible to fetal cardiac defects), further discussed in Unit IV of the proposed rule. EPA is proposing a WCPP for several conditions of use of TCE in order to address to the extent possible the unreasonable risk during the time period before a

prohibition becomes effective. The conditions of use for which EPA is proposing a WCPP include manufacturing (including import) and processing for uses of TCE that are allowed to continue until eventual prohibition; processing TCE as a reactant/intermediate in the production of HFC-134a; processing TCE where recycled; industrial and commercial use of TCE as a solvent for closed-loop vapor degreasing necessary for human-rated rocket engine cleaning by NASA and its contractors; industrial and commercial use of TCE as a solvent for closed loop batch vapor degreasing for rayon fabric scouring for end use rocket booster nozzle production by Federal Agencies and their contractors; industrial and commercial use of TCE for DoD naval vessels and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems; industrial and commercial use of TCE as a processing aid for battery separator manufacturing; industrial and commercial use of TCE as a laboratory chemical for essential laboratory activities and some research and development activities; emergency industrial and commercial use of TCE in furtherance of National Aeronautics and Space Administration's mission for specific conditions which are critical or essential and for which no technically and economically feasible safer alternative is available; disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works for cleanup projects. The WCPP would include the ECEL, the associated implementation requirements, and may include other components, such as dermal protection. The TCE WCPP would be non-prescriptive, in the sense that regulated entities would not be required to use specific controls prescribed by EPA to achieve the exposure concentration limit. Rather, it would be a performance-based exposure limit that would enable owners or operators to determine how to most effectively meet the exposure limit based on conditions at their workplace.

A central component of the TCE WCPP is the exposure limit. Exposures remaining at or below the ECEL would address any unreasonable risk of injury to health to workers or

occupational non-users (ONU) driven by inhalation exposures for occupational conditions of use in the TSCA 2020 Risk Evaluation. For TCE, EPA is proposing an ECEL of 0.0011 parts per million (ppm) (0.0059 mg/m³) for inhalation exposures to TCE as an 8-hour TWA. EPA acknowledges the challenges of complying with the WCPP due to suitable personal breathing zone monitoring methods to detect TCE air concentration levels at the ECEL, and in the proposed rule, requests comment on using OSHA Method 1001 to set an interim exposure limit. This method involves exposing SKC 575-002 Passive Samplers to workplace air and extracting samples with carbon disulfide. The extracts are analyzed by gas chromatography using flame ionization detection to determine the TCE air concentration.

Where elimination, substitution, engineering controls, and administrative controls are not feasible to reduce the air concentration to or below the ECEL for all potentially exposed persons, EPA is proposing to require implementation of a PPE program in alignment with OSHA's General Requirements for Personal Protective Equipment at 29 CFR 1910.132. Consistent with 29 CFR 1910.132, owners and operators would be required to provide PPE, including respiratory protection and dermal protection selected in accordance with the guidelines described in Unit V. of the proposed rule, that is of safe design and construction for the work to be performed. EPA is proposing to require owners and operators ensure each potentially exposed person who is required by Unit V of the proposed rule to wear PPE to use and maintain PPE in a sanitary, reliable, and undamaged condition. Owners and operators would be required to select and provide PPE that properly fits each potentially exposed person who is required by Unit V of the proposed rule to use PPE and communicate PPE selections to each affected person.

As described further in Unit VI of the proposed rule, EPA believes that long-term implementation of the WCPP for continued use of TCE is not a feasible means of addressing unreasonable risk because, at this time, EPA is not aware of any methods that could reliably

monitor to the low ECEL value real-time on site. Thus, a prohibition may ultimately be necessary to address the unreasonable risk.

EPA is not proposing reporting requirements beyond downstream notification (third-party notifications). Regarding recordkeeping requirements, three primary provisions of the proposed rule relate to recordkeeping. The first is recordkeeping of general records: all persons who manufacture, process, distribute in commerce, or engage in industrial or commercial use of TCE or TCE-containing products must maintain ordinary business records, such as invoices and bills-of-lading related to compliance with the prohibitions, restrictions, and other provisions of the regulation.

The second is recordkeeping related to WCPP compliance: under the proposed regulatory action, facilities complying with the rule through the WCPP would be required to develop and maintain records associated with ECEL exposure monitoring (including measurements, compliance with Good Laboratory Practice Standards, and information regarding monitoring equipment); compliance with the ECEL or lowest achievable exposure level (including the exposure control plan, PPE program implementation, and workplace information and training); PPE compliance (including the exposure control plan, PPE program implementation, basis for specific PPE selection, and workplace information and training); and workplace participation. This would also include recordkeeping related to the exemptions proposed under TSCA section 6(g), which would provide longer compliance dates for entities engaged in specific activities with TCE for which prohibition in the short term would be disruptive to national security or critical infrastructure. To maintain eligibility for the time-limited exemptions, EPA is proposing that owners and operators maintain records demonstrating compliance with the specific conditions of the exemption, including compliance with the WCPP. To support and demonstrate compliance, EPA is proposing that each owner or operator of a workplace subject to the WCPP retain compliance records for five years.

The third is recordkeeping related to the phaseouts for the processing of TCE as an intermediate for the manufacture of HFC-134a (for which each manufacturer of HFC-134a who uses TCE as an intermediate would be required to maintain production volume records demonstrating compliance with setting the baseline and the phaseout) or use as a solvent for closed-loop batch vapor degreasing for rayon fabric scouring (for which each person using TCE would be required to maintain records demonstrating that the end use is for rocket booster nozzle production for Federal agencies and their contractors and would, within five years, be required to maintain records that demonstrate that a final static motor test was completed using an alternative to TCE in the production of rocket booster nozzles for Federal agencies and their contractors).

B. What Classes of Small Entities are Subject to Compliance Requirements?

The small entities that would be potentially directly regulated by this rule are small entities that manufacture (including import), process, distribute in commerce, use, or dispose of TCE, including retailers of TCE for end-consumer uses.

C. What Professional Skills are Needed to Comply?

Entities that would be subject to this proposal that manufacture (including import), process, or distribute TCE in commerce for consumer use would be required to cease under the proposed rule. The entity would be required to modify their Safety Data Sheet or develop another way to inform their customers of the prohibition on manufacture, processing, and distribution of TCE for consumer use. They would also be required to maintain ordinary business records, such as invoices and bills-of-lading, that demonstrate compliance with the prohibitions, restrictions, and other provisions of this proposed regulation. These are all routine business tasks that do not require specialized skills or training.

Entities that use TCE in any industrial and commercial capacity would be required to cease under the proposed rule, with some timeframes for prohibitions longer than others. The

conditions of use for which EPA is proposing longer timeframes until eventual prohibition include manufacturing (including import) and processing for uses of TCE that are allowed to continue until eventual prohibition; processing TCE as a reactant/intermediate in the production of HFC-134a; processing TCE where recycled; industrial and commercial use of TCE as a solvent for closed-loop vapor degreasing necessary for human-rated rocket engine cleaning by NASA and its contractors; industrial and commercial use of TCE as a solvent for closed loop batch vapor degreasing for rayon fabric scouring for end use rocket booster nozzle production by Federal Agencies and their contractors; industrial and commercial use of TCE as a processing aid for battery separator manufacturing; industrial and commercial use of TCE for DoD naval vessels and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems, industrial and commercial use of TCE as a laboratory chemical for essential laboratory activities and some research and development activities; emergency industrial and commercial use of TCE in furtherance of National Aeronautics and Space Administration's mission for specific conditions which are critical or essential and for which no technically and economically feasible safer alternative is available; and disposal of TCE to industrial pretreatment, industrial treatment, or publicly owned treatment works for cleanup projects. Restriction or prohibition of these uses would likely require the implementation of an alternative chemical or the cessation of use of TCE in a process or equipment that may require persons with specialized skills, such as engineers or other technical experts. Instead of developing an alternative method themselves, commercial users of TCE may choose to contract with another entity to do so.

Entities that would be permitted to continue on a time-limited basis until prohibition to manufacture, process, distribute, or use TCE would be required to implement a WCPP and would have to attempt to meet the provisions of the program for continued use of TCE. A

transition to a WCPP may require persons with specialized skills such as an engineer or health and safety professional. Instead of implementing the WCPP, entities that use TCE may choose to contract with another entity to do so. Records would have to be maintained for compliance with a WCPP. While this recording activity itself may not require a special skill, the information to be measured and recorded may require persons with specialized skills such as an industrial hygienist.

5. Are there Other Federal Rules that may Duplicate, Overlap, or Conflict with the Rule?

Because of its health effects, TCE is subject to numerous State, Federal, and international regulations restricting and regulating its use. The following is a summary of the regulatory actions pertaining to TCE; for a full description see the proposed rule and the regulatory appendix in the docket.

EPA has issued numerous rules and notices pertaining to TCE under its various authorities.

Under a Significant New Use Rule (SNUR), (81 FR 20535; April 8, 2016), issued under the authority of TSCA section 5(a), TCE is subject to notifications for manufacture (including import) or processing of TCE for use in a consumer product except for use in cleaners and solvent degreasers, film cleaners, hoof polishes, lubricants, mirror edge sealants and pepper spray. This SNUR ensures that EPA will have the opportunity to review any new consumer uses of TCE and, if appropriate, take action to prohibit or limit those uses.

The TSCA Section 8(a) Chemical Data Reporting (CDR) Rule requires manufacturers (including importers) to give EPA basic exposure-related information on the types, quantities and uses of chemical substances produced domestically and imported into the United States.

TCE manufacturing (including importing), processing, and use information is reported under the CDR rule (76 FR 50816, August 16, 2011).

TCE is a hazardous air pollutant (HAP) under the CAA (42 U.S.C. 7412(b)(1)). Under section 112(d), EPA has established national emission standards for hazardous air pollutants (NESHAPs) for a number of source-specific categories that emit TCE, including synthetic organic chemical manufacturing (40 CFR part 63, subparts F, G, and H z; 59 FR 19402, April 22, 1994), miscellaneous organic chemical manufacturing (40 CFR part 63, subpart FFFF; 85 FR 49084, August 12, 2020), and aerospace manufacturing and rework facilities (40 CFR part 63, subpart GG; 80 FR 76151, December 7, 2015). Under Section 112(d) and 112(f), EPA has promulgated a number of risk and technology review (RTR) NESHAPs, including the RTR NESHAP for Halogenated Solvent Cleaning (40 CFR part 63, subpart T; 72 FR 25138, May 3, 2007). With this proposed rule under TSCA section 6, uses and emissions already regulated under these NESHAPs would be prohibited, with some of these uses identified for a longer timeframe before prohibition under TSCA section 6.

Under the CAA section 612, EPA's Significant New Alternatives Policy (SNAP) program listed TCE as an acceptable substitute for methyl chloroform and chlorofluorocarbon (CFC)-113 in metals, electronics, and precision cleaning; as an alternative to CFC-11, CFC-113, methyl chloroform, and hydrochlorofluorocarbon (HCFC)-141b for aerosol solvent use; and as an alternative for methyl chloroform for use as a carrier solvent in adhesives, coatings, and inks (59 FR 13044, March 18, 1994). TCE was also noted to have essentially no ozone depletion potential and cited as a volatile organic compound (VOC)-exempt solvent and acceptable substitute for ozone-depleting substances (72 FR 30142, May 30, 2007). TCE is also listed under the National Volatile Organic Compound Emission Standards for Aerosol Coatings (40 CFR part 59, subpart E). Under the American Innovation and Manufacturing Act (AIM Act) that directs

EPA to phase down the production and consumption of HFCs, EPA set HFC production and consumption baseline levels from which reductions will be made (86 FR 55116, October 5, 2021). The rule also establishes an initial methodology for allocating and trading HFC allowances for 2022 and 2023. TCE is identified as a feedstock chemical for HFC production, specifically for HFC-134a.

TCE is designated as a toxic pollutant under section 307(a)(1) of the Clean Water Act and as such is subject to effluent limitations. Also under section 304, TCE is included in the list of total toxic organics (TTO) (40 CFR 413.02(i)). In 2015, EPA published updated ambient water quality criteria for TCE, including recommendations for “water + organism” and “organism only” human health criteria for States and authorized tribes to consider when adopting criteria into their water quality standards (80 FR 36986, June 29, 2015). TCE is also subject to National Primary Drinking Water Regulations (NPDWR) under the Safe Drinking Water Act (SDWA) with a maximum contaminant level goal (MCLG) of zero and an enforceable maximum contaminant level (MCL) of 0.005 mg/L (40 CFR 141.50; 40 CFR 141.61).

TCE is listed as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), meaning that releases of TCE in excess of 100 pounds must be reported (40 CFR 302.4).

Under section 3001 of the Resource Conservation and Recovery Act (RCRA), TCE is identified as a characteristic and listed hazardous waste under the following RCRA Hazardous Waste Codes: D040 (Toxicity); F001, F002; and U228 (40 CFR 261.24(b), 261.31(a), 261.33(f)). In 2013, EPA modified its hazardous waste management regulations to conditionally exclude solvent-contaminated wipes that have been cleaned and reused from the definition of solid waste under RCRA and to conditionally exclude solvent-contaminated wipes that are disposed from the

definition of hazardous waste (78 FR 46448, July 31, 2013). However, TCE-contaminated wipes were not eligible for this exclusion due to health and safety concerns.

EPA notes that TCE was first registered as an antimicrobial and conventional chemical in 1985 pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). EPA removed TCE from its list of inert ingredients used in pesticide products in 1998 (63 FR 34384, June 24, 1998).

While TSCA shares equity in the regulation of TCE, EPA does not anticipate this rule to duplicate nor conflict with the aforementioned programs' classifications and associated rules.

In addition to EPA actions, TCE is also subject to other Federal regulations. Under the Occupational Safety and Health Act (OSH Act), the Occupational Safety and Health Administration (OSHA) established the permissible exposure limit (PEL) for TCE at 100 ppm as an 8-hour time-weighted average (TWA) with an acceptable ceiling concentration of 200 ppm and an acceptable maximum peak above the acceptable ceiling concentration for an 8-hour shift of 300 ppm, maximum duration of 5 minutes in any 2 hours (29 CFR 1910.1000). However, EPA recognizes that the existing PEL does not eliminate the unreasonable risk identified by EPA under TSCA, and EPA is therefore proposing prohibitions based on the unreasonable risk identified following the TSCA 2020 Risk Evaluation for TCE, with time-limited requirements to meet to the extent possible a new, lower exposure limit. The implementation of those requirements would align with existing OSHA frameworks for worker protection where possible, including for monitoring, recordkeeping, and measurement methods. For TCE, this approach would eliminate the unreasonable risk EPA has identified, reduce burden for complying with the regulations, and provide the familiarity of a pre-existing framework for the regulated community.

Under the Federal Food, Drug, and Cosmetic Act (FFDCA), the Food and Drug Administration (FDA) established tolerances for residues of TCE resulting from its use as a

solvent in the manufacture of decaffeinated coffee and spice oleoresins (21 CFR 173.290). Under the Atomic Energy Act, the Department of Energy (DOE) Worker Safety and Health Program requires the use of the American Conference of Governmental Industrial Hygienists (ACGIH®) threshold limit value (TLV®) for TCE, which is 10 ppm (8-hour TWA) and 25 ppm Short Term Exposure Limit (STEL). Under the Federal Hazardous Material Transportation Act, the Department of Transportation (DOT) has designated TCE as a hazardous material, and there are special requirements for marking, labeling and transporting it (49 CFR part 171, 49 CFR part 172, 40 CFR 173.202 and 40 CFR 173.242).

6. What are the Potential Economic Impacts on Small Entities?

There are an estimated 21,571 small entities affected by the proposed option with a per firm cost impact of \$8 - \$106,862. Except for vapor degreasing, no cost impacts beyond rule familiarization costs are estimated for users of products that contain TCE who will need to switch to alternative products that do not contain TCE (e.g., TCE aerosol spray cleaners and degreasers). Chapter 5 of the Economic Analysis demonstrates that alternative products with similar costs and efficacy to TCE products are generally available.

Alternative products that are drop-in substitutes (i.e., requiring no changes by the user in how the product is used) were generally available. However, in some cases some effort might be required by firms using TCE products to identify suitable alternatives, test them for their desired applications, learn how to use them safely and effectively, and implement new processes (including adding new equipment when necessary) for using the alternative products. The information to estimate how often these costs might be incurred or what the specific costs would be per-user or per-firm when they are incurred is not available. Therefore, EPA is unable to consider these costs quantitatively in the IRFA or Economic Analysis.

In Chapter 10 of the Economic Analysis, EPA has estimated the costs and small business impacts of the options of WCPP requirements, reformulating products, or switching to a production process that uses alternatives to TCE. This information is summarized below. The estimated per facility annualized costs for small business compliance are summarized in Table 4. The summary of small business impacts is in Table 5 below.

Table 4: Per Firm Annualized Cost Impacts for Small Businesses

Use Category	Estimated per Facility Costs (2022\$ 7% Annualized Costs)	Notes	Proposed Regulation
Laboratory Use	\$4,010	Estimated per-facility unit costs of \$1,153 and per-worker unit costs of \$2,857. One affected worker.	Prohibition with time-limited exemption for industrial and commercial use as a laboratory chemical for essential laboratory activities and some research and development activities with WCPP
Battery Separator Manufacture	\$106,862	Estimated per-facility unit costs of \$1,425 and per-worker/ONU unit costs of \$3,321. 17 affected workers and 8 affected ONUs.	Time-limited exemption for industrial and commercial use as a processing aid for battery separator manufacturing with WCPP
Intermediate in HCl Production	\$64,532	Estimated per-facility unit costs of \$1,425 and per-worker unit costs of \$3,321. 19 affected workers.	Prohibition
Vapor Degreasing Use Categories	\$87,206		Prohibition
Incorp. into.: Mold Release	\$61,637	1 firm with 11 products reformulated	Prohibition
	\$11,207	1 firm with 2 products reformulated	Prohibition
Incorp. into.: Liquid Cleaners and Degreasers	\$11,207	1 firm with 2 products reformulated	Prohibition
Incorp. into.: Aerosol Spray Cleaning/Degreasing	\$5,603	4 firms with 1 product reformulated	Prohibition
	\$16,810	1 firm with 3 products reformulated	Prohibition
Incorp. into.: Adhesives, Sealants, Paints, and Coatings	\$5,603	1 firm with 1 product reformulated	Prohibition
	\$16,810	1 firm with 3 products reformulated	Prohibition
	\$44,827	1 firm with 8 products reformulated	Prohibition

Incorp. into.: Lubricants and Greases	\$5,603	4 firms with 1 product reformulated	Prohibition
Incorp. into.: Spot Removers	\$5,603	1 firm with 1 product reformulated	Prohibition

Table 5 - Summary of Small Business Impacts

Use Category	Number of Small Firms	Number and Percent of Firms by Cost-Revenue Impact Threshold		
		<1%	1-3%	>3%
Laboratory Use	1	1 (100%)	-	-
Battery Separator Manufacture	1	1 (100%)	-	-
Intermediate in HCL Production	1	1 (100%)	-	-
Vapor Degreasing and Batch Cold Cleaning Uses	330	149(45%)	88 (27%)	93 (28%)
Incorporation Into Formulation, Mixture, or Reaction Product	16	16 (100%)	-	-
Disposal and Recycling	17	7 (41%)	10 (59%)	-
Mold Release	15	15 (100%)	-	-
Liquid Cleaners and Degreasers	11,574	11,574 (100%)	-	-
Aerosol Spray Cleaning/Degreasing	4,277	4,277 (100%)	-	-
Lubricants and Greases	332	332 (100%)	-	-
Adhesives, Sealants, Paints and Coatings	58	58 (100%)	-	-
Spot Removers	4,949	4,949 (100%)	-	-
Total	21,571	21,380 (99.1%)	98 (0.5%)	93 (0.4%)

7. Minimization of Economic Impacts on Small Entities Consistent with Statutory Objectives, and Consideration of Alternatives

A. Small Business Advocacy Review Panel

As required by section 609(b) of the RFA, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), EPA conducted outreach to small entities and convened a Small Business Advocacy Review Panel on January 31, 2023, to obtain advice and recommendations of representatives of the small entities that potentially would be subject to the rule's requirements. The Panel solicited input on all aspects of these proposed regulations. Four potentially impacted small entities served as small-entity representatives (SERs) to the Panel,

representing a broad range of small entities from diverse geographic locations. The Panel Report was signed on April 4, 2023.

Consistent with the RFA/SBREFA requirements, the Panel evaluated the assembled materials and small-entity comments on issues related to elements of the IRFA. It is important to note that the Panel's findings and discussion were based on the information available at the time the final report was prepared. EPA has continued to conduct analyses relevant to the proposed rule, and additional information may be developed from public comment on the proposed rule. The Panel recommended that:

1. With respect to the possible establishment of an Existing Chemical Exposure Limit, the Panel recommends that EPA consult and communicate with OSHA to clearly explain respective regulatory requirements applicable to workers and workplaces who must comply with standards set by both agencies, and to minimize confusion by aligning definitions, reporting intervals, and other requirements where possible. In addition, EPA and OSHA should communicate on implementing or sharing information in instances of duplicative regulatory requirements, such as record keeping or monitoring. EPA should also provide clear and specific guidance for complying with any potential ECEL. The Panel recommends that EPA request public comment in the notice of proposed rulemaking (NPRM) on the extent to which a regulation under TSCA section 6(a) could minimize requirements, such as testing and monitoring protocols, recordkeeping, and reporting requirements, which may exceed those already required under OSHA's regulations for TCE.
2. The Panel recommends that EPA continue to engage with Federal partners to work towards establishing a policy on its relationships to other Federal laws administered by EPA and/or other Federal agencies to ensure transparency and that the statutory

- obligations under TSCA to address the unreasonable risk are met. Specifically, the panel recommends that EPA describe in its communications materials relating to the proposed rule a crosswalk to similar relevant OSHA regulations and a crosswalk of any final regulations to similar relevant pre-existing regulations, as part of required small entity compliance guides (as in the case of OSHA PELs and EPA ECELS).
3. The Panel recommends that EPA provide and request comment in the NPRM on reasonable compliance timeframes for small businesses. Specifically, the Panel recommends that EPA request comment on whether and how to provide longer compliance timeframes for transitioning to alternatives for uses requiring reformulation and cleaning processes for cleaning parts for national defense or cleaning medical devices. As part of this effort, the Panel recommends that EPA consider compliance timelines based on the expected availability of technically and economically feasible alternatives, as well as any information that could be provided by other agencies that set requirements for certification or standards relevant to degreasing, parts cleaning, or other uses of TCE. The Panel also recommends that EPA request comment in the NPRM on differing compliance or reporting requirements or timetables that account for the resources available to small entities. Additionally, the Panel recommends that EPA consider reasonable compliance timeframes for prohibitions or phase-outs on use of TCE for vapor degreasing and other uses, in response to SER input and other appropriate factors, such as the lifespan of equipment, and capital costs for new equipment. In addition, the Panel recommends that EPA take comment on any additional appropriate factors for identifying reasonable compliance timeframes and how to weigh the factors for vapor degreasing and other industries.

4. The Panel recommends that EPA provide readily available information on potential costs that could be incurred using strategies to meet requirements for any proposed ECEL, such as engineering, administrative, or prescriptive controls (e.g., use of specialized ventilation systems, add-ons to equipment to reduce emissions, cost of new equipment, etc.), as they apply to each relevant COU. The Agency should also provide its analysis on whether it is feasible to implement these strategies for the regulated entities. The Panel further recommends that EPA request public comment in the NPRM about the feasibility of entities complying with and monitoring for a potential ECEL of either 4.0 ppb or 1.1 ppb. Specifically, regarding the public comment request, the panel recommends that EPA aim to obtain more information on potential costs that could be incurred using strategies to meet the requirements of such a standard, such as engineering, administrative, or prescriptive controls and how feasible it would be for entities to implement these strategies in their operations.
5. The Panel recommends that EPA provide details and request public comment in the NPRM about the feasibility of use of alternatives to TCE and their availability for conditions of use that EPA evaluated in reaching its conclusion that TCE presents unreasonable risk. Specifically, the Panel recommends that EPA provide, to the extent practicable, costs for the use of alternatives and information on the hazard profile of the alternatives. The Panel recommends that EPA should ensure that entities, with emphasis on small entities, are provided as much information as is available to the Agency about suitable alternatives for these conditions of use, potentially through the form of information generated as part of the rulemaking process (such as an alternatives assessment). Additionally, the Panel recommends that EPA describe in the NPRM known problems and/or risks with available alternatives including those

- indicated by the SERs, such as flammability, toxicity, and water limitations due to drought.
6. The Panel recommends that EPA provide an analysis for each use identified by SERs that would be subject to prohibition to demonstrate whether technically and economically feasible alternatives to TCE that benefit health or the environment, compared to the use proposed to be prohibited or restricted, would be reasonably available as a substitute when the proposed prohibition or other restriction takes effect.
 7. The Panel recommends that EPA consider and request comment in the NPRM on a training and certification program for a commercial user to obtain a TCE-containing product from a retailer, such as industrial supply stores or online retailers.
 8. The Panel recommends that EPA provide an explanation of consideration for providing an exemption under TSCA section 6(g) for the Department of Defense, National Aeronautical and Space Administration, and Federal Aviation Administration-related and aviation uses, such as vapor degreasing for parts in aerospace vehicles. In addition, the Panel recommends that EPA engage, as appropriate, with relevant agencies.
 9. The Panel recommends that EPA consider and request public comment in the NPRM on a *de minimis* level in the case of an impurity or trace amounts of TCE in products.
 10. The Panel recommends that EPA request comment on whether to allow the use of TCE by entities that could, based on demonstrated ability through monitoring data, meet the ECEL under a workplace chemical protection program.
 11. The Panel recommends that EPA discuss the concerns regarding availability of feasible alternatives that could be subject to market forces that may impact

- availability of alternatives (e.g., certain fluorinated chemicals) or potentially be subject to future EPA regulations. The panel recommends that EPA request public comment on how the rulemaking should consider TCE alternatives in light of ongoing regulatory scrutiny.
12. The panel recommends that EPA's RFA and cost-benefit analyses consider the impact of excluding, as viable alternatives, any chemicals identified by the Agency as part of the TSCA risk evaluation process as presenting an unreasonable risk of injury to health or the environment. The Panel recommends that EPA request comment on whether these chemicals as well as chemicals undergoing risk evaluation would be likely to be considered as viable alternatives and, if so, in which circumstances.
 13. The Panel recommends that EPA request public comment in the NPRM on potential challenges associated with monitoring TCE below 4 ppb and 1 ppb.
 14. The Panel recommends that EPA request public comment in the NPRM on whether the use of TCE in a closed-loop vapor degreasing system, when combined with requirements of a potential workplace chemical protection program, could meet the ECELS for TCE.

B. Alternatives considered

EPA analyzed alternative regulatory approaches to identify which would be feasible, reduce burden to small businesses, and achieve the objective of the statute (i.e., applying one or more requirements list in TSCA section 6(a) to the extent necessary so that the chemical substance or mixture no longer presents an unreasonable risk.) As described in more detail in Unit VI of the proposed rule, EPA considered several factors, in addition to identified unreasonable risk, when selecting among possible TSCA section 6(a) requirements. To the extent practicable, EPA factored into its decisions: the effects of TCE on health and the environment,

the magnitude of exposure to TCE of human beings and the environment, the benefits of TCE for various uses, and the reasonably ascertainable economic consequences of the rule. EPA also considered input provided by the SERs in selecting among possible TSCA section 6(a) requirements as part of the proposed regulatory action and alternative regulatory action, particularly as it related to specific uses of TCE for vapor degreasing. As part of this analysis, EPA considered – in addition to the prohibitions described earlier - a wide variety of control measures to address the unreasonable risk from TCE such as a WCPP, weight fractions, a certification and limited access program, and prescriptive controls. EPA’s analysis of these risk management approaches is detailed in Unit VI.A.3. of the proposed rule. In general, EPA determined that these approaches alone would either not be able to address the unreasonable risk, or, in the case of a weight fraction limit, would result in a product containing so little TCE that it would have the effect of a prohibition.

Weight Fractions: As discussed in Unit VI.A.3 of the proposed rule, EPA considered limiting the weight fraction of TCE in industrial/commercial and consumer products. However, because TCE is the main constituent (e.g., cleaning component) of the majority of TCE-containing product formulations and EPA understands that decreasing the concentration of TCE decreases the efficacy of the product, a requirement to reduce the weight fraction or concentration of TCE to address the unreasonable risk would result in a concentration of TCE that would not likely serve its functional purpose in the formulation. EPA thus concluded that a weight fraction limit would essentially function as a prohibition yet with a greater amount of uncertainty regarding compliance and no increased benefit to users; it was therefore not a preferred option.

Point-of-sale self-certification: As discussed in Unit VI.A.3 of the proposed rule, EPA also examined the extent to which a point-of-sale self-certification requirement in order to

purchase and subsequently use TCE would further ensure that only facilities able to implement and comply with a WCPP or prescriptive controls are able to purchase and use TCE, and self-certify to that. Under a self-certification requirement, entities would submit a self-certification to the distributor or retailer each time TCE is purchased. The self-certification would consist of a statement indicating that the facility is implementing a WCPP or required prescriptive controls to control exposures to TCE; the self-certification would be signed and presented by a person authorized to do so by the facility owner or operator. Copies of the self-certification would be maintained as records by both the owner or operator and the distributor or retailer where TCE was purchased. However, a point-of-sale self-certification is not a viable option for this proposed rulemaking. Given the eventual full prohibition of TCE and the significant investments users may have to make toward establishing a WCPP, EPA does not believe it would be practicable to add an additional burden of implementing a limited access program. As such, EPA is not proposing a self-certification requirement as an additional component of the requirements for addressing the unreasonable risk of occupational exposures to TCE. In the proposed rule, EPA is requesting comment on whether to include point-of-sale self-certification or other administrative controls, to address the unreasonable risk of TCE, in particular for facilities with occupational exposures to TCE that may not be able to meet the WCPP requirements of this proposed rulemaking.

Prescriptive controls: As discussed in Unit VI.A.3 of the proposed rule, EPA considered prescriptive controls (i.e., engineering or administrative controls, or PPE) to reduce exposures to TCE in occupational settings. Prescriptive requirements would be supported by information in the 2020 Risk Evaluation for TCE. However, as described in Unit III.A.1. and 2 of the proposed rule, EPA received input during required consultations and additional stakeholder engagement that regulatory options that align with the hierarchy of controls (i.e., elimination and substitution

of hazards in the workplace) should be preferred over prescriptive controls (which alternatively could be accomplished through the implementation of a WCPP with a risk-based exposure limit). Inadequacy of engineering, administrative, and personal protective equipment control measures to lower exposure below the exposure limit would mean that elimination or substitution would be the only viable methods of addressing unreasonable risk. Additionally, the WCPP approach EPA is considering under the proposed and alternative action is a more flexible approach as prescriptive controls present significant uncertainties related to their feasibility, given the site-specific operations and variable configurations, and need for consistency of proper use.

EPA determined that such controls (i.e., engineering or administrative controls, or PPE) may not be able to eliminate unreasonable risk for some conditions of use when used in isolation. In the 2020 Risk Evaluation for TCE, many conditions of use still drive unreasonable risk even with the application of air-supplied respirators with an assigned protection factor (APF) 50. Reasonably available data indicated additional uncertainty regarding the feasibility of exposure reductions through engineering controls alone, considering the unique closed-system processes already in place. For occupational conditions of use, prohibitions (rather than prescribed controls) would be more appropriate to ensure the elimination of unreasonable risk of TCE. Nevertheless, EPA determined that a WCPP, including requirements for an ECEL (which would be accompanied by monitoring requirements) in tandem with the implementation of engineering controls, administrative controls, and/or PPE, as appropriate, would be necessary for reducing exposures to TCE prior to the effective date of the proposed prohibition.

Additionally, in the proposed rule preamble and the Economic Analysis for the proposed rule, EPA examined a primary alternative regulatory action. The primary alternative regulatory action described in the proposed rule and considered by EPA combines prohibitions and requirements for a WCPP in order to address to the extent possible unreasonable risk from TCE

conditions of use that EPA evaluated. While in some ways it is similar to the proposed regulatory action, the primary alternative regulatory action described in the proposed rule differs from the proposed regulatory action by providing longer timeframes for prohibitions and by describing requirements for an ECEL of 0.0040 ppm (rather than 0.0011 ppm) based on a different health endpoint (i.e., immunotoxicity), as part of the WCPP, for the conditions of use of TCE that would be permitted to continue for longer than 1 year after publication of the final rule until the effective date of those prohibitions. The primary alternative regulatory action was considered and found to provide greater uncertainty in addressing the unreasonable risk from TCE under the conditions of use, resulting in EPA's proposed action. Estimated costs of the primary alternative regulatory action can be found in Chapter 7 of the Economic Analysis for the proposed rule and analysis on small entity impacts is in Chapter 10 of the Economic Analysis.

As indicated by this overview and detailed in Unit VI.A of the proposed rule, in the review of alternatives, EPA determined that some methods either did not effectively eliminate the unreasonable risk presented by TCE or, for many conditions of use, there was a high degree of uncertainty regarding whether compliance with a comprehensive WCPP would be possible to adequately protect potentially exposed persons. While EPA is soliciting comments about all aspects on the alternative regulatory actions, which may be incorporated into the final rulemaking, EPA has considered the primary alternative regulatory action and found that the proposed action is more suitable for addressing the unreasonable risk to the extent necessary so that TCE no longer presents such risk, while also allowing flexibility for regulated entities to continue operations under time-limited exemptions, as described in more detail in Unit V.A. and VI.A of the proposed rule.

EPA considered its authority under TSCA section 6(g) to grant a time-limited exemption for conditions of use where compliance with a requirement would significantly disrupt the national

economy, national security, or infrastructure. As described in Units V.A.3. and V.B.3. of the proposed rule, based on reasonably available information, EPA analyzed the need for an exemption and is proposing five exemptions under TSCA section 6(g), for industrial and commercial use of TCE as a processing aid for battery separator manufacturing (lead acid and lithium battery separators), for industrial and commercial use of TCE as a solvent for closed-loop vapor degreasing necessary for human-rated rocket engine cleaning by NASA and its contractors, for industrial and commercial use of TCE for DoD naval vessels and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems, for laboratory use for essential laboratory activities and some research and development activities, and for 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. EPA has also found that an exemption under TSCA section 6(g) may be warranted under the primary alternative regulatory action for two additional uses: for industrial and commercial use of TCE in batch vapor degreasing for essential aerospace parts and components and narrow tubing in medical devices and for the industrial and commercial use of TCE as a processing aid in the manufacturing of specialty polymeric microporous sheet materials. A section 6(g) exemption may mean that the unreasonable risk will not be fully addressed. EPA's analysis of the needs for these exemptions and the details of the proposed exemptions, as well as details of the exemptions considered under the primary alternative regulatory action, are in Unit V.A.3 and Unit V.B.3. of the proposed rule.

As required under TSCA section 6(c)(2)(C) and detailed in Unit VI.B. of the proposed rule, EPA also considered to the extent practicable whether technically and economically feasible alternatives that benefit human health or the environment, compared to the use so proposed to be prohibited or restricted, will be reasonably available as a substitute when the

proposed prohibition or other restriction takes effect. To that end, in addition to the Economic Analysis, EPA conducted an Alternatives Assessment, using reasonably available information. For this assessment, EPA identified and analyzed alternatives to TCE in products relevant to industrial, commercial, and consumer conditions of use. Based on reasonably available information, including information submitted by industry, EPA understands viable alternatives to TCE may not be available for several conditions of use—for example, use of TCE as a processing aid for battery separator manufacturing—and considered that information to the extent practicable in the development of the regulatory options.

Regarding timeframes for compliance, as described in Unit V.A.1, 2, and 3 of the proposed rule, the proposed compliance dates incorporate EPA’s consideration of sustained awareness of risks resulting from TCE exposure, precedent established by the OSHA standards (62 FR 1494, January 10, 1997), and information provided by stakeholders, including during the SBAR process. TSCA requires that EPA propose timeframes that are “as soon as practicable” under TSCA section 6(d)(1)(B) and 6(d)(1)(D). EPA has no information indicating that the proposed compliance dates are not practicable for the activities that would be prohibited, or that additional time is needed for products affected by the proposed restrictions to clear the channels of trade. TSCA section 6(d)(1)(C) also requires that EPA specify mandatory compliance dates for the start of ban or phase-out requirements “as soon as practicable” but not later than five years after the promulgation date of a rule. In developing the proposed compliance timeframes, EPA considered reasonably available information. Flexibilities EPA considered and adopted in the proposed rule include a compliance date for prohibitions on industrial and commercial use of TCE in open-top and closed-loop vapor degreasing that is later than other prohibitions on industrial and commercial use of TCE (including a longer 10-year phaseout on the industrial and commercial use of TCE as a solvent for closed-loop batch vapor degreasing for rayon fabric

scouring for rocket booster nozzle production). EPA recognizes that industrial and commercial use of TCE 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 is a highly specific use with a uniquely long qualification process for alternatives. EPA is also proposing a phaseout over 8.5 years for processing TCE as an intermediate for the manufacture of HFC-134a (1,1,1,2-Tetrafluoroethane; CAS Number 811-97-2). EPA understands that additional time may be necessary for certain processing and industrial and commercial conditions of use to achieve a full prohibition, including the need for upstream manufacturing, processing, and distribution in commerce for those uses to continue to ensure availability for the supply chain. In particular, EPA recognizes that processing TCE as a reactant/intermediate often takes place in unique closed-systems, and facilities processing TCE may need additional time to transition to adjust the physical plant design to accommodate an alternative manufacturing process or chemical substance and avoid significantly disrupting the supply chain. Details of these proposed longer compliance timeframes are in Unit V.A.1.b., d., and e., of the proposed rule, with EPA's rationale provided in Unit VI.A.1.a. of the proposed rule.

As noted in the proposed rule, EPA is seeking public comment on whether additional time is needed for compliance with prohibitions, for products to clear the channels of trade, or for implementing a WCPP. EPA may finalize shorter or longer compliance timeframes based on public comment. Regarding potential regulatory flexibilities for compliance dates and timeframes, EPA notes that the alternative regulatory action would include longer compliance timeframes for prohibitions. Given the potential severity of impacts from exposure to TCE, EPA's proposed regulatory action would include relatively rapid compliance timeframes. However, it is possible that longer timeframes would be needed for entities to come into compliance; therefore, the primary alternative regulatory action described in the proposed rule

would include longer timeframes for implementation than the proposed regulatory action. These timeframes are detailed in Unit V.B of the proposed rule. Estimated costs for both the primary and alternative regulatory actions can be found in Chapter 7 of the Economic Analysis.