



December 15, 2023

To: Environmental Protection Agency

Re: Trichloroethylene (TCE); Regulation Under the Toxic Substances Control Act (TSCA), 88 Fed. Reg. 74712 (proposed Oct. 31, 2023) (Docket No. EPA–HQ–OPPT–2020–0465)

The Institute for Policy Integrity at New York University School of Law (Policy Integrity)¹ respectfully submits the following comments to the Environmental Protection Agency (EPA) regarding its proposed restrictions (Proposed Rule) on the manufacture, processing, and distribution of trichloroethylene (TCE).² Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decision-making through advocacy and scholarship in the fields of administrative law, economics, and public policy. Our comments focus on the Economic Analysis³ that EPA prepared to satisfy its obligations under both Section 6(c)(2) of the Toxic Substances Control Act (TSCA), which requires EPA to assess “the reasonably ascertainable economic consequences” of regulations issued under the Act,⁴ and Executive Order 12,866, which requires executive agencies to estimate the costs and benefits of significant regulatory actions.⁵

Under TSCA, if EPA determines that a chemical poses an “unreasonable risk of injury to health and the environment,”⁶ the agency must regulate at least “to the extent necessary so that the chemical substance or mixture no longer presents such risk.”⁷ EPA determined in 2020 that TCE presents an unreasonable risk under certain conditions of use (COUs),⁸ and the agency is now statutorily obligated to eliminate this risk.

¹ This document does not purport to represent the views, if any, of New York University School of Law, if any.

² Trichloroethylene (TCE); Regulation Under the Toxic Substances Control Act (TSCA), 88 Fed. Reg. 74712 (proposed Oct. 31, 2023) (to be codified at 40 C.F.R. pt. 751) [hereinafter Proposed Rule].

³ EPA, ECONOMIC ANALYSIS OF THE PROPOSED REGULATION OF TRICHLOROETHYLENE UNDER TSCA SECTION 6(A) (2023), <https://www.regulations.gov/document/EPA-HQ-OPPT-2020-0642-0178> [hereinafter ECONOMIC ANALYSIS].

⁴ 15 U.S.C. § 2605(c).

⁵ Exec. Order No. 12,866, 58 Fed. Reg. 51735 (Oct. 4, 1993), as amended by Exec. Order No. 14,094, 88 Fed. Reg. 21879 (Apr. 11, 2023).

⁶ 15 U.S.C. § 2605(b)(4).

⁷ *Id.* § 2605(a).

⁸ EPA, RISK EVALUATION FOR TRICHLOROETHYLENE (TCE) 41–43 (2020), https://www.epa.gov/sites/default/files/2020-11/documents/1._risk_evaluation_for_trichloroethylene_tce_casrn_79-01-6.pdf.

Accordingly, EPA need not find that the Proposed Rule’s monetized benefits outweigh its monetized costs before proceeding to finalization. Nevertheless, aspects of the agency’s Economic Analysis could be clarified or expanded upon to better inform policymakers and the broader public about the benefits of ending TCE use. To that end, we recommend the following:

- EPA should consider conducting a break-even analysis focused on the Proposed Rule’s potential to reduce the incidence of congenital heart disease (CHD).
- EPA should consider conducting a break-even analysis focused on the Proposed Rule’s potential to reduce the need for future remediation of soil and groundwater contamination.
- EPA should use a 2% discount rate, as recommended in the 2023 update to Circular A-4, to calculate the present value of the Proposed Rule’s expected benefits and costs.
- EPA should acknowledge potential benefits from reducing the need for personal protective equipment (PPE) in some workplaces.

I. EPA Should Consider Conducting a Break-even Analysis Focused on the Proposed Rule’s Potential to Reduce the Incidence of CHD.

EPA acknowledges “evidence of a positive association” between TCE exposure and CHD and cites estimates of annual hospitalization costs for individuals with CHD.⁹ But the agency declines to quantify the CHD-related benefits of the Proposed Rule due to uncertainty regarding the number of pregnant women who, absent the Proposed Rule, would be exposed to TCE during the critical window for fetal development.¹⁰ Because these “non-monetized benefits . . . are likely to be important,” EPA should consider conducting a break-even analysis.¹¹

A break-even analysis “asks what magnitude non-monetized benefits . . . would need to have for the regulation at issue to yield positive net benefits.”¹² Here, EPA could calculate how many cases of CHD would have to be avoided for the Proposed Rule’s monetized benefits to exceed its monetized costs. The agency could then discuss whether the Proposed Rule can reasonably be

⁹ ECONOMIC ANALYSIS, *supra* note 3, at 8-37 to 8-38.

¹⁰ *Id.* at 8-38.

¹¹ OFF. OF MGMT. & BUDGET, CIRCULAR A-4: REGULATORY ANALYSIS 47 (2023), <https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4.pdf> [hereinafter REVISED CIRCULAR A-4].

¹² *Id.*

expected to avoid that many cases—given reasonable assumptions about the extent to which TCE increases CHD risk¹³ and the amount of TCE exposure avoided by the rule.¹⁴

II. EPA Should Consider Conducting a Break-even Analysis Focused on the Proposed Rule's Potential to Reduce Soil and Groundwater Remediation Costs.

TCE is “frequently found at Superfund sites as a contaminant in soil and groundwater.”¹⁵ Remediating such sites is extremely costly.¹⁶ By banning TCE without exception for most COUs, the Proposed Rule can be expected to reduce the number of TCE-contaminated sites that will be created in the future and, in turn, reduce future remediation expenditures. Accordingly, as with CHD, EPA should consider conducting a break-even analysis focused on this regulatory effect.

III. EPA Should Use the Revised Circular A-4's Recommended 2% Discount Rate When Calculating the Expected Benefits and Costs of the Proposed Rule.

EPA should update its cost and benefit calculations to reflect a 2% discount rate, as recommended in the recently revised Circular A-4.¹⁷ Though agencies are not obligated to follow the new guidance until January 1, 2025, OMB recommends that they do so earlier “[t]o the extent feasible and appropriate.”¹⁸

If EPA instead continues to use the 3% and 7% discount rates from the 2003 version of Circular A-4,¹⁹ the agency should place greater emphasis on net benefits estimates under the 3% rate. A large body of economics research has found that discount rates of 3% or below are more

¹³ See, e.g., Jennifer S. Yauck et al., *Proximity of Residence to Trichloroethylene-Emitting Sites and Increased Risk of Offspring Congenital Heart Defects among Older Women*, 70 BIRTH DEFECTS RSCH. 808, 811–12 (2004) (finding “a three-fold increase in risk of CHD among infants” whose mothers resided within 1.32 miles of a TCE-emitting facility during pregnancy); Steven P. Forand et al., *Adverse Birth Outcomes and Maternal Exposure to Trichloroethylene and Tetrachloroethylene Through Soil Vapor Intrusion in New York State*, 120 ENV'T HEALTH PERSP. 616, 620 (2012) (finding that infants of mothers living in an area that had experienced a TCE spill were twice as likely to have CHDs, and almost five times as likely to have conotruncal heart defects, as infants of mothers in nonexposed areas).

¹⁴ See ECONOMIC ANALYSIS, *supra* note 3, at 8-38 (estimating that “approximately 976 pregnant workers and [occupational nonusers] annually . . . may potentially benefit from a reduced risk of CHD resulting from reduced TCE exposure”). EPA should similarly be able to estimate the number of pregnant women annually who live within 1 mile of a TCE facility. See *id.* at 10-20 (describing demographics of communities within 1, 3, and 5-mile radii of facilities that manufacture, emit, and/or release TCE).

¹⁵ EPA, *Vapor Intrusion at Superfund Sites* (last updated Jan. 17, 2023), <https://www.epa.gov/vaporintrusion/vapor-intrusion-superfund-sites>.

¹⁶ Michael Greenstone & Justin Gallagher, *Does Hazardous Waste Matter? Evidence from the Housing Market and the Superfund Program*, 123 Q. J. ECON. 951, 977 (2008) (estimating an average cleanup cost of \$43 million for Superfund sites).

¹⁷ See REVISED CIRCULAR A-4, *supra* note 11, at 75–81.

¹⁸ *Id.*

¹⁹ See OFF. OF MGMT. & BUDGET, CIRCULAR A-4: REGULATORY ANALYSIS at 33–34 (2003), <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf>.

appropriate when assessing the present value of benefits that accrue over a long period of time.²⁰ Here, due to the long latency period for relevant cancers, many of the Proposed Rule’s benefits will accrue several decades after its promulgation.

IV. EPA Should Acknowledge Potential Benefits from Reducing the Need for PPE Use in Some Workplaces

EPA notes that implementing a respirator program to comply with the Proposed Rule’s Workplace Chemical Protection Program requirements could reduce productivity because “[r]espirators have been found to interfere with many physiological and psychological aspects of task performance.”²¹ For the same reasons, workplaces that currently rely on respirators but that will instead cease TCE use under the Proposed Rule could experience *increased* worker comfort and productivity. EPA should acknowledge these potential benefits of the Proposed Rule.

Respectfully,

Jack Lienke
Max Miller
Gunnar Stanke
Tyler Szeto

²⁰ See, e.g., COUNCIL OF ECONOMIC ADVISORS, DISCOUNTING FOR PUBLIC POLICY: THEORY AND RECENT EVIDENCE ON THE MERITS OF UPDATING THE DISCOUNT RATE 2 (2017); Moritz A. Drupp et al., *Discounting Disentangled*, 10 AM. ECON. J. ECON. POL’Y 109, 118 (2018) (finding that experts on social discounting recommend, on average, a social discount rate of 2% when assessing the present value of benefits that accrue over long timeframes); Qingran Li & William A. Pizer, *Use of the Consumption Discount Rate for Public Policy over the Distant Future*, 107 J. ENV’T ECON. MGMT. 1, 9 (2021) (finding that the range of appropriate discount rates narrows to around 3% when examining time horizons of 20 years or longer).

²¹ ECONOMIC ANALYSIS, *supra* note 3, at 7-54.