

U.S. EPA Webinar on Proposed Regulation of Trichloroethylene under the Toxic
Substance Control Act (TSCA)

Transcript

Tuesday, November 14, 2023

Commencing at 1:00 p.m. Eastern Daylight Time (EDT)

Sheerin Shirajan (ICF): Hello and welcome to the U.S. EPA webinar on the proposed rulemaking of trichloroethylene. We will get started shortly. Next slide. If you're having trouble with Zoom and are using the desktop app, please check your settings. If you're using a browser, we recommend either restarting or opening it with Google Chrome. For general questions on the rule, please email EPA at TCE.TSCA@epa.gov. If you have any technical questions, please utilize the Q&A chat box or email us at EPARulemaking@icf.com.

All attendees are pre-muted. Note that the public remarks session will take place after the presentation. Attendees who requested to make public remarks and who are present will be taken off of mute one at a time and given three minutes to provide their remarks. More information regarding this session will be provided later in the webinar. The chat will be used for broadcast messages only. Please refer to the Q&A button on your Zoom dashboard to submit technical questions. Please also ensure your full name and affiliation are correct. If your name on Zoom does not align with your name at registration, please reach out to EPARulemaking@icf.com with your name as it currently appears in Zoom and the email address that you registered with. This will ensure that you're still able to provide your remarks.

The ASL and CLT interpreters will have their camera turned on through the entirety of the webinar and will be pinned to the top left corner of your screen. The closed captions have been turned on and should be displayed at the bottom of your screen. Click and drag the captions to move their position in the meeting window. If you wish to hide these captions, move your cursor down to the meeting controls and hide captions icon on the right-hand side of the Zoom dashboard.

An email before this webinar and following will be in your inbox from EPARulemaking@icf.com. These emails include details regarding accessing the presentation slides. If you do not see communications from this email, please check your spam. This webinar is being recorded and will be available along with the presentation slides after the webinar has concluded. Please use the links posted in the chat to access these materials. Please note that the comment period for the proposed rule will close on December 15th. Submit comments at EPA-HQ-OPPT-2020-0642. Please use the links in the chat to access this rule. And with that, I'll pass it on to Sheila Canavan for opening remarks.

Sheila Canavan (EPA): Good afternoon, everyone. Thank you for being with us. I'm going to turn it to Joel Wolf now. I'm sorry, my computer just had like a complete freeze up and all my notes are not here, but I want to thank you so much for being here and for listening to our presentation on the trichloroethylene rulemaking that we've proposed.

Joel Wolf (EPA): Good afternoon, everyone and welcome. My name is Joel Wolf and I'm the branch chief in the Existing Chemical Risk Management Division in EPA's Office of Pollution Prevention and Toxics. We are excited to be here today to talk to you about the trichloroethylene risk management rule. This proposed rule on trichloroethylene will demonstrate EPA's commitment to the risk management of existing chemicals. As many of you are aware, the Toxic Substance Control Act or TSCA requires us at EPA to address unreasonable risk from chemical substances to the extent that they are no longer unreasonable to human health or the environment.

Our unreasonable risk findings on TCE stem from risks of human health effects, resulting from inhalation or dermal exposure to this chemical. These well-documented effects include risks of liver cancer, kidney cancer, and non-Hodgkin's lymphoma, as well as damage to the central nervous system, liver, kidneys, immune system, and reproductive organism. TCE also presents risks for fetal development. These risks are present even at very small concentrations of TCE, and for a wide variety of conditions of use of TCE, including not only manufacturing, processing, and heavy-duty industrial uses, but also commercial uses such as degreasing and numerous consumer uses such as furniture care, automotive care, and household degreasers. As a result, we have proposed to prohibit all uses of TCE. Most uses would be banned within one year of finalization of this proposed rule. For those that are critical and essential or need longer transition time periods, such as

refrigerant and electric vehicle batteries manufacturer, we are proposing longer phaseout periods paired with strict worker protections.

During these prolonged phase-out periods, EPA would require facilities to comply with the Workplace Chemical Protection Program or WCPP, that uses a familiar exposure management framework to protect workers in these industries combined with a new low risk-based exposure limit. The key element to note here is that we understand and do recognize that in some situations TCE is a very important chemical. And while EPA is proposing prohibitions of all uses, our proposal also aims to find ways to allow appropriate timeframes for reasonable transition for key uses until alternatives can be implemented, while instituting workplace controls for workers. We have based this proposed rule on the extensive risk evaluation for TCE, published in November 2020, and the revised unreasonable risk determination in January 2023.

Many of you may have attended the webinar in December 2020, which provided an overview of the risk evaluation and our key findings and is available on our website. We were able to develop and refine this proposed rule through consistent public engagement over the last three years, including stakeholder meetings and consultations with tribes, small businesses, and people interested in environmental justice. I know some attendees of these meetings have joined the event today. To those of you who have written to us, met with us, and engaged since the first stage of the risk evaluation, thank you. We hope you see elements of your contributions in the risk management action we are proposing.

Our goal today is to explain, in plain English, the rationale for our proposed action, several of the key details and highlight specific areas we are seeking comments to inform the final risk management action. I want to emphasize that point, we are seriously interested in substantive comments to consider as we work to finalize this rulemaking. As you'll hear several times during the presentation, we strongly encourage you to submit comments to the docket and the proposed rule has a list of all the topics we're seeking public comment and input on. We'd also appreciate comments on any aspect of the rule. Detailed comments that provide supporting information will be particularly important for the final rule development so that the agency has a solid record basis for the elements in its final rule.

In conclusion, we are proud to have proposed this important rulemaking, but it's not done yet. Please note that your continued participation is critical to helping us write and then finalize regulations that are protective of human health and the environment. We cannot emphasize enough our appreciation for your time and all the information that you've provided us up to now. On behalf of the Office of Pollution Prevention and Toxics, we continue to look forward to collaborating as we move ahead. I will now turn to Simon Regenold, on the risk management team and the next speaker who will lead you through the start of the presentation. Thank you.

PRESENTATION BEGINS:

Simon Regenold (EPA): Thank you, Joel. Welcome everyone, my name is Simon Regenold and I'm a risk manager on the TCE rulemaking team here at EPA. Next slide, please. Today, I will give an overview of the rulemaking, followed by background on the chemical, as well as the TSCA regulatory toolbox and how we develop effective regulations. I will then turn the presentation over to my colleague, Gabriela Rossner. Next slide, please.

In June 2016, Congress amended TSCA to require EPA to assess and address risks from chemicals that are currently in commerce, rather than exempting them. TSCA established statutory timeframes for this regulation in order for protection for the public and predictability for the regulated community. TCE was identified in 2016 as one of the first chemicals for risk evaluation. In 2020, EPA published the risk evaluation for TCE following a public draft and peer review process. At the beginning of this year, a revised unreasonable risk determination was also published. EPA determined that TCE presents an unreasonable risk under its conditions of use. Moving on to slide 4.

The purpose of this rulemaking is to address the unreasonable risk identified in the risk evaluation of TCE. The rule will prevent consumer and occupational illness through a prohibition, while providing identified essential uses with longer timeframes until prohibition, contingent on strict workplace protections in the interim. Public comment period is open until December 15, 2023, and EPA will consider these public comments as it finalizes this regulation. Next slide, please.

Here's some background on the chemical. TCE is a volatile chemical. That means when exposed to air, some of the chemical will go into the vapor phase, which means that you can smell it. And this chemical is used in wide ranging industrial, commercial, and consumer applications. It was found to present risk to workers, consumers, and bystanders for 52 of the 54 conditions of use, which contribute to the unreasonable risk from TCE. And here is the timeline. In November 2016, EPA designated TCE as one of the first 10 chemicals for risk evaluation. And then between 2016 and 2020, EPA conducted a robust scoping and evaluation process, which culminated in the November 2020 publication of the risk evaluation for TCE. Also, in 2016 and in 2017 EPA proposed two regulations to restrict some uses of TCE, but these proposals were later withdrawn, and those uses are now covered under the current proposed rule. At the beginning of this year, again, the revised unreasonable risk determination was published and at the end of last month, the end of October, EPA proposed this regulation of TCE.

Next slide, please. TCE was found to present risk to workers, occupational non-users or ONUs, these are people who are in the workplace but they're not directly handling the chemical, they are near it so they could be exposed, as well as consumers and bystanders. The 2020 risk evaluation identified several endpoints for acute, chronic non-cancer, and cancer effects. And these effects are presented in the table to the left. The unreasonable risk determination is based on the immunotoxicity endpoint. EPA's risk evaluation is based on the immunotoxicity endpoint, but the developmental toxicity endpoint, also described in detail in the risk evaluation, provides the basis for EPA's proposed existing chemical exposure limit in the Workplace Chemical Protection Program for uses with longer compliance dates. The proposed action to address the developmental toxicity endpoint will address the unreasonable risk from all other effects. In addition, the risk evaluation did not find unreasonable risk to the environment.

Moving on to slide 7. Now I'm going to talk about TSCA more broadly. This is the TSCA menu of options that EPA has. TSCA provides EPA the authority to regulate entities that include distributors, manufacturers, and processors, commercial users, and entities disposing of chemicals for commercial purposes. However, EPA cannot directly regulate consumer uses. EPA can regulate the manufacturing, processing, and distribution levels in the supply chain for consumer goods so that it can restrict the availability of chemicals and products that contain these chemicals, for consumer use. In this way, EPA can effectively address the unreasonable risks to consumers. Next slide, please. This list presents the TSCA toolkit, the options under the statute that we have to address unreasonable risks.

EPA can prohibit, limit, or otherwise restrict manufacturing, processing, or distribution in commerce. This can be overall or for particular uses or for uses above a set concentration. EPA can require minimum warning instructions with respect to use, distribution, or disposal. This could be, for example, a warning on a safety data sheet for the chemical. EPA can require recordkeeping, monitoring, or testing, prohibit or regulate the manner or method of commercial use, as well as the manner or method of disposal by certain persons. And EPA can direct manufacturers and processors to give notice of the unreasonable risk determination to distributors, users, and the public, and replace or repurchase the chemical. This menu of regulatory options can be applied alone or in combination.

Next slide, please. Throughout this process, it is crucial that we have stakeholder input for transparency. We want to develop transparent, proactive, and meaningful engagement throughout this risk management, which helps EPA develop practical and protective and effective regulations.

We've conducted many one-on-one meetings, public webinars, just like this one, and required consultations with state and local governments, tribes, environmental justice communities, and small businesses. We also

consult and coordinate with other federal agencies such as OSHA, NIOSH, and CPSC, the Consumer Product Safety Commission, so that we can develop a consistent approach and facilitate compliance and avoid duplicative requirements. We also consult with the Department of Defense and NASA for uses that might affect U.S. critical infrastructure or national security. And we also conduct a Small Business Advocacy Review panel with the Small Business Administration to obtain advice and recommendations from small businesses. This extensive dialogue helps people understand our risk evaluation findings, the risk management process, and available options for how we can manage these unreasonable risks. We've been seeking input from stakeholders on potential risk management approaches, their effectiveness, and impacts these approaches might have on businesses, workers, and consumers, and we continue to do so. Next slide, please.

In developing effective regulations, EPA's priority is to address the unreasonable risk. EPA must consider the effects and magnitude of exposure to human health and the environment. This includes potentially exposed or susceptible subpopulation, and when appropriate, potential risks from the ambient air pathway or water pathway to fenceline communities. These are communities that are adjacent to facilities where the chemical is manufactured or processed in some way. We must also consider the benefits of a chemical substance, the economic consequences of the rule, and the availability of alternatives. This proposal is based on the best available science and reasonably available information. Moving on to slide 11. We will discuss the specifics of the rule in a few minutes, but here are some of the considerations that went into the rulemaking process.

The goal is to develop practical and protective regulations that include a familiar regulatory framework for occupational and consumer exposure, ensuring consumers would not have access to TCE containing products, prohibiting all occupational uses with longer compliance timeframes until prohibition for certain uses and time-limited exemptions for critical uses, mandating worker protection requirements for uses continuing for longer time frames, meeting TSCA requirements to address the risk to the extent necessary so that it is no longer unreasonable, including this risk to potentially exposed or susceptible subpopulations, as well as requiring recordkeeping to ensure the rule is enforceable. Next slide, please. Input from stakeholders is crucial to the rulemaking process. We are requesting comment on all elements of the proposed and alternative regulatory action. EPA may in the final rule modify elements of the proposed regulatory action. These public comments could result in changes when the rule is finalized. I will now turn this press presentation over to my colleague Gabriela Rossner, who will discuss the rule in more detail.

Gabriela Rossner (EPA): Thank you, Simon. I appreciate that. As Simon mentioned, my name is Gabriela Rossner, and I am the risk management chemical lead for the TCE rule under TSCA. Today I'm going to be doing the rest of the presentation and going over the specific details of the TCE proposal.

On this slide, on slide 13 here, is an overview of the proposed regulation that I'm going to start with, and I'm going to go into more specific details on each of the parts of this proposed regulation in the later slides, but as an overview, EPA's proposed rule would prohibit the manufacturing, processing, and distribution of TCE for all consumer uses. Additionally, it would prohibit all industrial and commercial uses with longer timeframes for certain industrial and commercial uses. Some of these longer timeframes include an 8-and-a-half-year phaseout for the processing of TCE as an intermediate to make the refrigerant HFC-134a and a 10-year phaseout for TCE use in vapor degreasing, specifically to make rocket booster nozzles for federal agencies. The longer timeframes for certain industrial and commercial uses also include six critical use exemptions under TSCA section 6(g), which I will go into more detail on a later slide.

Any use being prohibited on a longer time frame in the industrial and commercial sector would require a Workplace Chemical Protection Program or WCPP to be in place until prohibition. Furthermore, all of these proposed prohibitions would have recordkeeping and downstream notification requirements.

Next slide, please. So, I'm going to start the deep dive by talking about consumer uses as the first category of regulated uses. EPA determined that TCE could not be used safely in consumer products. The proposed rule would prohibit then the manufacture of, processing, and distribution for consumer uses. As Simon mentioned

in the previous slides, under TSCA, EPA cannot directly regulate consumers or regulate how they use products. Instead, EPA has to regulate upstream on the supply chain to ensure that no consumer can then access a TCE containing product. This time frame for the proposed prohibition on consumer uses includes a stagger for manufacturers and then retailers to phase out their inventory. And I also want to emphasize that for many consumer products, EPA's information suggests that there is minimal ongoing use or that alternatives to TCE are readily available. I also want to mention that EPA concluded that alternative approaches that weren't prohibition were not feasible. As an example, the thought of using a protective weight fraction limit would be so low for TCE that it would essentially function as a prohibition.

On the next slide is a list of some of the more common types of consumer uses that EPA is proposing to prohibit. I have not listed all of the consumer uses, as there's a total of 26 consumer uses, but some of the more common types of consumer uses that would be captured under this prohibition are TCE use in cleaners and degreasers, in automotive care products, in lubricants and greases, and in adhesives and sealants.

On the next slide, slide 16. I'd like to shift the discussion and now move on to the proposed regulations for industrial and commercial conditions of use. In crafting the proposed regulations for industrial and commercial conditions of use, EPA considered each use individually and thought about factors such as how each work activity could create challenges for the implementation of a Workplace Chemical Protection Program, or WCPP, and the meeting of an ECEL, or an existing chemical exposure limit. EPA also considered the potential for regrettable substitutions in the industrial and commercial space. Ultimately, uncertainty about industrial and commercial workplaces' ability to comply with the proposed WCPP is the driving factor in proposing a prohibition for all industrial and commercial uses. As a note, for all the COUs, or conditions of use, EPA proposed a staggered implementation for the prohibition in order to allow the supply chain to have an orderly phaseout.

On the next slide, I want to expand a little bit more on the rationale of the proposed regulation and why TCE specifically is not a candidate for uses to continue with a Workplace Chemical Protection Program. TCE as a chemical has an extremely high magnitude of risk with unique challenges in exposure reduction. The proposed ambient air inhalation limit that would constitute the workplace protection plan, which we are calling an ECEL or existing chemical exposure limit, is an 8-hour time-weighted average of 0.0011 parts per million of TCE. Meeting this ECEL poses significant challenges for regulated entities. According to the best available information to EPA, the ECEL cannot be achieved solely through engineering and administrative controls. This means that regulated entities would require that their workers be in intense personal protective equipment, or PPE, with assigned protection factor of 10,000 or above to come close to meeting that ECEL, essentially looking like a scuba suit or a hazmat suit or some sort of supplied air respirator. This is a level of PPE that is not feasible long-term to keep workers in.

Additionally, EPA's knowledge shows that monitoring methods currently mean that TCE cannot be reliably measured down to 0.0011 ppm. The lowest personal breathing zone limit for the OSHA approved method of exposure testing is above that. Due to this high risk with unique challenges, EPA found that prohibition is the only regulatory action that ensures the unreasonable risk from TCE is addressed. Eventually, all industrial and commercial uses of TCE would be prohibited. A grand majority of the industrial and commercial uses of TCE would be prohibited within one year under this proposal.

I'm going to talk about the uses with longer timeframes next, but on this slide is the full list of TCE occupational uses proposed to be prohibited under a short timeframe. Again, I'm not going to read all of these, but I'd like to call out industrial and commercial use of TCE as a solvent in cleaning, as a lubricant in grease, and as an adhesive in sealant again.

On the next slide, I want to spend some time going into the industrial and commercial uses that EPA is proposing longer timeframes until prohibition for. For these uses, EPA would propose either phaseouts or exemptions for uses that either require a longer timeframe in order to replace TCE or that are proposed to be critical and essential. Additionally, the industrial and commercial uses would be subject to the proposed

WCPP, or Workplace Chemical Protection Program, during the time that they continue, and the uses selected to continue for a longer time are uses in which reasonably available information leads EPA to believe that their workplaces have sophisticated engineering controls in place already that could work easier to bring exposures close to the ECEL as possible. The staggered timeframes and in general longer compliance timeframes for these set of uses were informed heavily through engagement with external stakeholders as well as federal agencies.

Next slide, please. Thank you. So, on slide 20, this lays out the proposed longer timeframes for certain industrial and commercial uses. This slide I am going to read in full. So, the uses with longer timeframes that are industrial and commercial that would require worker protections are firstly the manufacturing of TCE and the processing of TCE in recycling and repackaging in order to furnish all the use that I'm going to continue talking about. Other uses with longer timeframes are the processing of TCE as a reactant or intermediate in the making of refrigerant HFC-134a, the industrial and commercial use of TCE as a solvent for closed loop vapor degreasing, specifically for human-rated rocket engine cleaning by NASA and for rayon fabric scouring for end use in rocket booster nozzles by federal agencies. The industrial and commercial use of TCE for Department of Defense naval vessels and their systems and the maintenance, fabrication, and support of those naval vessels and systems. The industrial and commercial use of TCE as a processing aid, specifically for battery separator manufacturing. The use of TCE as a laboratory chemical for essential laboratory activities and some research and development activities. An emergency industrial and commercial use of TCE and furtherance of NASA's mission for specific conditions, which are critical or essential, and finally the disposal of TCE to industrial pre-treatment, industrial treatment, or publicly owned treatment works to facilitate cleanup projects of historical TCE water contamination.

Now that was a lot of uses, I'm going to get into some further breakdown, but first I want to talk about compliance dates in general. Firstly, the prohibitions related to all consumer uses and most industrial and commercial uses would become effective very fast. Three months for manufacturers, six months for processors and distributors, and eventually the full prohibition would come into effect at nine months for industrial and commercial users. Prohibitions related to vapor degreasing, unless otherwise exempted, and I'll discuss those timeframes in the next slides, would become effective with a stagger eventually at one year for industrial and commercial uses. Prohibitions related to the processing of TCE as a reactant or intermediate and the industrial and commercial use of TCE as a processing aid, again, unless otherwise exempted, which I'll discuss the separate timeframe for, would be prohibited within two years from the final rule. Furthermore, compliance with a Workplace Chemical Protection Program for all the uses that I've just read on the previous slide as specified as having longer compliance timeframes would be required to be fully implemented within nine months from the final rule.

On the next slide, I want to dive deeper on some of these longer proposed compliance timeframes. I want to start with the proposed phaseout for processing TCE as an intermediate in the manufacture of the refrigerant HFC-134a. TCE is part of the process of making hydrofluorocarbon 134a and is an intermediate in this process, as such it is not part of the final product. The final product, HFC-134a, is one of the more common refrigerants used in various cooling and air conditioning systems, both in buildings and in car cooling systems. EPA is proposing an 8-and-a-half-year phaseout for this use, which aligns with the phasedown of HFC-134a under the American Innovation and Manufacturing Act under which the use of HFC-134a is expected to decline as users switch to refrigerants with lower global warming potential. In this table at the bottom of the slide, I have laid out the proposed phaseout steps in which an entity that uses TCE as an intermediate in the manufacture of refrigerant HFC-134a would abide by.

So, six months after the publication date of the final rule, a manufacturer of HFC-134a would have to establish a baseline volume of TCE. Then, two years after that, they would be restricted to using 75% of that baseline, two years later using 50% of that baseline, two years later using 25% of that baseline, and eventually at 8-and-a-half-years a full prohibition on the manufacturing distribution and commerce and processing of TCE for HFC-134a would be fully effective. The other timeline to remember on this slide, I'm sorry, there's just one more thing on the previous slide, is that for the phaseout of HFC-134a as a product that

TCE is used in, the workplaces continuing to manufacture and process TCE would have to enact Workplace Chemical Protection Programs within nine months after the publication date of the final rule. Thank you, we can go to the next slide now.

Another mechanism under TSCA for allowing more time for use before a prohibition is a TSCA section 6(g) exemption. Section 6(g) permits an exception if EPA finds that either a specific condition of use is critical or essential for which no technically and economically feasible safer alternative is available or for which compliance with the rule would significantly disrupt the national economy, national security, or critical infrastructure, or that the specific condition of use provides a substantial benefit to health, the environment, or public safety.

On slide 24, EPA is proposing several exemptions under TSCA section 6(g). These exemptions are a 7-year exemption for the use of TCE in closed-loop vapor degreasing necessary for rocket engine cleaning by NASA, a 10-year exemption for emergency uses of TCE in furtherance of NASA's mission, a 10-year exemption for the use of TCE as a processing aid in battery separator manufacturing, a 10-year exemption for the use of TCE to meet Department of Defense naval vessel requirements, a 50-year exemption for TCE in essential laboratory use, and a 50-year exemption for the disposal of contaminated wastewater to facilitate the cleanup of historical TCE contamination. The WCPP is described in great length in the rule itself. There are additional recordkeeping requirements in which entities must document efforts to comply with the provisions of the WCPP during the exemption period to the extent feasible.

On the next slide, I want to dig in deeper on the proposed Workplace Chemical Protection Program, or WCPP, that entities under the previously described longer timeframes would have to comply with until their prohibition. The ability to comply with an ECEL, or the existing chemical exposure limit, influences whether a condition of use was a candidate for a WCPP or whether we thought an immediate prohibition would be more appropriate.

For TCE, EPA is proposing this WCPP only until prohibitions come into effect with the understanding that prohibition is the ultimate action that addresses unreasonable risk. One thing that I would like to point out about the Workplace Chemical Protection Plan is that although it is similar to OSHA's plan in many ways, the WCPP applies to owners or operators and potentially exposed persons, which is a much broader definition than OSHA's employers and employees. On the next slide, I want to go further into detail on the TCE specific WCPP.

For TCE, the main part of the Workplace Chemical Protection Program is an inhalation exposure limit of an existing chemical exposure limit, or ECEL, which for an 8-hour time-weighted average would be 0.0011 parts per million of TCE. For comparison, the current OSHA permissible exposure limit for TCE is 100 parts per million. The Workplace Chemical Protection Program includes additional monitoring, recordkeeping requirements, and dermal requirements. It provides regulated entities with the flexibility for preventing exceedances of the identified EPA exposure limit, and it aligns with the OSHA requirements wherever possible.

On the next slide, I want to go back now to a bigger picture approach, kind of zoom out and talk about recordkeeping and downstream notification. For all parts of the proposed regulation there are also recordkeeping and downstream notification requirements. Downstream notification of the prohibition would be carried out through safety data sheet updates. The safety datasheet, or SDS, is a document that lists information related to occupational safety and health for the use of various chemical substances and products, and this would spread awareness throughout the supply chain of the restrictions of TCE. All uses would also have to comply with recordkeeping requirements, including maintenance of normal business records, and if applicable, records related to WCPP requirements, monitoring, and compliance. As part of the TSCA requirements, EPA has also put out an alternative regulatory approach in this notice of proposed rulemaking. Similar to the proposed approach, the primary alternative regulatory action considered is a full prohibition with staggered timeframes and a Workplace Chemical Protection Program for certain uses until prohibition.

The alternative action does differ in that it has longer time frames for all conditions of use prohibited. Additionally, the alternative regulatory action has two more TSCA section 6(g) exemptions under the alternative which are a 7-year exemption for industrial and commercial use of TCE in batch vapor degreasing for aerospace parts and narrow tubing and a 15-year exemption for the industrial and commercial use of TCE as a processing aid for specialty polymeric microporous sheet materials. The alternative approach would also require that uses under a phaseout or an exemption comply with the WCPP, but a key difference is that under the alternative regulatory approach the existing chemical exposure limit is calculated from a different health endpoint, it's calculated from the immunotoxicity endpoint, so that the 8-hour time-weighted average would be set at 0.0040 parts per million under the alternative regulatory action.

Next slide, please. In wrapping up this presentation, I want to really highlight the benefits of this proposed rule. The proposal on TCE would address the unreasonable risk for all consumers and bystanders and would address the unreasonable risk for workers and occupational non-users. Under this proposal, all facilities would be accounted for addressing the potential exposures to the neighboring communities. And this proposal takes into account the state of the world as it is, allowing for certain industrial and commercial uses to continue for longer timeframes to allow for a smoother transition and using workplace controls during that time in order to protect workers. This proposed rule would also provide the regulated community with confidence in a protected and healthier workforce. Next slide, please.

As Joel mentioned in his opening remarks, we are requesting comments and substantive information regarding several topics, including: the WCPP and its various components, including monitoring, engineering controls, process changing; the feasibility of complying with and monitoring to the existing chemical exposure limit either of 0.0011 parts per million or 0.0040 parts per million; the timeframes for the implementations of the proposed requirements; any specific engineering or administrative controls; the appropriateness of the TSCA section 6(g) exemptions; feasibility of TCE alternatives; and any uses that are proposed to be prohibited in a way where information suggests that they may need a longer timeframe. There's a full list of requests for comments in the rule in section 9.

I just really want to emphasize that EPA really takes a look at every single comment that comes in, and the information that EPA receives during the comment period is a key part of crafting our final rule. Next slide, please. Potentially useful information for EPA would help sort out key areas of uncertainty and should include information from the last 20 years. Some examples that would best inform comments for TCE would be occupational monitoring data from workplaces that use TCE, including personal breathing zone and area monitoring; process emission factors; descriptions of commercial worker activities and the associated sources of exposures; product formulation information; and any relevant unpublished data.

Just to finish up this presentation, I want to talk about the next steps. So, this was the proposed rule, and it was published on October 31, 2023. We are currently in the public comment period, and we encourage open comments in the docket, EPA-HQ-OPPT-2020-0642. The public comment period will close on December 15, 2023, after which EPA will review the public comments and consider new information submitted. EPA is planning to publish the final rule for TCE, estimated to be in 2024.

And if this timeline occurs, the prohibition for most uses and the Workplace Chemical Protection Program for the uses of the longer timeframes would then be in full effect 12 months after the date of the final rule, which would then estimated be 2025. Next slide, please. On this slide, we've provided a list of additional resources related to TCE under TSCA. The EPA TSCA TCE webpage has a list of all our risk management activities as well as general TSCA and other chemicals in the TSCA process. The TCE risk evaluation, supplemental risk evaluation materials, and proposed rulemaking materials are in the dockets, which are numbered here and can be accessed through [regulations.gov](https://www.regulations.gov).

Next slide, please. I believe this is the last slide of my presentation. So, I just want to emphasize that we really encourage public comments that could help inform the regulation that we finalize. The comments need to be submitted to EPA-HQ-OPPT-2020-0642 through [regulations.gov](https://www.regulations.gov) and must be submitted by December

15th to be considered. Additionally, for general questions, you can email EPA at TCE.TSCA@epa.gov with any questions about the rule. Thank you for your time and I will turn it back over to my colleague at EPA for closing remarks.

INSTRUCTIONS FOR PARTICIPATION:

Sheerin Shirajan (ICF): Hello, we will now begin the public remarks session. If you requested to make public remarks, please ensure that your name on Zoom is the same as the name you registered with. If you are currently signed on Zoom under a different name and you registered to provide remarks, please email EPARulemaking@icf.com with your name as it currently appears on Zoom and the email address that you register with. Attendees who requested to provide public remarks will be given three minutes to speak. We will call on group numbers to begin. Each group member will be unmuted one at a time to make their statement.

As a reminder, oral remarks presented during the webinar will not be included as part of the docket and substantive comments should be provided in writing by December 15th to EPA-HQ-OPPT-2020-0642. The link to the docket is provided in the chat box. Before you begin your remarks, please state your full name and affiliation. A timer will appear in the top right corner of your screen and a time check will be sent to the speaking attendees when they have one minute remaining. When it's your turn to speak in your respective group and order in the queue, you will see a pop-up message. Please hit unmute when it's your turn to speak. Your three minutes will begin when you start your oral remarks. If you do not see the popup message when it's your turn, go to the bottom left of the Zoom dashboard and hit the unmute button to speak. If you continue to have any issues, please email EPARulemaking@icf.com. Again, please state your full name and affiliation before providing your remarks. You will have a total of three minutes to provide the remarks.

COMMENT SECTION:

Sheerin Shirajan (ICF): We will now begin. Speaker number one of group one is not present and therefore will not provide their remarks. We now move on to the next speaker. Speaker number two, please unmute, state your name and affiliation, and begin your remarks.

Kevin Tiedemann (SAFECEM): Hello, can everyone hear me?

Sheerin Shirajan (ICF): Yes.

Kevin Tiedemann (SAFECEM): Okay, so my name is Kevin Tiedemann, and I am the EH&S manager of the European company called SAFECEM. First, I would like to thank you giving the opportunity to raise a comment here. So, SAFECEM is an experienced provider of solutions for the safe and sustainable use of solvents in industrial parts cleaning, was founded 30 years ago in Germany. With the same aim of making the use of solvents, especially trichloroethylene and perchloroethylene, safe and sustainable, SAFECEM together with the leading original equipment manufacturers established a risk management solution to adhere with the most stringent regulations so far, which is the German law for air pollution. This current and also the comment we will officially hand in will therefore predominantly focus on vapor degreasing and not on commercial users. Firstly, we acknowledge that the proposal for TCE is stricter than for perchloroethylene taking into consideration the more hazardous profile of TCE. It is also acknowledged that for some critical industries, like as a processing aid in the production of battery separators exemptions are proposed, however, SAFECEM shares great concerns on two major topics. First, a prohibition of TCE and vapor degreasing makes absolute critical that PCE, so perchloroethylene, remains a realistic alternative. Secondly, the proposed ECEL for TCE of 0.0011 ppm is absolutely unrealistic and would be equal to a ban of TCE even in exempt applications. Our recommendation, which we refer the outline in our official comment therefore are, first, keep perchloroethylene a suitable alternative for vapor degreasing by taking into consideration the determination of the German ECEL equivalent and establish an ECEL which is technically and economically achievable. This is especially crucial for highly demanding industries like automotive and aerospace or

applications where they are very complex parts, geometries, and or high oil intake. Secondly, for a reasonable ECEL for TCE, we emphasize to take into consideration the Austrian and German risk-based concept for hazardous substances and establish an ECEL which is technically and economically feasible. With that, I would like to close my comment and again thank you for the opportunity to speak.

Sheerin Shirajan (ICF): Thank you for your remarks. We would like to invite the next speaker that's currently in attendance. Speakers three through seven are not here, so we will move on to speaker number eight. Speaker number eight, please unmute, introduce yourself, and begin your remarks.

Speaker number eight, you are not audible. We kindly ask that you unmute. Please contact EPARulemaking@icf.com if you would like to provide remarks and need additional support.

We will now move on to the next speaker. Speaker number nine, please unmute, introduce yourself, and begin your remarks.

Kevin Harting (HandyTube Corporation): Hi, my name is Kevin Harting. I work for HandyTube Corporation. We are a tubing manufacturer. I just wanted to make sure or get a better understanding as to the, I guess, the grace period after the final ruling. I think we are pretty decent on our end. We may have some future questions, but we will reach out if necessary. Thank you.

Sheerin Shirajan (ICF): Thank you for your remarks. We will now move on to group number two. Speakers one through six are currently not present, so we will move on to speaker number seven. Speaker number seven, please unmute, introduce yourself, and begin your remarks.

Jon Kalmuss-Katz (Earth Justice): Thank you. This is Jon Kalmuss-Katz from Earth Justice. I'd like to begin by expressing support for EPA's proposed TCE ban and then recommend one way in which the proposed rule should be strengthened. EPA's proposed phaseout of TCE is lawful, necessary, and decades overdue. 80 years ago, U.S. military manuals warned of the dangers of TCE, 50 years ago the National Cancer Institute reported on TCE's carcinogenicity, and more than 20 years ago we learned of TCE's serious threat to fetal heart development. Had EPA acted when it first knew of those harms, countless lives could have been saved. The proposed ban will finally eliminate those unreasonable risks and ensure that no other communities experience the same pain and anguish as Woburn, Massachusetts, Camp Lejeune, North Carolina, Franklin, Indiana and other TCE contaminated communities. When dealing with a chemical as toxic as TCE, a ban is the only option that achieves TSCA's mandate of eliminating unreasonable risks to workers, consumers, fenceline communities, and other potentially exposed or susceptible subpopulations. EPA correctly found that there is no way to enforce the occupational exposure limits that would be needed to control the risks associated with TCE, and those limits don't address the serious risk to the communities where TCE is manufactured, used, or released. Now there is one gap in the proposed rule that we would urge EPA to address. TCE is going to be phased out over the course of a decade for several uses and over several decades for some of them. EPA proposed establishing an interim ECEL, existing chemical exposure limit to protect workers during that transition period, but it hasn't proposed any protections for fenceline communities who EPA found would experience elevated cancer risks. Now, just as workers should receive interim protections under EPA's proposed rule, impacted fenceline community should as well. So, we look forward to submitting written comments and I thank you for your time.

Sheerin Shirajan (ICF): Thank you for your remarks. We would like to invite the next speaker. Speaker number eight, please unmute, introduce yourself, and begin your remarks.

Paige Varner (Environmental Defense Fund): Hello, can you hear me?

Sheerin Shirajan (ICF): Yes.

Paige Varner (Environmental Defense Fund): Great. Hi, my name is Paige Varner, and I am a scientist with Environmental Defense Fund. We, first of all, applaud EPA for taking this long overdue action of banning TCE. TCE causes many different health harms at such low levels that when finalized this action will bring widespread benefits to countless workers in fenceline communities. As you know, TCE can cause multiple types of cancer such as kidney cancer, liver cancer, and non-Hodgkin's lymphoma, and exposure to TCE can also cause kidney, liver, and neurological damage, harm to the immune system and reproduction, and result in heart defects in developing fetuses. What is particularly concerning is that some of the harm TCE causes, such as to the immune system and to the fetal heart development, occurs at extremely low levels where exposures often go unnoticed. In addition to these hazards, exposures to TCE are widespread, including through drinking water and groundwater where TCE can persist for long periods of time and through vapor intrusion in homes, schools, and workplaces from soil and groundwater contamination. Yet, despite the known dangers of TCE and the undeniable scientific evidence supporting the need for this action, the chemical industry is trying to undermine this critical regulation by incorrectly claiming that the proposed rule is inconsistent with the science. The extensively peer reviewed science clearly demonstrates the high toxicity of TCE and that exposure to even small amounts of TCE can harm a person in multiple ways. We urge the EPA to continue using the best available science on TCE and to not be swayed by these arguments. And additionally, while we commend EPA for banning all uses of TCE and phasing out many uses within a year of finalization, we ask EPA to consider shortening the 10-year phaseout for the other uses. EPA has proposed a long list of Department of Defense uses that will continue for up to 10 years, which broadly applies to both DoD and its contractors. This is of concern because DoD's uses have significantly contributed to contamination of soil and groundwater in fenceline communities. Neglecting to phaseout TCE out of these uses quickly will continue to expose these fenceline communities to TCE even long after phaseout. Lastly, EPA should not treat the ECEL as if it's a policy issue. The ECEL of 0.0011 part per million is based on the most sensitive overall human health endpoint of developmental toxicity, or more specifically fetal cardiac defects. There's no valid justification to continue exposing people to levels of TCE higher than this proposed ECEL, as it will cause adverse developmental effects as demonstrated by the scientific evidence. Finally, it is imperative that EPA expeditiously finalize this ban of TCE. Thank you for your time.

Sheerin Shirajan (ICF): Thank you for your remarks. We'd like to invite the next speaker. Speaker number nine, please unmute, introduce yourself, and begin your remarks.

Sara Hull (Environmental Defense Fund): Hello, my name is Sara Hull. I'm a project manager with the Environmental Defense Fund and I'll be reading a statement from Kerry Reinhardt, which reads, thank you for the opportunity to have my statement read today. I want to talk about how important it is for the EPA to finalize its proposed ban of the toxic carcinogenic chemical TCE. I'm the founder of If It Was Your Child, the grassroots nonprofit started in 2015 by parents in response to the alarming rate of pediatric cancer in Johnson County, Indiana, where I lived in the town of Franklin for 20 years. One of those children was my 13-year-old daughter, Emma Grace. Emma died on December 18, 2014, three months and 13 days after her diagnosis from a rare brain tumor, an inoperable glioblastoma multi-form that is most common in men over 50. After Emma died, I was shocked to learn that for the majority of her life, the home we lived in, in Franklin, had been within a half a mile of a toxic TCE plume that had been virtually ignored for 30 years. It had made its way into homes, creeks, and has been found as far as a mile and a half of the plume. While much work has been done to address the soil, sewer, and vapor intrusion contamination in our community, many citizens are still on private wells and an underground water plume of TCE will take another decade to remediate, leaving our community and vulnerable children open to the fear of potential future exposures. And I learned Emma wasn't the only child in our community fighting rare pediatric cancers. It seemed a lot of other kids in our county were being diagnosed, many with incredibly rare cancers. Teenagers with thyroid, testicular, and brain tumors, normally seen in adults. After years of working to get testing for the homes in Franklin, to get leaders to pay attention, after years of traveling to Washington D.C. to urge Congress and the administration to take action on TCE, when I learned that the U.S. Environmental Protection Agency was finally proposing to ban all the uses of the toxic carcinogenic chemical TCE I was blown away. This is a huge win in the fight against toxic contamination that plagues communities around the United States, and I got a call from the EPA thanking me for advocating against TCE and acknowledging that the fight against TCE has been directly

influenced by the legacy of Emma Grace. To hear Emma's name in direct relation to this effort was a distinct honor. No family should have to go through what mine did or what the families in the town of Franklin in Johnson County, Indiana did. We have seen too much and suffered too much. By proposing a band of TCE, EPA is taking a step to ensure that other families do not lose their children because of exposure to toxic chemicals in their communities and homes. I cannot urge you enough to finalize the strongest ban possible. It is time. Thank you.

Sheerin Shirajan (ICF): Thank you for your remarks. We will now move on to group number three.

Currently, no speakers from group three are in attendance, so we'll be moving on to group number four. We'll be skipping to speaker number five of group number four. Speaker number five, please unmute, introduce yourself, and begin your remarks.

Devawn Bledsoe (Private Citizen): Hello, am I unmuted?

Sheerin Shirajan (ICF): Yes, you are.

Devawn Bledsoe (Private Citizen): Okay, great. Thanks so much. My name is Devawn Bledsoe, and I grew up in a Superfund cleanup site in Scottsdale, Arizona. It's known as the North Indian Bend Wash Superfund cleanup site, and we actually had TCE in our drinking water, and in the water that irrigated our playgrounds a quarter of a mile from the point source there at Motorola, and in our swimming pool because we had a pool in the backyard. So, I grew up with a lot of kids who had chronic childhood exposure. And when Motorola was sued, as some of you understand, the case was not published in the federal register. So, there's a lot of kids who just never really got the attention. And now, like we're in our fifties and those of us that are still alive, I'm just going to give you one example. So, a girl that grew up, so at one point in my late twenties I had a miscarriage, and they did a genetic analysis and determined that that miscarriage had tetraploidy. Which is like super rare. I should also say that when I was about nine years old, my mom took me to the doctor because I had a rash all over my entire body and the doctor thought maybe it was Mr. Bubble. Well, I found out at my 20-year class reunion that there was another girl who lived a couple blocks away and had the same kind of rash and had lost a baby with tetraploidy. So, I want you to know that there are real people with real ruined lives who are suffering because EPA scientists originally said the maximum contaminant level should be set at zero. And when you didn't set it at zero, you left the impression that there was a safe level, but there isn't, at all, at all. So, I hope that EPA will work with the CDC and NIH and whomever else JAMA, you know, publish articles because there's a lot of us out here whose doctors are looking at things like, you know, brain lesions to try and figure out what's going on with us. So, you know, I hope that you will make it possible for the word about why TCE is being banned to get out, and I would also encourage you to be cautious in allowing the Department of Defense to have extensions because so many Superfund sites contaminated with TCE are the responsibility of the Department of Defense. So, if you're going to give them an extra timeframe, then please give them extra scrutiny.

Sheerin Shirajan (ICF): Thank you for your remarks. We would like to invite the next speaker, speaker number six. Please unmute, introduce yourself, and begin your remarks.

Speaker number six, you are not audible. We kindly ask that you unmute. Please contact EPARulemaking@icf.com if you would like to provide remarks and need additional support.

We will now move on to the next speaker in attendance. Speakers seven and eight are not in attendance. Speaker number nine, please unmute, introduce yourself, and begin your remarks.

Sheri Smith (Private Citizen): Good afternoon, my name is Sheri Smith. I am a private citizen who has been deeply involved in TCE in my community, TCE pollution in my community for the last five years. I do intend to submit written comments, but I want this opportunity to address the assembled group. Minnesota was the first state in the union to ban the use of TCE. That was a landmark, a landmark legislation that passed

through our Senate and House in April of 2020. I presume other states perhaps have the same constraints that the state of Minnesota has and continues to have which is there are not enough local resources from regulatory agencies to oversee the use of TCE, which poses a tremendous risk to human health and the environment, a profound risk, and the only solution is prohibition. I urge those on this call to support this proposed ban, replacement chemicals do exist. And I'm not suggesting or referring to TDCE, which is a chemical that's almost as bad as TCE, but there is simply no reason to allow future use of this chemical in our country. The risks are profound, the ability to regulate in resources, the ability to regulate is impeded. Alright. And, as I said, alternate chemicals and alternate processes do exist. I have suffered along this, alongside of many of my neighbors at the hands of a company who abused TCE, and it infiltrated our water, our air, and our soil. This nasty chemical needs to be banned at a national level. Thank you.

Sheerin Shirajan (ICF): Thank you for your remarks. Speaker number 10 is currently not in attendance, so we'll be moving on to group number five.

Currently speakers one, two and three are not in attendance so we'll move on to speaker number four. Speaker number four, please unmute, introduce yourself, and begin your remarks.

Speaker number four, you are not audible. We kindly ask that you unmute. Please contact EPARulemaking@icf.com. If you'd like to provide remarks and need additional support.

We will now go on to the next speaker in attendance. Speaker number five is not here, so we'll move on to speaker number six. Speaker number six, please unmute, introduce yourself, and begin your remarks.

Samraa Smadi (Private Citizen; Student at Georgetown University): Hello. Can you hear me?

Sheerin Shirajan (ICF): Yes.

Samraa Smadi (Private Citizen; Student at Georgetown University): Okay, hello, my name is Samraa Smadi, I am a citizen, I am a student here, and the Environmental Protection Agency is proposing to address the unreasonable risk of injury to human health presented by TCE. While I commend this, a survey of those diagnosed with cancers and those exposed to increased suffering by this chemical is necessary. Is there any way to amplify those already experiencing issues, those suffering and are still suffering from these consequences? I want to see people compensated. People who have been affected want and need a voice more than a public comment. With this new proposal comes a prohibition within the next 10 years for commercial and industrial use. While this is great and a much needed step, it is of utmost importance to provide alternatives that don't defeat the purpose of this ruling, where regulation on TCE doesn't push for alternatives that pose the same threat to populations, communities, and families. Reading through some of the EPA public comments, Parkinson's disease seems to be linked to TCE and a study showed that there's a 500% exposure increased risk of PD. TCE is the most common organic contaminant in our groundwater. It pollutes outdoor air, taints groundwater, and contaminates indoor air. The molecule, like radon, evaporates from underlying soil and in groundwater, and enters homes, workplaces, or schools often undetected. TCE should be prohibited like it is through the EPA and yeah, thank you.

Sheerin Shirajan (ICF): Thank you, for your remarks. This now concludes our public remark session. As a final reminder, oral remarks presented during the webinar will not be included as part of the docket. And substantive comments should be provided in writing by December 15 at EPA-HQ-OPPT-2020-0642. The link can be found in the chat box and in your email from EPARulemaking@icf.com. I will now pass it to Jonathan Williams for closing remarks, thank you.

Jonathan Williams (EPA): My name is Jonathan Williams with U.S. EPA. And I provide public outreach support for the TCE rulemaking. On behalf of the Office of Pollution Prevention and Toxics, we thank you again for your remarks today, and for your continued participation and engagement. It is invaluable to us as

we work through the final rulemaking process. We look forward to receiving your written comments by December 15th through the TCE docket. Thank you once again.