

**Testimony of Mark N. Duvall  
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**Hearing on “Mismanaging Chemical Risks: EPA’s Failure to Protect Workers”**

**Before the House Committee on Energy & Commerce  
Subcommittee on Environment & Climate Change**

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I would like to thank the Chairman, the Ranking Member, and members of this subcommittee for the opportunity to testify today. I am Mark Duvall, a principal in the law firm Beveridge & Diamond, P.C. I have advised clients on chemical-related regulatory issues under both the [Toxic Substances Control Act \(TSCA\)](#) and the Occupational Safety and Health Act of 1970 for many years.

My testimony will relate to actions by the Environmental Protection Agency (EPA) to protect workers under TSCA, particularly since enactment of the [Frank R. Lautenberg Chemical Safety for the 21<sup>st</sup> Century Act \(LCSA\)](#) on June 22, 2016. I will also refer to requirements of the Occupational Safety and Health Administration (OSHA).

**1. EPA’s Obligation to Protect Workers**

In my view, EPA has always had worker protection among its highest priorities under TSCA. This arises in part from the fact that most chemical substances considered by EPA under TSCA are industrial chemicals to which consumers have little or no exposure. As a result, EPA has always been considering worker protection.

The LCSA amended TSCA in many ways, including by making worker protection a key consideration as EPA carries out its responsibilities. EPA now must make determinations concerning the risks presented by chemical substances, including risks to:

a potentially exposed or susceptible subpopulation identified as relevant by the Administrator under the conditions of use.

Having made a particular risk determination, EPA must take prescribed actions to protect health and the environment, including the health of potentially exposed or susceptible subpopulations. Section 3(12) defines that term to include workers. The term means:

a group of individuals within the general population identified by the Administrator who, due to either greater susceptibility or greater exposure, may be at greater risk than the general population of adverse health effects from exposure to a chemical substance or mixture, such as infants, children, pregnant women, workers, or the elderly.

In short, EPA is statutorily required to redress risks to workers that it determines are unreasonable or may be unreasonable.

This obligation is risk-based. It does not require EPA to protect workers without regard to the particular conditions of use, i.e., on the basis of hazard alone. Instead, every risk determination must consider risk in light of the applicable “conditions of use.” Section 3(4) defines that term to mean:

the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of.

## **2. Worker Protection for New Chemical Substances**

Worker protection has been an important consideration in EPA’s review of applications under TSCA section 5 for new chemical substances, i.e., those not on the TSCA Inventory, as well as related rulemaking and issuance of orders.

### **a. Exemption Applications**

Under the New Chemicals Review Program, since enactment of the LCSA through February 26, 2019, EPA has granted 824 applications for low volume exemptions or low release – low exposure exemptions, and it has denied 128 of those applications. Each of the 824 granted applications has worker protection requirements. The applications must include information on what worker protections will be used by the submitter. Those protections become mandatory once EPA grants the application.

### **b. PMN Substances for Which EPA Imposes Restrictions**

Under TSCA section 5(a)(3)(A) and (B), EPA must impose restrictions through a section 5(e) order or action under section 5(f) if it determines that a PMN substance may present or presents an unreasonable risk to workers or others under the conditions of use.

EPA has imposed worker protection requirements on many submitters of premanufacture notices (PMNs) in the form of a section 5(e) or a section 5(f) order. EPA has then mostly extended those requirements to other manufacturers and processors of the PMN substance through proposed or final significant new use rules (SNURs). Prior to enactment of the LCSA, EPA also adopted SNURs without first issuing a section 5(e) order or a section 5(f) order. Those SNURs applied both to the PMN submitter and to other manufacturers and processors of the SNUR substance.

Over the years, EPA has adopted 463 final SNURs that incorporate by reference worker protection provisions listed in [40 C.F.R. § 721.63](#), such as particular kinds of respirators, gloves, and protective clothing. In these SNURs, EPA has supplemented applicable OSHA requirements to mandate particular kinds of respirators and protective clothing. In some cases, it has set exposure limits and related monitoring requirements if companies can establish that exposure levels are low enough that respirators are not necessary.

EPA has adopted 404 final SNURs that incorporate by reference hazard communication requirements listed in [40 C.F.R. § 721.72](#). In these SNURs, EPA has gone beyond OSHA's general hazard communication standard to mandate identification of particular hazards and protective measures.

These worker protection and hazard communication provisions are tied to OSHA's standards on respirators, other kinds of personal protective equipment, and hazard communication. EPA expects to update its regulations on worker protection and hazard communication later this year, based on a proposed rule published shortly after enactment of the LCSA. [81 Fed. Reg. 49598 \(July 28, 2016\)](#). In addition, some SNURs limit the manufacture, processing, or use of the SNUR substance in a particular physical form, such as a powder, vapor, mist, aerosol, or dust, or effectively require the use of enclosed processes. All of those SNUR requirements are intended to protect workers.

Since enactment of the LCSA through February 10, 2019, EPA has made 564 final determinations for PMN substances, not counting PMNs that were invalid or withdrawn. EPA has issued section 5(e) or section 5(f) orders restricting 441 of those PMN substances, or 78% of the total. Many of those orders contain worker protection requirements. Thus, almost 4 out every 5 PMN substances that receive a final determination are regulated. This represents a dramatic shift from the situation prior to enactment of the LCSA, when only about 1 out of every 5 PMN substances that completed EPA review was regulated.

Also since enactment of the LCSA, EPA has initiated or completed SNUR rulemaking for 378 PMN chemicals for which it had issued section 5(e) or section 5(f) orders after the enactment date, or 85% of the total through February 10, 2019. Those SNURs extend, or propose to extend, the restrictions in those orders to all other manufacturers and processors of those chemicals.

**c. PMN Substances for Which EPA Does Not Impose Restrictions**

Under section 5(a)(3)(C), EPA need not impose restrictions if it determines that a PMN substance is not likely to present an unreasonable risk to workers or others under the conditions of use.

EPA has determined that a PMN substance is not likely to present an unreasonable risk in 123 cases since enactment of the LCSA through February 10, 2019. In some of those cases, EPA based that determination on a finding that the substance has a low hazard to human health, such that it is not likely that workers would face an unreasonable risk regardless of the level of their exposure to the PMN substance.

In some other cases, EPA determined that the PMN substance had human health hazards, but the substance was not likely to present an unreasonable risk because the exposure to workers and others was low without regard to the use of personal protective equipment. Examples are the [October 13, 2018 determination for PMNs P-18-0224 and -0225](#), and the [December 20, 2019 determination for PMN P-19-006](#).

In yet other cases, EPA has made a “not likely to present” determination based in part on information about intended use of personal protective equipment (PPE) to control exposure to a safe level, as stated in the PMN or amended PMN. For example, in the [February 13, 2019 determination for PMN P-18-0238](#), EPA found that:

Risks will be mitigated if exposures are controlled by the use of appropriate PPE, including impervious gloves. EPA expects that workers will use appropriate personal protective equipment (i.e., impervious gloves), consistent with the Safety Data Sheet prepared by the PMN submitter, in a manner adequate to protect them.

In making its risk determinations, EPA must consider the intended conditions of use – in this case, the PMN submitter’s intention to use impervious gloves and its recommendation to downstream employers to do the same. Here, the PMN submitter recommended use of impervious gloves in the safety data sheet (SDS) it will provide to its employees and customers. The OSHA hazard communication standard, [29 C.F.R. § 1910.1200](#), Appendix D, requires chemical manufacturers to indicate on their SDSs appropriate individual protective measures, such as PPE. Each PMN contains a certification requirement, where a responsible official of the PMN submitter swears on penalty of perjury that the information in the PMN, including its description of intended use of PPE, is truthful.

In addition to considering the PMN submitter’s intended conditions of use, EPA must also consider “reasonably foreseen” uses. It is certainly possible that some employers might not require their workers to use impervious gloves when handling this PMN substance. EPA evidently considered that this possibility is speculative, not “reasonably” foreseeable, given the OSHA requirements applicable to all manufacturers and processors of PMN substances.

Here, as elsewhere, EPA has apparently based its “not likely to present” finding in part on the reasonable assumption that employers will comply with applicable OSHA requirements, and that compliance with OSHA requirements means that the PMN substance is not likely to present an unreasonable risk to workers. OSHA’s glove use requirements appear in [29 C.F.R. § 1910.38](#), which provides in part:

- (a) *General requirements.* Employers shall select and require employees to use appropriate hand protection when employees’ hands are exposed to hazards such as those from skin absorption of harmful substances ....
- (b) *Selection.* Employers shall base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.

Other “not likely to present” determinations have been based on EPA’s expectation that additional kinds of PPE would be used. For example, the [December 20, 2018 determination for PMN P-0324](#), stated:

EPA expects that workers will use appropriate personal protective equipment (i.e., impervious gloves, respirator and eye protection), consistent with the Safety Data Sheet prepared by the PMN submitter, in a manner adequate to protect them. Therefore, EPA does not expect unreasonable risk to workers.

OSHA also has mandatory standards on respiratory protection, [29 C.F.R. § 1910.134](#), and eye protection, [29 C.F.R. § 1910.133](#). Both standards require employers to select and mandate the use of PPE based on chemical hazards and the work tasks to be done.

These requirements to use impervious gloves, respirators, and eye protection when needed also arise from OSHA's general PPE standard, [29 C.F.R. § 1910.132](#). Paragraph (a) imposes a broad requirement to use appropriate PPE whenever necessary:

**Protective equipment**, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, **shall be provided, used, and maintained** in a sanitary and reliable condition **wherever it is necessary by reason of** hazards of processes or environment, **chemical hazards**, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

(Emphasis added.) How is the employer to know what PPE is necessary? Paragraph (d) requires employers to assess the hazards that may be present in the workplace (and SDSs would be part of that consideration); to supply appropriate PPE; and to require its employees to use that PPE. Employers must also verify that this required workplace hazard assessment has been performed through a written certification, which must be available for review by OSHA.

In light of these applicable OSHA PPE requirements, EPA concluded that the PMN substances for which it made “not likely to present” determinations were not likely to present an unreasonable risk even in the absence of a section 5(e) or section 5(f) order or a SNUR.

d. **PMN Substances for Which EPA Imposes Restrictions Only Through SNURs**

Since enactment of the LCSA, EPA has made a “not likely to present” determination for 13 PMN substances but also proposed SNURs for those substances, [83 Fed. Reg. 52179 \(Oct. 16, 2018\)](#). They are the following:

- For [PMN P-16-0192](#), the PMN submitter intended to manufacture a silanized amorphous silica, which would present low hazard for lung effects. The proposed SNUR would make manufacture of the substance in other than an amorphous form (e.g., a crystalline form) a significant new use.

- For [PMNs P-16-0354 and -0355](#), the PMN submitter intended to manufacture the PMN substance in a manner with no potential for inhalation. The proposed SNUR would make the manufacture, process, or use the substances in any manner that results in inhalation exposure a significant new use.
- For [PMNs P-0380 to -0385](#), the PMN submitter intended to manufacture the PMN substance using engineering controls that prevent an inhalation hazard. The proposed SNUR would make manufacture, processing, or use the substance in any manner that results in inhalation exposure a significant new use.
- For [PMNs P-16-0483 and -0484](#), the PMN submitter intended to manufacture the PMN substance using engineering controls that prevent an inhalation hazard. The proposed SNUR would make manufacture without those engineering controls a significant new use.
- For [PMN P-16-0575](#), the PMN submitter intended to manufacture the PMN substance in a manner with no potential for inhalation. The proposed SNUR would make use involving an application method that generates a vapor, mist, aerosol, or dust a significant new use.
- For [PMN P-16-0581](#), the PMN submitter intended to manufacture the PMN substance without generating respirable particles. The proposed SNUR would make manufacture of the substance with particles having a size less than 10 micrometers a significant new use.

In each case, EPA based its “not likely to present” determination on either the form of the PMN substance intended by the PMN submitter or the engineering controls that the PMN submitter intended to use. These are very difficult for the PMN submitter to change in the short term, even it wanted to do so. Thus, any section 5(e) order issued to the PMN submitter would have had no effect on worker protection or other risks from the PMN submitter’s short-term actions.

EPA issues a section 5(e) order only to the PMN submitter. The order does not affect other manufacturers and processors of the PMN substance. A section 5(e) order must impose restrictions “to the extent necessary to protect against an unreasonable risk ... under the conditions of use.” In each of these 13 cases, in EPA’s eyes the PMN submitter’s proposed actions presented no short-term unreasonable risks, and thus an order to the PMN submitter would not have been “necessary to protect against an unreasonable risk” during the time before EPA could adopt a final SNUR. Of course, EPA must also consider risks arising from reasonably foreseen uses. EPA found that it was reasonably foreseeable that in the long-term, other manufacturers or processors could use a different form or different engineering controls, or that the PMN submitter could do so. Thus, EPA concluded that it was appropriate to propose SNURs for these 13 substances. Once final, the SNURs will apply to the PMN submitters and will prevent any manufacturer or processor from engaging in the listed significant new uses without prior EPA review and approval.

### **3. Worker Protection for Existing Chemicals**

EPA is also considering worker protection as it carries out its responsibilities with respect to existing chemicals.

#### **a. Methylene Chloride**

On the last day of the previous Administration, EPA published a proposed rule under TSCA section 6 that would prohibit the manufacture, processing, and distribution of methylene chloride for consumer use and most types of commercial paint and coating removal. [82 Fed. Reg. 7464 \(Jan. 19, 2017\)](#). Under the current Administration, EPA has considered the comments received and is moving forward to promulgate a final rule. EPA sent a draft final rule to OMB on December 21, 2018, which completed its review on March 11, 2019. Publication of the final rule is expected soon.

According to the OMB website, in addition to at least a partial ban, EPA plans to propose a program for commercial paint and coating removal training, certification, and limited access. We will know the nature of the final rule and this program shortly.

Regardless, EPA's actions will supplement OSHA's occupational health standards on methylene chloride, [29 C.F.R. § 1910.1052](#) (general industry) and [29 C.F.R. § 1926.1152](#) (construction industry). These OSHA standards set mandatory requirements on permissible exposure limits; exposure monitoring; regulated areas; methods of compliance; respirators; protective work clothing and equipment; hygiene facilities; medical surveillance; hazard communication; employee information and training; and recordkeeping.

They will also supplement EPA's NESHAP for paint stripping and miscellaneous surface coating operations at area sources, [40 C.F.R. Part 63, Subpart HHHHHH](#). These standards require commercial paint stripping operations using methylene chloride to institute management practices, including to ensure that there is not alternative paint stripping technology that can be used and to reduce inhalation exposure to paint strippers.

EPA is also working to publish a proposed risk evaluation for other uses of methylene chloride, an evaluation that is directed at worker protection as well as consumer protection. EPA's statutory deadline for issuing the final risk determination is December 19, 2019. If it determines that one or more conditions of use presents an unreasonable risk, EPA will promulgate a final risk management rule within 2 years of the final risk determination. Under section 6(a), a rule must impose a ban or restrictions "to the extent necessary so that the chemical substance or mixture no longer presents [an unreasonable] risk."

#### **b. Asbestos**

In 1989, EPA banned most uses of asbestos, but in 1991, a court overturned that ban. That development was a key influence leading to enactment of the LCSA 25 years later.

In June 2018, EPA proposed a SNUR under section 5(a)(2) for 14 former uses of asbestos. [83 Fed. Reg. 26922 \(June 11, 2018\)](#). EPA had projected publication of the final SNUR in January 2019. It is expected soon also. Once final, this SNUR will finally achieve much of what EPA's 1989 ban on asbestos was intended to achieve but could not, due to the court decision. It will effectively ban many of the uses listed in the 1989 rule as well as several others that have ceased in the U.S., thus preventing their recommencement without advance EPA review and approval.

EPA is also working to publish a proposed risk evaluation for certain ongoing uses of asbestos, an evaluation that is primarily directed at worker protection. EPA's statutory deadline for issuing the final risk determination is December 19, 2019. If it determines that one or more conditions of use presents an unreasonable risk, EPA will promulgate a final risk management rule within 2 years of the final risk determination. Under section 6(a), a rule must impose a ban or restrictions "to the extent necessary so that the chemical substance or mixture no longer presents [an unreasonable] risk."

The scope document for the asbestos risk evaluation indicated that EPA would not address legacy uses, such as asbestos-containing materials that remain in older buildings or are part of older products still in use but which are no longer in commerce. It would also not address disposal of legacy uses of asbestos. This approach is currently being litigated in the Ninth Circuit in the context of a challenge to EPA's risk evaluation framework rule.

The limited scope of the asbestos risk evaluation is reasonable, given that TSCA is not a particularly good statute for addressing asbestos remediation and disposal. Other federal authorities already address those issues, including:

- The OSHA general industry asbestos standard, [29 C.F.R. § 1910.1001](#).
- The OSHA construction industry asbestos standard, [29 C.F.R. § 1926.1101](#).
- The EPA asbestos NESHAP, [40 C.F.R. Part 61, Subpart M](#).

These standards already extensively regulate in-place asbestos and its removal and disposal. Under TSCA section 9, EPA must consider the extent to which the programs of other federal agencies or other EPA programs may effectively address risks, and it has done so with asbestos.

In addition, in light of the tremendous workload that EPA has under TSCA as amended, EPA properly focused its risk evaluation on the conditions of use best suited for a section 6 rule. As Senator Vitter stated in connection with the final vote on the LCSA, [Cong. Rec. S3519 \(daily ed. June 7, 2016\)](#):

[T]he Agency is given the discretion to determine the conditions of use that the Agency will address in its evaluation of the priority chemical. This assures that the Agency's focus on priority chemicals is on conditions of use that raise the greatest potential for risk. This also assures that the Agency can effectively assess and control priority chemicals and meet the new law's strict deadlines. Without this discretion to focus

chemical risk assessments on certain conditions of use, the Agency's job would be more difficult.

**c. Flame Retardants**

Exposure to chemical flame retardants is a particular concern for firefighters. EPA reviews new chemical substances intended for use as flame retardants under the section 5 New Chemicals Review Program. EPA is also addressing existing chemical substances used as flame retardants that raise health or environmental concerns, including the following:

- Decabromodiphenyl ether (decaBDE) is a flame retardant used in textiles, electronic equipment, building and construction materials, carpets, upholstery fabric, back coatings, cushions, mattresses, and tents. It is also used in plastics used as components in electrical appliances and equipment such as stereos, computers, televisions, circuit boards, casings, and cable insulation. In 2016, EPA listed decaBDE as a persistent, bioaccumulative, and toxic substance (PBT). Per section 6(h), EPA must publish a proposed risk management rule for decaBDE by June 22, 2019 and a final risk management rule by December 22, 2020. That rule must “reduce exposure to the substance to the extent practicable.”
- Phenol, isopropylated, phosphate (3:1) (PIP) is a flame retardant used in textiles, rubber, polyurethane foam, antistatic agents, cellulose, cotton, cutting oils, electronic equipment such as video display units cables, casting resins, glues, engineering thermoplastics, epoxy resins, and phenolic resins. In 2016, EPA listed PIP as a PBT. As with decaBDE, EPA must publish a proposed risk management rule for PIP by June 22, 2019 and a final risk management rule by December 22, 2020. That rule must “reduce exposure to the substance to the extent practicable.”
- The hexabromocyclodecanes (HBCD cluster) in the cyclic aliphatic bromide cluster includes two chemicals used as flame retardants in expanded polystyrene (EPS) foam and extruded polystyrene (XPS) foam in the building and construction industry for thermal insulation boards and laminates for sheathing products. They may also be used to a limited extent in plastics (additive) and textiles (backcoating). In 2016, EPA designated this cluster of flame retardants as among the first 10 chemical substances to receive risk evaluations under section 6(b)(2)(A). 81 Fed. Reg. 91927 (Dec. 19, 2016). EPA must publish a final risk evaluation on this cluster by December 19, 2019. If it determines that one or more conditions of use presents an unreasonable risk, it must adopt a risk management rule within 2 years that bans or restricts those conditions of use “to the extent that the chemical substance or mixture no longer presents such risk.”

In addition, in 9 days, by March 22, 2019, EPA must identify 20 candidates for designation as high-priority substances and make final designations by December 22, 2019. At that point, it must have risk evaluations underway for those 20 substances. Among the potential candidates are 3 additional clusters of flame retardants, all listed on the 2014 update to the TSCA Work Plan. They include:

- The chlorinated phosphate esters cluster, used as flame retardants in furniture foams, textiles, paints and coatings.
- The tetrabromobisphenol A and related chemicals cluster, used in plastics and printed circuit boards for electronics.
- The brominated phthalates cluster, used in commercial flame retardant formulations.

EPA had already begun work on these 3 clusters of flame retardants prior to enactment of the LCSEA, making them likely to be included among the 20 candidate chemicals.

**d. Other Existing Chemicals**

EPA is also considering worker protection as it proceeds toward risk management rulemaking for the other 3 PBTs designated under section 6(h), all industrial chemicals. They are:

- Hexachlorobutadiene (HCB), used in the manufacture of rubber compounds and lubricants and as a solvent.
- Pentachloro-ortho-phenol (PCTP), used as an agent to make rubber more pliable in industrial uses.
- 2,4,6-Tris(tert-butyl)phenol, used as a fuel, oil, gasoline or lubricant additive.

As with decaBDE and PIP, EPA must propose risk management rules for these substances by June 22, 2019, and publish final risk management rules for them by December 22, 2020.

In addition, EPA is considering worker protection in the other risk evaluations currently underway for the following chemical substances:

- 1,4-Dioxane
- 1-Bromopropane
- Carbon tetrachloride
- N-Methylpyrrolidone (NMP)
- Methylene chloride (conditions of use other than those covered by the risk management rule)
- Pigment Violet 29
- Trichloroethylene (TCE)
- Tetrachloroethylene (perchloroethylene)

EPA must publish final risk evaluations for these substances by December 19, 2019. For any conditions of use determined to present an unreasonable risk, it must publish a final risk management rule 2 years later.

The Briefing Memo for this hearing reported that EPA's [draft risk evaluation for Pigment Violet 29](#) "excluded consideration of worker exposures from that risk evaluation." It should be

noted that the draft risk evaluation does address occupational exposures in section 3.3.1, pages 21-24. It addresses risks to workers in section 5.2, pages 28-31.

### **Conclusion**

EPA has already done much under TSCA to protect workers from chemical risks. Given its responsibilities and upcoming deadlines under the LCSEA, EPA has much work ahead of it as well. As it does that work, worker protection will remain a primary objective.