Subcommittee on Environment and Climate Change
Hearing on
"Mismanaging Chemical Risks: EPA's Failure to Protect Workers"
March 13, 2019

Ms. Jeanneen McGinnis, United Auto Workers

The Honorable Frank Pallone, Jr. (D-NJ)

1. Trichloroethylene (TCE)

a. Did you and your coworkers feel safe using TCE?

RESPONSE:

As referenced in my testimony, the Huntsville plant was old and poorly ventilated. We were breathing in the fumes and our skin was exposed to the various chemicals used in products. We received little training and were uninformed of the chemicals being used. I didn't understand the possible health effects of these chemicals, including TCE.

It wasn't until I retired that I learned that TCE is a known carcinogen and toxic to the central nervous system in humans.

Looking back, it is worrisome because we were being exposed to TCE at the Huntsville, Alabama plant many years prior to moving to the newly built Huntsville Electronic Division Chrysler (HEDC) plant in the early 1990's. At the HEDC plant, every solder line had a cleaning station. The agent used to clean the resin off the circuit boards was TCE. Chlorinated solvents like TCE were thought to be "safety solvents" because they would not catch fire. On a daily basis, we were breathing in fumes and TCE and dust from PC fiberglass. We used our bare hands to take solder paste out of containers. We were just trying to get the job done and we weren't informed about how harmful the paste was or anything else.

I worked on the assembly line for twenty years. In 2003, I moved into a different role and became a benefit representative with the UAW. Currently, I work with the 2,000 retirees who suffer the effects of exposure at the plants. These plants were sold and eventually closed. I am very concerned that the health issues workers are experiencing might be linked to the chemicals we were exposed to at the plant. Researchers have studied my workplace. They found that my co-workers have died at a higher rate than the general population of diseases including cancers of the brain and nervous system as well as non-cancer nervous system diseases such as Alzheimer's and Parkinson's disease.

This week, I learned of a 58-year old who worked at the plant and now has stage 4 lung cancer. He needed help figuring out why his medical costs were so high and why chemotherapy was not covered. Breast cancer is also prevalent among women who worked at the plant. A co-worker of mine was recently diagnosed with breast cancer and had a double mastectomy. I too, have had health issues. I am a breast cancer survivor.

b. <u>When did you begin to worry about your workplace exposures?</u>

RESPONSE:

It is hard to definitively say when I started to worry about workplace exposures. But I would say that alarm bells went off for me after we found out about the baseball field contamination when I worked at the Huntsville, Alabama plant.

As discussed in my written testimony, there was a baseball field adjacent to one of our buildings where the ladies softball team played. Our concerns heightened when they closed the softball field after testing concluded that there was soil contamination. But we continued to work in the plant which was right next to the contaminated field and was the source of the chemicals contaminating the field.

c. <u>Did you receive clear information from your management about the risks in your workplace or the protective equipment you were supposed to use?</u>

RESPONSE:

We did not receive clear information from management about the risks to various chemicals in the workplace. I witnessed co-workers getting sick on the job and seeking help at the plant nurse station. Many workers complained of nausea, vomiting, headaches and pains in the legs. Several workers were transported by ambulance as a result of health issues.

Management didn't share what the potential health risks were in the workplace. They didn't say what the chemicals were in the products we were using. Management seemed to be limited in their knowledge of the chemicals as well.

In my written testimony, I mentioned that we were being exposed to chemicals from the solder wave machines. To keep the machines running, workers had to open up the machines and scrape off excess build up lead solder into a tray. There would be mechanical issues or even worse, a fire if we didn't fix the build-up. Fumes would frequently spew out of the machine while we were working. To make matters worse, a thick coating was applied to the floor intended to help with ergonomic issues. This was supposed to combat static and make the workplace safer, but it also resulted in lots of fumes. We were breathing in the fumes from the floor and the solder wave machines.

Postings about chemicals being used in the workplace were not widely disseminated. I recall a bulletin board was updated during OSHA audits with information about chemicals in the workplace. However, these postings were not explained to the workers. If I had been shown videos or had a sense of urgency about the chemicals I was working with, I would not have continued to work there.

d. <u>Were you able to speak up in your workplace to advocate for better ventilation or more protective equipment?</u>

RESPONSE:
Yes, we did speak up in the workplace to advocate for better ventilation. Since we had a union, our health and safety committee requested better ventilation and protective equipment. I had also shared my concerns with management, and they said they were compliant with OSHA regulations. We didn't know how inadequate OSHA's regulations are, as Dr. Finkel testified.

One way management addressed the ventilation issue was by opening the top of the plant so that fumes could escape. They used the retractable ceiling to lessen the fumes. It was far from a solution.

At one point we were given chemically protective shoes and jackets to wear in the work place. When the safety team conducted an audit they informed us that the jackets and boots were not made of the correct material to protect us from chemicals. Because the Personal Protective Equipment (PPE) did not fit correctly we had increase in exposure. We were not equipped with correct protective equipment and we had a false sense of protection.

e. <u>What do you think EPA should do to protect workers from TCE?</u>

RESPONSE:

In December 2016 and January 2017, EPA published proposed rules under section 6(a) of the Toxic Substances Control Act (TSCA) to ban commercial use of TCE in vapor degreasing, and to ban use of TCE in commercial and consumer aerosol degreasing and as a spot cleaner in dry cleaning. As part of these proposals, EPA proposed to prohibit the manufacture (including import), processing, and distribution of TCE in commerce and to prohibit commercial use of TCE for these purposes. In addition, EPA proposed to require manufacturers, processors, and distributors to provide downstream notification of these prohibitions throughout the supply chain. In December 2017, EPA postponed these proposed bans indefinitely.

The text of these proposals may be found at these links:

https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0387-0001

https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/federal-register-notice-trichloroethylene-tce-regulation

In order to protect workers from TCE, EPA should finalize these bans and put them into effect.

2. Risk Management Program (RMP): The UAW submitted a document for the hearing record entitled "Comments of the International Union, UAW on Accidental Release Prevention Requirements: Risk Management Programs under the Clean Air Act, Proposed Rule." In that document, UAW notes that many UAW members work in facilities covered by RMP program requirements, and that many also live in the vulnerability zones around these facilities. That document outlines a number of ways the proposed rule would weaken requirements for RMP regulated facilities. Specifically,

   a. **The proposed rule would rescind a requirement for safer technologies and alternatives assessment. How does that requirement protect workers?**

      RESPONSE:

      The proposed rule would rescind a requirement for facilities with Program 3 regulated processes in North American Industrial Classification System (NAICS) codes 322 (paper manufacturing), 324 (petroleum and coal products manufacturing), and 325 (chemical manufacturing) to conduct safer technology and alternatives analyses (STAA). These analyses could lead to the implementation of safer technologies such as the replacement of chlorine gas tanks with liquid chlorine bleach tanks. This makes both those who work in such facilities and those who live in their vulnerability zones safer by eliminating the possibility of inhalation of deadly chlorine gas. According to data provided by EPA in the rulemaking docket, between 2004 and 2013, there were 875 worker injuries and 40 worker deaths due to catastrophic events in facilities covered by the STAA provision. If the STAA requirement is allowed to stand, it is likely to reduce the number of injuries and deaths over the next decade.

   b. **The proposed rule would rescind the expanded safety training requirements now included in law. How do those training requirements protect workers?**

      RESPONSE:

      In order to resolve confusion as to who was covered by safety training requirements, EPA explicitly stated, in January 2017, that employees ''involved in'' operating a process are subject to the training requirements of the rule as are

supervisors responsible for directing process operations. Making sure that everyone with a potential need for safety training receives such training contributes to keeping both those who work in RMP-covered facilities and those who live in their vulnerability zones safer. Rescinding these training requirements would make them less safe.

c. <u>The proposed rule would rescind a requirement to keep process safety information up to date. How does that requirement protect workers?</u>

RESPONSE:

Keeping process safety information up to date is necessary in order to conduct an accurate process hazard analysis (PHA) and an accurate safer technologies and alternatives assessment (STAA). If these analyses are not accurate, they cannot be used to make a facility safer. Hence, they cannot provide safety to those who work in RMP-covered facilities and those who live in their vulnerability zones

d. <u>The proposed rule would rescind requirements to make certain information available to the communities around RMP facilities. How does that requirement protect workers who live in the vulnerability zones of these facilities?</u>

RESPONSE:

The rule requires the owner or operator of a stationary source to provide chemical hazard information to the public including:

- Names and SDSs of regulated substances
- Five-year accident history
- Emergency response efforts; and
- Procedures for informing the public and local emergency response agencies about accidental releases.

The rule requires the owner or operator of a covered facility to provide ongoing notification of availability of information through publicly accessible avenues such as a company web site or social media platforms. In addition, the rule requires a public meeting to be held for the local community within 90 days of an RMP reportable accident. This provision is designed to ensure that first responders and members of the community have easier access to chemical hazard information, which can significantly improve emergency preparedness and their understanding of how the facility is addressing potential risks. In the event of emergency, this will save lives both those who work in RMP-covered facilities and those who live in their vulnerability zones.

e. <u>The proposed rule would rescind the third-party audit requirement. How does that requirement protect workers?</u>

RESPONSE:

The rule requires owners or operators no later than 90 days after receiving a final audit report from a third party, to develop a findings response report that would include:

- A copy of the final audit report;
- An appropriate response to each of the audit report findings;
- A schedule for promptly addressing deficiencies; and
- A statement, signed and dated by a senior corporate officer, certifying that appropriate responses to the findings in the audit report have been identified and deficiencies were corrected, or are being corrected.

The rule further requires the owner or operator to develop a schedule to address deficiencies identified in the audit findings response report. The findings response report and schedule are to be provided to the board of directors. The owner or operator is required to document the action taken to address each deficiency, along with the date completed. Identifying and correcting deficiencies make both those who work in chemical facilities and those who live in their vulnerability zones safer. These deficiencies may never be identified and corrected if there is no requirement to conduct the audit in the first place.

f. <u>The proposed rule would rescind several provisions related to investigations, including requirements to investigate near misses and requirements to conduct root cause analysis. How do those provisions, in their current form, protect workers?</u>

RESPONSE:

The attached fact sheet from OSHA and EPA discusses the importance of root cause analysis to prevent future adverse events. "A root cause analysis allows an employer to discover the underlying or systemic, rather than the generalized or immediate, causes of an incident. Correcting only an immediate cause may eliminate a symptom of a problem, but not the problem itself." These underlying problems may not be corrected if root cause analysis is not required.

A second attached fact sheet from the National Safety Council discusses the importance of investigating near-misses. "History has shown repeatedly that most loss producing events (incidents), both serious and catastrophic, were preceded by warnings or near miss incidents. Recognizing and reporting near miss incidents

can significantly improve worker safety and enhance an organization's safety culture."

Investigating near misses and conducting root cause analysis contributes to the protection of both those who work in chemical facilities and those who live in their vulnerability zones. Failure to do so leaves them less safe.

3. PV29 Risk Assessment: The UAW submitted a document for the hearing record entitled "Comments of the International Union, UAW on the Draft Risk Evaluation for Pigment Violet 29." In that document, you criticized EPA's reliance on safety data sheets (SDS) and PPE to conclude "occupational exposures from… downstream users are likely to be limited due to the expected use of PPE (per Safety Data Sheet for C.I. Pigment Violet 29)…" You stated that the instructions in the SDS do not provide adequate information to allow the downstream user to determine what PPE is appropriate under what circumstances. You conclude: "EPA's finding of 'no unreasonable risk' rests on the assumption that all employers will successfully control exposure by voluntarily applying the least effect exposure control method, namely PPE. From this EPA concludes that no exposures in downstream users will exceed those in manufacturing. This is not scientifically justifiable."

   a. **Does this criticism apply only to Pigment Violet 29 or does it apply to other risk evaluations as well?**

      RESPONSE:

      This criticism applies to ANY risk evaluation that relies on an SDS to conclude that exposures will be minimal and/or that there is not likely to be an unreasonable risk. Attached is an SDS for methylene chloride or dichloromethane (DCM), for which EPA has decided not to ban commercial uses. Although we are not saying that EPA proposes to find that DCM is "not likely to present unreasonable risk," the DCM SDS is a good illustration of the inadequacy of relying on safety data sheets to reduce or eliminate unreasonable risk.

      Let us look at this SDS from the point of view of a small employer making an effort to protect employees, who has a very limited budget to pay for chemical expertise. Under "Hand Protection," (p.6) the employer learns that the product is to be used with "Solvent-resistant gloves." The employer is not told that a given glove could be resistant to one solvent and not another. As the attached permeation table shows, only a polyvinyl alcohol glove will protect against DCM for a whole shift. DCM permeates other kinds of gloves in an hour or less. Nowhere on the SDS does the employer learn this. The same is true for the solvent-resistant apron and protective suit recommended in the section on skin and body protection.

On p.5, the employer learns that the product should be used with "local exhaust ventilation" and that vapor buildup should be prevented "by providing adequate ventilation." Adequate local exhaust ventilation could be anything from a window fan to an advanced HVAC system. How does the employer know? It is true that what constitutes adequate ventilation depends on the quantity and conditions in which the employer uses DCM. It also depends on the size of the space to be ventilated. It is also true that manufacturers and distributers cannot know the specifics for all the employers that they supply to. This means that the issue raised here is not necessarily that the SDS should provide better information about ventilation. In some cases, this may not be possible. Rather, a single SDS cannot possibly anticipate and cover all conditions of use in downstream users with enough specificity to provide complete information about the necessary controls. For that reason, it is inappropriate and unscientific for EPA to rely on the SDS to make a finding of "not likely to present unreasonable risk."

There are numerous pre-manufacture notifications in which EPA made a finding of "not likely to present unreasonable risk" based on a reliance on safety data sheets to protect workers from exposure. All of these findings are inappropriate and unscientific. One example comes from the attached TSCA Section 5(a)(3) Determination for Premanufacture Notice (PMN) P-18-0221:

> Risks were identified for workers for adverse systemic effects via dermal exposure based on quantitative hazard data for the analogue... EPA also identified worker risks for skin sensitization, mutagenicity, carcinogenicity, and developmental, reproductive, liver, and kidney toxicity via dermal exposure based on potential epoxide formation… 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… Because worker exposures can be controlled by PPE, no unreasonable risks to the general population or environment were identified, and there are no expected consumer exposures, EPA determined that the new chemical substance is not likely to present unreasonable risk to human health or the environment under the conditions of use.

The material covered by this notice is identified as "Polyglycerol reaction product with acid anhydride, etherified." A search for an SDS for a product by that name was fruitless. If EPA proposes to rely on the SDS for its determination of "not likely to present unreasonable risk," it should at the very least make that SDS available to the public for evaluation. More importantly, if the material were truly not likely to present unreasonable risk, PPE would not be necessary. If EPA means, there is an unreasonable risk that can be eliminated by PPE it should say

so. It should not say there is not likely to present unreasonable risk due to assumed use of PPE.

EPA's own analysis appears to indicate that there are, or at least may be, unreasonable risks of skin sensitization, mutagenicity, and carcinogenicity, as well as developmental, reproductive, liver, and kidney toxicity. The presence of such unreasonable risk would require EPA to impose restrictions necessary to protect against the risk. At the very minimum, EPA should require, not assume, the use of PPE. However, any time there is an occupational risk that needs to be mitigated, there is always a better way than PPE, as indicated below and in our comments on Pigment Violet 29.

In relying on an assumption of universal voluntary use of PPE to make its finding of "not likely to present unreasonable risk," EPA ignores the hierarchy of controls entirely. The hierarchy is a core component of standards issued by the U.S. Department of Labor – Occupational Safety and Health Administration (USDOL – OSHA). The hierarchy requires employers to eliminate, prevent and/or control hazards based upon the following preferred order of controls:

a. First: Elimination;
b. Then: Substitution of less hazardous materials, processes, operations or equipment;
c. Then: Engineering controls;
d. Then: Administrative controls; and
e. As a last resort: Personal Protective Equipment ("PPE").

This means that any time EPA relies on PPE to make a determination of "not likely to present unreasonable risk," it should instead be issuing an order, or a rule, not for PPE, but for a more effective control method higher up the hierarchy of controls.

Mr. Grumbles, Past President with the American Industrial Hygiene Association (AIHA) stated in his testimony at the hearing that:

[W]hen an SDS for a chemical is introduced into the workplace. A hazard assessment is developed that informs the need for:

1. Additional training;

2. Workplace labeling;

3. Changes in standard operating procedures;

4. Additional engineering controls; and

5. PPE needs.

The UAW agrees that a responsible employer performs a hazard assessment whenever an SDS for a chemical is introduced into the workplace, and that the hazard assessment informs the needs for the five items listed above. According to the hierarchy of controls, however, engineering controls should be item 1 not item 4. More importantly, Mr. Grumbles states that the responsible employer performs a hazard assessment. The responsible employer must do so because the SDS alone is not adequate to inform the employer how to control the risk under the conditions of a particular workplace. EPA, however, does not require an employer to perform hazard assessment upon receiving an SDS for Pigment Violet 29 or for "polyglycerol reaction product with acid anhydride, etherified" or for numerous other new chemicals. EPA does not even assume that the employer will perform the hazard assessment. Instead EPA assumes the risk into non-existence by stating

"occupational exposures from… downstream users are likely to be limited due to the expected use of PPE (per Safety Data Sheet for C.I. Pigment Violet 29)…"

and

"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…"
(Section 5(a)(3) Determination for Premanufacture Notice (PMN) P-18-0221, p.5)

Nowhere does EPA acknowledge that the employer cannot properly protect the employees based on the SDS alone without first conducting a hazard analysis. It strains credulity to interpret EPA's assumption of proper PPE use based on the SDS to include an assumption that the proper hazard assessment will be conducted and that the results of that hazard assessment, including engineering and administrative controls, would be implemented before PPE is used. It strains credulity even more to assume that it cannot be reasonably foreseen that some employers would fail carry this process through to conclusion and implementation. As long as it can be reasonably foreseen that that the smallest employers with the least access to chemical expertise would not be able to carry the process through to arrive voluntarily at all engineering, administrative and personal protective controls necessary to control the hazard, making a finding of "not likely to present unreasonable risk" based on an SDS and PPE is inappropriate and unscientific.

b. <u>Do you believe that employers will voluntarily and effectively employ PPE?</u>

RESPONSE:

As indicated in the previous answer, PPE is the least effective way to protect against hazards. Many, but not all employers will voluntarily employ PPE. Only a fraction of them will do so effectively. In the example of DCM above, employers who cannot afford industrial hygiene expertise, may not employ the correct "solvent resistant gloves" leading to skin exposure to this highly toxic and carcinogenic material. As indicated above, the same is true for the solvent-resistant apron and protective suit recommended in the section on skin and body protection.

In his testimony, Mr. Grumbles stated:

> The OSHA database of 12 million violations dating back to the 1970s shows less than one percent of violations related to lack of eye protection, lack of general dermal protection, and lack of glove use (or inappropriate glove use), despite the fact that these violations are relatively easy to observe. This confirms that workers are wearing PPE and compliance is likely.

He is simply incorrect in his assertion that inappropriate glove use, or more accurately, the provision of the wrong gloves by the employer is easy to observe. The inspector would have to determine all the chemical substances which the employee touches, determine the material of which the gloves are made, and consult a permeation table, such as the one attached to be sure the gloves protect against all the relevant substances. After all that, to cite the employer, it would still have to be proven not merely that the employee was wearing the wrong gloves but that the employer had failed to follow the procedures in the governing standard. This is not "relatively easy" to do.

Both Mr. Grumbles and Mr. Duvall (Principal, Beveridge & Diamond PC) point to an OSHA requirement to conduct a hazard assessment prior to PPE selection. They are correct, such a requirement exists. However, in order to make a finding of "not likely to present unreasonable risk," EPA must assume that it is reasonably foreseen that ALL employers will conduct the hazard determination AND conduct it correctly. Again, and again, EPA relies on an assumption that all employers will select PPE perfectly every time and all employees will use PPE perfectly every time. It can be reasonably foreseen that this is not always the case.