

October 9, 2019

Andrew Wheeler, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20004

Re: Imminent and Serious Health Risks from Acute Consumer and Worker Exposure to 1-Bromopropane

Dear Administrator Wheeler:

The undersigned organizations are national and grassroots groups committed to assuring the safety of chemicals used in our homes, workplaces and the many products to which our families and children are exposed each day. We are writing to express deep alarm about the serious and imminent health risks demonstrated in EPA's recently released draft risk evaluation for 1-bromopropane (1-BP) under the Toxic Substances Control Act (TSCA). According to the risk evaluation, there is a high likelihood that pregnant women and fetuses will suffer severe harm as a result of short-term to exposure to 1-BP.

While EPA continues work on its risk evaluation, the Agency must take immediate action to warn the public of these risks and advise manufacturers and users to greatly reduce or eliminate exposure to this unsafe chemical. The dangers of acute exposure to 1-BP are too serious to delay action until completion of the risk evaluation and follow-up rulemaking, which could take several years.

1-BP is a component of several liquid spray/aerosol household products with significant dermal and inhalation exposure, including degreasers, spot cleaners and stain removers. Commercial applications include use as a vapor degreaser, aerosol spray degreaser, adhesive, sealant, spot cleaner and dry cleaning chemical. These uses are largely uncontrolled, occur at hundreds of small facilities and result in exposure to thousands of workers. According to EPA, half the workers at these facilities are women.

There are long-standing concerns about 1-BP's harmful effects on human health. The draft risk evaluation confirms these concerns, finding that 1-BP causes cancer, reproductive harm, damage to developing fetuses, and kidney, liver and neurological effects. Accordingly, it concludes that 1-BP presents an unreasonable risk of injury for most use and exposure scenarios under TSCA.

The EPA Science Advisory Committee on Chemicals (SACC) reviewed the draft evaluation on September 10-12. According to SACC members and comments by stakeholders, the draft likely understates risks to workers, consumers and vulnerable subpopulations. Nonetheless, even with these limitations, EPA's findings demonstrate that pregnant women and developing fetuses are at serious risk from acute exposure to 1-BP. According to EPA, testing on 1-BP "shows severe effects resulting from prenatal exposure during gestation" as well as postnatal "adverse developmental effects that manifest at various stages of development, and span multiple generations." (p. 160) The draft evaluation identifies two serious developmental effects – reduced litter size and post-implantation loss – that raise particular concern because they have been observed following acute exposure.

To determine the likelihood of harm under actual conditions of use, EPA developed detailed exposure scenarios for each of 1-BP's consumer and industrial applications using available monitoring data and established modeling techniques. EPA then compared these exposure estimates to acute dose levels

demonstrating harmful developmental and reproductive effects in animal studies, with appropriate adjustments to account for differences in uptake and metabolism between rodents and humans.

For all consumer products and numerous industrial use scenarios, actual acute exposures were above or alarmingly close to toxic dose levels, resulting in small or non-existent margins of exposure (MOE) two to three orders of magnitude lower than the “benchmark MOE” EPA uses to define unreasonable risk. For certain consumer products, MOEs were unacceptably low for both inhalation and dermal pathways of exposure, increasing the overall risk since users of these products are exposed by both routes simultaneously. MOEs were also inadequate to protect both direct users and consumer and industrial bystanders, who likely are unaware that they may be exposed to 1-BP.

In the face of these unequivocal findings, EPA must take three immediate actions to protect pregnant women and fetuses from acute exposure to 1-BP while it finalizes its risk evaluation and completes rulemaking under TSCA section 6(a):

- EPA should list 1-BP under section 5(b)(4) of TSCA as a chemical that “present[s] or may present an unreasonable risk to human health and the environment.” This listing will increase the transparency of EPA's decision making, provide additional disclosure on exports of products containing 1-BP and enhance awareness of the harmful effects of acute exposure to this chemical.
- EPA should issue and broadly disseminate a health advisory that warns the public of 1-BP's risks to fertility and fetal development following acute exposure and urges women of child-bearing age to avoid exposure to these products if they are present in their homes.
- At the same time, the Agency should send letters to all 1-BP manufacturers, industrial users and manufacturers of 1-BP-containing consumer products that:
 - (1) Urge retailers and distributors stop sales of consumer products containing 1-BP;
 - (2) Press manufacturers, processors and commercial users to take immediate steps to reduce workplace concentrations of 1-BP below the NIOSH Recommended Exposure Limit (REL) of 0.3 ppm, placing principal reliance on engineering controls, and implement comprehensive safety and health programs that include worker education and training, hazard communication, and exposure monitoring;
 - (3) Call on manufacturers and distributors of 1-BP and all products containing the chemical to immediately revise product labels and Safety Data Sheets (SDSs) to prominently warn workers of 1-BP's acute reproductive and developmental hazards and recommend immediate reductions in exposure below the NIOSH REL, backed up by worker training, education and monitoring; and
 - (4) Encourage firms using 1-BP to investigate and adopt safer substitutes.

While EPA should initially seek voluntary industry commitments to implement these measures, it should not hesitate to make them mandatory using its TSCA section 7 “imminent hazard” authority if firms fail to act to protect workers and consumers. Since it gives rise to acute exposure, the threat 1-BP poses to pregnant women and their offspring is imminent. The effects of concern are severe and highly likely to occur based on EPA's own risk evaluation. Thus, acute exposure to 1-BP plainly satisfies the TSCA section 7(b) definition of an “imminently hazardous chemical substance.”

Distributors and retailers should immediately remove all consumer products containing 1-BP from commerce because no other step will meaningfully protect product users and bystanders. As the draft risk evaluation emphasizes, consumers are extremely unlikely to use protective equipment and, even if they did, the acute risks would be unacceptable under EPA's criteria. Product labels (which now are inadequate) would not likely change consumer behavior, as EPA has noted in previous section 6 proposals for other solvents, and bystanders would not see label warnings in any event. Since there are known safer substitutes for 1-BP in these applications, no possible justification exists for putting consumers at risk.

There is an equally compelling need for industry to immediately implement substantial reductions in workplace exposure. The extensive analysis in EPA's risk evaluation shows that 1-BP levels in most user facilities are two to three orders of magnitude above the NIOSH recommended REL. EPA also recognizes that there is no evidence of the use of Personal Protective Equipment (PPE) in these facilities and, even on the unrealistic assumption that workers continuously used air supplied respirators, MOEs would still be below the EPA benchmark for many exposure scenarios. Labels and Safety Data Sheets now in use do not effectively highlight acute risks to pregnant women and fetuses or recommend effective workplace protections against these risks. Deep reductions in exposure through engineering controls are needed now to reduce the risk and even these reductions may be inadequate to provide full protection against acute adverse reproductive and developmental effects.

The draft EPA evaluation also provides compelling evidence that chronic exposure to 1-BP presents serious and unreasonable health risks, including risks of cancer and neurotoxic effects. While we are not asking EPA to take action to address these risks at this time, our position is that all consumer and most industrial uses of 1-BP should be banned under section 6(a) of TSCA. We plan to advocate strongly for this ban once the risk evaluation is complete.

Attached is a more detailed paper compiling the findings of the draft risk evaluation for workers and consumers with acute 1-BP exposure.

We look forward to meeting soon with your staff to discuss EPA's response to this letter.

Please contact SCHF counsel Bob Sussman at bobsussman1@comcast.net with any follow-up questions.

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