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February 13th, 2023

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Submitted via Regulations.gov; docket number EPA-HQ-OPPT-2023-0265

RE: Tris(2-chloroethyl) Phosphate (TCEP); Draft Risk Evaluation Under the Toxic Substances Control Act (TSCA)

The National Tribal Toxics Council (NTTC) is an EPA Tribal Partnership Group with the Office of Pollution Prevention and Toxics (OPPT). Since the 2016 TSCA amendments, one of the Council's primary goals has been to suggest improvements to the TSCA risk evaluation process such that risks to tribes are accurately characterized and tribal peoples can be assured that, as Congress intended, their lifeways, environment, and health are protected in all chemical risk management decisions. The NTTC appreciates the opportunity to provide comments on the Draft Risk Evaluation of TCEP under TSCA.

After many years of advocating for the consideration of unique tribal exposures and risks in EPA risk assessments, the NTTC appreciates and strongly supports EPA in taking the step to identifying tribal populations as a potentially exposed and susceptible subpopulation (PESS) in the TCEP risk evaluation. We support EPA's efforts to quantify the greater exposures via higher fish consumption that tribal people experience. The NTTC also appreciates EPA's recognition of the facts that:

*"Tribal cultures are inextricably linked to their lands, which provide all their needs from hunting, fishing, food gathering, and grazing horses to commerce, art, education, health care, and social systems. These services flow among natural resources in continuous interlocking cycles, creating a multi-dimensional relationship with the natural environment and forming the basis of *Tamanwit* (natural law) (Harper et al., 2012). Such an intricate connection to the land and the distinctive lifeways and cultures between individual tribes create many*

*unique exposure scenarios that can expose tribal members to higher doses of contaminants in the environment.*¹ (page 219; italics added)

While NTTC appreciates the inclusion of tribal fish consumption in the TCEP draft risk evaluation as a unique exposure pathway, and the efforts EPA has made to include current and heritage tribal fish consumption rates in their analyses, we agree with EPA that only considering one exposure pathway “overlooks many unique exposure scenarios”¹ (page 219) that can greatly increase tribal risks from TCEP. Tribal populations are exposed to contaminants in the environment in different ways than all other populations considered under TSCA—for example, by consuming many subsistence foods (e.g. aquatic species other than fish, game, marine mammals, birds, plants), via cultural resources and activities (e.g. harvesting and gathering of plants and berries for food and medicine, mastication of plants for basket weaving), by hauling local water, by living proximate to unlined, uncovered community dumps with open burning of trash, by residing in remote communities with no other sources of food than local fish and wildlife, via daily steam bathing or sauna use, by residing in older and substandard housing with poor ventilation and older and worn out carpeting, furniture, and bedding, all of which are likely to contain legacy TCEP. In most situations, tribal people are exposed via many of these pathways at the same time, while also experiencing additional exposure to TCEP in the same way as the general populations as workers, as occupational non-users (ONUs), and as consumers. In order to evaluate real-world exposures of and risks to tribal populations, EPA needs to aggregate these exposures across pathways and COUs, including background exposures from non-TSCA uses, account for increased tribal susceptibility, and consider cumulative impacts on tribal people from TCEP exposure.

Even exposures of tribal people via fish ingestion are underestimated in the risk evaluation by:

- 1) using a mean current fish consumption rate vs. a 95th percentile rate for tribal populations, when both 50th and 95th percentile exposure values are used in determining occupational and general population exposures, and when 95th percentile values are available for many different tribes and they are much higher than 216 g/day^{2,3}
- 2) using a fish consumption rate from only one tribe, when much higher rates and for many different tribes are available in peer-reviewed literature^{4,5}, WA State

¹ EPA, Draft Risk Evaluation for Tris(2-chloroethyl) Phosphate (“Draft TCEP Risk Evaluation”) (Dec. 2023), https://www.epa.gov/system/files/documents/2023-12/tcep_draft_risk_evaluation_20231207_hero_public_release.pdf

² Department of Ecology, State of Washington. Fish Consumption Rates, A Review of Data and Information About Fish Consumption in Washington (2013). <https://apps.ecology.wa.gov/publications/documents/1209058.pdf>

³ Harper, B. L., Flett, B., Harris, S., Abeyta, C., & Kirschner, F. (2002). The Spokane Tribe's multipathway subsistence exposure scenario and screening level RME. *Risk Analysis*, 22(3), 513-526.

⁴ Delistraty, D., Van Verst, S., Rochette, EA (2010). Radiological risk from consuming fish and wildlife to Native Americans on the Hanford Site (USA). *Environmental Research* 110 (169-177).

⁵ Barbara L. Harper, Stuart G. Harris (2008). A possible approach for setting a mercury risk-based action level based on tribal fish ingestion rates (2008), *Environmental Research*, Volume 107, Issue 1, (60-68)

publications², and in EPA’s own Exposure Factors Handbook (Chapter 10) and other publications⁶;

- 3) disregarding the higher mean current fish consumption rate of 770 g/day for Alaskan communities published in Chapter 10 of the EPA Exposure Factors Handbook with no explanation
- 4) using the lower fish bioaccumulation factor in determining risk⁷
- 5) the NTTC has communicated to EPA on multiple occasions and in multiple comment letters that the 33-year value for residential mobility does not apply to tribal members, who typically spend most, if not all, of their lives living on their tribal lands⁸. Applying this value to tribal people greatly underestimates their chronic exposures and risks.

Another way in which tribal exposures are underestimated in this risk evaluation is by not considering how increased susceptibility of tribal people may increase the risks of exposure to TCEP. While there may not be specific studies on how increased allostatic load, pre-existing disease, higher smoking rates or higher rates of alcoholism in tribal communities increase susceptibility to TCEP’s health effects, there is ample evidence linking susceptibility to the impacts of toxin exposure (Table 5-69, Table_Apx D-2).

Background exposures to TCEP are also not considered and this may disproportionately impact the assessment of tribal risks. Because of higher exposure to TCEP (a bioaccumulative chemical) via many unique exposure pathways not considered, in addition to the one that was considered in the TCEP risk evaluation, tribal people are likely to have a higher TCEP physiological burden, which is likely to increase the risk of additional exposures to TCEP. The NTTC urges EPA to consider background exposures in the final risk evaluation of TCEP.

The NTTC has been advocating for the consideration of the unique disposal circumstances in tribal communities in EPA risk evaluations for quite some time. Not considering environmental releases to air and water from unlined and uncovered open dumps located in very close proximity to schools and houses that employ open burning as waste management leaves tribal populations (a PESS group in the TCEP risk evaluation) and tribal land, air, water, fish, and wildlife unprotected from the impacts of exposure to this chemical.

In the TCEP draft risk evaluation, EPA identifies tribal populations as a PESS group, recognizes the fact that they have many unique exposure pathways, acknowledges that this is likely to lead to higher exposures to and risks from TCEP, but includes an analysis of only one exposure pathway unique to tribes, thus greatly underestimating risks to this PESS group. In not considering all unique tribal exposure pathways and all COUs, not evaluating aggregate

⁶ D.E. Walker and L.W. Pritchard, Estimated Radiation Doses to Yakama Tribal Fishermen: An Application of the Columbia River Dosimetry Model for the Hanford Environmental Dose Reconstruction Project (1999)

⁷ TCEP Draft Risk Evaluation, page 360.

⁸ TSCA Science Advisory Committee on Chemicals, Meeting Minutes and Final Report No. 2023-02: A Set of Scientific Issues Being Considered by the Environmental Protection Agency Regarding 2023 Draft Supplement to the 1,4-Dioxane Risk Evaluation (Nov. 16, 2023), <https://www.regulations.gov/document/EPA-HQ-OPPT-2022-0905-0078>

exposures, including background exposures from non-TSCA uses, underestimating tribal fish consumption rates, not considering increased susceptibility of tribal people, and not considering environmental releases from open dumps, not considering cumulative impacts of TCEP exposures on tribal people, EPA has greatly underestimated tribal risks from this chemical. While the lack of data is cited as a reason for omitting these analyses, no data does not necessarily translate to no risk and EPA should work to acquire the data necessary to conduct accurate PESS risk assessments by using TSCA's data gathering authorities and EPA's Office of Research and Development's extensive expertise and capabilities. It is important to note that real-world tribal exposures are likely much higher than estimated in this draft risk evaluation, and we urge EPA to take that into consideration when making risk management decisions on TCEP.

Environmental risks from TCEP are also not accurately evaluated in the draft risk evaluation, despite the TSCA mandate to determine risks to the environment along with risks to human health—a concern the NTTC has expressed to EPA in meetings and comment letters. While EPA finds that chronic exposure to TCEP results in unreasonable risk to aquatic organisms, only releases from industrial and commercial facilities were modeled and quantified (page 92). Releases from laundry wastewater as a primary source of TCEP to wastewater treatment (page 75), which may not be fully effective in removing TCEP, and releases from landfills and dumps (page 82) are additional exposures to aquatic organisms that should be considered during risk management actions. Tribal health and well-being is intricately and closely linked with the health of the environment and the NTTC is concerned that not evaluating risks to the environment from all conditions of use, especially disposal in unlined landfills that openly burn trash, will mean that any risk management decisions will not be protective.

The NTTC requests that peer review of the TCEP draft risk evaluation be conducted by panel instead of by letter. During the January 24, 2024, Committee on Environment and Public Works, Senator Merkley of Oregon shared his concerns with EPA Assistant Administrator Freedhoff that letter peer reviews do not allow debate and discussion. EPA's response that letter peer reviews help complete risk evaluations more quickly and are a standard process miss the point that Senator Merkley was making about the value of scientific dialogue during review. In addition, letter peer review is not a transparency process for the public and does not allow the opportunity for comment to the whole panel. In the past, the NTTC has provided oral comments to the SACC and always appreciates the opportunity to listen to advisory panel discussions. For the TCEP risk evaluation review, this is particularly important since EPA's use of tribal exposures clearly show unreasonable risk for PESS.

As always, we welcome any opportunity to collaborate with EPA in advancing the protection of tribal people and lifeways from the impacts of toxic chemicals. Should you or your staff have questions or comments regarding this letter, please contact myself, Dianne Barton, NTTC Chair, at (503) 731-1259 / bard@critfc.org.

Sincerely,

A handwritten signature in black ink that reads "Dianne C. Barton". The signature is written in a cursive style with a large initial "D" and a long horizontal stroke at the end.

Dianne C. Barton, Ph.D.
Chair, National Tribal Toxics Council