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RE: Perchloroethylene, Draft TSCA Risk Evaluation; Docket ID: EPA-HQ-OPPT-2019-0502

Dr. Barone,

The National Tribal Toxics Council (NTTC) appreciates the opportunity to provide comments on the draft Toxic Substances Control Act (TSCA) risk evaluation for perchloroethylene. NTTC is an EPA Tribal Partnership Group (TPG), supported by the EPA Office of Pollution Prevention and Toxics (OPPT), that works to provide Tribes with information on issues and rulemakings related to toxic chemicals and pollution prevention. On behalf of Tribes, the NTTC works to ensure that tribal risks are accurately characterized and evaluated in EPA's risk assessment process by informing and educating the EPA on tribal lifeways, exposures, and risks.

In May 2020, the EPA released a draft risk evaluation for perchloroethylene (PCE). The purpose of TSCA risk evaluations is to determine whether a chemical substance presents an unreasonable risk to health or the environment under the conditions of use, including an unreasonable risk to any relevant potentially exposed or susceptible subpopulations (PESS). PCE is used in a wide variety of consumer products, including adhesives, glues, sealants, aerosols, printing inks, paint products, paint removers, household cleaners, shoe polish, paper coatings, rubber coatings, leather treatments, polishes, lubricants, silicones, waterproofing fabric finishes, and spot removers. It is widely used in dry cleaning and can also be found in automotive cleaners, in metal

degreasers, and in electrical transformers. According to the American Cancer Society, PCE is "probably carcinogenic to humans". According to EPA[1], acute exposure to PCE can cause irritation of the upper respiratory tract, kidney dysfunction, and neurological effects, including unconsciousness. Long-term exposure to PCE is associated with adverse effects on the kidney, liver, immune system, and hematologic system, as well as on development and reproduction. Workplace exposure to PCE is associated with several types of cancer, including bladder cancer, non-Hodgkin's lymphoma, and multiple myeloma.

EPA has provided a 60-day public comment period on this draft risk evaluation, which NTTC finds insufficient given the impact of the global COVID-19 pandemic on tribal environmental offices and staff. The current pandemic disproportionately impacts tribal communities[2]. Incidence rates are alarmingly high on some reservations and healthcare infrastructure is generally poor. High risk conditions, such as diabetes, are disproportionately present in these nations' populations. Many isolated tribal communities have had their supply chains severely disrupted. For example, the primary, and in many cases only, transport and freight airlines stopped serving over one hundred Alaska tribes[3].

Tribal environmental staff, who typically would be the primary parties to research and prepare comments for discussion and direction from their Councils, are the very staff who are also responsible for leading their tribal nation's response to the numerous COVID-19 environmental health concerns. They must ensure indoor air, waste disposal, water treatment operations, and community practices are changed to conform with the best up-to-date information and that their workers and communities are safe and informed. They do this while often homeschooling, caring for elders, and carrying out customary and traditional practices. Our volunteer Council members, as tribal employees, are no exception and their NTTC duties are in addition to their work for their tribes.

We believe that a 60-day comment period, the entirety of which occurs during a pandemic, is far too short to expect substantial tribal comment for reasons we expressed previously in other TSCA-related comment opportunities, including the draft scoping documents for the next set of high-priority chemicals and the asbestos risk evaluation. As a primary grantor to most federally recognized tribes, EPA is aware that many Tribal Councils are shut down except for essential

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[1] https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/tetrachloroethylene.pdf

[2] Hedgepeth, D., Fears, D., and Scruggs, G. Indian Country, Where Residents Suffer Disproportionately from disease, Braces for Coronavirus. Washington Post, April 4, 2020; https://www.washingtonpost.com/climate-environment/2020/04/04/native-american-coronavirus/

[3] Hollander, Zaz. Ravn Suspends Air Service, Including Mail Deliveries, to Most Rural Alaska Communities. Anchorage Daily News, April 3, 2020. https://www.adn.com/alaska-news/aviation/2020/04/02/ravn-suspends-air-service-including-mail-deliveries-to-most-rural-alaska-communities/

operations by explicit order. It would be impossible for tribes to send in comments or for Councils to consider whether they wish to send in comments. EPA should provide an additional 90-day comment period on the PCE draft risk evaluation.

Based on our initial review of the draft risk evaluation for PCE, NTTC is concerned that EPA has once again left out tribal populations' exposures to toxic chemicals from consideration, mainly by 1) not evaluating tribes as potentially exposed and susceptible subpopulations; 2) assuming that environmental statutes are protective of tribal communities; and 3) not considering all conditions of use and all exposure pathways.

We include the following sections:

1 Tribes Are Potentially Exposed Subpopulations (PESS)

TSCA defines a "potentially exposed or susceptible subpopulation" (PESS) as "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." As detailed below, *tribes clearly meet this definition for the majority of chemical substances but are not considered as PESS in this or previous TSCA draft risk evaluations. If tribal risks are not evaluated under TSCA, they will not be included in future risk management decisions and tribes will be left unprotected.*

The ultimate purpose of the new TSCA risk assessment process is to evaluate toxic chemical risks to Americans and then to use that information to make decisions that protect them from unreasonable risk. In order to protect all Americans, and not just those Americans that can be represented through general population exposures, TSCA requires that EPA decisions identify and protect PESS[4]. Without evaluating risks to PESS, it would be impossible to propose protection of PESS, except in the case of a full chemical ban. This is especially important because general population exposures have not be evaluated in this draft risk evaluation.

As NTTC has informed EPA in previous comment letters and presentations to the Agency[5], tribes have unique lifeways that place them at different risk due to multiple exposure pathways not experienced by the general population. For example, these lifeways include differences in:

1. Diet, such as significantly higher consumption of fish and other aquatic life that is typically locally harvested
2. Higher consumption of deer, elk, and other wildlife that is locally harvested and may be contaminated from industrial and mine releases to tribal lands
3. Housing, which tends to be more often substandard, with older household furniture and products; to lack garages (resulting in product storage inside the home), and can be associated with dirt yards and unpaved roads
4. Worker safety protocols, which tend to be less stringently practiced due to multiple small businesses, self-employment, do-it-yourself practices, and remote access locations unvisited by OSHA
5. Water use for:

[4] 15 USC §2604 [a][3][A]; 15 USC §2605 [b][1][B][i], [b][4][A], and [h][1][B]) [35–38].EPA's g (15 USC §2604 [a][3][A]; 15 USC §2605 [b][1][B][i], [b][4][A], and [h][1][B]) [35–38]. See Koman PD, Singla V, Lam J, Woodruff TJ (2019) Population susceptibility: A vital consideration in chemical risk evaluation under the Lautenberg Toxic Substances Control Act. PLoS Biol 17(8): e3000372. https://doi.org/10.1371/journal.pbio.3000372

[5] See http://tribaltoxics.org/?page_id=301054

- Drinking, which can be from untreated and unregulated small systems (less than 15 homes), including well water, surface haul water, and spring water systems
- Hygienic use, through daily steam baths and/or immersion in surface water flows
- Ceremonial use through steam baths and full body immersion in surface water flows
- Multiple cultural activities (e.g. reed harvesting, mouthing, weaving);
- Subsistence activities (e.g. hunting, gathering)
- Recreational activities (swimming in natural water)
- Other lifeways.

Native Americans are at higher risk generally from chemical releases to the natural environment due to aggregate exposures via multiple pathways, many of which have greater frequency and duration than those of the general population or other human receptor groups. While each tribe has unique exposures due to its unique culture, it is possible to distinguish broad categories of tribal exposure scenarios that tribes are likely to face and that differ from those of the general population. For convenience, we include a graphic that depicts many of these exposures.

EPA's Science Advisory Committee on Chemicals, in its November 2019 report[6] on the HBCD and 1,4-dioxane draft risk evaluations, strongly agreed with NTTC's recommendation that EPA must consider all exposure routes and give:

> …special consideration to specific populations (e.g., tribal, arctic inhabitants, etc.) who depend on fish as a major source of food because of cultural considerations and provide some quantitative sense of how much extra risk exists for these populations.[7]
>
> In considering special and susceptible population exposures, more consideration needs to be given to populations with specific preexisting conditions, such as metabolic disease and obesity, as well as to tribal, ethnic and other subpopulations that depend heavily on potentially contaminated foods, such as Native American subsistence fishers"[8].

Referencing the conceptual model below, the SACC also recommended that

> "the context of the assessment would be improved by including a graphic similar to the one presented by the National Tribal Toxics Council at the public meeting, that illustrates exposure routes for potentially sensitive or highly

[6] TSCA Science Advisory Committee on Chemicals Meeting Minutes and Final Report No. 2019-02, Peer Review for EPA Draft Risk Evaluations for 1,4-Dioxane and Cyclic Aliphatic Bromide Cluster (HBCD), July 29- August 2, 2019, 166 pp.

[7] Ibid, pg. 149.

[8] Ibid, pg 155.

exposed populations"[9].

Despite this feedback from its SACC, and despite NTTC's work to educate the EPA on tribal exposures, tribes were not considered as PESS in the PCE draft risk evaluation. The TSCA amendments of 2016 require that EPA consider all PESS for each chemical risk evaluation and EPA should evaluate tribes as PESS in the final risk evaluation for PCE. The multiple aggregate exposures, defined as "the combined exposures to an individual from a single chemical substance across multiple routes and across multiple pathways" (40 C.F.R. § 702.33), inherent in tribal lifeways and circumstances should also be considered, as mandated by TSCA Section 6(b)(4)(F). Importantly, because general population exposures were not considered in this risk evaluation, aggregate exposures to PCE were also not considered by default.

In section 2.4.3 of the PCE draft risk evaluation, EPA lists the PESS identified as relevant for consideration based on greater exposure:

[9] Ibid, pg 40.

> "In developing the draft risk evaluation, the EPA analyzed the reasonably available information to ascertain whether some human receptor groups may have greater exposure than the general population to the hazard posed by PCE. Exposures of PCE would be expected to be higher amongst groups living near industrial facilities, groups with PCE containing products in their homes, workers who use PCE as part of typical processes, and groups who have higher age and route specific intake rates compared to the general population."

Many tribal communities live in close proximity to a landfill or other waste disposal site, such as a transfer station. For example, three-quarters of the 229 tribal communities in Alaska have residents living within 1 mile of unlined landfills which lack design performance, are open access, and typically employ open burning without emissions treatment as a waste management strategy, all in compliance with RCRA Subtitle D, as well as the Clean Air Act (CAA) which includes a specific provision for Alaska villages[10]. Because such communities are often off the road system, drinking water sources and primary diet sources are also typically proximate so that aggregate exposures are likely to be present. Analyses of the aggregate exposures associated with living in proximity to such landfills need to be explicitly included in the final risk evaluation.

Because it is EPA that is ultimately responsible for these authorized exceptions, and because exposures from disposal site releases are clearly not adequately managed under other statutes, such releases need to be evaluated and should include releases from *all* waste disposal and waste disposal sites, including those left unregulated by RCRA, such as transfer stations and construction waste landfills. The multiple exposure pathways associated with proximity to unlined disposal site releases to environmental media must be analyzed for both individual exposures and the aggregate exposures that tribal members face from their customary and traditional tribal lifeways (inhalation, dermal, ingestion). If these exposures are not analyzed, then no determination can be made on the risks these populations face, which would be in violation of TSCA.

NTTC has expressed concern at the paucity of data on tribal risks and has observed that tribal people are underrepresented or absent from EPA's risk evaluations and proposed actions. It is well documented in the scientific and medical literature that Native Americans experience significant health disparities as compared to the general population[11]. The practice of leaving tribes out of risk evaluations, and thus excluding them from any relevant risk management

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[10] Federal Incinerator Regulations for Remote Alaska Incinerators Commercial/Industrial (CISWI) and Other Solid Waste Incinerators (OSWI) Prepared May 25, 2017 by ADEC Air Compliance Program.

[11] For example, Bauer UE, Plescia M. Addressing disparities in the health of American Indian and Alaska Native people: the importance of improved public health data. Am J Public Health. 2014;104 Suppl 3(Suppl 3):S255-S257. doi:10.2105/AJPH.2013.301602

strategies, will only contribute to further health disparities. NTTC has in the past provided detailed information to EPA on multiple chronic chemical exposures tribal people experience, including those presented by living in proximity to unlined landfills and other waste disposal sites, many of which are managed with unmonitored and untreated waste burning. In order to protect tribal communities, their unique lifeways and exposures must be considered by EPA. NTTC is willing to assist EPA in obtaining or generating relevant data on tribal risks and exposures that EPA can use, in order to accurately determine tribal risks.

2. Tribes Are Susceptible Subpopulations (PESS)

On page 32 of the PCE draft risk evaluation, EPA states that:

> "Potentially susceptible subpopulations include the developing fetus (and by extension, women of childbearing age) as well as those with pre-existing health conditions, higher body fat content, or particular genetic polymorphisms."

According to the US Department of Health and Human Services, American Indian/Alaska Native (AI/AN) adults are 50% more likely to be obese than the non-Hispanic white population (NHW)[12], which results in higher body fat content. AI/AN people also have higher rates of chronic diseases than other ethnic groups in the US[13]. For example, AI/AN adults are almost three times more likely than NHW adults to be diagnosed with diabetes and are 2.5 times more likely than NHWs to die from diabetes[14]. AI/ANs are also more likely to have chronic liver disease, heart disease, chronic lower respiratory diseases, and high blood pressure[15].

On pages 272-273 of the PCE draft risk evaluation, EPA mentions a thorough review of epidemiological data the Agency performed in 2012, which found that:

> "…there was a pattern of evidence associating PCE exposure with several types of cancer, specifically bladder cancer, non-Hodgkin's lymphoma (NHL), and multiple myeloma (MM), and that more limited data supporting a suggestive effect were available for cancer at other sites, including esophageal, kidney, lung, liver, cervical, and breast cancer."

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[12] US Department of Health and Human Services Office of Minority Health https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=40

[13] Centers for Disease Control and Prevention. CDC Tribal Data, Information, and Resources. https://www.cdc.gov/tribal/data-resources/information/chronic-diseases.html

[14] US Department of Health and Human Services Office of Minority Health https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=33#:~:text=Diabetes%20and%20American%20Indians%2FAlaska%20Natives,die%20from%20diabetes%2C%20in%202017.

[15] Indian Health Service. https://www.ihs.gov/newsroom/factsheets/disparities/

NTTC notes that AI/AN women are 2.3 times more likely to have and twice as likely to die from liver cancer, as compared to NHW women and 20% more likely to have kidney cancer[16]. AI/AN men are also almost twice as likely to have liver cancer than NHW men. Further, while AI/AN lung cancer incidence rates are lower overall, their mortality rate is 17% higher than that for NHW. Additionally, Alaska Native people have a 53% higher lung cancer incidence rate than the NHW population[17].

NTTC urges EPA to consider tribes as susceptible populations and evaluate their health risks from exposure to PCE in the final risk evaluation.

3. Reliance on Environmental Statutes to Address Tribal Chemical Exposures

In this draft risk evaluation, EPA has once again excluded all general population risks from releases of PCE to land, air, and water, based on the assumption that other statutes adequately address these exposures. On page 33, the EPA states that:

> "General population exposures to PCE may occur from industrial and/or commercial uses; industrial releases to air, water or land; and other conditions of use. As part of the problem formulation for PCE, EPA found those exposure pathways are covered by other statutes and consist of: the ambient air pathway (i.e., PCE is listed as a hazardous air pollutant (HAP) in the Clean Air Act (CAA)), the drinking water pathway (i.e., National Primary Drinking Water Regulations (NPDWRs) are promulgated for PCE under the Safe Drinking Water Act), ambient water pathways (i.e., PCE is a priority pollutant with recommended water quality criteria for protection of human health under the CWA), and disposal pathways (RCRA and SDWA regulations minimize further environmental exposure and associated risks related to the disposal of PCE). As described in the problem formulation for PCE, other environmental statutes administered by EPA adequately assess and effectively manage these exposures. EPA believes that the TSCA risk evaluation should focus on those exposure pathways associated with TSCA conditions of use that are not subject to the regulatory regimes discussed above because those pathways are likely to represent the greatest areas of concern to EPA. Therefore, EPA did not evaluate hazards or exposures to the general population in this risk evaluation, and there is no risk determination for the general population."

[16] US Department of Health and Human Services Office of Minority Health https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=31

[17] Source: US HHS, NCI 2020. Seer Cancer Statistics Review, 1975-2016. Tables 1.20, 2.15 through 24.15, Source: NCI 2020. Seer Cancer Statistics Review, 1975-2016. Table 1.20 https://seer.cancer.gov/csr/1975_2016/sections.html and Alaska Native Epidemiology Center, http://anthctoday.org/epicenter/healthData/factsheets/Cancer_Mortality_statewide_09_03_2019.pdf

The importance of TSCA is that it tasks EPA with addressing human and environmental health risks, while other environmental statutes may have standards that are not health-based. TSCA section 6(b)(4)(A) states: "The Administrator shall conduct risk evaluations pursuant to this paragraph *to determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors*, including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant to the risk evaluation by the Administrator, under the conditions of use." Many statutes require EPA to consider other non-health factors when setting their standards, factors that TSCA explicitly forbids EPA from taking into account when determining risks. For example, on June 4, 2020, the EPA released a proposed rule that will require EPA to undertake a cost-benefit analysis for all significant Clean Air Act rulemakings. According to that proposal, additional cost-benefit analysis rulemakings can be expected for other federal pollution control laws. EPA is the agency that is mandated to administer TSCA. Relying on other statutes that are presumably protective ignores significant media releases and their resultant exposure scenarios which, as the preceding quotation makes clear, is not the intent of TSCA. The pathways excluded from consideration in the PCE draft risk evaluation cover the main ways PCE enters the environment and the releases of PCE that EPA is ignoring in this risk evaluation are substantial. Based on data from EPA's Toxics Release Inventory (TRI), *1,170,581 lbs of PCE were released to the environment in 2015*.

As NTTC has detailed in previous letters to EPA, environmental statutes do not guarantee protection from exposures, particularly in the case of tribes. Tribes are generally remote, rural, and small populations, and federal statute variances, exemptions, exclusions, and local flexibilities tend to be promulgated specifically for these very demographics. In proposing blanket determinations as to whether releases are managed under RCRA, CWA, SDWA, or CAA, EPA does not consider the populations who are impacted by environmental releases falling under its own exceptions. In doing so, EPA is failing in its mission to adequately protect not only the health of tribes, but of other rural, remote, and small populations who essentially fall through the regulatory cracks.

Unfortunately, the statutes EPA is relying on may reduce releases of PCE into the environment for the general population, but with the wide range of exceptions affecting rural facilities and small service populations, EPA cannot presume the same outcome for tribes, nor for rural and small communities generally. Because exceptions for small systems, businesses, and communities are common throughout federal statute authorities, and tribes use resources in ways that are not considered in granting such exceptions, evaluating all primary tribal exposure pathways under TSCA is critical. EPA granted the many variances, exemptions, and exclusions described below, and the burden of proof that an environmental statute is protective of tribal people, lands, and waters, must rest on EPA. *It is not acceptable to assume blanket protections when these statutes wholly or partially exclude the protection of tribal people.*

a. Inadequate Protection of Native Americans by the Safe Drinking Water Act (SDWA)

PCE is subject to National Primary Drinking Water Regulations (NPDWR) under the SDWA and human exposure to PCE from drinking water or bathing (dermal and inhalation) was not evaluated in the draft risk evaluation because it is regulated by this statute. PCE is detected in surface water and groundwater, making it a common drinking water contaminant across the U.S.[18]

NTTC notes that there are multiple exemptions to the SDWA that leave tribes and other small communities unprotected by this statute. As an example, 13 million rural households throughout the United States rely on private drinking water wells–for drinking and other purposes—that are unregulated by the SDWA[19]. Due to the rural and remote nature of most reservations, multiple tribes have residents relying on individual groundwater wells or community water systems serving less than 25 people, which are also exempt from the SDWA. This unregulated and unmonitored water is used for drinking, cooking, bathing, daily steam baths, ceremonies, home crops, and more, and any exposures via these pathways will not be managed under SDWA. EPA's current policy of reliance on SDWA excludes these critical exposure pathways from evaluation.

Substantial documentation exists that other groundwater wells are used for drinking water and household use, particularly for those homes that are unplumbed[20]. Haul water for unplumbed homes is often from unregulated and untreated surface and groundwater sources. It is noteworthy that Native American households are 19 times more likely than other households to lack indoor plumbing[21]. Nearly 14% of Native households lack access to a public water system compared to 0.6% of the USA as a whole, with some tribes lacking access for more than 30% of their populations, creating a greater reliance on unregulated sources[22]. EPA clearly cannot assume that these exposures are adequately managed by the SDWA for tribes and other small or rural populations and these exposure pathways cannot be left out of the PCE risk evaluation.

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[18] Focazio MJ, Kolpin DW, Barnes KK, Furlong ET, Meyer MT, Zaugg SD, et al. A national reconnaissance for pharmaceuticals and other organic water contaminants in the United States –II untreated drinking water sources. Sci Total Environ. 2008; 402:201–16

[19] USEPA Private Drinking Water Wells webpage, accessed May 23, 2020. https://www.epa.gov/privatewells, using data from the US Census American Housing Survey 2017

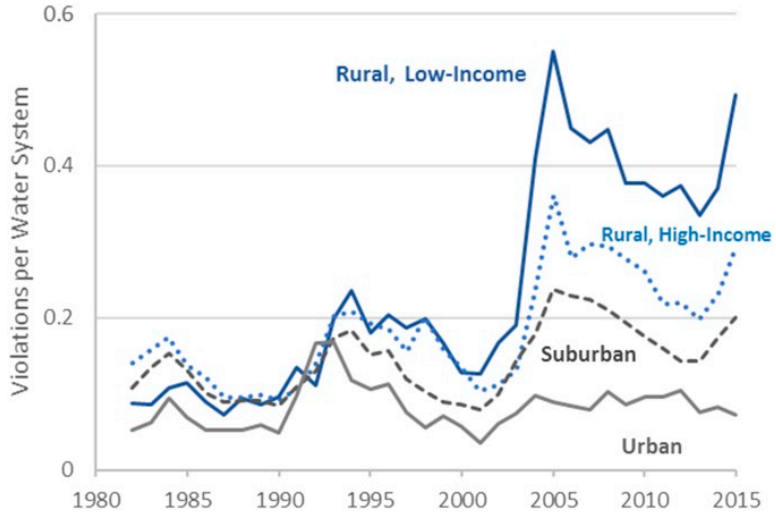
[20] Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5

[21] US water alliance, Closing the Water Access Gap in the United States, 2019 closethewatergap.org

[22] Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5

Even when water used by tribes is regulated by statute, it is noteworthy that EPA does not account for violations. For example, in 2015, nearly 21 million people relied on community water systems that violated health-based quality standards under the SDWA[23]. In 2013, tribal water systems were 19 times more likely to have violations than other water systems[24]. A 2016 legal analysis of the Clean Water Act (CWA) and the SDWA revealed that, compared with nontribal facilities, tribal facilities experience less rigorous CWA and SDWA enforcement and are more likely to violate these laws[25].

According to a study published by the National Academy of Science that examined health-based violations (which excludes recording and monitoring violations), substantial differences across time exist between rural and urban areas, with low-income rural areas having a larger compliance gap than higher-income rural areas[26]. The study states that "Utilities in more rural, less urbanized areas tend to have less capacity to comply with quality regulations and face financial strain due to declining populations and lower incomes." For reference, NTTC includes the study graphic below. For reference, NTTC includes the study graphic below.



As described above, the SDWA cannot be assumed to be protective of tribes and other small or rural populations. Exposures via these pathways needs to be evaluated under TSCA in the

[23] Allaire M, Wu H, Lall U. National trends in drinking water quality violations. *Proc Natl Acad Sci U S A*. 2018;115(9):2078-2083. doi:10.1073/pnas.1719805115

[24] Note, 2013 was the last year that EPA published this statistic. Providing Safe Drinking Water in America: National Public Water Systems 2013 Compliance Report, https://www.epa.gov/sites/production/files/2015-06/documents/sdwacom2013.pdf

[25] M. Teodoro, M. Haider, D. Switzer U.S. Environmental Policy Implementation on Tribal Lands: Trust, Neglect, and Justice, Policy Science JournalVol 46(1), Pages 37-59, Feb 2018https://doi.org/10.1111/psj.12187

[26] Allaire M, Wu H, Lall U. National trends in drinking water quality violations. *Proc Natl Acad Sci U S A*. 2018;115(9):2078-2083. doi:10.1073/pnas.1719805115

context of tribal circumstances and lifeways, in order to accurately determine the risks these populations face from exposure to probable carcinogens like PCE.

b. Inadequate Protection of Native Americans by the Clean Water Act (CWA)

In this draft risk evaluation, exposures to PCE from surface water and sediment are assumed to be adequately managed by the CWA and EPA did not evaluate these exposure pathways. PCE has moderate potential to accumulate in sediment (page 459). Sediment immersion during subsistence activities is common for members of many tribes. Consumption of aquatic species was also not considered because of PCE's low bioaccumulation potential. EPA found unreasonable risk to aquatic organisms, based on immobilization due to acute exposure, growth effects from chronic exposure, and mortality to algae (page 459), but human exposure to PCE was not evaluated via pathways covered by the CWA in this draft risk evaluation.

Similar to SDWA, multiple CWA exemptions and exceptions leave tribes and other small communities unprotected by this statute. For example, many publicly owned wastewater treatment plants (POTWs) discharging into marine waters have received NPDES variances under the CWA. At issue again is that tribes consume fish, shellfish, marine mammals, and aquatic plants and seaweed at far greater quantities than the general population and are exposed to the water and sediment while harvesting these foods. One example is the NPDES permit administered by EPA for the city of Anchorage POTW, which comprises nearly half the population of the state of Alaska and discharges primary treated effluent into an inlet used by tribal people for multiple customary and traditional practices, including local harvesting, preparation, and ingestion of such foods as salmon, stickleback, hooligan, herring, seal, and clam[27]. This NPDES permit has been administratively extended since 2005. In issuing variances under the CWA for discharges, tribal customary and traditional uses are not specifically included for consideration.

Another example of an exclusion in the CWA is the Navigable Waters Protection Rule, which was published by EPA on April 21, 2020. This Rule, to which the NTTC strongly objects, excludes ephemeral waters and wetlands not adjacent to navigable waters. Because these waters are often critical in supporting native plants, fish, and wildlife[28], they are vital to tribal lifeways. Exposures resulting from chemical releases to such water must be evaluated. Such exposures include harvesting and mouthing plants and resources for cultural, ceremonial, and

[27] The Community Subsistence Harvest Information System (CSIS), Alaska State Department of Fish and Game. www.adfg.alaska.gov/index.cfm?ADFG=subsistence.harvest

[28] For example, US EPA ORD, NERL, Environmental Sciences Program, The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest, 2008. ephemeral_streams_report_final_508-kepner.pdf

consumption purposes, as well as ingestion of terrestrial and aquatic species exposed to chemical releases.

Additionally, tribal communities and reservations typically support multiple small businesses and self-employed contractors. The Small Business Exemption under CWA § 122.21(g)(8) does not consider local use of water for the wide variety of tribal uses, and the vast majority of tribes at this time have no specific delegated authority to make the exemption more stringent.

The water quality criteria developed under Section 304(a) of the CWA were assumed by EPA to sufficiently address exposures from the presence of PCE in ambient water. NTTC finds this unacceptable because the human health assessment methodology used by EPA to develop Ambient Water Quality Criteria does not meet the congressional mandate in TSCA to protect PESS that may have higher exposures and different exposure pathways than the general population. EPA's 2000 human health methodology guidance[29], "Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health" states:

> EPA's national 304(a) criteria are usually derived to protect the majority of the general population from chronic adverse health effects. EPA has used a combination of **median values, mean values**, and percentile estimates for the parameter value defaults to calculate its national 304(a) criteria. (emphasis added, page 34)
>
> EPA considers that its target protection goal is satisfied if the **population as a whole** will be adequately protected by the human health criteria when the criteria are met in ambient water. (emphasis added, page 34)
>
> The default fish consumption value for the general adult population in the 2000 Human Health Methodology is 17.5 grams/day…. This **default value is chosen to be protective of the majority of the general population**. (emphasis added, page 31)

TSCA risk evaluations are mandated by Congress to consider PESS. Water quality criteria developed under CWA 304(a) are calculated to be protective of the general population and not subpopulations like tribes. For example, a more representative tribal fish consumption rate is an order of magnitude higher[30], and EPA itself used a rate of 142 g/day for adults (vs. 22 g/day) and 70 g/day for children (vs. 5-8 g/day) in its draft HBCD risk evaluation for high-end user risk, which is based on tribal fish consumption research. As established in the above document passages, EPA itself acknowledges that the CWA can be considered only protective of the majority of the general population. By not considering unique exposure pathways nor high-end users, EPA fails in its responsibility to evaluate risks to PESS under TSCA.

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[29] *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., EPA-822-B-00-004 (Oct. 2000), 185 pp.

[30] https://fortress.wa.gov/ecy/publications/publications/1209058.pdf

c. Inadequate Protection of Native Americans by the Clean Air Act (CAA)

PCE is listed as a Hazardous Air Pollutant (HAP) and is regulated by the CAA so EPA did not evaluate inhalation exposures of the general population from releases to air of PCE because these exposure are assumed to be managed by this statute. Even when chemical substances are listed as HAPs and are regulated, multiple exemptions to the CAA leave tribes unprotected from certain exposures by this statute and the risks they face therefore need to be evaluated under TSCA.

For example, the majority of Native American tribes live in rural areas where individuals employ open barrels for burning of household wastes. Another example is an exemption of the State of Alaska's delegated CAA program, under which approximately three-quarters of Alaska tribes use a "burnbox" at the landfill to burn the full community waste stream, releasing untreated emissions directly to ambient air[31]. A self-report database with information collected from tribal environmental professionals, whose positions are paid and trained through EPA Indian General Assistance Program (IGAP) monies, indicates residents in over one-quarter of those communities smell the smoke three or more days each week, with nearly nine in ten communities experiencing emissions odors in town at least monthly. Without burn controls, the fire is left to self-extinguish, and can smolder for up to two days with associated low-temperature emissions. While Alaska burnboxes have their own exemption under the Other Solid Waste Incineration rules, all Very Small Municipal Landfill incinerators qualify as Other Solid Waste Incineration (OSWI) and are subject to less reporting and less monitoring. Under Part 129, they must monitor only for nine pollutants: Organics (dioxin/furans), metals (lead, cadmium, mercury), acid gases (hydrochloric acid, sulfur dioxide), particulate matter, NOx, and opacity (visual). PCE is not one of them. This classification of landfill accepts waste from about 15,000 persons per day, so only a small handful of tribes would operate reservation waste sites that do not qualify for this CAA monitoring exception[32].

Small and Remote Commercial/Industrial Solid Waste Incineration (CISWI) units such as those used at mine camps, oil and gas facilities, and construction camps are likewise subject to reduced burdens of reporting and monitoring. Again, because of the small population sizes, and the inherent nature of natural resource development occurring in rural areas, tribes are more likely to live near incineration units with less stringent regulations.

Beyond the sections of the CAA dealing with waste disposal, States, local governments, and tribes can be given delegated responsibilities for developing emission plans for area sources and small businesses (non-major source emitters). These sources may be under general permits, which again do not guarantee monitoring or compliance for HAPs, and thus may be

[31] Federal Incinerator Regulations for Remote Alaska Incinerators Commercial/Industrial (CISWI) and Other Solid Waste Incinerators (OSWI) Prepared May 25, 2017 by ADEC Air Compliance Program.

[32] https://www.cdc.gov/tribal/tribes-organizations-health/tribes/reservations.html

subject to little or no enforcement. In addition, many tribes are impacted by State issued permits, that are often violated and leave tribal lands with elevated levels of contamination. Tribal members are left unprotected by the CAA and are relying on the intent and foundation of TSCA to offer some protections.

d. Inadequate Protection of Native Americans by the Resource Conservation and Recovery Act (RCRA)

In this draft risk evaluation, EPA assumes that "PCE disposal is managed and prevented from further environmental release by RCRA and SDWA regulations" (page 460) and exposure of the general population to PCE from disposal pathways was not evaluated. Disposal pathways include exposures from Municipal landfills, Hazardous landfills, Hazardous and Municipal Waste Incinerators, underground injection wells, and off-site waste transfer. PCE is listed as a hazardous waste under RCRA Subtitle C.

As described in this letter and multiple prior comment letters, assuming that RCRA is universally protective is inaccurate, especially in the case of tribes and their potential waste disposal exposure scenarios. Most tribal populations are in rural areas and operate or use waste transfer stations, which are not regulated by RCRA. They are not subject to federal design or monitoring requirements and are likely to allow public access and be unlined. Outside of Alaska, the large majority of tribes use such facilities and they are often located proximate to residences for service convenience.

Additionally, because they often reside in rural areas with small populations, tribal communities may live proximate to tribal or county landfills receiving less than 20 tons per day, equivalent to a population base of about 10,000 persons. Under RCRA and the 1996 ``Land Disposal Program Flexibility Act'' (LDPFA), such landfills are also exempted from the design requirements of larger facilities, including daily cover, leachate treatment, gas recovery, and liners. Further, those small landfills receiving less than 25 inches of precipitation per year are not subject to groundwater monitoring requirements. Additionally, approved State RCRA programs have the ability to grant a No Migration Exemption to larger landfills, which waives groundwater monitoring requirements. Several states do not even require site specific data, in order for landfills to be granted such an exemption[33]. For example, high salinity is a sufficient parameter for an exemption in the State of Utah. Beyond these waste disposal exceptions, other landfill types are also not covered by RCRA. These include Construction waste landfills, which are unlined in many states and often lack cover, monitoring, or leachate and gas collection and

[33] USEPA, Preparing No-Migration Demonstrations for Municipal Solid Waste Disposal Facilities: A Screening Tool, EPA530-R-99-008 February 1999

treatment. Construction waste landfills tend to be sited in rural areas as well due to the lower price of land and other factors. Again, by not considering whether such unlined and un- or under-monitored facilities may result in releases to tribes will leave tribes unprotected by outcome risk management decisions.

With the exception of Subtitle C for Iowa and Alaska, for which EPA retains primacy, RCRA is currently delegated only to states. Permits are therefore issued by states and how the state manages the program is outside of tribal influence. We have heard from tribal staff that at least some states do not provide information on releases to tribal governments, placing tribal populations at even greater risk when a release occurs. Many industrial facilities that require RCRA permits may not coordinate with Tribal governments on their release notifications and, again, by the time tribal governments are informed of the RCRA release or violation, the tribal membership living in the vicinity of the facility have been exposed.

We have brought to EPA's attention the fact that in evaluating risks, long absent has been the consideration of waste disposal and transfer facilities that either are not covered by RCRA, or not required under RCRA to have liners, leachate treatment, groundwater monitoring, daily cover material, and/or other protective features. Such facilities are prevalent in and near tribal communities, particularly rural areas, where the bulk of tribes reside. As mentioned, all rural landfills in Alaska lack these protective features. PCE is in use in commerce and can be found in a variety of products that consumers may use daily, all of which will eventually be disposed in a landfill or other waste management site. Used consumer products are managed by burning or placement nearby in unlined and uncovered landfills that commonly flood at least annually, joining snowmelt and breakup waters, in which residents walk and children play. Most of the state is located in wetland. Landfills are often only a few feet above the water table and are proximate to surface drinking water intakes and traditional (untreated) household use water, particularly for unplumbed communities. Chemicals release to rivers and ponds, from which Alaska tribes obtain drinking water and foods. About three quarters of landfills are less than one mile from homes and about one-fifth are within one quarter mile. Inhalation of disposal site emissions is prevalent. Emissions can adhere to, or ash settle on, fish and marine mammals that are placed on in-town drying racks and that potentially represent a full year's supply of a family's dietary protein.

The above exposure pathways present clear human and environmental health implications. Indeed, associations between open dump sites and negative health outcomes in Alaska have been identified. Adverse health effects were found for newborn babies associated with community landfills characterized to be of moderate to high hazard threat, including low birth weight, preterm birth, and intrauterine growth restriction (IUGR). Infants born to mothers residing in communities with high hazard site contents were more likely to have "other" birth defect(s) than other infants, and positive odds ratios were found for all categories of congenital

anomalies. In a preliminary retrospective cohort study, residents living near dumpsites had greater incidences of self-reported vomiting and fever. Vomiting and dizziness was associated with a dose response to burning waste near residences. Odor complaints (a wind direction proxy) and dumpsite visits were correlated with increases in several symptoms with indications of dose-response, including fever, vomiting, cough, and headache[34,35].

NTTC's position is that the disposal exposure pathways faced by tribes throughout the United States as a result of the multiple RCRA exceptions and exemptions that apply to rural, remote, and small populations, should be evaluated. If they are not, then any risk assessment conducted under TSCA is not relevant to tribal peoples, and their risks have not been evaluated. We believe that EPA agrees this circumstance would be unacceptable. EPA is mandated by TSCA to determine whether the disposal of toxic chemicals presents unreasonable risk to human health and/or the environment. That evaluation must include exposure scenarios as experienced by PESS living near unlined and under-designed sites, as allowed by RCRA. Aggregate exposures that presume PESS and worker proximate residence, access and use of the facility, and a range of lifeways practiced near and in lands and waters impacted by facility environmental releases must be considered. Further, for all chemicals, NTTC urges that environmental release to air, water, soil, and sediment from *all* waste disposal sites, including transfer stations, C&D sites, materials recovery facilities, disaster debris facilities, and landfills be evaluated in the light of the common exceptions these facilities have for the range of design, performance, and monitoring features described above. To facilitate this outcome, NTTC has in previous comment letters informed EPA in detail about the unique characteristics of disposal sites on tribal lands and in tribal communities and we are able and willing to provide extensive photographic and narrative evidence that exposure through disposal is very likely for tribal people.

4. American Indian Religious Freedom Act Implications

The American Indian Religious Freedom Act of 1978 (AIRFA) (42 U.S.C. § 1996.) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites. When EPA presumes that environmental and other federal statutes protect a population from chemical release exposures, it must consider tribes practicing ceremonial and

[34] Gilbreath, Susan Vibeke Maria. "Health Effects Associated with Solid Waste. Disposal in Alaska Native Villages." PhD diss., University of California, 2005.

[35] Gilbreath, S. and Kass, P. Adverse Birth Outcomes Associated with Open Dumpsites in Alaska Native Villages *American Journal of Epidemiology*, Volume 164, Issue 6, 15 September 2006, Pages 518–528, 13 July 2006.

traditional activities, which are a protected basic American right. We note that EPA's TSCA risk assessment process includes a risk management stage following the risk evaluation stage. EPA cannot adequately manage chemical risks to tribal populations without including tribal practices in the risk evaluations. Without addressing risks to tribal practices in the evaluation stage, EPA risks violating AIRFA.

5. Environmental Justice Executive Order Implications

Not only would the continued exclusion of tribes from risk assessment be in violation of TSCA, it would be also in violation of EPA's commitment to integrating environmental justice into "the development, implementation, and enforcement of environmental laws, regulations, and policies"[36]. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. According to the EPA, "no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies"[37]. Executive Order 12898, to which risk assessment processes are subject, directs federal agencies to identify and address "the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations"[38] Tribes are a minority and low-income population whose lifeways place them at higher exposure potential to chemicals in the natural environment so that EPA must include exposure scenarios representative of tribal lifeways in its TSCA risk assessment process. In not doing so, tribal risks are left unevaluated, and tribes are left with a disproportionate share of the negative consequences and effects resulting from EPA's TSCA policies and operations.

6. Aggregate Exposures

NTTC notes that to fulfill the intent of Congress, EPA must evaluate the true risk of a chemical in commerce, and to consider aggregate and cumulative exposures, and not just for workers. Assessment of risk should mirror the real world so that the public is truly protected by agency risk management decisions.

Aggregate exposures were not considered in this risk evaluation.

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[36] EPA Environmental Justice webpage: https://www.epa.gov/environmentaljustice

[37] EPA EJ 2020 Glossary: https://www.epa.gov/environmentaljustice/ej-2020-glossary

[38] Summary of Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations. https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice

7. Aquatic Species Use and Ingestion

NTTC notes that unreasonable risk was found for aquatic organisms from PCE exposures based on direct releases from Processing as a Reactant condition of use (COU), and indirect releases from Incorporation into Formulations COU. Risks from PCE exposures were identified for algae based on direct and indirect releases from multiple COUs, including Waste Handling, Disposal, Treatment, and Recycling. These risks were found despite the very limited scope of COUs, and the exclusion of any consideration of releases from unlined disposal facilities near tribal populations, such as Very Small Municipal Landfills, transfer stations, and construction landfills. As noted, tribes depend on locally caught fish, algae (seaweed), and shellfish for their diets in far greater amount and in greater diversity that the general population.

While we recognize that fish consumption may not be an appreciable exposure pathway for the general population, we point out here there is a spiritual connection between fish and many tribes, and harm to them results in harm to tribal peoples' health.

This draft risk evaluation does not include a method to examine such harm, but we look forward to a proposed risk management strategy for PCE that reduces all releases to the environment, including those not considered under the current evaluation, to the point where aquatic species are not negatively impacted.

> …My strength is from the fish; my blood is from the fish, from the roots and berries. The fish and game are the essence of my life. I was not brought from a foreign country and did not come here. I was put here by the Creator….
>
> —*Chief Weninock,* Yakama, *1915*

8. Legacy Use

Legacy use and associated disposal of products containing PCE is not considered in this draft risk evaluation. In order to accurately address the risks PCE may pose to human health and the environment, the use and unsafe disposal of consumer products containing it need to be evaluated. Not considering legacy use, and the risks it poses, disproportionately affects tribes' exposures. According to the US Census, Native Americans experience the highest poverty rate in the country, much higher than the general population. Low income housing is prevalent in tribal communities today. Older electronics, furniture, and thrift store purchases can lead to continued and chronic exposure to toxins inside people's homes. NTTC strongly urges EPA to consider the impacts of legacy use of PCE on tribal populations.

On November 15, 2019, the Ninth Circuit Court of Appeals released its decision in the challenge to the TSCA risk evaluation and prioritization rules that EPA can no longer exclude "legacy" chemical uses from a risk evaluation, nor can it exclude any conditions of use from consideration.

9. Closing Remarks

In closing, the NTTC would first request that EPA extend the comment period on the draft TSCA risk evaluation of PCE. This will provide the time needed during a global pandemic for tribes and the public to better review and provide comments to EPA.

The final risk evaluation should include an analysis of tribes as PESS, and account for tribal lifeways and circumstances, as well as aggregate exposures.

Exemptions, exceptions, and exclusions of environmental statutes must be examined in detail before these statutes are assumed to be universally protective. Many such rules and policies leave tribes unprotected by EPA's statutes because tribal lifeways and circumstances are excluded or not considered. By relying on these statutes to protect the American people in risk evaluations under TSCA, EPA is excluding risks Native Americans face.

As OPPT's tribal partnership group, the NTTC looks to chemical regulation under TSCA as the most effective means that EPA has to achieving its mission to protect human and environmental health. EPA should take advantage of the authority granted by the Frank R. Lautenberg Chemical Safety for the 21st Century Act and work to improve TSCA risk evaluations by fully applying them to those subpopulations with the highest potential for exposure and those that are most susceptible, thereby modernizing its approach to achieving chemical safety.

Rather than relying on other environmental regulations to limit the impact of chemicals to human and environmental health, TSCA could be the primary regulatory backstop that keeps harmful chemicals from impacting the health and safety of US citizens. To support this mission and to protect the health of all, the NTTC again offers our help to EPA in providing information and data on tribal environmental exposures and risks.

We look forward to the Agency's written response to these comments within 90 days. Should you or your staff have questions or comments regarding our letter, please contact myself, Dianne Barton, NTTC Chair, at (503) 731-1259 / bard@critfc.org or Fred Corey, NTTC Co-Chair, at (207) 764-7765 / fcorey@micmac-nsn.gov.

Sincerely,

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