United States Environmental Protection Agency
Washington, DC

Comments Regarding: Interim Framework for Advancing Consideration of Cumulative Impacts
Docket ID Number: EPA-HQ-OLEM-2024-0360

Dear United States Environmental Protection Agency,

I appreciate the opportunity to provide comments on the U.S. Environmental Protection Agency's (USEPA's) *"Interim Framework For Advancing Consideration of Cumulative Impacts"* dated November 2024 (Framework). For 38 years I have been assessing and communicating risk at Superfund sites, while setting standards and when developing permit limits. That experience has provided me many opportunities to observe the various sources the contribute to the cumulative risk that a population of concern experiences.

Though the goal of the Framework is laudable, I found preparing the comments challenging. The challenge arises because USEPA's purview is reducing potential risk from chemicals in the environment through regulations that affect the concentration of such chemicals. Yet, generally it is no longer the case that chemicals in the environment are an important contributor to the cumulative adverse health outcomes experienced by the populations USEPA is trying to protect. In the initial decades of USEPA's existence the opposite was often the case. The risks from chemicals in the environment – lead is a prime example; solvents causing cancer clusters is another – were real and measurable. USEPA did a great deal to reduce the contribution of chemicals in the environment to cumulative human health risk in those days. To the point where today, risks from chemicals in the environment are not just small, but smaller than most other sources that contribute to cumulative health risk.

The Framework appears to recognize that change. "Place Matters" is emphasized throughout as a key source of cumulative impacts. Chemicals in the environment are not emphasized. One of the examples on page 25 of the Framework lists "racial, economic and environmental disparities and social injustices related to education, employment, housing and human health" as the focus of a cumulative impacts assessment. Another example on page 26 lists "housing, neighborhood and built environment, parks and greenspace, crime and safety, employment and economy, and social and cultural well-being" as being the determinants of health. Concentrations of chemicals in the environment are not included in the list of cumulative impacts in either example. The omission of chemicals in the environment is not surprising.

For most populations today, potential risks posed by chemicals in the environment (more accurately upper bound estimates of those risks) are not observable or measurable; they are predicted using risk assessment methods. Because the primary sources contributing to adverse health outcomes experienced by populations of concern are something other than chemicals in the environment, USEPA's ability to meaningfully

affect cumulative human health impacts through regulation of chemicals in the environment is limited, at best. Given USEPA cannot mitigate the primary causes contributing to cumulative risk (see examples above cited from the Framework) and that it is outside of USEPA's purview to assess and attempt to affect all of the cumulative sources that can affect overall health, the Framework is an overreach on USEPA's part. Identifying, assessing, ranking and then attempting to mitigate the sources that make significant contributions to cumulative health risk is better left to agencies within the United States Public Health Service (such as the Agency for Toxic Substances and Disease Registry) and local and State health departments. It is not USEPA's place to lead such a process.

USEPA can and should have a role in assessing cumulative impacts. USEPA can provide input to such a cumulative risk process by quantifying the potential risks from chemicals in the environment. Such quantification is something that USEPA does regularly. However, there is one aspect of USEPA's regulation of chemicals in the environment that has not been included in an assessment of cumulative impacts and should be included. That aspect is the stress created in populations of concern by the processes USEPA uses to estimate and communicate potential risk from chemicals in the environment. That anxiety and stress is almost certainly responsible for a larger contribution to cumulative adverse health impacts than the concentration of chemicals in the environment over which USEPA has purview.

A memorable personal example of the creation of stress associated with chemicals in the environment, and the much greater level of potential health risk posed by that stress than the chemicals in the environment themselves, occurred at a Superfund site in Florida. The site was abutted by a mixed-race lower socioeconomic neighborhood. Just the kind of neighborhood that is the focus of the Framework. On one of my visits to that neighborhood I had a conversation with an older woman of color. She knew about the Superfund site. She also understood that her yard and surrounding yards might contain concentrations of chemicals reported to pose an unacceptable risk. She was worried about what might happen to her grandchildren if they visited and contacted the soil in her yard. She was so concerned about the reported risks that she no longer felt her grandchildren could safely visit her and had determined that they should not visit. This was heart-wrenching. She did not appreciate that while USEPA's estimated risks may have been actionable in a regulatory context (an excess lifetime cancer risk in the vicinity of $1x10^{-4}$), that USEPA's estimates of potential risk were developed using standard risk assessment methods, that those are upper bound estimates of risk and greatly overstate any actual risks. Even if these risk levels are real, they are minuscule compared to the level of stress – both emotional and physical - and the risks associated with that stress that this woman was experiencing (my recollection was that she was in tears as she spoke to me). This is just one example of many I have seen over the past nearly 40 years where populations of concern are at far greater risk from USEPA's risk assessment and risk communication processes than they are from chemicals in the environment.

Whether USEPA continues with the *Interim Framework for Advancing Consideration of Cumulative Impacts* or not, USEPA needs to begin to account for the stress-related adverse effects created by its risk assessment and risk communication processes in the populations USEPA is trying to protect. Stress and anxiety can lead to a multitude of observable and measurable adverse effects. Adding such stress-related adverse effects to considerations of cumulative impacts is key given their potentially substantial contribution to overall cumulative public health risk.

Further, USEPA should consider developing methods to quantify the adverse effects associated with the stress created by the current processes of assessing and communicating risks associated with chemicals in the environment. USEPA could then compare the adverse effects of that stress to the adverse effects associated with chemicals in the environment. If the stress-related risks associated with the processes of estimating and communicating risks from chemicals is greater than the risks from chemicals themselves, USEPA could change its processes. That change could lead to a measurable reduction in cumulative risk experienced by the populations USEPA is striving to protect. Exactly what the Framework is hoping to achieve.

Thank you again for the opportunity to submit these comments.