



October 2, 2023

Toxicology Division, MC 168
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F
P.O. Box 13087
Austin, TX 78753

Re: Sunset Management Recommendation 1.2: Commission Vote on Acceptable Level of Health-Based Risk

To whom it may concern:

Harris County Pollution Control Services (PCS) is a local regulatory agency that inspects facilities in Harris County for compliance with air quality laws and regulations, reviews permit applications, provides comments and permitting and rulemaking actions, and responds to emergencies affecting the citizens of Harris County. PCS also works closely with the Texas Commission on Environmental Quality (TCEQ) to minimize potential impacts from activities (e.g., process upsets and accidental chemical leaks from industrial facilities) on the local environment and airshed. Harris County Public Health (HCPH) is the public health department for Harris County and provides comprehensive health services and programs to the community through approximately 700 public health professionals. HCPH's mission is to protect health, prevent disease and injury, and promote health and well-being for everyone in Harris County by advancing equity, building partnerships, and establishing culturally responsive systems. PCS and HCPH formed an Environment and Health Committee (hereby referred to as EAHC) as a collaborative effort to address this topic.

In response to the proposed target cancer risk level of 1 in 100,000 (1×10^{-5}) for setting screening levels that are used in TCEQ's air permitting program and compared to ambient air monitoring data, EAHC submits the following comments.

EAHC requests that TCEQ change their target cancer risk from 10^{-5} to 10^{-6} to minimize cumulative risk in emergency events involving more than one carcinogenic chemical. EAHC also suggests that



TCEQ avoid using the Environmental Protection Agency's (EPA) acceptable range for risk at remediation sites to validate their selected target cancer risk level.

TCEQ guidance states “the no significant excess risk level of 1×10^{-5} risk (one in 100,000) is ten times less than the upper end of USEPA's acceptable risk range (1×10^{-4})...”¹ Additionally, the webpage on TCEQ's website entitled *Sunset Management Recommendation 1.2: Commission Vote on Acceptable Level of Health-Based Risk* states “...the TRL of 1 in 100,000 (1×10^{-5}) ... [a]ccounts for potential exposure to multiple carcinogens while remaining below the upper end of EPA's acceptable risk range (1 in 10,000 or 1×10^{-4}).”² The EPA states on their website, “unlike other pollutants that EPA regulates, air toxics have no universal, predefined risk levels that clearly represent acceptable or unacceptable thresholds. However, EPA has made case-specific determinations and made general presumptions that apply to certain regulatory programs.”³

The range that TCEQ is referencing from EPA is the recommended upper and lower-end values for risk associated with regional removal management levels (RMLs). This range is used to determine remedial clean-up actions at contaminated sites, such as Superfund sites. Therefore, TCEQ should not validate their selection of target cancer risk based on the chosen value falling within EPA's “acceptable risk range” as this range is not comparable to air as a matrix.

EAHC suggests TCEQ change their target cancer risk level from 10^{-5} to 10^{-6} . Texas has a substantial industry presence that is largely sited in the counties along the Gulf Coast. Highly industrialized counties have higher risk for cancer and would benefit from TCEQ decreasing their established cancer risk level. Harris County is one such highly industrialized area. This industrial presence, which is disproportionally sited in low-income and minority neighborhoods, creates an increased risk of chemical leakage, fires, and human exposure to harmful contaminants. EAHC would also like

¹ TCEQ Guidelines to Develop Toxicity Factors, Introduction to Inhalation and Oral Toxicity Factors, 9 (2015) https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg-442.pdf.

² Sunset Management Recommendation 1.2: Commission Vote on Acceptable Level of Health-Based Risk, TCEQ, <https://www.tceq.texas.gov/toxicology/sunset-management-recommendation-1-2-commission-vote-on-acceptable-level-of-health-based-risk-1> (Last visited Sept. 27, 2023).

³ AirToxScreen Frequent Questions, EPA, <https://www.epa.gov/AirToxScreen/airtoxscreen-frequent-questions> (Last visited Sept. 27, 2023).



to note that Houston, the largest city in Harris County, has no zoning laws, which increases the cumulative exposure of communities that are often quite literally at the fence-line of industry.

Individuals in Harris County are exposed to a heightened level of several types of environmental hazards. For example, despite the standards set to control and prevent exposure, emergency events in highly industrialized counties are inevitable. These emergency events are paired with the likely release of hazardous air pollutants (HAPs). It is also common for multiple HAPs to be involved in one emergency event, which creates an adverse cumulative impact on neighboring communities. Since TCEQ plans to use one target cancer risk level for all carcinogenic chemicals, it is possible that more toxic chemicals would have a permissible exposure limit that is higher than the EPA recommended value. During an emergency event, this would result in an even higher cumulative impact than what would be suggested by the EPA. Additionally, TCEQ lists a total of 25 Superfund sites (active and remediated) in Harris County,⁴ which have the potential to be hazardous to its citizens.

There is also research that points to the conclusion that Harris County residents may be at high risk to development cancer. One 2021 study examined trends of cancer risk across 27 U.S. National Air Toxics trends stations from the years 2013 to 2017. This research showed that the estimated cancer risk for Houston was significantly higher than the mean cancer risk of rural sites, 42 in 1 million.⁵ Additional data shows all cancer incidence rates on a decreasing trend with an average cancer risk of 39 in 1 million in Harris County between the years 2015-2019.⁶ Both values exceed the current target cancer risk established by TCEQ, 10^{-5} (equivalent to 10 in 1 million). Therefore, EAHC contents that the heightened level of exposure and risk faced by residents of Harris County warrant a more protective risk level of 10^{-6} .

⁴ Superfund Sites in Harris County, TCEQ,

<https://www.tceq.texas.gov/remediation/superfund/sites/county/harris.html><https://www.tceq.texas.gov/remediation/superfund/sites/county/harris.html> (Last visited Sept. 27, 2023).

⁵ Chelsea A. Weitekamp et al., An Examination of National Cancer Risk Based on Monitored Hazardous Air Pollutants, 129(3) *Env't Health Perspectives*, 037008-2 (2021). <https://ehp.niehs.nih.gov/doi/10.1289/EHP8044>

⁶All Cancer Incidence Rate Measurement Period 2015-2019, Houston State of Health, <https://www.houstonstateofhealth.com/indicators/index/view?indicatorId=162&localeId=2675&localeChartIdxs=1%7C2%7C3&periodId=4523>.



In summary, the urban environment and industrial present in Harris County increases its citizens' risk for cancer, which is only one source for concern. Permissible concentrations of HAPs, which are incorporate TCEQ's target cancer risk in its calculation, still puts individuals in this county at risk for experiencing other serious adverse health effects which are not mentioned in this vote (e.g., asthma, COPD, heart disease). Furthermore, EPA generally reviews multiple variables associated with a chemical's toxicity before assigning a target cancer risk. EPA has assigned cancer risks as low as 10^{-6} for specific chemicals based on the frequency of exposure compared to other chemicals (e.g., benzene). Once again, TCEQ plans to use the same target cancer risk level for all carcinogenic chemicals, which would result in some toxic chemicals having higher cancer risks than the recommended values listed from EPA. Finally, at contamination sites, various media (e.g., soil, groundwater, sediment) have the potential to be remediated by removing contaminants until they are at a low enough concentration that poses little risk to neighboring communities. Unlike the listed matrices, it is difficult to "clean" or remediate air pollution after an emission event. There is also a high potential for multiple carcinogenic compounds to be involved in one emission event, which may produce additive or synergistic effects. By having an initial target cancer risk level that is low for individual chemicals, the overall cumulative effects would also be lowered if multiple chemicals were involved in an emission event. Considering all these points, TCEQ should be proactive and change their cancer risk to protect individuals living in high-risk counties by changing the target cancer risk from 10^{-5} to 10^{-6} .

Harris County

Pollution Control Services

Dr. Latrice Babin, Executive Director

Established in 1953



Thank you for the opportunity to provide comment on regarding the commission vote on acceptable level of health-based risk. Should you have any questions, please contact Valerie Coronado at (713) 274-6275 or via email at valerie.coronado@pcs.hctx.net.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. Babin', with a stylized flourish at the end.

Dr. Latrice Babin
Executive Director

cc: Anna Brewster – Harris County Judge’s Office
Sarah Utley – Harris County Attorney’s Office
Barbie Robinson – Harris County Public Health
Nicole Bealle – TCEQ Region 12