

Via Email

February 22, 2022

Southern Environmental Law Center
601 West Rosemary St, Suite 220
Chapel Hill, NC 27516

Attn: Mr. Nick Torrey

Re: Response to SELC Comments
Risk Assessment Report
828 Martin Luther King, Jr. Blvd.
Chapel Hill, NC
H&H Job No. TCH-002

Dear Mr. Torrey:

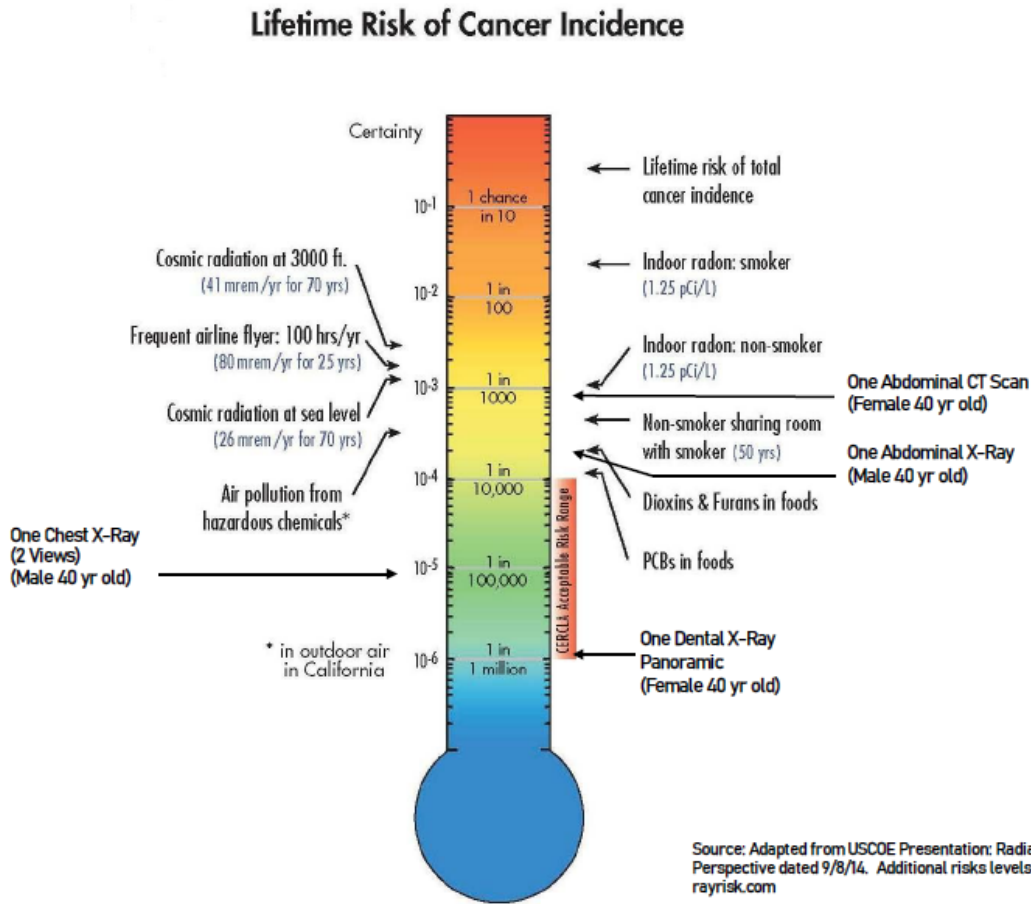
At the request of the Town of Chapel Hill, we have prepared this letter to address comments dated January 31, 2022, from the Southern Environmental Law Center (SELC) on the October 7, 2021 Risk Assessment Report (RAR) prepared by Hart & Hickman, PC (H&H) for the property located at 828 Martin Luther King (MLK) Jr. Boulevard in Chapel Hill, Orange County, North Carolina (site). For ease of reference, the abridged SELC comments are provided below followed by our response.

Comment:

*At the October 13, 2021 council meeting, Council members and Mayor Hemminger requested more information to update the risk assessment prepared by the town's environmental consultant before considering possible uses for the property. **The additional information requested included risk calculations using 10^{-5} (the level used for the initial risk assessment on the greenway) and 10^{-6} cancer risk factors**, as well as the inclusion of background levels of metals in the risk calculations since families living there would risk exposure to all pollutants present on the site.*

Response regarding cancer risk factor:

Before answering this question, we feel it is important to understand overall carcinogenic risks to humans from various causes in comparison to the North Carolina Department of Environmental Quality (DEQ) and EPA acceptable incremental cancer risk levels of 1 in 10,000 (1×10^{-4}) to 1 in 1,000,000 (1×10^{-6}). Below is graphic depicting the lifetime incidence of cancer from various causes such as air pollution, radon, cosmic radiation, and X-rays in comparison to the EPA acceptable risk range.



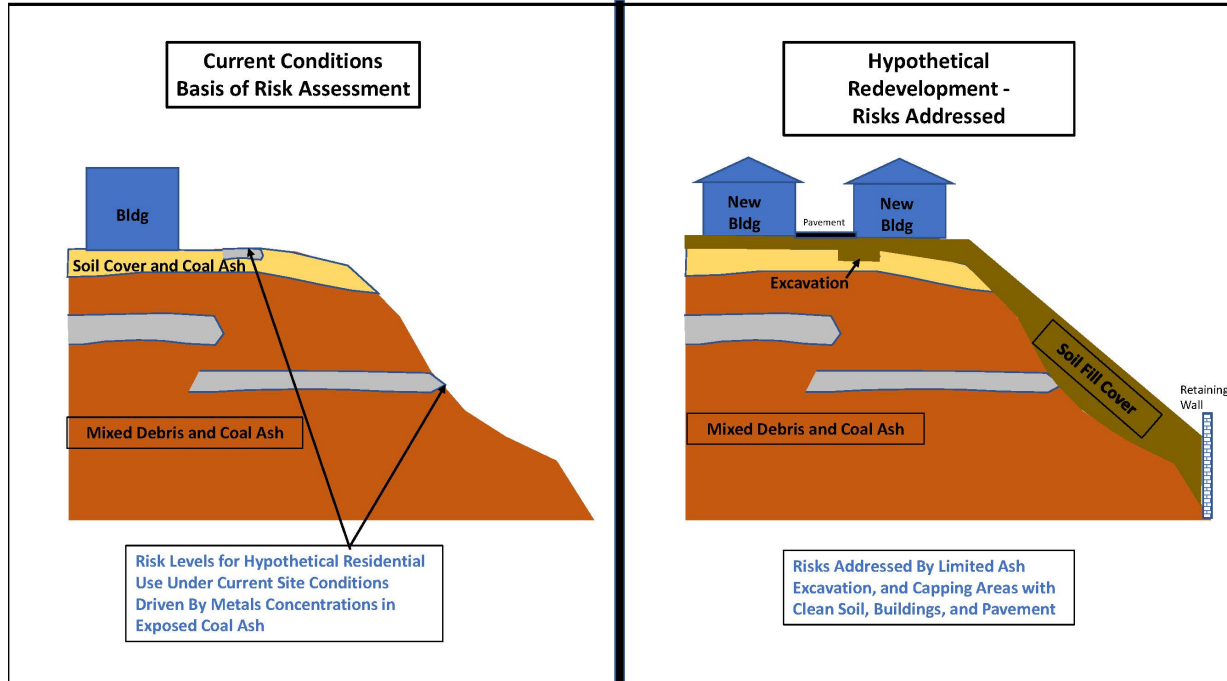
As indicated in the graphic, the overall incidence of cancer in the human population is around 1 in 5 (i.e., 20% of the population will get cancer of some type). The incidences of cancer from cosmic radiation at sea level, radon in indoor air for a non-smoker, and from a single abdominal CT scan are approximately 1 in 1000 and significantly higher than the acceptable EPA and DEQ acceptable risk range of 1 in 10,000 to 1 in 1,000,000. The incidences of cancer within the EPA and DEQ risk range are similar to that of a single dental X-ray, single chest X-ray (2 views), and single abdominal X-ray. Multiple X-rays over a lifetime will obviously increase the potential incidence of cancer.

Therefore, the incremental cancer risk from environmental exposures that are within the EPA and DEQ acceptable risk range are minimal in comparison to everyday type of exposures that occur to people. The EPA and DEQ acceptable carcinogenic risk range of 1 in 10,000 to 1 in 1,000,000 is identified in Federal rules at 40 CFR 300.430[e]. A risk range is provided in the rules to give flexibility to regulators, parties conducting cleanups, and communities in making decisions regarding cleanup objectives. The DEQ Division of Waste Management considers a cumulative cancer risk of one in 10,000 to be acceptable. The EPA recommends consideration

of a range of risk levels, but typically uses a risk of 1 in 10,000 as a trigger to define remediation areas.

Per the Town Council's request, H&H performed additional risk calculations using the risk assessment criteria outlined in the RAR for residential exposure in the upper level of the site *in the site's current condition* (i.e., no additional actions including potential capping or removal of soil/coal combustion products [CCPs] that would occur as part of redevelopment), but using the 1 in 100,000 and 1 in 1,000,000 acceptable risk levels. The results of that evaluation indicate that application of a 1 in 100,000 target cancer risk would result in a recommendation to remove/cover soil representative of one additional sample (sample HH-3) for the site *in its current condition* to be suitable for residential use. Application of a 1 in 1,000,000 target cancer risk would result in a recommendation to remove/cover soil representative of three samples (samples HH-1, HH-2, and HH-3) for the site *in its current condition* to be suitable for residential use.

Regardless of the target risk values used in evaluation of the current site conditions, risks can be addressed as part of the redevelopment of site. Where impacted soil/CCPs are covered by areas of pavement, buildings, or clean fill material, the potential for exposure to those soil/CCPs is addressed. For areas with elevated concentrations above the target risk value and no surface cover or fill material under the post-redevelopment scenario, impacted soil/CCPs near the surface can be excavated and replaced with clean fill material, thereby addressing the potential for exposure. The Brownfields process will ensure that these measures are implemented to ensure that risks are acceptable for the specified uses of the property, and will also ensure that those measures are in place and maintained in the future. The below diagram provides a hypothetical example to demonstrate how current risks identified at the site (upon which the risk calculations in the RAR are based) can be addressed as part of the site redevelopment.



The measures that will be used to address risks will be dependent on the specifics of the redevelopment project. The redevelopment information can then be used to identify specific management procedures to reduce or eliminate potential exposure risks, which are currently noted in the RAR but are not tied to specific development plans.

Comment:

At the October 13, 2021 council meeting, Council members and Mayor Hemminger requested more information to update the risk assessment prepared by the town's environmental consultant before considering possible uses for the property. The additional information requested included risk calculations using 10^{-5} (the level used for the initial risk assessment on the greenway) and 10^{-6} cancer risk factors, as well as the inclusion of background levels of metals in the risk calculations since families living there would risk exposure to all pollutants present on the site.

Response regarding inclusion of background metals concentrations in the risk calculations:

The RAR documents risk calculations with and without the inclusion of background metals concentrations (refer to the text, Table 1, and Appendix C of the RAR). EPA and DEQ do not require remediation of concentrations below naturally occurring background levels, because these concentrations represent naturally occurring conditions in North Carolina soil, are not associated with contamination sources, and are therefore not "pollutants". Therefore, constituent concentrations attributed solely to background conditions are not used in evaluation of areas to be addressed to reduce potential risks to site occupants. For example, it would not reduce risks or be a good use of resources to excavate soil from the site due to concentrations of metals at typical background levels, then backfill with soil from another local uncontaminated site or quarry that contains similar concentrations of metals at typical background levels.

Comment:

If the proposed developer or the town's consultant can provide examples of successful residential redevelopment projects constructed on coal ash sites, we would be interested to see that information.

Response:

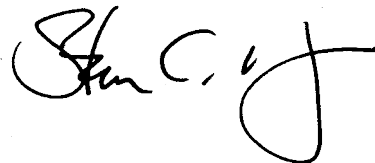
This inquiry is best directed to the DEQ Brownfields Program. However, H&H notes that coal ash has been used as structural fill throughout the State in both permitted fills and prior to permitting requirements. The State keeps records of permitted fill sites. Fill has been used for many types of end uses including residential properties, churches, farms, and schools. Although there have been cases where structural fill coal ash has become exposed after placement, the vast majority of the locations where coal ash has been used as structural fill have not resulted in significant risks to use of the properties. In the case of the proposed redevelopment of the subject site, a Brownfields agreement will require long term inspections and, if needed, repair of barriers to prevent exposure of occupants to underlying coal ash.

We appreciate your interest in this project.

Sincerely,
Hart & Hickman, PC



Genna K. Olson, PG
Principal



Steve Hart, PG
Principal

cc: Dwight Bassett – Town of Chapel Hill
Mary Jane Nirdlinger – Town of Chapel Hill
John Richardson – Town of Chapel Hill
Laura Selmer – Town of Chapel Hill
Keith Johnson – Poyner Spruill
Justin Ballard – Hart & Hickman, PC