

November 16, 2019

Ms. Tina Andersen
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, CA 92602

SUBJECT: CONSTRUCTION HEALTH RISK ASSESSMENT MEMORANDUM

Dear Ms. Tina Andersen:

Urban Crossroads, Inc. is pleased to submit this construction health risk assessment memorandum to T&B Planning, Inc..

PURPOSE

California Air Resources Board (CARB) has recently been commenting on projects subject to the California Environmental Quality Act (CEQA), requesting that projects that involve construction activity longer than two months should include a construction health risk assessment (HRA). CARB refers to guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to support its claim that construction HRAs should be performed.

BACKGROUND

Urban Crossroads, Inc. has reviewed the referenced OEHHA Guidance Manual¹ to determine applicability of the use of early life exposure adjustments to diesel particulate matter (DPM) emissions resulting from construction activity.

Specifically, the OEHHA Guidance states “Due to the uncertainty in assessing cancer risk from very short-term exposures, we do not recommend assessing cancer risk for projects lasting less than two months at the MEIR. **We recommend that exposure from projects longer than 2 months but less than 6 months be assumed to last 6 months** (e.g., a 2-month project would be evaluated as if it lasted 6 months).” (2015 Guidance Manual p. 8-18 [emphasis added].)

As such, the determination of whether a construction HRA is warranted is dependent on whether or not early life exposure adjustments apply to DPM emissions resulting from construction activity. This memorandum outlines the substantial evidence to support why early life exposure adjustments are *not* applicable to construction DPM and therefore a construction health risk assessment is not required due to the short-term duration of construction activity (long-term exposure e.g. 9 or 30 years of activity are typically used to generate a risk estimates).

¹ http://oehha.ca.gov/air/hot_spots/hotspots2015.html

For risk assessments conducted under the auspices of The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588), OEHHA applies specific adjustment factors to all carcinogens regardless of purported mechanism of action. Notwithstanding, applicability of AB 2588 is limited to commercial and industrial operations. There are two broad classes of facilities subject to the AB 2588 Program: 1) Core facilities and 2) facilities identified within discrete industry-wide source categories. Core facilities subject to AB 2588 compliance are sources whose criteria pollutant emissions (particulate matter, oxides of sulfur, oxides of nitrogen and volatile organic compounds) are 25 tons per year or more as well as those facilities whose criteria pollutant emissions are 10 tons per year or more but less than 25 tons per year. Industry-wide source facilities are classified as smaller operations with relatively similar emission profiles (e.g., auto body shops, gas stations and dry cleaners using perchloroethylene). The emissions generated from off-road mobile sources are not classified in AB 2588 as core operations nor subject to industry-wide source evaluation.

In comments presented to the South Coast Air Quality Management District (SCAQMD) Governing Board (Meeting Date: June 5, 2015, Agenda No. 28) relating to toxic air contaminant exposures under Rules 1401, 1401.1, 1402 and 212 revisions, use of the OEHHA Guidelines specifically related to the applicability and use of early-life exposure adjustments for projects subject to CEQA, it was reported that²:

“The Proposed Amended Rules are separate from the CEQA significance thresholds. The SCAQMD staff is currently evaluating how to implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board. In the interim, staff will continue to use the previous guidelines for CEQA determinations.”

To date, the SCAQMD, as a commenting agency, has not conducted public workshops nor developed policy relating to the application of early-life exposure adjustments utilizing the OEHHA Guidance Manual for projects prepared by other public/lead agencies subject to CEQA.

As a result, it is recommended that health risk assessments rely upon U.S. EPA documentation when evaluating the use of early life exposure adjustment factors (*Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*, EPA/630/R-003F) wherein adjustment factors are only considered when carcinogens act “through the mutagenic mode of action.” A mutagen is a physical or chemical agent that changes genetic material, such as DNA, increasing the frequency of mutations to produce carcinogenic effects. The use of adjustment factors is recommended to account for the susceptibility of producing adverse health effects during early life stages from exposure to these mutagenic compounds.

² See Response to Comment #13, Page A-7 and A-8 of the June 5, 2015 board meeting Agenda No. 28. <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-jun1-028>

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In 2006, U.S. EPA published a memorandum which provides guidance regarding the preparation of health risk assessments should carcinogenic compounds elicit a mutagenic mode of action (USEPA, 2006³). As presented in the technical memorandum, numerous compounds were identified as having a mutagenic mode of action. For diesel particulates, polycyclic aromatic hydrocarbons (PAHs) and their derivatives, which are known to exhibit a mutagenic mode of action, comprise < 1% of the exhaust particulate mass. To date, the U.S. Environmental Protection Agency reports that whole diesel engine exhaust has not been shown to elicit a mutagenic mode of action (USEPA, 2018⁴).

Additionally, the California Department of Toxic Substances Control (DTSC) which is charged with protecting individuals and the environment from the effects of toxic substances and responsible for assessing, investigating and evaluating sensitive receptor populations to ensure that properties are free of contamination or that health protective remediation levels are achieved has adopted the U.S. EPA's policy in the application of early-life exposure adjustments which is consistent with the methodology considered herein. As such, incorporation of early-life exposure adjustments for exposures to DPM emissions in the quantification of carcinogenic risk for construction of the proposed are not considered.

Given that there is no available guidance that has been adopted by SCAQMD for CEQA purposes and the fact that the Project does not emit any pollutants that elicit a primary mutagenic mode of action, the use of the OEHHA guidelines to determine potential construction health risks would not be appropriate and therefore is not recommended at this time.

Respectfully submitted,

URBAN CROSSROADS, INC.



Haseeb Qureshi,
Associate Principal

3 United States Environmental Protection Agency, 2006. Memorandum – Implementation of the Cancer Guidelines and Accompanying Supplemental Guidance - Science Policy Council Cancer Guidelines Implementation Workgroup Communication II: Performing Risk Assessments that include Carcinogens Described in the Supplemental Guidance as having a Mutagenic Mode of Action.

4 United States Environmental Protection Agency, National Center for Environmental Assessment, 2018. Integrated Risk Information System (IRIS). Diesel Engine Exhaust.