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March 11, 2025

Kathryn Barger 5th District Supervisor County of Los Angeles

Barbara Ferrer, PhD, MPH, MEd Director Los Angeles County Department of Public Health

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Dear Supervisor Barger and Dr. Ferrer,

You requested an evaluation of potential cancer risks among residents living near Chiquita Canyon Landfill due to concerns about the potential impact of the Chiquita Canyon Landfill odor incident. We have also been contacted by Assemblywoman Schiavo regarding similar concerns of excess cancer risks among residents in the city of Val Verde, adjacent to Chiquita Canyon Landfill. We determined that there are two concerns relevant to cancer risk assessments.

1. Impact of underground fire:

Reports of odor complaints from residents were traced to an underground fire in Chiquita Canyon Landfill resulting from a sub-surface reaction that occurred in 2023. We communicated with officials of the Los Angeles County Department of Public Health and reviewed air quality & exposure assessments conducted by Roux Associates. As of now, the most recent complete data on cancer incidence covers up to year 2021. Thus, it is not possible to assess any changes in cancer incidence after the fire. Due to the long latency period of cancer, the delay between initial exposure to a cancer-causing agent and the clinical detection of cancer, the fire-related cancer risks may not manifest for several years. Nonetheless, we propose to revisit cancer pattern analysis as cancer incidence data from 2023 and forward become available.

2. Long-term previous exposure to Chiquita Canyon Landfill:

It was reported that the residents who live near Chiquita Canyon Landfill had concerns about cancer risks from exposure to unspecified pollutants over decades. Based on the information provided on exposure risks and the exposure assessment report by Roux Associates, we investigated cancer incidence in census tracts of Val Verde, Hasley Canyon, and Castaic. The analysis included cancers of the breast, ovary, prostate, bladder, cervix, colon, esophagus, liver, lung, nasopharynx, sinonasal tract, thyroid, and kidney (renal cell carcinoma), as well as multiple myeloma, acute myeloid leukemia, and both adult and pediatric acute lymphocytic leukemia. These sites were selected based on the reported exposure assessment and residents' self-report of cancer incidence in the area.

We applied statistical methods endorsed by the CDC and computed the standardized incidence ratio (SIR), which detects any differences in cancer incidence among residents of the affected area compared to the

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incidence among the general population of Los Angeles County. The U.S. Census data is used to estimate the underlying population counts. To compute the SIR, we count the observed number of cases in the selected geographic area by sex, year of diagnosis in decades, and race/ethnicity and compare it to the expected number of cases calculated by sex, year of diagnosis in decades, and race/ethnicity. The expected number represents the number of cases we would expect to find if the cancers occurred at the same rate as those in Los Angeles County. We calculated 95% confidence intervals of the SIR values that tell us the statistical likelihood that the SIRs are significant.

Due to recent changes in the U.S. Census data disclosure practice and an erroneous census data pattern found in one of the affected census tracts, we employed customized strategies specific and appropriate for each region.

Val Verde and Hasley Canyon

Census tracts 9201.06 and 9201.04 based on 2000, 2010 and 2020 Census were used to define the area of interest. The investigation was performed in consideration of sex (male, female), race and ethnicity (non-Hispanic whites, Hispanics, non-Hispanic blacks, and Asians/others) and time period (2000-2009 and 2010-2021).

For each of Val Verde and Hasley Canyon regions, we conducted 256 independent cancer-, sex-, time period- and race/ethnicity-specific assessments and made statistical adjustments to account for multiple testing and chance finding. The investigation did not result in detection of statistically significant excess in cancer incidence by sex, race/ethnicity, time period and cancer site. However, due to low population counts in Hasley Canyon and Val Verde, the estimated SIRs did not have sufficient statistical stability. Therefore, the lack of statistically significant findings do not confirm or deny association, thus shall be interpreted with caution.

<u>Castaic</u>

Census tracts 9201.16, 9201.18 and 9201.19 based on 2010 and 2020 Census were used to define the area of interest. During the investigation, we discovered that 2000 Census data of the same area (census tract 9201.05) had erroneous and irreparable data, rendering the period 2000-2010 unanalyzable. Therefore, the investigation was performed in consideration of sex (male, female), race and ethnicity (non-Hispanic whites, Hispanics, non-Hispanic blacks, Asians, and others) for time period 2010-2021.

For Castaic, we conducted 128 independent cancer-, sex-, and race/ethnicity-specific assessments and made statistical adjustments to account for multiple testing and chance finding. The investigation did not result in detection of statistically significant excess in cancer incidence by sex, race/ethnicity and cancer site. However, two cancer sites – cancers in breast and prostate - showed modest increase in risks with borderline significance that did not reach the statistical threshold. These increases in risks do not imply causation, but rather an observed association in population studies. Breast and prostate cancers are known to be strongly associated with demographic factors, notably race/ethnicity and socioeconomic status.

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Residents in Castaic are of higher socioeconomic status compared to residents in Los Angeles County. According to the U.S. Census, the median household income in Castaic is \$132,153 and that of Los Angeles County is \$87,760. We note that in other areas of Los Angeles County that are similarly higher in socioeconomic status also experience similar increases in breast and prostate cancer incidence.

In order to mediate the lack of the U.S. Census data in 2000 in Castaic region, we used an alternative population estimation strategy relying on 2010 census only. We confirm that the findings still stand.

This information is provided on behalf of the Los Angeles Cancer Surveillance Program and the California Cancer Registry. Please contact us for further information if needed.

Sincerely,

Omio Hurang

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