Laytonville Landfill and Health Concerns raised by Tribes at the Laytonville Rancheria

For meeting with GreenAction and Representative of the Wailaki Tribe from Laytonville Rancheria regarding agenda item 4. Contamination, health emergency on the Laytonville Rancheria and need to get residents out of harm's way.

Potential health impacts from the Laytonville Landfill have been long-term concerns for the Cahto Tribe and the Wailaki tribal members, who also reside on the Rancheria. More recently, sampling by the Tribe in 2016, called out arsenic, lead and hexavalent chromium as potential contaminants of concern. Five soil samples and three groundwater samples were collected and analyzed. Although this was a relatively small data set, the analytical results showed minor hits of three metals.

- Arsenic: Results ranged from 2-6 mg/kg. This is above the RSL of 0.68 mg/kg but below the natural background of 3-15 mg/kg near Laytonville.
    - Residential Screening Level (RSL) is a screening tool and EPA's residential remedial action level for cleanup of arsenic is 20 ppm or 20 mg/Kg.
- Lead: The lead (Pb) was generally below the residential RSL of 82 mg/kg (9.1, 12, 140, 13, and 5.2 mg/kg). Background Pb for this area is approximately 8-15 mg/kg, so the hit of 140 mg/kg may be anthropogenic. The landfill is one possible source of this minor Pb hit, but there may be other local Pb sources as well.
- Hexavalent chromium: The data showed two detections above the residential RSL of 0.3 mg/kg (6.6, 3.6 mg/kg). Although hexavalent chromium is typically sourced to human activity, it can occur under natural conditions, particularly in areas that have high total chromium, such as California's Coast Ranges.

The Tribes and GreenAction have raised concerns with increased cancer and respiratory issues at the Rancheria and have advocated to CA and BIA that tribal members need to be relocated away from the landfill.

In 2017 BIA conducted two rounds of more extensive soil testing in 20 quadrants throughout the Rancheria. The results were similar for arsenic, no lead above RSL and no detections of hexavalent chromium. One of the 20 composite samples had a Dioxin/Furan Toxicity Equivalency Quotient (TEQ) result of 5.66 ng/Kg. This is above the residential RSL of 4.8 ng/Kg or 4.8 ppt for Dioxin/Furans.

Phase I Soil Sampling Results: (from 20 composite samples)

- Arsenic: Results ranged from 2-8 mg/kg. Above the RSL of 0.68 mg/kg but below the natural background of 3-15 mg/kg.
- Lead: Results ranged from 5-22 mg/kg and were below the residential RSL of 82mg/kg
- Hexavalent chromium: All non-detect.
- Dioxin/Furans - TEQ: One composite sample had a result of 5.66 ng/Kg. This is above the residential RSL of 4.8 ng/Kg or 4.8 ppt. EPA's furan TEQ action level is 51 ppt for residential.

Phase II - primarily focused on the quadrants with higher dioxin/furan TEQ results

- Arsenic: Results were mostly below 5 mg/kg one at 10.3 mg/Kg a couple around 6-7 mg/Kg
- Dioxin/Furans – TEQ: One TEQ result that was 60.9 ng/Kg vs RSL of 4.8. and a handful of TEQ results just above RSL of 4.8 vs. EPA's furan TEQ action level is 51 ppt. This sample was taken at a location formerly used for open dumping/burring.

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This spring, California Department of Toxic Substances Control collected samples at the landfill itself and we are waiting for those results.

2005 ATSDR Public Health Assessment - In 2005 the Toxic Substances and Disease Registry (ATSDR) prepared a Public Health Assessment for the Laytonville Landfill. Very briefly, the assessment concluded there is a lack of conclusive evidence about past landfill contamination. However, since the landfill was closed and capped in 1997, current exposure risk is minimized. The assessment also concluded that the landfill does not significantly affect the air quality in the area. Low level VOCs may be coming from the landfill but do not pose a health hazard. The most significant impact to area air quality is open burning, wood-burning fireplaces and automobile traffic.