

August 14, 2018

Dear Petaluma City Council members,

I am writing you in regards to the Proposed 16-bay Safeway fueling station on Petaluma's east side. I am a toxicologist with the State of California and I have reviewed the relevant scientific literature on the Health Impacts of Gasoline and Fuel Emissions in children. Much of it is fairly recent, so you may not be up to date on the most current scientific findings regarding adverse health impacts and proximity to gas stations.

The US Environmental Protection agency (USEPA) classifies gas stations as point sources for benzene, a potent volatile carcinogen that is linked to cancer in children. Living next to a gas station (within 328 feet) quadruples the risk of acute leukemia in children and increases the risk of developing acute non-lymphoblastic childhood leukemia by 7 times, compared with children who don't live near a gas station (Steffen et al., 2004). (Cancer is a leading cause of childhood mortality in the US, and leukemia is the most frequent malignant disease effecting children). Because benzene is a carcinogen, the World Health Organization (WHO) has determined that there is ***no safe level*** of exposure.

Studies show that living within 100 yards (300 feet) of a gas station damages your health and that a 100 yard distance, at a minimum, should apply to vulnerable facilities such as schools (Morales et al., 2010). Children with higher exposures to toxins such as benzene and vehicle exhaust are more likely to require academic support services later in childhood, and to adversely impact their educational trajectories (Stingone et al., 2017). The USEPA publishes School Siting Guidelines that recommend careful evaluation for any potential school location within 1,000 feet of a LARGE gas station (defined as dispensing more than 3.6 millions gallons/year). The proposed Safeway gas station, with 16 bays, will dispense well in excess of 12 million gallons fuel/year - and there is a preschool, a children's playing field, and numerous residences *within 160 feet*, and an elementary school *within 300 feet* of this fueling station! These are unsafe distances.

There is a large body of scientific literature on the health impacts of gasoline and fuel emissions, particularly in children. Attached is a summary of some of the scientific findings for your review. Cancer, neurotoxicity, respiratory and other inflammatory effects are some of the health endpoints of concern. Even at low levels, airborne concentrations of benzene have been shown to result in oxidative damage to nucleic acids in children 5-11 years of age (Andreoli et al., 2015). (Oxidative damage is implicated in many chronic diseases.).

Simply put, I don't think Petaluma can manage the liability this has the potential to create in terms of the risk of adverse health outcomes – given the scientific weight of evidence. Moreover, I am concerned about your proceeding with this decision when neither the City Council nor Safeway have properly evaluated the health risks of this fueling station. Whatever revenues may be realized from this commercial enterprise

would be offset by likely lawsuits regarding children's, teacher's and resident's health. Fueling stations, especially mega fuel stations, should *not* be located in areas where vulnerable populations and activities (*e.g.*, schools, child-care centers) would be impacted. Interestingly, Petaluma's general plan already forbids new drive-throughs, in an effort to reduce greenhouse gas emissions from idling vehicles, and a 16-bay gas station would do just that: significantly *increase* greenhouse gas emissions.

In 2018, as Petaluma continues to grow and land becomes increasingly expensive, it doesn't make economic sense to keep building gas stations, let alone mega-sized gas stations. In many cities, a gas station falls far down on the list of the best things to do with a piece of land. It would be far more preferable to build housing above with stores below than to put in a conventional gas station which - given the cheap price of natural gas and the drive to move towards natural gas-based fuels and electric cars - is on the wane. Moreover, no need for additional gas stations to meet the needs of Petaluma citizens has been shown. Thus, the building of this gas station is without merit, and poses a gravely unacceptable risk to our community's most vulnerable citizens: young children.

Thank you for your time and attention to this critical matter.

Sincerely,

Moirra Sullivan, M.S.