

The following testimony was given to the Costco Office of Zoning and Administrative Hearings on Monday, February 24, 2014.

This is a copy of the document that was submitted at that time.

Note that the problem is in not taking into account topology – i.e. houses being down a slope instead of some X linear feet away from the pumps.

Good morning. My name is Doug Sims. I live on Peregoy Drive, about 600 feet from the proposed gas station. I would like to distribute some pictures I took close to my house.

Dr. Cole used the term “downslope” in his report entitled: Expert Opinion on Costco’s Air Quality Assessment dated March 26, 2013 and in comments submitted to the Montgomery County Planning Staff on January 15, 2013

In this report he described how pollutants can concentrate in an area situated beneath the source of pollution. This happens because the polluted air cools overnight and flows down a slope – in our case to the houses near the ring road.

On page 11 of the Montgomery County Planning Department report dated February 14, 2013 I find these statements which heighten my concerns:

1. EPA standards and methodologies used to evaluate modeling results are not site-specific.
2. Gas stations are considered to be hotspots for air toxics due to the concentration of emission sources (e.g., idling vehicles, underground storage tanks, etc.).

What I take this to mean is that the specific topographic characteristic of the Kensington Heights neighborhood, with the adjacent houses sitting in a depression next to the source of the pollution, has not been taken into account.

On page 12 of the report I find:

1. The anticipated queues of vehicles waiting to purchase gas are not typical of a gas station and that they will create a carbon monoxide hotspot, similar to those created at intersections.
2. Unlike an intersection hot spot, which dissipates over a wider area, the hotspot created with this gas station will not dissipate as quickly and will be a true hotspot, circular in nature, centered around the area that is associated with the queued idling vehicles.
3. The proposed gas station will create a hotspot in nitrogen oxide emissions and could be a cause for concern for nearest residents.
4. The nearby residents will be directly impacted by the carbon monoxide and nitrogen oxide emissions. The proposed gas station,

therefore, will bring the emissions directly into a neighborhood, and these emissions will not dissipate as they would along a transportation corridor.

My understanding of this is that if the gas station is built it will create a unique and hazardous source of toxic air.

It will be unique, not only because of the size of the facility, in terms of gas pumped per year, but also because of where it is located, next to the hills of Kensington Heights. We basically live in a valley below that gas station. It seems likely that the emissions will not dissipate like they would if the wind could clear the pollution from a flat area. Instead, because of the downslope flow documented in Dr. Cole's report, the toxic hotspot will settle into the neighborhood below the gas station.

On page 12 of the Planning Department Staff Report it is stated:

1. The quantity of air toxics emitted from gas stations is directly related to the volume of gas dispensed.

I've read that this gas station is projected to pump more gas than any other in Montgomery County.

The Planning Department report also states:

2. A gas station has a much higher contribution to Volatile Organic Compound (VOC) levels, including benzene and 1,3 butadiene, which are known carcinogens, than emissions from mobile sources, and these VOCs come from several sources such as the refueling of the underground storage tanks, breathing of the tanks, refueling of vehicles, spillage, and idling vehicles waiting to purchase gas.
3. The VOC emissions from the proposed gas station will create another hotspot comparable to the nearby bus transfer station.
4. The Applicant has understated the exposure of the nearest residents to these emissions.
5. Staff disagrees with the Applicant's low assessment of residential exposure rates, since the graphics provided show VOC emissions in the backyards of the nearest residents to be higher than stated in the analysis.
6. There is no supporting method for calculating the cancer risk since the risk assessment is not broken out by compound or length of exposure.
7. It is not clear what assumptions have been made to conclude that there will be no cancer risk.

Finally, I would like to briefly comment on the Volatile Organic Compounds referred to in the Planning Department's report.. These compounds are mostly heavier than air, and therefore likely to settle in the neighborhood below the gas station along with the rest of the pollutants.

There was a study done by the Department of Civil and Environmental Engineering entitled the Chemical Composition of Vehicle-Related Volatile Organic Compound Emissions in Central California that was published in 2004. (http://www.arb.ca.gov/airways/ccos/docs/ii5_0014_aug04_fr.pdf)

This study analyzed the VOCs in vehicle exhaust by sampling the air in the Caldecott tunnel in Oakland California.

They found 93 types of volatile organic compounds in car exhaust. They produced a table that lists them by weight percent. The carcinogen benzene was found to account for 3.4% by weight of VOCs in 2001, and the carcinogen 1,3 butadiene was present at .48% by weight.

As for the other 91 VOCs found in car exhaust, which the Montgomery County Planning Department states will be in our yards, most of these compounds are surely toxic.

Gas stations are not generally considered to be pollution sources severe enough to threaten public health, but I would ask you to consider the word "generally". It's hard to see how our topographic situation is typical. I think absent a study showing otherwise, the VOCs in gasoline and other heavier-than-air pollutants in car exhaust may likely create an unacceptable concentration of toxic air that will settle into the neighborhood beneath the ring road.

There are young children living on Peregoy Drive closer to the ring road than where I live. If the gas station was moved 300 feet from the pool, why is it okay for it to be closer than that to the children who would have to breathe the bad air all the time?

Thank you.