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Email: Northwest Region Air Quality Permits

Northwest Air Quality Permit Coordinator
George Davis, Permit Writer
David Munro, Air Quality Manager, Northwest Division
DEQ Northwest Region
2020 SW 4th Avenue, Suite 400
Portland, OR 97201

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Subject: Intel Emission Permit, Permit Number 34-2681

Dear Northwest Air Quality Permit Coordinator, Mr. Davis, and Mr. Munro:

It is clear that there is significant information about the emissions from Intel's manufacturing facilities that is of grave concern to the public but has not yet been disclosed. The recent media reports about unreported fluoride emissions are one example. A further and much more concerning report is that by another writer commenting on the specific emissions and the quality of the Oregon DEQ permitting process and requesting further clarifications and conditions for the permit issuance[1].

One area of concern that has not been addressed in the many comments submitted by the public is the localized impact of the site emissions both singly and in combination. The permit clearly identifies the two sites, Aloha and Ronler Acres, and the individual sources (Emissions Unit) and bundles them together as one emission source. The emissions from these sources are then emitted into a local "airshed" [2] of some undefined dimensions that is assumed to be of widespread distribution and of high capacity for dispersion and dilution of the emissions.

However, we know that weather patterns; wind, rainfall, temperatures and barometric pressures in this airshed are highly variable and thus strongly influence the generation of possibly intense local impacts in the immediate neighborhoods around the Intel sites. For example, the work at the Nature's Needs site in North Plains has identified periods of air inversions in which composting odors are trapped near the ground and prevented from dissipating. Additionally we observe a number of days in which the plumes from Intel's cooling towers rise vertically until the water vapor reaches equilibrium with the air and the plume disappears.

In addition, there is no provision in the permitting process to address the inevitable pollution control equipment malfunctions and the resultant high levels of untreated process exhaust onto local residences.

Finally, there are a large number of cooling towers on the Intel sites. These devices are known for their water carryover (drift) both as water droplets and as water vapor. There seems to be the very real possibility that the exhaust from emission control devices, e.g., silica dust will combine through some mechanism such as physical entrainment, with the cooling tower (drift) to produce undetermined impacts on local residences.

To this point, all of the discussions around the Intel Air Emissions Permit have been directed to source controls. Nothing has been directed at the impact on individual households with respect to the variables identified above. It is time to start looking at this impact, not only for the Intel sites currently under review, but for other existing sources such as the Hillsboro Airport as well as future large industrial facilities.

In order to provide the visibility into household impacts, I'm requesting that DEQ require comprehensive emission dispersion modeling be completed for all of Intel's Oregon facilities, both individually and collectively. done by a third party, the results of which to be reviewed through a public process. Such modeling should be a prerequisite for the permit conditions and approvals.

- [1] Joseph Miller PhD, Letter to Oregon DEQ re Intel Air Emmissions Permit, dated October 13, 2013
- [2] <http://www.oregongeology.org/pubs/ofr/p-O-11-06.htm>, Not definitive, but conveys the concept of a Tualatin Valley airshed.
- [3] http://www.epa.gov/ttn/atw/3_90_023.html, Identifies "dispersion modeling" and its uses.

Respectfully
Henry Oberhelman