



Save Helvetia
13260 N.W. Bishop Road
Hillsboro, Oregon 97124

www.SaveHelvetia.org

March 6, 2023

RE: Senate Bill 4 - OPPOSED to Sections 10 and 11

Honorable Members of the Joint Committee on Semiconductors:

RISKS of Semiconductor Manufacturing Industry
HAZARDOUS POLLUTANTS could be harmful to our health

1. The semiconductor industry brings with it a pollution risk of extremely hazardous materials

It is widely known in the real estate business that some Intel employees will not live within 5 miles of an Intel semiconductor manufacturing plant due to the potential risk.

2. DEQ is woefully lacking in technical expertise to monitor modern high-tech pollution risks. Their technology is based on 1950's and 1960's industry: smoke from lumber mills and home wood burning stoves, metal fabrication plants.

DEQ missed Intel's 12 tons of fluoride emissions from 1978 to 2012

3. Intel has a history of repeated failures of polluting soils, groundwater and air at their sites in Aloha and Ronler Acres , Oregon

EXAMPLE #1: INTEL ALOHA (38 acres)

- The Intel Aloha site has been an EPA Hazardous Waste Site since 1990
- "One known spill in 1982 from a former underground solvent storage tank system. Volume and duration of release are unknown."
- "A wide range of chlorinated solvents are present in soil and ground water at the site."
- "The groundwater contamination has been detected in the Willamette Silt water table aquifer and underlying Valley Fill aquifer."
- Hazardous substances found in groundwater and soil included various forms of Dichloroethane, Tetrachloroethylene, Trichloroethane and Vinyl Chloride

EXAMPLE #2: INTEL RONLER ACRES (DX1)

- Intel estimated it had emitted 12.5 tons of fluoride over 25 years
- Intel never reported these fluoride emissions to DEQ and DEQ never requested it
- Three violations: Intel did not disclose its fluoride emissions, it did not obtain a permit for those emissions; and it did not obtain the correct approval to begin construction on DX1
- Intel's emissions application in 2013 for DX1 requested up to 6.4 tons of fluorides per year
- This is considered a "Significant Emission"
- There has been no public review or verification reported of soil or ground water for DX1
- Intel Hillsboro has been under a Good Neighbor Agreement since 2015

EXAMPLE #3: INTEL RONLER ACRES (D1X) - July 7 through September 9, 2022

- Intel left a key piece of safety monitoring equipment off for 64 days last summer, resulting in a failure to monitor for "significant" emissions of potentially hazardous chemicals.
- Oregon DEQ reported that pollutants, including hydrogen fluoride and hydrogen chloride, were vented into the air
- Other potential chemical emissions included fluorine, chlorine and hydrogen bromide
- DEQ wrote in its violation notice to Intel: "...short-term exposure to high enough air concentrations of these chemicals can cause severe respiratory damage in humans including severe irritation and edema." The gas can also cause blindness by rapid destruction of the corneas.

BIG ISSUE: Compound Effect

4. Each semiconductor plant may receive DEQ permission to emit a certain amount of pollutants BUT when multiple semiconductor plants are located in the same area, the COMBINATION of pollutants INCREASES the potential health and pollution risk

- **Centralizing semiconductor manufacturing in Hillsboro is a potential risk to the area's air, groundwater and soil, potentially endangering the health of north Washington County residents, farms and natural resources.**
- **There are plenty of other sites throughout Oregon inside cities' UGBs - let's reduce the concentration in Washington County**

Please VOTE NO on Senate Bill 4

Respectfully submitted,

Allen Amabisca, B.A.Botany, B.S. Finance
21-year Operation Manager, Intel Oregon
Member, AQAC since 2018 (Air Quality Advisory Committee)

Sources

Intel Hillsboro's DX1 permit application requests up to 6.4 tons of fluoride gas - this is considered a "significant emission"; https://www.oregonlive.com/hillsboro/2013/09/intel_has_been_emitting_fluori.html

"InteL has been emitting fluoride for years without state knowledge, permit"; https://www.oregonlive.com/hillsboro/2013/09/intel_has_been_emitting_fluori.html

Summary DEQ Report - Intel Aloha

<https://www.deq.state.or.us/lq/ECSI/ecsidetail.asp?seqnbr=1131>

Detail DEQ Report - Intel Aloha

<https://www.deq.state.or.us/lq/ECSI/ecsidetailfull.asp?seqnbr=1131#actions>

https://www.oregonlive.com/silicon-forest/2014/04/intel_will_pay_143000_penalty.html

<https://semiconductor.samsung.com/us/support/tools-resources/dictionary/hydrogen-fluoride-essential-to-the-semiconductor-processes/>

<https://www.oregonlive.com/silicon-forest/2023/02/intel-emissions-risked-significant-environmental-harm-oregon-regulators-say-because-safety-equipment-was-turned-off-for-9-weeks.html>

https://en.wikipedia.org/wiki/Hydrogen_fluoride

