November 24, 2010

BY EMAIL (AQFeb2011Rules@deq.state.or.us)

Ms. Jill Inahara
Oregon DEQ, Air Quality Division
811 SW Sixth Avenue
Portland, OR 97204

Subject: Comments on Proposed $PM_{2.5}$ and Greenhouse Gas Regulations

Dear Ms. Inahara:

Intel Corporation ("Intel") has substantial operations in the State of Oregon. Intel's Oregon operations form the company's largest and most comprehensive site in the world, a global center of semiconductor research and manufacturing and the anchor of Oregon's economy. Intel's capital investments in Oregon since first acquiring property in 1974 total approximately $18 billion and Oregon is poised for significant additional capital investment with the announcement of the construction of the new D1x facility. Already Intel is Oregon's largest private employer with approximately 15,000 employees in the state. Intel is the largest property taxpayer in Washington County with payments of approximately $30 million/year. As the company expands its Oregon operations, it will add to that employment and tax base and continue to enhance Oregon for years to come.

Given Intel's large existing presence in Oregon and its commitment to expand its Oregon operations, we care deeply about how the Department is proposing to amend its rules to address $PM_{2.5}$ and greenhouse gas (GHG). We appreciate this opportunity to comment on the proposed regulations so as to ensure that they benefit the environment while not posing undue obstacles for business.

Intel has a longstanding commitment to reducing GHG emissions in Oregon (and elsewhere around the globe). Intel's GHG emissions derive from two sources, combustion emissions and process emissions (primarily PFC emissions). Intel has an established energy conservation program with the goal of reducing energy consumption, on a normalized basis, by 5 percent annually. This goal ensures that combustion derived GHG emissions are constantly being optimized at our Oregon campuses notwithstanding the tremendous growth in production that we have experienced. A similar story exists for process GHG emissions. Semiconductor manufacturing requires the use of PFCs which are regulated GHGs. Intel has made tremendous strides to reduce PFC emissions from its Oregon operations. The result has been that emissions, on a CO_2e basis, have dropped since 2000 from approximately 410,000 short tons per year to just

over 125,000 short tons per year in 2009. This 70 percent decrease in GHG emissions occurred during a time that production at the Oregon facilities increased by approximately 300 percent. This translates to an approximately 90 percent decrease in GHG emissions per unit of production in Oregon. To accomplish this amazing feat, Intel has installed millions of dollars in controls at each manufacturing site in Oregon and has also engaged in chemical substitution to chemicals that were more amenable to control. Intel is continuing to invest tremendous time and money into GHG emission prevention and emission control. In preparing these comments we are mindful of what we have achieved at a time that most industries were not investing heavily to reduce GHG emissions and we hope that our comments are read in light of this strong and ongoing commitment to reduce GHG emissions.

Intel Recommends that DEQ Retain Its State PSD Program for GHGs

Intel encourages the Department to retain its unique state PSD program for GHGs. DEQ indicated that it is considering adopting the federal PSD rules (i.e., 40 CFR 52.21) for GHGs rather than keeping GHG regulation consistent with the means by which other regulated air pollutants are addressed in Oregon. Intel believes that this would be bad policy for Oregon and therefore encourages the Department to adopt its proposed "Option 1," i.e., that Oregon regulate GHGs consistent with all other regulated air pollutants.

Intel believes that the adoption of the federal PSD program for GHGs would lead to considerable confusion in the regulated community. Intel has major operations in other states where the federal PSD program applies and so has extensive experience with PSD applicability determinations in the context of the semiconductor industry. Intel has always valued the Oregon PSD approach. In Oregon a source seeking an emission limit that exceeds its netting basis by a significant emission rate or more must demonstrate through modeling that it will not cause or contribute to an air quality violation. If a major source or modification in a nonattainment or maintenance area or a Federal Major Source in an attainment area, it must employ state of the art controls (BACT or LAER). Once these requirements are met, the source is then able to establish a bright line (the Plant Site Emission Limit or "PSEL") against which it can thereafter measure its PSD compliance. Industries such as Intel value certainty and predictability. The Oregon PSEL provides both. In contrast, the federal PSD applicability test is considerably different and extremely complicated and often confusing. It involves a multipart test that requires sources to look as far back as 15 years ago in a constantly changing applicability evaluation. Thus Intel believes that applying the federal PSD program for GHGs and GHGs alone in Oregon would create considerable confusion and add greatly to the Department's workload.

Intel believes that Oregon's means of approaching PSD is far more focused on air quality protection than the federal PSD system. There are many subtle but important ways in which the

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Oregon PSD program is more stringent than the federal program. For example, a 200 ton per year source can increase its emissions by an additional 200 tons per year and never trigger federal PSD. This is due to the fact that the definition of "major modification" in 40 CFR § 52.21 only applies once a source is a major source. Where a source starts as a minor source (i.e., 200 tons per year of emissions) and proposes an increase that is itself less than the 250 ton per year major source threshold, the source never triggers PSD. Relating this to GHGs, a 99,000 ton per year CO_2e source could add another 99,000 tons per year CO_2e of emissions and never trigger PSD. This would not occur under the Oregon program where the source is evaluated taking into account the post-change emissions. This example is just one of many ways in which the Oregon program provides greater certainty for industry, but does so while being more protective than the federal PSD program.

Intel also believes that adoption of the federal PSD program for GHGs would eliminate the strong historic incentive that the Oregon program has provided to proactively reduce emissions. As EPA acknowledges, the federal PSD program creates powerful incentives for companies to hold back on making emission reductions until the company knows that new equipment is to be added. This is the result of the 5 year period that is available for netting. If a company proactively decreases emissions and 6 years later chooses to expand, it loses any benefit from the making the emission reduction early. Thus companies in other states tend to hoard any reductions and wait to implement them until they need them to enable a plant expansion. The Oregon program, by contrast, has always had incentives under the PSEL program to reduce emissions and to operate equipment in as low-emitting a manner as possible. This concept is particularly important to Intel as the company has proactively worked for over a decade to find new ways to reduce GHG emissions. Intel hopes to continue such technology forcing measures, but will be discouraged from doing so if Oregon implements the federal PSD program.

Intel strongly encourages DEQ to apply the Oregon PSD program to GHGs. However, if Oregon opts to apply the federal PSD program to GHGs, we request that the agency adopt all portions of the federal rules, including the Plantwide Applicability Limit (PAL). While not nearly as well thought out as the PSEL, the PAL could at least provide limited flexibility to Intel if the federal PSD program is implemented for GHGs in Oregon.

Intel Recommends Allowing Flexibility in the Establishment of $PM_{2.5}$ Baseline Emission Rates

Intel is a relatively minor source of $PM_{2.5}$ emissions. Nonetheless we suggest that the Department allow sources, such as ourselves, with a small PM_{10} netting basis, options in how they set their $PM_{2.5}$ baseline emission rate. The proposed rules require that a source take the proportionate share of its existing PM_{10} netting basis for $PM_{2.5}$. Only if a source has no PM_{10} netting basis may it utilize the actual $PM_{2.5}$ emission rate from the $PM_{2.5}$ baseline period for

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establishing its $PM_{2.5}$ baseline emission rate. We do not see a reasonable basis for forcing sources to take a percentage of their PM_{10} netting basis where they have good data backing up their actual emissions. We recognize that for some sources the proportional approach results in a far more equitable outcome while for other sources the ability to rely on actual emissions is critical to their very existence. We suggest that so long as sources are consistent and do not change their method for setting their $PM_{2.5}$ baseline, it should not matter which avenue they choose.

Intel Recommends Similar Flexibility in Setting GHG Baseline Emission Rates

Similar to the method for establishing $PM_{2.5}$ baseline, Intel suggests that the Department allow sources the discretion to choose which of two methods they use to establish their GHG baseline emission rate. The proposed rules require that a source calculate its combustion GHG emissions based on the same production rate used to calculate the netting basis for other combustion pollutants. However, for sources like Intel that have relatively low baseline combustion emissions, establishing this approach as mandatory penalizes the company. By means of example, Intel's actual GHG combustion emissions in 2009 were approximately 20 percent higher than the GHG emission rates scaled up from baseline fuel usage. Therefore, Intel is penalized for having a baseline emission rate for combustion sources as compared to the newer source that does not. This is particularly ironic for Intel when the reason that it has a baseline emission rate is because the Ronler Acres campus (post-1978) was determined to be collocated with the Aloha campus (which was operating in 1978). However, the currently planned new fab and most of the combustion GHG emissions are at Ronler Acres. Therefore, Intel is penalized for having stepped up and accepted Aloha and Ronler Acres as collocated facilities. Therefore, we believe that all sources should have the option of either calculating baseline combustion GHG emissions using fuel usage parameters underlying the current criteria pollutant netting basis or through the use of the actual combustion GHG emissions from the baseline period.

Intel also recommends that sources with process emissions have the same choice of either using netting basis parameters to set the GHG baseline emission rate or using actual emissions from the GHG baseline period. The proposed rule requires that sources use in establishing the GHG baseline emission rate the relationship between GHG emissions and the same production parameters used to calculate the current netting basis for non-GHG pollutants. We believe that the most effective means of addressing process GHGs is to allow sources to make a choice as to how to establish baseline. A source should be allowed to either choose the netting basis parameter approach or the actual emissions approach in establishing GHG baseline. A source would have to choose which method it was using at the time it initially established its GHG baseline. Once that choice is made, we respect that the Department would want to prohibit the

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source from changing. Such a limitation on changing computational methods is consistent with the baseline freeze already captured under the rules.

In case the Department opts not to provide sources the flexibility to choose either the netting basis parameter approach or the actual emissions approach for setting GHG baseline, we request clarification as to which approach would apply in our context. The semiconductor industry has changed profoundly since 1978 and we believe that in Intel's case, GHG emissions are not related to the production parameters that were used to establish the netting basis. Therefore, we believe that we would be required, under the proposal, to use actual emissions during the GHG baseline period to establish our GHG process emission baseline emission rate. We believe that this is the only logical interpretation of the proposed rules in light of the profound difference between what Intel manufactured in 1978 and what it manufactures today. However, we would appreciate DEQ confirming this to be the case in the agency's response to comments document. We believe that the use of such a real life example would assist others to better understand the rules.

Intel Recommends Clarification of the Approach Used for Determining Baseline for Equipment Permitted but not yet Built

Intel has considerable equipment that is fully authorized under the Division 210 requirements, but that will not have commenced normal operation during the baseline period. Intel requests that the Department confirm in its response to comments that in light of the proposed revisions to the definition of "actual emissions," the GHG baseline emission rate attributable to equipment will equal the potential to emit of that equipment where that equipment has been approved for construction prior to December 31, 2010 but has not yet begun normal operations by January 1, 2011. We believe that this is the necessary outcome in light of the proposed changes but would appreciate your confirming our interpretation.

Intel Believes that DEQ Erred in its Federal Major Source and Major Source Definitions

DEQ's proposed rules include definitions of "Federal Major Source" and "Major Source" that Intel believes have major deficiencies. EPA was very clear in the Tailoring Rule that to be major for Title V or PSD for GHGs, the source had to meet both of the following two criteria:

> "(1) The GHG emission source, which is not major for another pollutant, emits or has the potential to emit GHG in amounts that equal or exceed the following, calculated as the sum-of-six well-mixed GHGs on a mass basis (no GWPs applied):

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- 100 tpy for sources in any of the 28 major emitting facility source categories listed under PSD, or
- 250 tpy for any other stationary source.

"(2) The GHG emission source emits or has the potential to emit GHGs in amounts that equal or exceed 100,000 tpy CO2e basis."

75 Fed. Reg. 31513, 31523 (June 3, 2010). A similar two part test is applied for Title V applicability. See, 75 Fed. Reg. 31524. In DEQ's rules, by contrast, the 100,000 ton per year criterion appears to be based on absolute tons rather than CO_2e. The 100/250 ton per year criterion appears to be missing altogether. As we understand that DEQ intends to be consistent with the federal Tailoring Rule, we suggest that the Department revise its regulations to make the applicability tests consistent with federal law. Intel does not anticipate that this change will affect its regulatory status. However, making this change will speed the evaluation and approval of the Oregon program by EPA and that benefits all sources.

Intel Requests that the Department Not Include Fugitive GHG Emissions Unless Federal Law so Requires

Intel requests that DEQ revise the definition of "major source" to exclude fugitive emissions from consideration for sources not in one of the 28 designated source categories. Under EPA's Tailoring Rule, fugitive GHG emissions need only be considered in determining PSD and Title V applicability for sources in one of the 28 designated source categories. Nonetheless, DEQ is proposing that fugitive GHG emissions must be included for all sources when determining PSD or Title V applicability. We do not believe that this is consistent with the Department's stated goal of being consistent with EPA's Tailoring Rule. Inclusion of fugitive GHG emissions for non-designated source categories is neither required by nor consistent with federal law and so Intel suggest that the Department not require inclusion of fugitives at this time except as required under EPA's PSD regulations.

Intel Requests that the Department Clarify GHG PSD Applicability under Division 224

Intel requests that the Department revise its GHG PSD applicability provisions proposed for inclusion in OAR 340-224-0010(5) and (6). As with the definition of Federal Major Source and Major Source discussed above, the tests in OAR 340-224-0010(5) and (6) fail to identify the two part GHG applicability test outlined in the Tailoring Rule. In addition, the language in (5)(b) suggests that prior to July 1, 2011, an existing source that is major for non-GHG pollutant, and that has any increase in a non-GHG pollutant, will trigger PSD for GHGs if GHGs increase by 75,000 tons per year or more. We believe that what was intended was that GHGs only trigger

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PSD prior to July 1 if the existing source triggers PSD for a non-GHG pollutant and the GHG emissions increase by 75,000 tons per year CO_2e. We believe that what is written is not what is intended. Under Oregon law a major source is defined as a source that has the potential to emit any regulated air pollutant at the SER or more. As proposed, the Oregon rules would expose sources to PSD for GHGs before the federal rules would so require. We believe that what was intended was to require existing Federal Major Sources that have a significant emissions increase of a non-GHG regulated air pollutant and a GHG emissions increase of 75,000 tons/year or more (CO_2e) over the netting basis would be subject to PSD for GHGs. As proposed, the underlined elements are missing from the rule resulting in the Oregon proposed rule being far more stringent than the federal rules.

Intel believes that there are similar problems with the OAR 340-224-0010(6). This rule states that on or after July 1, 2011, an existing source is subject to regulation for GHGs if it makes a physical change or change in method of operation that will result in an emissions increase of 75,000 tons per year of GHGs. However, under the Oregon program a source must request a GHG PSEL that exceeds that GHG netting basis by 75,000 tons/year or more to trigger PSD. As proposed, OAR 340-224-0010(6) would require that sources increasing GHGs by 75,000 tons per year or more undergo PSD even if the ultimate emission rate would not exceed the netting basis by that amount. We believe that what was intended was to require existing Federal Major Sources to undergo PSD for GHGs only if they request a GHG emissions increase of 75,000 tons/year or more (CO_2e) over the GHG netting basis.

Intel appreciates this opportunity to comment and we hope that our suggestions will serve to improve Oregon's regulatory program.

Sincerely,

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cc: Todd Rallison
Tom Wood

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