April 3, 2026

Julia DeGagné, P.E.
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

Re: Cleaner Air Oregon Inventory Submittal #1 and Submittal #2

Dear Ms. DeGagné:

Intel Corporation (Intel) received written notice from the Oregon Department of Environmental Quality (DEQ) on May 29, 2025 that the Gordon Moore Park at Ronler Acres Campus (Ronler) and the Aloha Campus (Aloha) were being called into the Cleaner Air Oregon (CAO) program. Ronler and Aloha both operate under Standard Air Contaminant Discharge Permit (ACDP) 34-2681-ST-02, issued by DEQ on April 16, 2024.

On March 5, 2026, DEQ submitted a letter via email requiring additional information and updates for Submittal #1 (Natural Gas Combustion and Cooling Tower Toxic Emission Units [TEUs] and Process Flow Diagrams) and Submittal #2 (Emergency Generators and Fire Pumps).

Below is Intel's response to each comment outlined in the letter dated March 5, 2026:

General Comment

The Inventory assumes that the diesel particulate filters on the emergency diesel engines achieve control efficiencies of 93 percent and 90 percent for diesel particulate matter (DPM; DEQ ID 200), based on the control device manufacturers' stated control efficiencies for filterable particulate matter (PM). Because these values do not consider control of the non-filterable portion of PM, which would typically be less well-controlled than the filterable portion, DEQ's recommends updating the Inventory to use a lower value that accounts for both the filterable and non-filterable portions and aligns with DEQ test methods. For example, 68.6 percent is DEQ's default assumption for control of DPM with a diesel particulate filter.

Intel is reviewing the materials that DEQ provided to Maul Foster Alongi on March 25, 2026 containing additional information regarding the source of DEQ's default assumption for control of diesel particulate matter with a diesel particulate filter. Following review of the material, Intel may contact DEQ for further discussion on the recommendation above.

Specific Comments on Submittal #1 (Natural Gas Combustion and Cooling Tower TEUs and Process Flow Diagrams)

1. Update and submit to DEQ a revised AQ520 form and supporting information as required under OAR 340-245-0040(4), Including the following:
    a. Natural gas combustion TEUs EU-NG-1, EU-NG-3, EU-NG-4, and EU-NG-5: update benzo(a)pyrene (CASRN 50-32-8) emissions to 1.2x10-6 pounds per million standard cubic feet.

The benzo(a)pyrene emission factor has been updated to 1.2x10-6 pounds per million standard cubic feet for Toxic Emission Unit (TEUs) EU-NG-1, EU-NG-3, EU-NG-4, and EU-NG-5. The updates are included in the revised AQ520 (Worksheet 3) for the Natural Gas Combustion TEUs.

b. Natural gas combustion TEU EU-NG-1: In Worksheet 2, update the TEU ID and Description for boiler F15-HW35-4 to "EU-NG-1" and "Natural Gas Combustion Boilers <10 MMBtu/hr" for consistency with Worksheet 3 of the AQ520.

The TEU ID and description for boiler F15-HW35-1 have been updated to "EU-NG-1" and "Natural Gas Combustion Boilers <10 MMBtu/hr". The updates are included in the revised AQ520 (Worksheet 2) for the Natural Gas Combustion TEUs.

c. Natural gas combustion TEU EU-NG-3:

i. Update the TESU IDs for TESUs D1B-VOC138-4 D1B-VOC138-5 to be consistent– the unit IDs end in "-100" in the EDS and on Worksheet 3, "-120" in Worksheet 2, and "-20" in page 8 of the Process Flow Diagram (PFD);

The Toxic Emission Sub-units (TESU) IDs have been updated to D1B-VOC138-4-20 and D1B-VOC138-5-20. The updates are included in the revised AQ520 (Worksheets 2 and 3) for the Natural Gas Combustion TEUs and Process Flow Diagrams (PFD) (Page 8).

ii. In Worksheet 2 of the AQ520, update the "Stack or Fugitive ID" to match the air dispersion ID from the EDS for the following Toxics Emissions Sub-Units (TESUs):

1. F15-VOC-138-2-10
2. F15-VOC-138-3-10
3. F15-VOC-138-4-10; and
4. F15-VOC-138-1-10;

The Stack or Fugitive IDs for the TESUs (F15-VOC-138-2-10, F15-VOC-138-4-10, and F15-VOC-138-1-10) have been updated. The updates are included in the revised AQ520 (Worksheet 2) for the Natural Gas Combustion TEUs.

iii. In Worksheet 2 of the AQ520, confirm the installation status and update Actual Annual and Max Daily emissions for the TESUs F15-VOC-138-1-10 and F15-VOC-138-4-10 – based on the EDS, F15-VOC-138-4-10 is a planned installation and F15-VOC-138-1-10 was installed in 2003; and

The installation status was confirmed for TESUs F15-VOC-138-1-10 and F15-138-4-10. The emissions (actual annual and maximum daily) for TESUs F15-VOC-138-1-10 and F15-VOC-138-4-10 have been updated. The updates are included in the revised AQ520 (Worksheet 2) for the Natural Gas Combustion TEUs.

iv. In Worksheet 3 of the AQ520, update emissions for the following TESUs as needed to reflect the activity values in Worksheet 2:

1. D1B-VOC138-4 (Max Daily)
2. D1B-VOC138-5 (Annual and Max Daily)
3. D1XM1-VOC138-5-20 (Max Daily)

4. D1XM1-VOC138-6-20 (Max Daily)
5. D1XM1-VOC138-7-20 (Max Daily); and
6. D1XM1-VOC138-8-20 (Max Daily).

The activity values for the TESUs D1B-VOC138-4, D1B-VOC138-5, D1XM1-VOC138-5-20, D1XM1-VOC138-6-20, D1XM1-VOC138-7-20 and D1XM1-VOC138-8-20 have been updated. The updates are included in the revised AQ520 (Worksheet 3) for the Natural Gas Combustion TEUs. Please note that the TESU IDs have been updated for D1B-VOC138-4 and D1B-VOC138-5 to D1B-VOC138-4-20 and D1B-VOC138-5-20.

d. Cooling Towers: Update the AQ520 form to reflect the emissions presented in the calculation workbook provided by Intel to DEQ on January 16, 2026, with the following updates:

   i. Confirm recirculation flow rates for the following cooling towers – these are inconsistent with the rates listed in the EDS:

      1. CUB2 Cooling Towers (14 units – peak flow rate only);
      2. CUB1 (F20-) Cooling Towers (11 units – peak flow rate only);
      3. N2 Cooling Towers (3 units – peak and average flow rates); and
      4. Aloha Cooling Towers (8 units – peak flow rate only);

The recirculation flow rates for the cooling towers have been updated. The average flow rates are based on design specifications or the normal operating conditions. The peak flow rates are assumed to be two times the average flow rates. The updates are included in the revised AQ520 (Worksheet 2) for the Natural Gas Combustion TEUs. In some cases, corresponding updates to the EDS may be warranted; these updates will be submitted separately to DEQ.

   ii. The supporting documentation indicates that "only those cooling towers dosed with chemicals listed in OAR 340-245-8040 were included" and "only those products with CAO RBCs were included." Ensure all Toxic Air Contaminants (TACs) listed on the Priority TAC List in OAR 340-247-8010 Table 1 are included in the Emissions Inventory, not only those with Risk Based Concentrations (RBCs);

The safety data sheets (SDSs) for the chemicals used in the cooling tower were previously provided to DEQ on November 4, 2025 and February 13, 2026. All chemicals included on the SDS that are Toxic Air Contaminants (TAC) listed on the Priority TAC list in OAR 340-247-8010 Table 1 are included in the emission calculations.

   iii. Include copper in the emissions for TESUs N2-CT114-2 and N2-CT114-3; and

The potential copper emissions for TESUs N2-CT114-2 and N2-CT113-3 have been updated. The updates are included in the revised AQ520 (Worksheet 3) for the Natural Gas Combustion and Cooling Tower TEUs.

   iv. Include aluminum in emissions from the Aloha Cooling Towers (8 units).

The potential aluminum emissions for TESUs AL4-CHW-CT2, AL4, CHW-CT3, F15-CT29-1-1, F15-CT29-1-2, F15-CT29-1-3, F15-CT29-1-4, F15-CT29-1-5, and F15-CT29-1-6-1 have been

updated. The updates are included in the revised AQ520 (Worksheet 3) for the Natural Gas Combustion and Cooling Tower TEUs.

e. PFDs:

i. Add the EXAM connection from MSB1 to the D1XM1, D1XM2, and D1XM3 building PFDs (pp. 29-31), to be consistent with the MSB1 PFD (p. 34);

The Process Flow Diagrams (PFDs) for D1XM1, D1XM2, and D1XM3 have been updated to include the EXAM connection from MSB1.

ii. Include the PSSS scrubbers in building WATR (4 total; Equipment numbers "RAWTR1-TK909-X-1") in the PFDs; and

The odor scrubbers in the WATR building (RAWTR1-TK909-1-1, RAWTR1-TK909-2-1, RAWTR1-TK909-3-1, and RAWTR1-TK909-4-1) have been included in the PFDs. Please note that these are not PSSS but odor scrubbers as indicated on the equipment data sheets.

iii. Clarify which TMXW burner is electric and update the PFD or AQ520 as needed – on page 13 of the PFD, CUB3-OX293-0-70 is indicated as being electric, but in the AQ520 and EDS, CUB3-OX293-0-70 burns natural gas and the electric burner is CUB3-OX293B-0-70.

As indicated on the EDS, CUB3 - OX293B-0-70 uses an electric heater. The PFD has been updated to indicate that this TMXW burner is electric.

2. Update the AQ520 form to reflect the emissions presented in the calculation workbook provide d by Intel to DEQ on February 13, 2026, with the following changes:

a. Update the destruction/removal efficiency for zinc (CASRN 7440-66-6) to 70 percent, because it is included both the "semi-volatile" and the "lubricant additives" category in the documentation from J.M. Matthey provided to DEQ on February 4, 2026; and

As requested by DEQ, the removal efficiency for zinc has been updated to 70 percent. The updates are included in the revised AQ520 (Worksheet 3) for the Emergency Generator (EGEN) TEUs.

b. Confirm the fuel usage rates and generator model for D1X-GEN-4C and D1X-GEN-5C. The EDS lists the -4C as 3000-kw engine and the -5C as a 2500-kw engine, but the Inventory appears to have the fuel usage rates transposed.

The model and fuel usage rates are D1X-GEN-5C (Cummins 2500 DQLE x QSK78-G11) at 172.1 gal/hr and D1X-GEN-4C (Cummins C3000D6e x QSK95-G9) at 206 gal/hr. The updates for the fuel usage rates are included in the revised AQ520 (Worksheet 3) for the EGEN TEUs.

c. Update the fuel usage rates as follows:

i. For D1C-EPS-GEN01 and D1C-EPS-GEN02, convert the fuel usage rate from the 208 grams per kilowatt-hour provided in the specification sheet to the equivalent gallons per hour;

The unit conversion of the fuel usage rates from g/kWHr to gal/hr for D1C-EPS-GEN01 and D1C-EPS-GEN02 are included as Attachment A. The fuel usage rates for these engines have been updated in the revised AQ520 (Worksheet 2) for the EGEN TEUs. Please note that this updated fuel usage rate was included in Intel's March 16, 2026 request to DEQ staff to update the fuel usage rate for these engines on the EDS.

ii. For Fire Pump PH #4, confirm the fuel usage rate and update if needed to match the updated "EGEN Detail Sheet" provided to DEQ on March 4, 2025, which indicates this is the 130 kilowatt model with a fuel usage rate of 7.2 gallons per hour;

Intel submitted a request to update the fuel usage rate for PH#4 on the EDS to DEQ staff on March 16, 2026. The fuel usage rate for PH#4 is 6.1 gal/hr per the manufacturer specifications that were submitted to DEQ staff on February 13, 2026.

iii. Confirm that Fire Pump PH #3 is the 130 kilowatt model with a correct maximum fuel usage rate of 6.6 gallons per hour (the EGEN Detail Sheet lists 7.9 gallons per hour), or update as needed; and

Intel submitted a request to update the fuel usage rate for PH#3 on the EDS to DEQ staff on March 16, 2026. The fuel usage rate for PH#3 is 6.6 gal/hr per the manufacturer specifications that were submitted to DEQ staff on February 13, 2026.

iv. Confirm that Fire Pump PH #2 is the 215 kilowatt model with a correct maximum fuel usage rate of 11.3 gallons per hour (the EGEN Detail Sheet lists 11.4 gallons per hour), or updated as needed.

Intel submitted a request to update the fuel usage rate for PH#2 on the EDS to DEQ staff on March 16, 2026. The fuel usage rate for PH#2 is 11.3 gal/hr per the manufacturer specifications that were submitted to DEQ staff on February 13, 2026.

d. In Worksheet 2 of the AQ520, include the engine make and model in the TESU Description column for each emergency engine and fire pump.

As requested by DEQ, the engine make and model have been included in the TESU Description column. The requested updates for the make and model number are included in the revised AQ520 (Worksheet 2) for the EGEN TEU.

The updated AQ520 for the Natural Gas Combustion and Cooling Tower TEUs, Emergency Generator and Fire Pump TEUs, and revised PFDs have been uploaded to YDO.

Intel is dedicated to providing an accurate and representative CAO emissions inventory. We look forward to continued collaboration with DEQ throughout the CAO process. Please contact Ruth Glass at ruth.glass@intel.com or Leslie Riley at lriley@maulfoster.com with any questions regarding the information in this response.

Sincerely,

Ruth Glass

Ruth Glass
TD Environmental Engineer
Intel Corporation

CC: J.R. Giska, DEQ
Intel Site Air Correspondence File

Attachment A: Unit Conversion of the fuel usage rates for D1C-EPS-GEN01 and D1C-EPS-GEN02

Attachment A

D1C-EPS-GEN01 and D1C-EPS-GEN02

1750REOZDD

60 HZ. DIESEL INDUSTRIAL GENERATOR SET
EMISSION DATA SHEET

ENGINE INFORMATION			
Model:	MTU 12V4000 G83	Bore Stroke:	170mm (6.7 in.)
Nameplate BHP @ 1800 RPM:	2561	Stroke:	210mm (8.3 in.)
Type:	4-Cycle, 12-V Cylinder	Displacement:	57.2 L (3491 cu.in.)
Aspiration:	Turbocharged, Intercooled	EPA Family:	DMDDL95.4XTR
Compression Ratio	16.5:1	EPA Certificate	DMDDL95.4XTR-006
Emission Control Device	Direct Diesel Injection, Engine Control Module, Turbocharger, Charge Air Cooler		

	Table 1			
PERFORMANCE DATA:	1/4 Standby	1/2 Standby	3/4 Standby	Full Standby
Engine bkW @ Stated Load	487.00	954.00	1435.00	1910.00
Fuel Consumption (g/kWh)	249.00	218.00	209.00	208.00
Exhaust Gas Flow (m^3/s)				6.10
Exhaust Temperature (°C)				465.00

Enter the specific fuel consumption in **g/kWh (grams per kilowatt hour)**:

208

Enter the engine power in **kW:**

1910

Enter the density of the fuel in **kg/m^3** (references: diesel – 850 kg/m^3, gasoline (petrol) – 710 kg/m^3):

850

Fuel consumption **liters per hour (l/h)** is:

467.388 l/h

467.3879999713⁴	=	123.4708472
Liter / Hour		US liquid gallon / Hour

Formula for an approximate result, divide the volume / time value by 3.785

208 g/kwh = 123 gal/hr