

# Air Quality Advisory Committee

May 3, 2023

# Agenda

1. Welcome/Introductions
2. Recap of Previous Meeting
3. Community Opens
4. AQAC Opens
5. Good Neighbor Agreement Items Update
6. Agenda for Next Meeting
7. Public Comments/Questions

# GNA-Specified Agenda Items

- Intel to report to the AQAC at its quarterly meetings on:
    - Stack testing completed since the last AQAC meeting; any stack testing planned before next AQAC meeting
    - Annual or semiannual reports submitted by Intel to DEQ pursuant to Intel's air permit
    - Any requests to DEQ for authority to modify emission factors or emission sources that were submitted since the last AQAC meeting or that Intel anticipates will be submitted prior to the next AQAC meeting
    - Any excess emissions and upsets reported to the Department during the most recent calendar quarter
- \*Implemented measures identified on Attachment A

# Stack Testing Overview

- Why does Intel perform stack testing?
  - Determination of compliance with Best Available Control Technology (BACT) emission limits
  - Determination of Rotary Concentrator Thermal Oxidizer (RCTO) control efficiencies
  - Development of emission calculations for fluorides and hydrogen fluoride
  - Good Neighbor Agreement Attachment B requirements
- Stack testing plans are reviewed and approved by Oregon DEQ and utilizes standard EPA and/or DEQ test methods
- Stack testing performed by a 3<sup>rd</sup> party stack testing firm

# Stack Testing Update

- Activities since Q1 meeting (02/08/23)
  - Two reports submitted to ODEQ for scrubber and RCTO compliance stack testing programs
  - Update to EXSC report submitted on 4/20/23
- Planned Q2 2023
  - No planned stack testing currently anticipated

# Continuous Emissions Monitoring System Overview

- Rotor Concentrator Thermal Oxidizer (RCTO)
  - Used to control emissions of VOCs
  - Method of control: Thermal oxidation (combustion)
    - Temperature = Key operating parameter
    - Measurement via thermocouple
    - Minimum temperature established during stack testing
    - Temperature measurements are reviewed on an ongoing basis
    - Alarms are also set to alert when measured value outside the acceptable range
      - Alarms are indication of off-spec operation, not an indication of excess emissions or bypass

# Continuous Emissions Monitoring System Overview

- Wet Scrubbers
  - Used to control emissions of acid gases, primarily Fluorides, HF, and HCl
  - Method of control: pH adjusted water absorption
    - Water flow rate and pH = Key operating parameters
    - Measurements via pH probe and flow meter
    - Minimum pH and flow established during stack testing
    - Measurements are reviewed on an ongoing basis
    - Alarms are also set to alert when measured value outside the acceptable range
      - Alarms are indication of off-spec operation, not an indication of excess emissions or bypass

# Continuous Emissions Monitoring Report

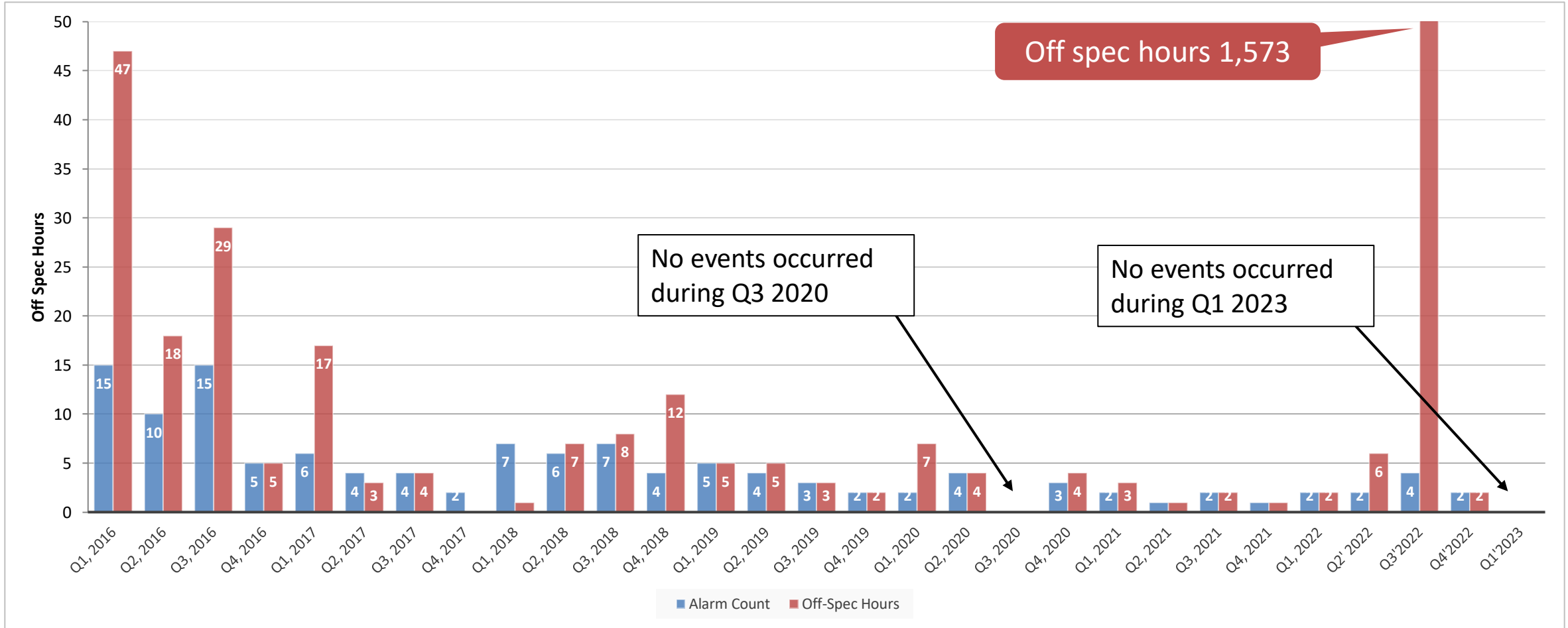
## – Q1 2023

### Attachment C

Source	Frequency	Parameter	Monitoring Equipment	Q1, 2023 Report
Rotary Concentrator Thermal Oxidizers (RCTO)	Continuous	Temperature	Thermocouple	No events
Acid Gas Scrubbers	Continuous	Flow	Flow Meter	No events
		pH	pH probe	No events
Emergency Generators/Fire Pumps	When used	Hours of operation including time of engine start, time of engine stop and reason for operating		No events



# Continuous Emissions Monitoring Report



- Normal hourly operations for Q1 2023 is 100%
- Blue bars indicate the number of alarms per quarter
- Red bars indicate the number of hours outside of normal operation per quarter

# DEQ Submittals since February AQAC Meeting

- EXSC, RCTO and Boiler emission factor update 2/6/23
- Notice of construction complete HW boiler at CUB5 2/6/23
- Process emission factor update 2/27/23
- Boiler emission factor update 3/3/23
- Compliance Annual Report RY2022 3/15/23

# Annual Air Permit Compliance

- Was submitted to NCA and NEDC as required by GNA
- Annual Air Compliance Report including GHG emissions inventory will be posted on Explore Intel website for both Ronler Acres and Aloha sites

# Planned Q2 2023 DEQ Submittal

- AQAC members informed on April 5, 2023, Intel planning to submit a new air permit application
  - Will request:
    - Authorization to build new buildings/equipment
    - Increased emission limits (PSEs) to reflect new manufacturing technologies
  - Goal: To support potential future expansion and enable new manufacturing process technology in support of Intel's ongoing research and development
  - Intend to submit later this month (Q2 2023)

# Planned Q2 2023 DEQ Submittal

- Application will include:
  - Facility description
  - Emission inventory
  - Regulatory analysis
  - Air Quality Analysis (modeling)
  - Best Available Control Technology (BACT) analysis

# Intel Type 4 Permit Application: DEQ Permitting Process

1. Intel submits application
2. DEQ holds public meeting after determining application is administratively complete
  - a) DEQ can continue to request information throughout process
3. DEQ reviews application and develops draft permit
4. DEQ publishes draft permit and requests public comment
5. DEQ holds public hearing on draft permit
6. DEQ reviews and responds to comments submitted during public comment period and at hearing
7. DEQ makes final permit decision

# Type 4 Permit Application: Intel's Next Steps

1. Intel plans to submit application by end of the month
2. Once the application is deemed complete by DEQ, Intel will publish a link to the application on the AQAC website
3. Intel will be prepared to answer AQAC questions about application at our next meeting after it is submitted

# Agenda for Q3 AQAC Meeting 2023

August 9, 2023

AQAC members to have input into the next agenda for each AQAC meeting

- Standing agenda items
  - DEQ Submittals
  - Stack Testing Update
  - Project Update
- Questions about Type 4 air permit application
- Other?



# Public Comments/Questions

# Back-up

# Attachment A

Emission Reduction Project	Target Date	Status / Method of Confirmation
Advocate to contractors working at the Facility to use newer onroad and nonroad diesel engines	2 <sup>nd</sup> quarter 2016	Ongoing collaboration with suppliers to encourage reductions
Evaluate ways to reduce (if possible) diesel particulate matter emissions either with onsite or offsite projects	3 <sup>rd</sup> quarter 2016	Reported out during Q3, 2016 AQAC quarterly meeting
Decommission four Fab 5 boilers	3 <sup>rd</sup> quarter 2016	Completed
Assess feasibility of reducing waste tank emissions	4 <sup>th</sup> quarter 2016	Completed
Retrofit RCTOs to optimize natural gas usage	2 <sup>nd</sup> quarter 2017	Completed
Boiler replacement with ultra low-NOx burner boilers at RA2 and RP1	3 <sup>rd</sup> quarter 2017	Project completed. Report out during Q3, 2017 AQAC meeting
Compare actual emissions inventory in 2020 to inventory used in HRA	2 <sup>nd</sup> quarter 2021	Completed. Reported to AQAC at quarterly meeting