



March 14, 2019

Oregon Department of Environmental Quality
AQ Permit Coordinator
700 NE Multnomah Street, Ste 600
Portland, Oregon 97232

**Re: Intel Corporation, Aloha and Ronler Acres Campuses, ACDP 34-2681-ST-01
Calendar Year 2018 Annual Report**

In accordance with the requirements set forth in Oregon Department of Environmental Quality (ODEQ) Permit ACDP 34-2681-ST-01 Condition 77.b., Intel Corporation (Intel) is submitting three (3) copies of this annual report. During calendar year 2018, there was one deviation reported on April 18, 2018 related to an emergency generator maintenance and readiness (M&R) testing event that began on February 10, 2018 at 5:23pm and lasted until 5:55pm. Part of this M&R test occurred after sunset (5:33pm) and therefore was a deviation of permit condition 45.c.iv. The run was not discovered until April 10th, 2018. This resulted in a deviation to permit condition 72, which requires the site to report deviations in writing to ODEQ within 15 days of deviation occurrence. There were no other instances of deviation from any permit requirements within the air permit #34-2681-ST-01 that need to be included in this report for 2018. This annual report is being submitted in a timely manner on or before March 15, 2019 and includes the following:

- 77.b.ii.: The emission fee report
- 77.b.iii.: A summary of the Excess Emissions and Upset log
- 77.b.iv.: The annual certification that the risk management plan is being properly implemented
- 77.b.v.: The type and amount of fuel combusted
- 77.b.vi.: The calculated 12-month rolling emission rates for PM, PM₁₀, PM_{2.5}, SO₂, CO, NO_x, VOC, Fluorides, combined HAPs and individual HAPs

NOTES:

- Reporting for individual HAPs is only required for pollutants with emission rates of 0.1 or more tons/yr.
 - The GHG emissions report will be submitted no later than March 31 as per OAR 340, Division 215.
- 77.b.vii.: Revisions of the pollutant capture efficiency function used for compliance emission calculations in condition 60.
 - 77.b.viii.: A summary of the physical changes, additions and/or process modifications as well as the pollution prevention project(s) performed to offset emission increases associated with these changes/modifications, pre-approved pursuant to Condition 16. In addition, the permittee must identify and summarize any change(s) with the associated emission increase of five (5) or more tons of VOC or one (1) or more tons of any HAP on a yearly basis.

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Hillsboro, OR 97124
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- 77.b.ix.: Summary of complaints relating to air quality received by permittee during the year.
- 77.b.x.: List major maintenance performed on pollution control equipment.
- 77.b.xi.: There are no applicable Subpart Dc specific reporting requirements for affected facilities that are exclusively natural gas fired.

77.b.ii.: Emission fee report:

Attachment A to this annual report includes Form F1101 as the emission fee report.

77.b.iii.: Summary of the Excess Emissions and Upset log:

There were no excess emissions or upset events in calendar year 2018 to include in the log.

77.b.iv.: Annual certification that the risk management plan (RMP) is being properly implemented:

The Ronler Acres campus has an RMP that was last updated in September of 2018. The RMP is current and is implemented as required. The Aloha campus does not store regulated substances in quantities which exceed the RMP applicability threshold quantities, and therefore does not have an RMP.

77.b.v.: The type and amount of fuel combusted:

The Ronler Acres and Aloha campuses only combust natural gas and diesel fuel. The diesel fuel is fired within the emergency generators and fire pumps, while natural gas is fired in boilers, RCTOs, heaters, and Point of Use (POU) abatement devices. The quantity of these fuels combusted in 2018 are summarized below for Ronler Acres and Aloha combined.

- Diesel Fuel Combusted
 - Aloha: 2,028 gallons/yr
 - Ronler Acres: 43,383 gallons/yr
 - Total: 45,411 gallons/yr
- Natural Gas Combusted
 - Aloha: 150 MMscf/yr
 - Ronler Acres: 1,123 MMscf/yr
 - Total: 1,254 MMscf/yr

77.b.vi.: Calculated 12-month rolling emissions:

Attachment B to this annual report includes the calculated 12-month rolling emission rates for PM, PM₁₀, PM_{2.5}, SO₂, CO, NO_x, VOC, Fluorides, combined HAPs, and individual HAPs with annual emissions of 0.1 or more tons/yr.

77.b.vii.: Revisions of the pollutant capture efficiency:

Compliance testing of D1X Anguil (RCTO) wet electrostatic precipitator (WESP) units was performed from October 19th, 2018 through October 23rd, 2018. The testing established a capture/removal efficiency of 83.15% for PM, PM₁₀, PM_{2.5} for these units.

77.b.viii.: Summary of physical changes:

Below is a summary of the physical changes, additions and/or process modifications.

- In April of 2017, a Type 1 Notice of Intent to Construct application was submitted for three (3) wet electrostatic precipitators (WESPs) to be installed on the oxidizer outlet of D1X Anguil RCTO #1-3 (Anguil RCTO D1X-1/2/3) and five (5) WESPs to be installed on the scrubber outlets of D1X EXSC 1-5 (D1X-SC133-1/2/3/4/5-00). Subsequently, an approval letter was issued (NC 029045). WESP installation at D1X RCTO #1-3 was completed and the equipment became operational in January, 2018. The WESP installation on D1X Scrubber #5 was complete, and the unit became operational at the end of December, 2018. The WESP installation on D1X Scrubbers #1 and 2 began in October and November, 2018, respectively. The WESP installation on D1X Scrubber #3 began in January, 2019. No additional WESPs have commenced construction as of the date of this report.
- In June of 2017, a Type 1 Notice of Intent to Construct application was submitted to update the specifications for eight (8) previously permitted emergency generators, as well as the installation of one (1) additional emergency generator, all with Diesel Particulate Filters (DPFs). An approval letter was issued thereafter (NC 029142). D1X-GEN-4C/5B/5C became operational in March, 2018. D1X-GEN-6A/6C became operational in July, 2018. D1X-GEN-6B became operational in August, 2018. N2-GEN-1a became operational May, 2018. IWW-GEN-1 and IWW-PS-1 are not yet operational as of the date of this report.
- In July of 2018, a Type 2 Notice of Intent to Construct application was submitted to install one (1) additional hot water boiler, replace two (2) previously permitted (but not yet installed) Munters rotary concentrating thermal oxidizers (RCTOs) with three (3) Anguil RCTOs, install two (2) additional ammonia scrubbers, and convert one (1) existing (but not yet operating) acid scrubber to one (1) ammonia scrubber. An approval letter was issued thereafter (NC 030206). The conversion of one (1) existing acid scrubber located at D1X MOD2 (D1XM2-SC133-1-00) to an ammonia scrubber (D1XM2-SC142-4-00) has been completed but is not yet operational. None of the other equipment in this application has been installed as of the date of this report.
- Two Anguil RCTOs, which were permitted equipment in the ACDP permit, became operational in 2018. D1XM2-VOC138-2-20 became operational in April, 2018. D1XM2-VOC138-1-20 became operational in May, 2018.

77.b.ix.: Summary of complaints:

Intel is not aware of any complaints received relating to air quality during calendar year 2018.

77.b.x.: List of major maintenance performed on pollution control equipment:

Attachment C to this annual report includes a list of major maintenance performed on the RCTOs and scrubbers at the Ronler Acres and Aloha campuses. All maintenance records (major and minor) are maintained onsite within the Maximo system and available for inspection upon request.

77.b.xi.: NSPS Subpart Dc reporting requirements:

Intel continues to fire natural gas exclusively in all boilers at the Ronler Acres and Aloha campuses. Therefore, there are no applicable Subpart Dc reporting requirements.

Statement of Certification (as required by Permit Condition 74):

Based on information and belief formed after reasonable inquiry, the statements and information in this document and any attachments are true, accurate and complete. I also certify that all statements made concerning compliance, which are based on monitoring required by the permit but not required to be submitted to DEQ, are true, accurate and complete based on information and belief formed after reasonable inquiry.

PENG DAI
Name of designated responsible official

Corporate Vice President
Title of responsible official


Signature of responsible official

3/8/2018
Date

Please contact me (stephanie.b.shanley@intel.com; 503-319-6285) if you have any questions.

Sincerely,

Stephanie Shanley
Environmental Manager

INTEL CORPORATION

cc: Patty Jacobs, ODEQ
Site Air Correspondence File

Attachment A:

DEQ Form F1101



State of Oregon
Department of
Environmental
Quality

Total Emissions by Regulated Pollutant

FORM F1101

1. Reporting year: 2018															
2. Facility name: Intel Corporation - Aloha & Ronler Acres	4. Permit number: ACDP 34-2681-ST-01														
3. Aloha Campus, 3585 SW 198th Ave, Aloha, OR 97007 Mailing street address or PO Box Ronler Acres, 2501 NE Century Blvd, Hillsboro, OR 97124 Mailing city, state and ZIP code	5. Stephanie Shanley, Environmental Manager Contact name and title (503) 319-6285 Phone number with area code														
6. Emissions (in tons) by regulated air pollutant subject to fees for the reporting year: <table><tr><td>PM₁₀*</td><td>35</td></tr><tr><td>or PM</td><td></td></tr><tr><td>or PM_{2.5}</td><td></td></tr><tr><td>or TSP</td><td></td></tr><tr><td>SO₂</td><td>39</td></tr><tr><td>NO_x (as NO₂)</td><td>197</td></tr><tr><td>VOC</td><td>178</td></tr></table>		PM ₁₀ *	35	or PM		or PM _{2.5}		or TSP		SO ₂	39	NO _x (as NO ₂)	197	VOC	178
PM ₁₀ *	35														
or PM															
or PM _{2.5}															
or TSP															
SO ₂	39														
NO _x (as NO ₂)	197														
VOC	178														
* Report only one particulate category. If permit has a PSEL for PM ₁₀ , report emissions of PM ₁₀ . If permit has a PSEL for particulate matter (PM) and not PM ₁₀ , report emissions of PM. If permit has a PSEL for PM _{2.5} and not PM ₁₀ or PM, report emissions of PM _{2.5} . If permit has a PSEL for total suspended particulate (TSP) and not PM ₁₀ , PM or PM _{2.5} , report emissions of TSP.															
7. Total emissions (in tons) of pollutants subject to fees for the reporting year: 449															
8. Statement of certification: I have reviewed this report and all supporting documentation in their entirety and to the best of my knowledge, information, and belief formed after reasonable inquiry, the statements and information contained herein are true, accurate and complete. <table><tr><td>PENG BAI Name of designated responsible official</td><td>Corporate Vice President Title of responsible official</td></tr><tr><td> Signature of responsible official</td><td>3/8/2019 Date</td></tr></table>		PENG BAI Name of designated responsible official	Corporate Vice President Title of responsible official	 Signature of responsible official	3/8/2019 Date										
PENG BAI Name of designated responsible official	Corporate Vice President Title of responsible official														
 Signature of responsible official	3/8/2019 Date														

Attachment B:

Calendar Year 2018 12-Month Rolling Emission Inventory

Pollutant	Rolling 12-month Total Emissions (Ronler Acres and Aloha Facilities combined)												PSEL tons/year	Units
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18		
PM	25.5	26.8	27.1	27.2	27.5	28.5	28.4	28.1	27.9	28.7	28.4	26.7	41	
PM10	20.1	21.4	21.8	21.9	22.1	23.2	23.0	22.7	22.6	23.3	23.0	21.4	35	
PM2.5	15.8	17.1	17.4	17.6	17.8	18.9	18.7	18.4	18.3	19.0	18.7	17.1	31	
NOx	41.1	42.8	44.8	46.1	48.0	49.9	51.5	53.3	55.6	57.3	59.0	60.8	197	
CO	58.4	59.1	60.7	61.5	63.2	64.7	65.9	67.0	68.0	69.2	69.9	70.5	229	
SO2	5.7	5.7	5.7	5.7	5.6	5.6	5.7	5.7	5.6	5.5	5.5	5.6	39	
VOC	77.2	75.4	73.6	71.6	70.0	68.1	66.1	64.3	62.1	59.8	60.1	58.0	178	
Total Fluorides	3.6	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	6.4	
Total HAPs	6.9	6.9	7.1	7.3	7.3	7.4	7.7	7.8	7.7	8.0	8.0	8.2	24	
Individual HAP - HF	4.64	4.77	4.94	5.05	5.16	5.26	5.37	5.49	5.60	5.77	5.89	6.04	9	
Individual HAP - Cl2	0.95	0.93	1.08	1.17	1.19	1.24	1.43	1.45	1.44	1.54	1.55	1.63	9	
Individual HAP - HCl	0.32	0.30	0.32	0.34	0.34	0.36	0.38	0.39	0.38	0.39	0.38	0.40	9	
GHG	278089	283735	289382	295028	300675	306321	311968	317615	323261	328908	334554	340201	819000	

Notes:

* All individual HAPs with annual emissions above 0.1 tons per year are reported above

Attachment C:

List of Major Maintenance on RCTOs and Scrubbers in
Calendar Year 2018

Site ID	Asset Number	Description of Maintenance	Date
RA-D1C	D1C-SC133-1-200	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1C-SC133-1-200	1/3/2018
RA-D1D	RP1-SC133-1-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM RP1-SC133-1-100	1/5/2018
RA-D1C	D1C-PMP133-2-101B	D1C EXSC #2 Shutdown/LOTO for Pump B Rebuild (See Log)	1/8/2018
RA-D1C	D1C-VOC138-3-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1C-VOC138-3-120	1/11/2018
RA-D1C	D1C-VOC138-1-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1C-VOC138-1-120	1/17/2018
RA-D1X	D1X-VOC138-5-20	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1X-VOC138-5-20	1/24/2018
RA-D1X	D1X-VOC138-6-20	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1X-VOC138-6-20	1/26/2018
RA-D1C	D1C-SC133-3-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1C-SC133-3-100	1/28/2018
RA-D1D	VOC-138-1-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM VOC-138-1-120	1/31/2018
RA-D1X	D1X-SC133-3-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1X-SC133-3-00	1/31/2018
RA-D1X	D1X2A-SC133-3-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1X2A-SC133-3-00	2/3/2018
RA-D1D	VOC138-4-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM VOC138-4-120	2/7/2018
RA-F20	F20-SC133-3-111	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM F20-SC133-3-111	2/17/2018
RA-D1C	D1C-SC133-1-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber Annual PM	2/18/2018
RA-D1D	VOC-138-2-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM VOC-138-2-120	2/22/2018
RA-D1C	RB1-SC133-8-111	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM RB1-SC133-8-111	2/25/2018
RA-D1C	D1C-SC133-4-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1C-SC133-4-100	3/4/2018
RA-D1D	RP1-SC133-2-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM RP1-SC133-2-100	3/4/2018
RA-F20	D1B-VOC-138-3-22	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1B-VOC-138-3-22	3/7/2018
RA-D1D	SC-133-3-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM SC-133-3-100	3/10/2018
RA-D1X	D1X-SC133-4-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1X-SC133-4-00	3/14/2018
RA-D1D	SC-133-5-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM SC-133-5-100	3/14/2018
RA-D1X	D1X2A-SC133-4-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1X2A-SC133-4-00	3/17/2018

Site ID	Asset Number	Description of Maintenance	Date
RA-D1C	RB1-AIT133-4-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration RB1-AIT133-4-07A	5/13/2018
RA-D1C	RB1-SC133-4-111	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM RB1-SC133-4-111	5/13/2018
RA-D1C	RB1-FIT133-4-05A	SCRUBBER ANNUAL--Flow Transmitter Calibration RB1- FIT133-4-05A	5/13/2018
RA-D1C	RB1-AIT133-4-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration RB1-AIT133-4-09A	5/13/2018
RA-D1X	D1X-VOC138-7-20	Seal gap measurements and adjustments (see log)	5/16/2018
RA-D1D	VOC138-4-120	(See Log)D1D VOC 138-4-120 Replace "TEL-TRU" Temperature Indicator TI 54 (Thermometer)	5/18/2018
RA-D1D	AIT133-2-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration AIT133-2-09A	5/19/2018
RA-D1D	AIT133-2-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration AIT133-2-07A	5/19/2018
RA-D1X	D1X-SC134-3-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM D1X-SC134-3-00	5/20/2018
RA-D1X	D1X2A-SC134-3-00	D1X2A_SC134_3_00 Replace spray nozzle (see log)	5/20/2018
RA-D1C	D1C-VOC138-3-120	Seal gap measurements and adjustments (see log)	5/24/2018
RA-D1D	VOC-138-2-120	Seal gap measurements and adjustments (see log)	5/26/2018
RA-D1X	D1X2A-AIT133-2-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X2A-AIT133-2- 07A	5/27/2018
RA-D1X	D1X2A-SC133-2-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM D1X2A-SC133-2-00	5/28/2018
RA-D1X	D1X2A-AIT133-2-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X2A-AIT133-2- 09A	5/28/2018
RA-D1X	D1X2A-FIT133-2-05A	SCRUBBER ANNUAL--Flow Transmitter Calibration D1X2A- FIT133-2-05A	5/29/2018
RA-D1X	PUB1-SC133-1-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM PUB1-SC133-1-00	5/29/2018
RA-D1C	D1C-SC134-2-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM D1C-SC134-2-00	6/3/2018
RA-D1C	D1C-VOC138-2-120	replace RTR1 outlet temp and clean burner	6/5/2018
RA-D1C	D1C-AIT133-2-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1C-AIT133-2-09A	6/5/2018
RA-D1C	D1C-FIT133-2-05A	SCRUBBER ANNUAL--Flow Transmitter Calibration D1C- FIT133-2-05A	6/5/2018
RA-D1C	D1C-AIT133-2-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1C-AIT133-2-07A	6/5/2018

Site ID	Asset Number	Description of Maintenance	Date
RA-D1C	RB1-AIT133-2-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration RB1-AIT133-2-07A	7/10/2018
RA-D1C	RB1-SC133-6-111	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM RB1-SC133-6-111	7/12/2018
RA-D1C	RB1-FIT133-6-05A	SCRUBBER ANNUAL--Flow Transmitter Calibration RB1- FIT133-6-05A	7/12/2018
RA-D1X	D1X-VOC138-6-20	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1X-VOC138-6-20	7/13/2018
RA-D1C	D1C-VOC138-1-120	D1C_VOC138_1_120 Replace combustion air motor acuator	7/16/2018
RA-D1C	D1C-SC133-1-200	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1C-SC133-1-200	7/18/2018
RA-D1C	D1C-VOC138-1-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1C-VOC138-1-120	7/18/2018
RA-D1D	VOC-138-1-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM VOC-138-1-120	7/21/2018
RA-D1X	D1X2A-SC133-3-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1X2A-SC133-3-00	7/22/2018
RA-D1D	SC-133-1-200	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM SC-133-1-200	7/24/2018
RA-D1X	D1X-SC133-3-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1X-SC133-3-00	7/29/2018
RA-D1D	SC134-3-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM SC134-3-100	7/31/2018
RA-D1C	RB1-AIT133-6-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration RB1-AIT133-6-07A	7/31/2018
RA-D1C	RB1-AIT133-6-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration RB1-AIT133-6-09A	7/31/2018
RA-F20	D1B-AIT133-3-109	D1B_SC133_3_11 Replace pH probe	8/3/2018
RA-D1D	AIT133-4-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration AIT133-4-07A	8/7/2018
RA-D1D	AIT133-4-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration AIT133-4-09A	8/7/2018
RA-D1D	SC-133-4-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM SC-133-4-100	8/7/2018
RA-D1C	D1C-SC133-3-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM D1C-SC133-3-100	8/9/2018
RA-D1D	SC-133-5-100	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Secuenced) PM SC-133-5-100	8/13/2018
RA-D1X	D1X-AIT133-4-09A	Replace pH probe	8/14/2018
RA-D1X	D1X-VOC138-1-20	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1X-VOC138-1-20	8/17/2018

Site ID	Asset Number	Description of Maintenance	Date
RA-D1X	D1X2A-AIT133-4-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X2A-AIT133-4-07A	9/9/2018
RA-D1X	D1X2A-AIT133-4-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X2A-AIT133-4-09A	9/9/2018
RA-F20	D1B-VOC138-1-22	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM D1B-VOC138-1-22	9/13/2018
RA-D1X	D1X-AIT133-4-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X-AIT133-4-07A	9/20/2018
RA-D1X	D1X-AIT133-4-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X-AIT133-4-09A	9/20/2018
RA-D1X	D1X-SC133-4-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM D1X-SC133-4-00	9/20/2018
RA-D1X	D1X-SC134-2-00	Ronler Acers Scrubbed Exhaust (EXSC) Scrubber (Sequenced) PM D1X-SC134-2-00	9/21/2018
RA-D1D	VOC-138-3-120	Ronler Acers VOC Abatement System (EXVO) (Sequenced) PM VOC-138-3-120 w/ IR Scan	9/24/2018
RA-D1D	AIT133-6-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration AIT133-6-07A	10/4/2018
RA-D1D	AIT133-6-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration AIT133-6-09A	10/4/2018
RA-D1X	D1X-AIT133-1-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X-AIT133-1-07A	10/17/2018
RA-D1X	D1X-AIT133-1-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1X-AIT133-1-09A	10/17/2018
RA-D1C	D1C-AIT133-1-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1C-AIT133-1-09A	10/23/2018
RA-D1C	D1C-AIT133-1-07A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1C-AIT133-1-07A	10/23/2018
RA-D1X	D1X-FIT138-7-20A	VOC ANNUAL--Flow Transmitter Calibration D1X-FIT138-7-20A	10/30/2018
RA-F20	D1B-AIT133-1-09A	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1B-AIT133-1-09A	11/11/2018
RA-F20	D1B-AIT133-1-107	SCRUBBER ANNUAL--Rosemount Model 56 pH/Conductivity Transmitter Calibration D1B-AIT133-1-107	11/11/2018
RA-D1C	D1C-PDIT138-3-16A	VOC ANNUAL--Low Range Pressure Calibration D1C- PDIT138-3-16A	11/14/2018

Site ID	Asset Number	Description of Maintenance	Date
F15	F15-AU138-1-10	F15 Munters 1 semi-annual	1/15/2018
F15	F15-AU138-1-10	Munters 1 Rotor 1 Desorb Downstream Radial Seal Repair	1/21/2018
F15	F15-SC7-1-1	F15 Acid Scrubber #1 annual	2/26/2018
F15	F15-AU138-1-10	Munters #1 Zeolite Wheel Replacement (E-request 377652)	2/28/2018
F15	F15-EF138-1-100	EXVO Fan #1 Expansion Joint Replacement support (e-request 388371)	3/12/2018
F15	F15-EF138-2-100	EXVO Fan #2 Expansion Joint Replacement support (e-request 388371)	3/13/2018
F15	F15-SC7-1-3	F15 Acid Scrubber #3 annual	3/27/2018
F15	F15-AIT133-3-07A	Scrubber #3 Conductivity calibration	3/28/2018
F15	F15-AIT133-3-09A	F15 Scrubber 3 pH probe calibration	3/28/2018
F15	F15-AU138-1-10	F15 Munters 1 (1Y, 6M)	3/31/2018
F15	F15-AIT133-4-07A	Scrubber #4 Conductivity calibration	4/3/2018
F15	F15-AIT133-4-09A	Scrubber #4 pH probe calibration	4/3/2018
F15	F15-SC7-1-4	F15 Acid Scrubber #4 annual	4/4/2018
F15	F15-AU138-1-10	Munters #1 Seal Gap Adjustments	4/10/2018
F15	F15-EF138-3-100	EXVO Fan #3 VFD replacement	4/10/2018
F15	F15-AIT133-2-07A	Scrubber #2 Conductivity calibration F15-AIT133-2-07A	4/17/2018
F15	F15-AIT133-2-09A	Scrubber #2 pH probe calibration F15-AIT133-2-09A	4/17/2018
F15	F15-AIT133-1-07A	6/11/2018, Replaced with WO 23530579 Conductivity calibration	6/11/2018
F15	F15-AIT133-1-09A	Scrubber #1 6/11/2018, Replaced with WO 223530577, pH probe calibration	6/11/2018
F15	F15-AU138-1-10	Munters 1 Seal Gap Checks (e-request 425286)	6/27/2018
F15	F15-AIT133-5-07A	Scrubber #5 Conductivity calibration	7/11/2018
F15	F15-AIT133-5-09A	Scrubber #5 pH probe calibration	7/11/2018
F15	F15-AU138-1-10	F15 Munters 1 annual	7/18/2018
F15	F15-AIT133-1-07A	Scrubber #1 Conductivity calibration	7/19/2018
F15	F15-AIT133-1-09A	Scrubber #1 pH probe calibration	7/19/2018
F15	F15-AU138-2-10	F15 Munters 2 annual	7/24/2018
F15	F15-AIT133-6-07A	Scrubber #6 Conductivity calibration	7/26/2018
F15	F15-AIT133-6-09A	Scrubber #6 pH probe calibration	7/26/2018
F15	F15-SC7-1-6	XD, F15 Acid Scrubber #6 annual	9/29/2018
F15	F15-SC7-1-1	XD, Scrubber #1 Fan Seal repair (e-request 607302)	10/14/2018
F15	F15-SC7-1-5	F15 Scrubber 5 BDD Flexible Joint Repair (e-request 665543)	10/24/2018
F15	F15-SC7-1-6	F15 Scrubber 6 BDD Flexible Joint Water Leaks (e-request 701039)	11/7/2018
F15	F15-AU138-2-10	Shutdown Munters #2 for Door repair (e-request 701038)	11/8/2018
F15	F15-SC7-1-2	F15 Acid Scrubber #2 annual	11/27/2018
F15	F15-SC7-1-5	F15 Acid Scrubber #5 annual	12/2/2018
F15	F15-AU138-1-10	Munters #1 for Door repair (e-request 707606)	12/19/2018
F15	F15-AU138-1-10	F15 Munters 1 semi-annual	12/17/2018
F15	F15-AU138-2-10	F15 Munters 2 semi-annual	12/12/2018