ADITYA BIRLA

NOVELIS

January 30, 2020

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsythe Street
Atlanta, Georgia 30303-8960

RE: Semi-annual and Annual Air Compliance Report
Kentucky Facility ID No. 21-151-00043
AI ID# 2798-Novelis

Dear Sir/Madam:

Please find the enclosed second half 2019 Semi-annual and 2019 Annual Air Compliance report (DEP7007CC) and supporting information pursuant to Regulation 401 KAR 52:020, Title V Permits, for Title-V Air Operating Permit No. V-16-005 R2 (Kentucky). This report also fulfills the requirements in 40 CFR 63.1516(b).

The monitoring requirements stated in our permit are:

1. Monthly and 12 month rolling total hours of operation
2. Monthly and 12 month rolling scrap throughput/aluminum production/dross processed
3. Monthly and 12-month rolling pollutant emission rates for annual limits under 401 KAR 51:017
4. Hourly pollutant emission rates (based on monthly average) for PM limits under 401 KAR 59:010 and 401 KAR 51:017 [Dross Cooling Building (Stack P-3) only]
5. Monthly natural gas usage
6. Reactive flux injection rate
7. Baghouse daily pressure drop (baghouse entrance to baghouse exit)
8. Operate and maintain a bag leak detection system – alarm < 5% of operating time
9. Opacity not to equal or exceed 20%
10. Afterburner temperature
11. NOxOut injection rate
12. Lime slurry flow rate
13. Baghouse inlet temperature

Novelis Corporation
Novelis Can Products, 302 Mayde Road, Berea, Kentucky 40403 Tel 859-986-2347 Fax 859-986-1973

14. For each sidewell group 1 furnace with add-on air pollution control devices: *"Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewell and hearth during reactive fluxing. Reactive flux, except for cover flux, was added only to the sidewell or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, HF and D/F emissions during this reporting period."*
15. For each 40 CFR 63 Subpart RRR affected source choosing to demonstrate compliance during periods of startup and shutdown in accordance with 40 CFR 63.1513(f)(1): *"During each startup and shutdown, no flux and no feed/charge were added to the emission unit, and electricity, propane or natural gas were used as the sole source of heat or the emission unit was not heated."*

This report includes the second half 2019 Semi-annual air compliance report (refer to Attachment 1) and certifies that the information listed above was collected and maintained for the period from July 1, 2019 to December 31, 2019. Also included is the monthly and 12-month rolling summary of various emissions and operating data by affected unit covering the 2019 calendar year reporting period (refer to Attachment 2). The Semi-annual Report in Attachment 1 identifies excursions from permit limits associated with the specific control devices by process stack or emissions point for July 1, 2019 – December 31, 2019. Finally, the annual compliance certification (ACC) for 2019 completed using the DEP 7007CC form is provided in Attachment 3.

Our next semi-annual monitoring report will cover the period from January 1, 2020 to June 30, 2020. Should you have any questions, please contact Aaron Andreassen, EHS Leader, at 859-661-8136.

I, the undersigned, hereby certify under penalty of law, that I am a responsible official, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Respectfully Submitted,

Ramon F. Romero

Ramon Romero
Plant Manager
Novelis Corporation – Novelis Can Products

CC: Aaron Andreassen, Novelis Berea EHS Leader
Shane Hibbitts, Novelis North America EHS Manager
Steven Royer, Novelis North America Environmental Manager
John Colebrook, Trinity Consultants

CC: Ms. Natasha Parker
Division for Air Quality
Frankfort Regional Office
300 Sower Boulevard
Frankfort, Kentucky 40601

ATTACHMENT 1

Semi-annual Report
July – December 2019

NOVELIS
SEMI-ANNUAL REPORT
July - December 2019
MONITORING AND EMISSIONS SUMMARY

Except as noted in Attachments A and B, the following emission units are in compliance with applicable requirements such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below.

Emission Point	Applicable Regulation	Requirement	Compliance Method	Compliance Review
Stack P-1 & P-5 Cold Baghouses *Emission Units* Shredders / Large Surge Hopper / Bucket Elevator / Shredder Exit Delivery Conveyors / Large Rotex Screens	401 KAR 51:017, 40 CFR 63 Subpart RRR	PM10 emissions shall not exceed 2.0 lbs/hr and 8.8 ton/yr (401 KAR 51:017) and 0.01 gr/dscf (40 CFR 63 Subpart RRR)	Monitoring / Recordkeeping	In Compliance
	401 KAR 59:010	Opacity shall not equal or exceed 20%.	Monitoring / Recordkeeping	In Compliance
	401 KAR 59:010	PM emissions from 02 Stack P-5 shall not exceed 2.34 lb/hr	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total scrap throughput.	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total hours of operation.	Monitoring / Recordkeeping	In Compliance
		Monthly average hourly pollutant emission rates	Monitoring / Recordkeeping	In Compliance
		Daily baghouse pressure drop measurements	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Bag Leak Detection System ▪ Alarm < 5% of operating time.	Monitoring / Recordkeeping	In Compliance

Emission Point	Applicable Regulation	Requirement	Compliance Method	Compliance Review
Stacks P-2 & P10 Hot Baghouses *Emission Units* Sidewell Furnaces/ Melt Furnaces/ Hot Conveyors/ Hold Furnace Door Hoods	401 KAR 51:017	CO emissions for each stack (P2 & P10) shall not exceed 20.64 lbs/hr and 90.4 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	NOx emissions for each stack (P2 & P10) shall not exceed 8.0 lbs/hr and 35.0 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	VOC emissions for each stack (P2 & P10) shall not exceed 7.2 lbs/hr and 31.5 ton/yr.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	HCL and HF emissions for each hold furnace and sidewell furnace shall not exceed 0.40 lbs/ton of aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	PM emissions from each hold furnace and sidewell furnace shall not exceed 0.40 lbs/ton of aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	PM10 emissions for each stack (P2 & P10) shall not exceed 6.0 lbs/hr and 26.3 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 59:010	Opacity shall not equal or exceed 20%.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	D/F emissions for each sidewell furnace shall not exceed 0.00021 grains TEQ/ ton of aluminum fed, charged, or produced	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total hours of operation	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total scrap throughput	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total aluminum produced.	Monitoring / Recordkeeping	In Compliance
		Monthly natural gas use for the melt furnaces	Recordkeeping	In Compliance
		Daily baghouse pressure drop measurements	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Bag Leak Detection System ▪ Alarm < 5% of operating time.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Reactive Flux Injection Rates OM&M Plan Rev. 10 limits (applicable from January 1, 2019 to October 15, 2019) ▪ < 34.19 lbs chlorine / ton of aluminum for Line #1 ▪ < 25.25 lbs chlorine / ton of aluminum for Line #2 OM&M Plan Rev. 11 limits (applicable from October 15, 2019 to December 31, 2019) ▪ < 28.58 lbs chlorine / ton of aluminum for Line #1 ▪ < 35.02 lbs chlorine / ton of aluminum for Line #2	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Maintain molten aluminum level above sidewell archway during salt additions	Monitoring / Recordkeeping	In Compliance

Emission Point	Applicable Regulation	Requirement	Compliance Method	Compliance Review
Stack P-3 Dross Baghouse *Emission Unit* Dross Building	401 KAR 51:017	Particulate emissions shall not exceed 0.24 lbs/hr and 1.05 ton/yr.	Monitoring / Recordkeeping	In Compliance
		Daily baghouse pressure drop measurements	Monitoring / Recordkeeping	In Compliance
	401 KAR 59:010	Opacity shall not equal or exceed 20%.	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total hours of operation	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total dross generated.	Monitoring / Recordkeeping	In Compliance
Stacks C-11c *Emission Unit* Sow Preheaters	401 KAR 51:017	CO emissions shall not exceed 1.46 lbs/hr and 6.4 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	NOx emissions shall not exceed 1.08 lbs/hr and 4.7 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	VOC emissions shall not exceed 0.110 lbs/hr and 0.48 ton/yr	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	PM10 emissions shall not exceed 0.152 lbs/hr and 0.67 ton/yr	Monitoring / Recordkeeping	In Compliance
	401 KAR 59:010	Opacity shall not equal or exceed 20%	Monitoring / Recordkeeping	In Compliance
		Monthly natural gas usage	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total hours of operation.	Monitoring / Recordkeeping	In Compliance
Stack DB-1 *Emission Unit* Bale Breaker	401 KAR 51:017	PM10 emissions shall not exceed 2.0 lbs/hr and 8.8 ton/yr.	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total hours of operation.	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total scrap throughput	Monitoring / Recordkeeping	In Compliance
	401 KAR 59:010	Opacity shall not exceed 20%	Monitoring / Recordkeeping	In Compliance

Emission Point	Applicable Regulation	Requirement	Compliance Method	Compliance Review
Stacks P-9a & P-9b AGRS (DHA) Baghouses *Emission Units* Decoaters/ Afterburners/ NOxOUT System/ Holder Furnaces / ACD In-Line Flux box Decoater Stacks C-1 & C-2 vent to Stacks P-9a & P-9b	401 KAR 51:017	Carbon monoxide emissions for each decoater shall not exceed 13.3 lbs/hr and 58.3 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	Nitrogen oxides emissions for each decoater shall not exceed 13.0 lbs/hr and 56.9 ton/yr.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017,	VOC emissions from each decoater shall not exceed 3.55 lbs/hr and 15.5 ton/yr.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	THC emissions from each decoater shall not exceed 0.2 lbs/ton aluminum fed, charged, aluminum produced.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	PM emissions from each decoater shall not exceed 0.3 lbs/ton aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
	401 KAR 51:017	PM10 emissions from each stack (P9a & P9b) shall not exceed 1.8 lbs./hr and 7.9 ton/yr.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	PM emissions from each holder shall not exceed 0.40 lbs/ton aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	PM emissions from the compact degasser shall not exceed 0.01 lbs/ton aluminum fed, charged, or produced	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	HCL emissions from each decoater shall not exceed 1.5 lbs/ton aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	HCL from each holding furnace shall not exceed 0.40 lbs/ton aluminum fed, charged, or produced	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	HCL emissions from the compact degasser shall not exceed 0.04 lbs/ton aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	D/F emissions from each decoater shall not exceed 0.000070 grains TEQ/ton aluminum fed, charged, or produced.	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total hours of operation	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total scrap throughput	Monitoring / Recordkeeping	In Compliance
		Monthly and 12-month rolling total aluminum produced	Monitoring / Recordkeeping	In Compliance
		Monthly natural gas usage	Monitoring / Recordkeeping	In Compliance

Emission Point	Applicable Regulation	Requirement	Compliance Method	Compliance Review
Stacks P-9a & P-9b AGRS (DHA) Baghouses *Emission Units* Decoaters/ Afterburners/ NOxOUT System/ Holder Furnaces / ACD In-Line Flux box Decoater Stacks C-1 & C-2 vent to Stacks P-9a & P-9b	40 CFR 63 Subpart RRR	The afterburner shall be operated above 760° C and at the temperature established during the performance test	Monitoring / Recordkeeping	In Compliance
		Injection of NOxOUT reagent shall be maintained within 10% of the gallons / aluminum shred throughput rate determined during the last system calibration.	Monitoring / Recordkeeping	In Compliance
		The NOxOUT system shall be tested and calibrated, at least once every four calendar months.	Recordkeeping	In Compliance (Completed every 3 months)
	401 KAR 59:010	Opacity shall not equal or exceed 20%	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	3-hour block lime slurry flow rate shall remain within 90% of the established setpoint or an emission unit is operating without associated control equipment due to an unscheduled shutdown or malfunction as addressed in 40 CFR 63.1506(a)(5) and Title V Permit Section E.	Monitoring / Recordkeeping	See Attachments A and B
		Continuous baghouse pressure drop measurements with 3-hour excursion threshold (refer to CAM Plan in Attachment A of Title V Permit).	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Bag Leak Detection System ▪ Alarm < 5% of operating time	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Fabric Filter Inlet Temperature – maintain at or below the following limits: OM&M Plan Rev. 10 limits (applicable from January 1, 2019 to October 15, 2019) 150 degrees C +14 degrees for both Lines #1 and #2 OM&M Plan Rev. 11 limits (applicable from October 15, 2019 to December 31, 2019) 149.9 degrees C for Line #1 + 14 degrees 149.4 degrees C for Line #2 + 14 degrees	Monitoring / Recordkeeping	In Compliance
	40 CFR 63 Subpart RRR	Reactive Flux Injection Rate ▪ ACD chlorine rate max 6,000 mL/min OM&M Plan Rev. 10 limits (applicable from January 1, 2019 to October 15, 2019) ▪ Holder salt use max 100 lbs / cast OM&M Plan Rev. 11 limits (applicable from October 15, 2019 to December 31, 2019) ▪ Hold salt flux usage 0.89 lbs chlorine/ton aluminum produced for Line #1 and 0.88 lbs chlorine/ton for Line #2	Monitoring/ Recordkeeping	In Compliance

Note: This compliance summary only contains reporting information for July – December 2019.

SEMI-ANNUAL AIR COMPLIANCE REPORT ATTACHMENT
JULY THRU DECEMBER 2019

ATTACHMENT A

12/7/2019

Off-line	5:35am
On-line	9:04am
Duration	3 hours 29 minutes

Emission Point (Stack P-9B - AGRS Control Systems) – SMACT DCoat 2 15 min Temp Block.

The Line 2 AGRS system shut down due to low inlet temperature outside of permitted range.

Explanation of Cause(s):

- The malfunction was caused by a damper failure between winter / summer mode resulting in too much cold air entering the AGRS system.

Containment Action(s):

- Observations and checks were conducted on the AGRS system. Control technology (PI system) shut down the weigh belt when alarm was triggered stopping process. Dampers were set accordingly and the system was restarted. Observation of stack for visible emissions was conducted during the incident.

Corrective Action(s):

- Semiannual inspection of winter / summer damper added to SAP enterprise software.

ATTACHMENT B

12/20/2019

Off Line	9:46pm
On-line	11:38pm
Duration	1 hour 52 minutes

Emission Point (Stack P-9B - AGRS Control Systems) – SMACT DCoat 2 15 min Temp Block.

The Line 2 AGRS system shut down due to low inlet temperature outside of permitted range.

Explanation of Cause(s):

- The malfunction was caused by a failed thermo-coupler device resulting in in-accurate temperature readings, shutting down the system.

Containment Action(s):

- Observations and checks were conducted on the AGRS system. Control technology (PI system) shut down the weigh belt when alarm was triggered stopping process. Failed thermos-coupler was replaced and the system was restarted. Observation of stack for visible emissions was conducted upon restart.

Corrective Action(s):

- Failed Thermo-coupler replaced.
- Semiannual inspection of thermo-couplers added to SAP enterprise software.

ATTACHMENT 2

Emissions and Process Data Monitoring Summary
January-December 2019

Operating Data (Imported Monthly)

Data Month:		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Hours of Operation (Uptime Hours)													
Input Data	Units												
Front End (cold metal) uptime	hours/month	744	672	744	648	720	720	744	744	720	480	696	528
Hot Metal uptime	hours/month	744	672	744	648	720	720	744	744	720	480	696	528
Monthly Hours	hours/month	744	672	744	648	720	672	744	744	720	480	696	528
Production Throughput (lbs)													
Input Data													
Total Cold Metal Inputs	pounds	56,524,834	49,258,028	56,679,141	44,976,465	52,885,825	43,573,859	53,568,120	53,918,349	50,967,264	33,077,066	47,337,620	39,176,046
Class 1 Scrap	pounds	8,217,922	7,893,815	6,783,165	4,994,505	5,870,695	6,604,922	6,837,982	5,245,966	31,738,849	4,537,230	4,967,115	4,405,142
5XXX Shreds	Pounds	14,641,183	11,474,432	16,100,466	11,418,501	13,139,290	10,484,840	12,330,100	11,770,789	11,181,720	6,975,060	10,797,260	9,883,950
DM Alternatives	Pounds	1,543,456	1,365,420	1,852,036	1,037,593	152,604	714,342	309,690	255,700	206,320	70,606	568,098	935,945
Total Weighted Throughput Line #1	pounds	28,209,003	24,799,248	28,597,828	23,029,459	26,544,598	23,216,836	28,971,044	27,655,972	28,630,856	18,597,681	25,551,133	20,310,512
Total Weighted Throughput Line #2	pounds	27,285,481	24,589,741	28,629,515	23,049,506	26,995,614	23,423,914	28,838,081	28,491,695	26,959,230	14,747,882	23,448,150	20,964,395
Hot Metal Direct Charge Inputs:													
Total Meltables per month	pounds												
* Melting Furnace 1A	pounds	5,024,706	4,360,147	4,661,844	3,918,028	4,943,852	3,935,899	4,386,203	4,633,579	5,120,259	3,023,034	4,723,606	4,003,786
* Melting Furnace 1B	pounds	4,914,910	4,200,935	4,615,042	3,648,265	4,656,014	3,755,291	4,210,994	4,495,456	3,843,094	2,624,060	4,210,878	3,849,356
* Melting Furnace 2A	pounds	4,883,574	4,176,977	4,666,548	3,776,645	4,401,309	3,753,449	4,136,001	4,454,988	3,780,949	2,245,544	4,102,739	3,880,480
* Melting Furnace 2B	pounds	4,768,337	4,129,340	4,421,182	3,589,767	4,061,326	3,448,928	3,853,965	4,207,874	3,707,657	1,934,688	3,525,175	3,663,487
Flux (salt) Usage:													
* Line 1 salt usage	pound	424,046	340,641	442,279	353,831	417,137	405,554	438,183	465,822	311,602	227,033	411,236	289,199
* Line 2 salt usage	pound	565,671	478,418	518,694	414,605	484,798	385,083	497,519	521,991	487,358	284,320	350,108	309,928
NOx-Out Urea Solution Usage:													
* Line 1 Urea Solution Used	gpm	2	2	2	2	2	2	2	2	2	2	1	1
* Line 2 Urea Solution Used	gpm	3	3	3	3	1	1	1	1	1	1	1	1
Dross Generated	pounds	3,037,100	2,912,100	3,113,300	2,289,060	3,234,000	3,178,060	3,083,160	3,222,000	2,823,680	2,352,100	2,842,920	2,205,550
Total Plant Finished Product	pounds	59,834,222	61,244,710	71,571,015	56,621,790	55,572,040	56,770,637	69,311,910	65,160,240	65,052,099	41,074,225	60,248,428	51,186,155
Natural Gas Usage (Mcf)													
Input Data													
Source of Data													
Atmos Energy Bill Records (supplier # 000532)													
Line 1 Decoater	mcf	9845	9248	10578	8884	9634	9059	9087	9126	8567	6068	9748	8299
Line 2 Decoater	mcf	10284	9345	10263	8480	9217	8474	9443	8687	8638	4730	9585	7336
Melting Furnace 1A	mcf	13534	12043	13851	11425	13054	12413	13684	13864	13975	12284	12284	10779
Melting Furnace 1B	mcf	14177	11788	13728	12926	13478	12480	14443	15187	14333	12189	12189	11575
Melting Furnace 2A	mcf	13304	11206	13429	11487	12175	10914	12855	12641	12190	13204	13204	10973
Melting Furnace 2B	mcf	14523	12567	14465	12980	13410	12784	14457	14493	13715	11588	11588	11824
Holding Furnace #1	mcf	2672	2317	2717	2685	2615	3163	3202	3059	3023	1949	2322	2784
Holding Furnance #2	mcf	2348	2257	2288	2457	2622	3162	3014	2878	2834	1783	2073	2785
Sow Pre-Heater #3	mcf	826	698	892	706	670	692	1188	569	1023	983	587	722

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

PM Emission Totals

Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-01	Line 1 and 2 Shredders	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	27,747	24,694	28,614	23,039	26,755	23,320	27,905	28,074	26,795	16,708	24,500	20,637
		12-Month Rolling Total Scrap Throughput	tons/yr	305,889	306,306	308,381	306,846	307,135	303,355	305,042	304,963	305,615	296,274	305,601	298,789
		Emission Factor	lb/ton	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		Monthly Emission Rate	tons PM/mo	0.069	0.062	0.072	0.058	0.067	0.058	0.070	0.070	0.067	0.042	0.061	0.052
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.19	0.18	0.19	0.18	0.19	0.16	0.19	0.19	0.19	0.17	0.18	0.20
		12-Month Rolling Emission Rate	tons PM/yr	0.76	0.77	0.77	0.77	0.77	0.76	0.76	0.76	0.76	0.74	0.76	0.75
		Annual Emissions Limit	tons PM/yr	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-05	Line 1 and 2 Dust Control Baghouse (CD)	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	27,747	24,694	28,614	23,039	26,755	23,320	27,905	28,074	26,795	16,708	24,500	20,637
		12-Month Rolling Total Scrap Throughput	tons/yr	305,889	306,306	308,381	306,846	307,135	303,355	305,042	304,963	305,615	296,274	305,601	298,789
		Emission Factor	lb/ton	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
		Monthly Emission Rate	tons PM/mo	0.036	0.032	0.037	0.030	0.035	0.030	0.036	0.036	0.035	0.022	0.032	0.027
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.097	0.096	0.100	0.092	0.097	0.084	0.098	0.098	0.097	0.091	0.092	0.102
		Hourly Emissions Limit	tons PM/yr	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34
		In Compliance with Hourly Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DB-1	Line 1 & 2 Bale Breaker	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	15,961	14,261	15,472	13,778	16,862	12,785	17,004	18,322	3,919	10,747	15,508	12,075
		12-Month Rolling Total Scrap Throughput	tons/yr	182,762	182,476	182,845	182,478	184,157	181,566	183,123	184,772	172,806	163,393	170,873	166,694
		Emission Factor	lb/ton	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
		Monthly Emission Rate	tons PM/mo	0.08	0.07	0.08	0.07	0.08	0.06	0.09	0.09	0.02	0.05	0.08	0.06
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.21	0.21	0.21	0.21	0.23	0.18	0.23	0.25	0.05	0.22	0.22	0.23
		12-Month Rolling Emission Rate	tons PM/yr	0.91	0.91	0.91	0.91	0.92	0.91	0.92	0.92	0.86	0.82	0.85	0.83
		Annual Emissions Limit	tons PM/yr	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-10	Melters 1A & 1B; Holder 1C/2C Hoods	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	19,074	16,680	18,937	15,398	18,072	15,455	17,784	18,393	17,797	12,157	17,243	14,082
		12-Month Rolling Total Scrap Throughput	tons/yr	206,267	206,545	207,199	205,938	206,539	203,835	203,371	202,656	202,045	196,183	205,667	201,073
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.71	23.83	27.58	24.35	26.53	24.89	28.13	29.05	28.31	24.47	24.47	22.35
		Emission Factor	lb/ton	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
		Monthly Emission Rate	tons PM/mo	0.12	0.11	0.12	0.10	0.12	0.10	0.12	0.12	0.12	0.08	0.11	0.09
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.33	0.32	0.33	0.31	0.33	0.28	0.31	0.32	0.32	0.33	0.32	0.35
		12-Month Rolling Emission Rate	tons PM/yr	1.43	1.43	1.42	1.41	1.40	1.38	1.36	1.35	1.34	1.29	1.35	1.31
		Annual Emissions Limit	tons PM/yr	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

PM Emission Totals

Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-02	Melters 2A & 2B	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	16,469	16,448	18,859	15,208	17,714	15,313	18,414	18,577	17,224	9,464	15,538	14,254
		12-Month Rolling Total Scrap Throughput	tons/yr	212,902	212,679	213,139	210,838	210,748	207,774	207,973	207,014	205,884	197,492	199,811	195,482
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.83	23.77	27.89	24.47	25.59	23.70	27.32	27.13	25.91	24.79	24.79	22.80
		Emission Factor	lb/ton	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019
		Monthly Emission Rate	tons PM/mo	0.18	0.16	0.18	0.14	0.17	0.15	0.17	0.18	0.16	0.09	0.15	0.14
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.47	0.47	0.48	0.45	0.47	0.40	0.47	0.47	0.45	0.37	0.42	0.51
		12-Month Rolling Emission Rate	tons PM/yr	2.10	2.09	2.09	2.06	2.05	2.01	2.00	1.98	1.96	1.88	1.90	1.86
		Annual Emissions Limit	tons PM/yr	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-03	Dross Cooling Building	Monthly Hours of Operation	hours/mo	744	672	744	648	720	672	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,376	8,376	8,376	8,304	8,328	8,280	8,304	8,328	8,328	8,088	8,304	8,112
		Monthly Total Dross Processed	tons/mo	3,037	2,912	3,113	2,289	3,234	3,178	3,083	3,222	2,824	2,352	2,843	2,210
		12-Month Rolling Total Dross Processed	tons/yr	33,205	33,890	34,287	34,048	34,346	34,811	35,008	35,307	35,046	34,223	35,492	34,297
		Emission Factor	lb/ton	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
		Monthly Emission Rate	tons PM/mo	0.049	0.047	0.050	0.037	0.052	0.051	0.049	0.052	0.045	0.038	0.045	0.035
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.13	0.14	0.13	0.11	0.14	0.15	0.13	0.14	0.13	0.16	0.13	0.13
		Hourly Emissions Limit	tons PM/yr	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
		In Compliance with Hourly Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
		12-Month Rolling Emission Rate	tons PM/yr	0.53	0.54	0.55	0.54	0.55	0.56	0.56	0.56	0.56	0.55	0.57	0.55
		Annual Emissions Limit	tons PM/yr	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-09A	Line 1 Decoater, Holding Furnace 1C, ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	14,105	12,400	14,299	11,515	13,272	11,608	13,486	13,828	13,315	9,334	12,776	10,155
		12-Month Rolling Total Aluminum Throughput	tons/yr	150,274	150,680	151,757	151,419	151,589	149,738	150,026	149,858	150,184	146,379	153,575	150,092
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.52	11.57	13.30	11.57	12.45	12.22	12.29	12.19	11.59	8.02	12.07	11.08
		Emission Factor	lb/ton	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012
		Monthly Emission Rate	tons PM/mo	0.085	0.074	0.086	0.069	0.080	0.070	0.081	0.083	0.080	0.056	0.077	0.061
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.23	0.22	0.23	0.21	0.22	0.19	0.22	0.22	0.22	0.23	0.22	0.23
		12-Month Rolling Emission Rate	tons PM/yr	2.45	2.24	2.03	1.82	1.60	1.36	1.14	0.90	0.90	0.88	0.92	0.90
		Annual Emissions Limit	tons PM/yr	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

PM Emission Totals																
Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-096	Line 2 Decoater, Holding Furnace 2C ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	13,643	12,295	14,315	11,525	13,483	11,712	14,419	14,246	13,480	7,374	11,724	10,482
		12-Month Rolling Total Aluminum Throughput	tons/yr	155,614	155,626	156,623	155,427	155,546	153,617	155,016	155,105	155,432	149,895	152,027	148,697
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.63	11.60	12.55	10.94	11.84	11.64	12.46	11.77	11.47	6.51	11.66	10.12
		Emission Factor	lb/ton	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
		Monthly Emission Rate	tons PM/mo	0.089	0.080	0.093	0.075	0.086	0.076	0.094	0.093	0.088	0.048	0.076	0.068
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.24	0.24	0.25	0.23	0.24	0.21	0.25	0.25	0.24	0.20	0.22	0.26
		12-Month Rolling Emission Rate	tons PM/yr	0.81	0.83	0.85	0.88	0.91	0.92	0.96	0.98	1.01	0.97	0.99	0.97
		Annual Emissions Limit	tons PM/yr	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
C-11C	Sow Pre-Heater #3	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Natural Gas Usage	MMscf/mo	0.83	0.70	0.89	0.71	0.67	0.69	1.19	0.57	1.02	0.98	0.59	0.72
		Emission Factor	lb/MMscf	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
		Monthly Emission Rate	tons PM/mo	3.14E-03	2.65E-03	3.39E-03	2.68E-03	2.55E-03	2.63E-03	4.51E-03	2.16E-03	3.89E-03	3.74E-03	2.23E-03	2.74E-03
		Hourly Emission Rate (Monthly Average)	lbs PM/hr	0.008	0.008	0.009	0.008	0.007	0.007	0.012	0.006	0.011	0.016	0.006	0.010
		12-Month Rolling Emission Rate	tons PM/yr	0.041	0.040	0.039	0.039	0.038	0.036	0.036	0.035	0.035	0.036	0.037	0.036
		Annual Emissions Limit	tons PM/yr	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EXCESS PM Emissions				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

NOx Emission Totals

Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-10	Melters 1A & 1B; Holder 1C/2C Hoods	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	19,074	16,680	18,937	15,398	18,072	15,455	17,784	18,393	17,797	12,157	17,243	14,062
		12-Month Rolling Total Scrap Throughput	tons/yr	206,267	206,545	207,199	205,938	206,539	203,835	203,371	202,656	202,045	196,183	205,667	201,073
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.71	23.83	27.58	24.35	26.53	24.89	28.13	29.05	28.31	24.47	24.47	22.35
		Emission Factor	lb/MMscf	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0
		Monthly Emission Rate	tons NOx/mo	1.51	1.30	1.50	1.33	1.45	1.36	1.53	1.58	1.54	1.33	1.33	1.22
		12-Month Rolling Emission Rate	tons NOx/yr	16.00	16.10	16.31	16.39	16.50	16.50	16.67	16.84	17.00	16.92	16.99	16.99
		Annual Emissions Limit	tons NOx/yr	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-02	Melters 2A & 2B	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	18,469	16,446	18,859	15,208	17,714	15,313	18,414	18,577	17,224	9,464	15,538	14,254
		12-Month Rolling Total Scrap Throughput	tons/yr	212,902	212,679	213,139	210,838	210,748	207,774	207,973	207,014	205,884	197,492	199,811	195,482
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.83	23.77	27.89	24.47	25.59	23.70	27.32	27.13	25.91	24.79	24.79	22.80
		Emission Factor	lb/MMscf	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
		Monthly Emission Rate	tons NOx/mo	1.06	0.90	1.06	0.93	0.97	0.90	1.04	1.03	0.98	0.94	0.94	0.87
		12-Month Rolling Emission Rate	tons NOx/yr	14.45	14.20	13.99	13.70	13.42	13.07	12.80	12.51	12.21	11.82	11.79	11.63
		Annual Emissions Limit	tons NOx/yr	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-09A	Line 1 Decoater, Holding Furnace 1C, ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	14,105	12,400	14,299	11,515	13,272	11,608	13,486	13,828	13,315	9,334	12,776	10,155
		12-Month Rolling Total Aluminum Throughput	tons/yr	150,274	150,580	151,757	151,419	151,589	149,738	150,026	149,858	150,184	146,379	153,575	150,092
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.52	11.57	13.30	11.57	12.45	12.22	12.29	12.19	11.59	8.02	12.07	11.08
		Emission Factor	lb/ton	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
		Monthly Emission Rate	tons NOx/mo	2.92	2.57	2.96	2.38	2.75	2.40	2.79	2.86	2.76	1.93	2.64	2.10
		12-Month Rolling Emission Rate	tons NOx/yr	30.24	30.44	30.79	30.83	30.99	30.74	30.92	31.02	31.09	30.30	31.79	31.07
		Annual Emissions Limit	tons NOx/yr	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

NOx Emission Totals																
Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-09B	Line 2 Decoater Holding Furnace 2C, ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	13.643	12.295	14.315	11.525	13.483	11.712	14.419	14.246	13.480	7.374	11.724	10.482
		12-Month Rolling Total Aluminum Throughput	tons/yr	155.614	155.626	156.623	155.427	155.546	153.617	155.016	155.105	155.432	149.895	152.027	148.697
		Monthly Total Aluminum Produced	tons/mo	17.459	15.311	17.893	14.155	16.643	14.193	17.328	17.290	16.263	10.269	15.062	12.797
		12-Month Rolling Total Aluminum Produced	tons/yr	189.882	190.143	191.450	189.899	191.070	188.514	189.171	189.061	188.772	182.790	188.550	184.662
		Monthly Natural Gas Usage	MMscf/mo	12.63	11.60	12.55	10.94	11.84	11.64	12.46	11.77	11.47	6.51	11.66	10.12
		Emission Factor	lb/ton	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
		Monthly Emission Rate	tons NOx/mo	3.27	2.94	3.43	2.76	3.23	2.80	3.45	3.40	3.22	1.76	2.80	2.51
		12-Month Rolling Emission Rate	tons NOx/yr	32.83	33.35	34.15	34.40	34.99	35.09	35.97	36.58	37.20	35.87	36.37	35.57
		Annual Emissions Limit	tons NOx/yr	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
C-11C	Sow Pre-Heater #3	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Natural Gas Usage	MMscf/mo	0.83	0.70	0.89	0.71	0.67	0.69	1.19	0.57	1.02	0.98	0.59	0.72
		Emission Factor	lb/MMscf	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		Monthly Emission Rate	tons NOx/mo	0.041	0.035	0.045	0.035	0.034	0.035	0.059	0.028	0.051	0.049	0.029	0.036
		12-Month Rolling Emission Rate	tons NOx/yr	0.537	0.524	0.516	0.508	0.496	0.475	0.479	0.460	0.466	0.469	0.491	0.478
		Annual Emissions Limit	tons NOx/yr	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EXCESS NOx Emissions				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

CO Emission Totals

Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-10	Melters 1A & 1B: Holder 1C/2C Hoods	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	19,074	16,680	18,937	15,398	18,072	15,455	17,784	18,393	17,797	12,157	17,243	14,082
		12-Month Rolling Total Scrap Throughput	tons/yr	206,267	205,545	207,199	205,938	206,539	203,835	203,371	202,556	202,045	196,183	205,667	201,073
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.71	23.83	27.58	24.35	26.53	24.89	28.13	29.05	28.31	24.47	24.47	22.35
		Emission Factor	lb/MMscf	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0
		Monthly Emission Rate	tons CO/mo	1.58	1.36	1.57	1.39	1.51	1.42	1.60	1.66	1.61	1.39	1.39	1.27
		12-Month Rolling Emission Rate	tons CO/yr	13.75	14.10	14.59	14.93	15.32	15.60	16.06	16.53	16.98	17.18	17.52	17.77
		Annual Emissions Limit	tons CO/yr	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-02	Melters 2A & 2B	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	18,469	16,448	18,859	15,208	17,714	15,313	18,414	18,577	17,224	9,464	15,538	14,254
		12-Month Rolling Total Scrap Throughput	tons/yr	212,902	212,679	213,139	210,838	210,748	207,774	207,973	207,014	205,884	197,492	199,811	195,482
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.83	23.77	27.89	24.47	25.59	23.70	27.32	27.13	25.91	24.79	24.79	22.80
		Emission Factor	lb/MMscf	134.0	134.0	134.0	134.0	134.0	134.0	134.0	134.0	134.0	134.0	134.0	134.0
		Monthly Emission Rate	tons CO/mo	1.86	1.59	1.87	1.64	1.71	1.59	1.83	1.82	1.74	1.66	1.66	1.53
		12-Month Rolling Emission Rate	tons CO/yr	14.96	15.59	16.39	17.00	17.66	18.20	18.94	19.64	20.30	20.84	20.76	20.50
		Annual Emissions Limit	tons CO/yr	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-09A	Line 1 Decoater, Holding Furnace 1C, ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	14,105	12,400	14,299	11,515	13,272	11,608	13,486	13,828	13,315	9,334	12,776	10,155
		12-Month Rolling Total Aluminum Throughput	tons/yr	150,274	150,680	151,757	151,419	151,589	149,738	150,026	149,858	150,184	146,379	153,575	150,092
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.52	11.57	13.30	11.57	12.45	12.22	12.29	12.19	11.59	8.02	12.07	11.08
		Emission Factor	lb/ton	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
		Monthly Emission Rate	tons CO/mo	1.47	1.30	1.49	1.20	1.39	1.21	1.41	1.45	1.39	0.98	1.34	1.06
		12-Month Rolling Emission Rate	tons CO/yr	33.05	30.80	28.39	26.09	23.61	20.84	18.35	15.66	15.69	15.30	16.05	15.68
		Annual Emissions Limit	tons CO/yr	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

CO Emission Totals

Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-09B	Line 2 Decoater Holding Furnace 2C, ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	13,643	12,295	14,315	11,525	13,483	11,712	14,419	14,246	13,480	7,374	11,724	10,482
		12-Month Rolling Total Aluminum Throughput	tons/yr	155,614	155,626	156,623	155,427	155,546	153,617	155,016	155,105	155,432	149,895	152,027	148,697
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.63	11.60	12.55	10.94	11.84	11.54	12.46	11.77	11.47	6.51	11.66	10.12
		Emission Factor	lb/ton	0.82	0.82	0.82	0.82	0.82	0.23	0.23	0.23	0.23	0.23	0.23	0.23
		Monthly Emission Rate	tons CO/mo	5.62	5.07	5.90	4.75	5.55	1.32	1.63	1.61	1.52	0.83	1.32	1.18
		12-Month Rolling Emission Rate	tons CO/yr	51.60	53.24	55.20	56.19	57.80	55.09	52.87	50.30	47.93	43.45	40.82	36.32
		Annual Emissions Limit	tons CO/yr	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3	58.3
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
C-11C	Sow Pre-Heater #3	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Natural Gas Usage	MMscf/mo	0.83	0.70	0.89	0.71	0.67	0.69	1.19	0.57	1.02	0.98	0.59	0.72
		Emission Factor	lb/MMscf	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
		Monthly Emission Rate	tons CO/mo	0.035	0.029	0.037	0.030	0.028	0.029	0.050	0.024	0.043	0.041	0.025	0.030
		12-Month Rolling Emission Rate	tons CO/yr	0.45	0.44	0.43	0.43	0.42	0.40	0.40	0.39	0.39	0.39	0.41	0.40
		Annual Emissions Limit	tons CO/yr	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EXCESS CO Emissions				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

VOC Emission Totals

Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-10	Melters 1A & 1B Holder 1C 2C Hoods	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	19,074	16,680	18,937	15,398	18,072	15,455	17,784	18,393	17,797	12,157	17,243	14,082
		12-Month Rolling Total Scrap Throughput	tons/yr	206,267	206,545	207,199	205,938	206,539	203,835	203,371	202,656	202,045	196,183	205,667	201,073
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.71	23.83	27.58	24.35	26.53	24.89	28.13	29.05	28.31	24.47	24.47	22.35
		Emission Factor	lb/MMscf	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
		Monthly Emission Rate	tons VOC/mo	1.26	1.08	1.25	1.11	1.21	1.13	1.28	1.32	1.29	1.11	1.11	1.02
		12-Month Rolling Emission Rate	tons VOC/yr	2.05	3.08	4.26	5.30	6.43	7.49	8.70	9.94	11.15	12.19	13.23	14.18
		Annual Emissions Limit	tons VOC/yr	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-02	Melters 2A & 2B	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total Scrap Throughput	tons/mo	18,469	16,448	18,859	15,208	17,714	15,313	18,414	18,577	17,224	9,464	15,538	14,254
		12-Month Rolling Total Scrap Throughput	tons/yr	212,902	212,679	213,139	210,838	210,748	207,774	207,973	207,014	205,884	197,492	199,811	195,482
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	27.83	23.77	27.89	24.47	25.59	23.70	27.32	27.13	25.91	24.79	24.79	22.80
		Emission Factor	lb/MMscf	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
		Monthly Emission Rate	tons VOC/mo	0.74	0.63	0.74	0.65	0.68	0.63	0.72	0.72	0.69	0.66	0.66	0.60
		12-Month Rolling Emission Rate	tons VOC/yr	2.76	3.33	3.99	4.58	5.18	5.74	6.40	7.04	7.66	8.24	8.22	8.11
		Annual Emissions Limit	tons VOC/yr	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
P-09A	Line 1 Decoater Holding Furnace 1C, ACD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	14,105	12,400	14,299	11,515	13,272	11,608	13,486	13,828	13,315	9,334	12,776	10,155
		12-Month Rolling Total Aluminum Throughput	tons/yr	150,274	150,680	151,757	151,419	151,589	149,738	150,026	149,858	150,184	146,379	153,575	150,092
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,062	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,882	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.52	11.57	13.30	11.57	12.45	12.22	12.29	12.19	11.59	8.02	12.07	11.08
		Emission Factor	lb/ton	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
		Monthly Emission Rate	tons VOC/mo	0.09	0.08	0.09	0.07	0.09	0.08	0.09	0.09	0.09	0.06	0.08	0.07
		12-Month Rolling Emission Rate	tons VOC/yr	2.11	1.96	1.81	1.66	1.49	1.31	1.15	0.97	0.98	0.95	1.00	0.98
		Annual Emissions Limit	tons VOC/yr	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Monthly and 12-Month Rolling Process Monitoring and Emissions Summary

VOC Emission Totals																
Stack	Emissions Unit(s)	Parameter	Units	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
P-09B	Line 2 Decoater, Holding Furnace 2C RCD	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Total AluminumThroughput	tons/mo	13,643	12,295	14,315	11,525	13,483	11,712	14,419	14,246	13,480	7,374	11,724	10,482
		12-Month Rolling Total Aluminum Throughput	tons/yr	155,614	155,626	156,623	155,427	155,546	153,617	155,016	155,105	155,432	149,895	152,027	148,697
		Monthly Total Aluminum Produced	tons/mo	17,459	15,311	17,893	14,155	16,643	14,193	17,328	17,290	16,263	10,269	15,052	12,797
		12-Month Rolling Total Aluminum Produced	tons/yr	189,862	190,143	191,450	189,899	191,070	188,514	189,171	189,061	188,772	182,790	188,550	184,662
		Monthly Natural Gas Usage	MMscf/mo	12.63	11.60	12.55	10.94	11.84	11.64	12.46	11.77	11.47	6.51	11.66	10.12
		Emission Factor	lb/ton	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
		Monthly Emission Rate	tons VOC/mo	0.70	0.63	0.73	0.59	0.69	0.60	0.74	0.73	0.69	0.38	0.60	0.53
		12-Month Rolling Emission Rate	tons VOC/yr	8.41	8.36	8.35	8.23	8.18	8.02	8.03	7.97	7.93	7.64	7.75	7.58
		Annual Emissions Limit	tons VOC/yr	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
C-11C	Sow Pre-Heater #3	Monthly Hours of Operation	hours/mo	744	672	744	648	720	720	744	744	720	480	696	528
		12-Month Rolling Hours of Operation	hours/yr	8,163	8,217	8,294	8,304	8,328	8,328	8,352	8,376	8,376	8,136	8,352	8,160
		Monthly Natural Gas Usage	MMscf/mo	0.83	0.70	0.89	0.71	0.67	0.69	1.19	0.57	1.02	0.98	0.59	0.72
		Emission Factor	lb/MMscf	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
		Monthly Emission Rate	tons VOC/mo	2.27E-03	1.92E-03	2.45E-03	1.94E-03	1.84E-03	1.90E-03	3.27E-03	1.56E-03	2.81E-03	2.70E-03	1.61E-03	1.99E-03
		12-Month Rolling Emission Rate	tons VOC/yr	0.030	0.029	0.028	0.028	0.027	0.026	0.026	0.025	0.026	0.026	0.027	0.026
		Annual Emissions Limit	tons VOC/yr	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
		In Compliance with Annual Emissions Limit?	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EXCESS VOC Emissions				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

ATTACHMENT 3

2019 Title V Annual Compliance Certification

Division for Air Quality

Submit to the Regional Office identified in your permit

DEP7007CC

Compliance Certification

____ Section CC.1: Source Information

____ Section CC.2: Signature Block

____ Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

____ Section CC.4: Notes, Comments, and Explanations

1) Source Name Novelis Corporation	2) Agency Interest (AI) ID 2798
3) Source Location Address (street, city, state, zip) 302 Mayde Road, Berea, KY 40403	
4) Technical Contact (name, e-mail, phone #) Aaron Andreassen, aaron.andreassen@novelis.adityabirla.com, 859-985-6725	

5) Permit Number(s) V-16-005 R2	6) County Madison	7) KY EIS (AFS) # 21- 151-00043

8) Submittal Information

Are you certifying any requirement(s) as "not in continuous compliance?" ☐ Yes ☐ No What is the reporting period? 1 (mm/) 1 (dd/) 2019 (yy) TO 12 (mm/) 31 (dd/) 2019 (yy)

Section CC.2: Signature Block

9) CERTIFICATION SIGNATURE

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE STATEMENTS AND INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

BY: _____ AUTHORIZED SIGNATURE

1-30-2020 DATE

Ramon Romero TYPED OR PRINTED NAME OF SIGNATORY

Plant Manager TITLE OF SIGNATORY

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
ALL	Section A NA **Permit Authorization**	NA	The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.	See method discussion	If necessary, permit applications are submitted.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 1.a 40 CFR 63.1510(b) **Operating Parameters**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Operating parameters established in most recent stack test and incorporated into OM&M	See method discussion 1.a	Current OM&M incorporates operating parameters for these emission units that are based on the most recent performance test.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 1.b. 40 CFR 63.1506(a) **Operating Requirements**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Operate sources and control equipment according to 40 CFR 63.1506	See method discussion 1.b	Novelis operates sources and control equipment according to the requirements in 40 CFR 63.1506.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 1.c. 40 CFR 63.1510 **OM&M Plan**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Comply with all provisions of the OM&M plan	See method discussion 1.c	Novelis operates shredders per current OM&M. OM&M identifies process and operation parameters for these sources/control units.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 1.d. 40 CFR 63.1506(e) **Baghouse Monitoring**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Operate bag leak detection system, or a continuous opacity monitor, or conduct visible emissions observations.	See method discussion 1.d	Novelis follows current OM&M to comply with operating and corrective action procedures for these sources/control units.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 2.a. 401 KAR 59:010 **Visible Emissions Limit**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Visible emissions from each stack shall not equal or exceed 20%.	See method discussion 2.a	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 2.b. 401 KAR 51:017 **Hourly Stack P-1 PM10 Emissions Limit**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Particulate (PM10) emissions from Stack P-1 shall not exceed 2.0 lbs/hr	See test results in method discussion 2.b	Test results from most recent stack test for P-1 (Line 1) dated Sept 2017 was 0.15 lb/hr. Test results from most recent stack test for P-1 (Line 2) dated Sept 2017 was 0.073 lb/hr. Performance tests completed every 5 years since initial performance test.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 2.b. 401 KAR 51:017 **Annual Stack P-1 PM10 Emissions Limit**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Particulate (PM10) emissions from Stack P-1 shall not exceed 8.8 tpy	0.75 tpy for Jan.-Dec. 2019	Compliance with allowable emission rates based on stack test results and monitoring process and control parameter data determined during the most recent performance test. Monthly and 12-month rolling PM10 emissions tracking in accordance with Section D.2.b.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 2.c. 40 CFR 63.1505(b) **PM Grain Loading Limit**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Particulate emissions from each shredder shall not exceed 0.01 grains/dscf.	See test results in method discussion 2.c	Compliance demonstrated from most recent performance test (Sept 2017): Stack — Test Results P-1 (Line 1) — 0.00035 gr/dscf P-1 (Line 2) — 0.00017 gr/dscf P-5 — 0.00021 gr/dscf
001 (01 and 02) {P-1 and P-5}	Section B, Condition 2.d. 401 KAR 59:010 **Stack P-5 PM Emissions Limit**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Emissions of PM from Stack P-5 shall not exceed 2.34 lb/hr.	See test results in method discussion 2.d	PM test results from most recent stack test for P-5 (Sept 2017) was 0.11 lbs/hr and control equipment operation, maintenance, and monitoring to maintain compliance with emission limit between stack tests. No occurrence or record that during reporting period control device was not operation when process was in operation. Equipment maintenance recorded per MAXIMO periodic equipment maintenance schedule.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 3.a. 40 CFR 63.1512(a) **PM Emissions**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Conduct performance tests to measure PM emissions at outlet of control system. If visible emission observations is the selected monitoring option, record Method 9 results during the performance test.	See method discussion 3.a	Testing conducted pursuant to 40 CFR 63.1512(a) for P-1 and P-5. Method 9 conducted if VE observed during period stack monitoring per current OM&M plan.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
001 (01 and 02) {P-1 and P-5}	Section B, Condition 3.b. 40 CFR 63.1512(q) **Bag Leak Detection System Conformance**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit documentation of conformance with specifications and requirements for bag leak detection system.	See method discussion 3.b.	Bag leak detection systems installed per manufacturer's specifications and detection certification; annual calibrations by contractor conducted to conform to 40 CFR 63.1510(f); records retained in ETQ database. Notification report submitted with first system in 2004 and all subsequent detection units are identical.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 3.c. 40 CFR 63.1512(s) **Capture/Collection System Initial Conformance**	Line 1 & Line 2 Shredders, Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit documentation of conformance with operational standard for capture/collection system.	See method discussion 3.c	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) through (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or on annual DEP7007CC certifications.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.a. NA **Hours of Operation Tracking**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Monitor monthly and 12-month rolling total hours of operation.	See method discussion 4.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.b. NA **Scrap Throughput Tracking**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Monitor monthly and 12-month rolling total scrap throughput.	See method discussion 4.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.c. NA **Hourly Emission Rates Tracking**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Monitor hourly pollutant emission rates (based on a monthly average).	See method discussion 4.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly average hourly emissions data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.d NA **Flowrate-based Emission Rates Tracking**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Monitor flowrate-based pollutant emission rates.	See method discussion 4.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: flowrate-based emission rates obtained from stack tests and used in emission factor development tracked in most recent performance test reports.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.e. NA **Pressure Drop Tracking**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Monitor daily pressure drop for each baghouse.	See method discussion 4.e	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: continuous pressure drop data evaluated and missing or out-of-range readings presented in semiannual reports.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.f. 40 CFR 63.1510(b) **OM&M Plan**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Prepare and implement for each new or existing affected source and emission unit a written operation, maintenance and monitoring (OM&M) plan.	See method discussion 4.f	OM&M prepared and submitted to DAQ; plan identifies process and operating parameters (ranges where applicable) for this source/control unit.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.g. 40 CFR 63.1510(d) **Capture/Collection System Operation and Inspection**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Install, operate, and maintain a capture/collection system for each source and emission unit equipped with add-on control device, and inspect device annually.	See method discussion 4.g	Capture collection system designed and installed to conform to 1506(c)(1); Installation design: P-1 in 1998 (confirmed in 2003 initial compliance notification) and P-5 in 2013 DEP 7007CC; Annual system inspection by contractor recorded in ACGIH Flow Assessment Report; system operated per current OM&M plan.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.h. 40 CFR 63.1510(f)(1)(iii) **Bag Leak Detection System Certification**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.	See method discussion 4.h	Bag leak detection systems certified by manufacturer to detection limits. Original notification per 40 CFR 63.1515(b) submitted in 2004.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.i. 40 CFR 63.1510(f)(1)(iv) **Bag Leak Detection System Sensor**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	The bag leak detection system sensor shall provide output of relative or absolute PM loadings.	See method discussion 4.i	Bag leak detection systems provide output of relative or absolute PM loadings. Original notification per 40 CFR 63.1515(b) submitted in 2004.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.j. 40 CFR 63.1510(f)(1)(v) **Bag Leak Detection System Continuous Recorder**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.	See method discussion 4.j	Bag leak detection systems are equipped with a device to continuously record the output signal from the sensor and data is recorded by ETQ. Original notification per 40 CFR 63.1515(b) submitted in 2004.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.k. 40 CFR 63.1510(f)(1)(vi) **Bag Leak Detection System Alarm System**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	The bag leak detection system shall be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.	See method discussion 4.k	Bag leak detection systems are equipped with alarm systems. Original notification per 40 CFR 63.1515(b) submitted in 2004.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.l. 40 CFR 63.1510(f)(1)(vii) **Bag Leak Detection System Location**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	For positive pressure fabric filter systems, a bag leak detection system shall be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.	See method discussion 4.l	Bag leak detection systems are located properly. Original notification per 40 CFR 63.1515(b) submitted in 2004.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.m. 40 CFR 63.1510(f)(1)(viii) **Multiple Bag Leak Detection Systems**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.	See method discussion 4.m	Not applicable.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.n. 40 CFR 63.1510(f)(1)(ix) **Bag Leak Detection System Baseline**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.	See method discussion 4.n	Bag leak detection systems had a baseline output properly established. Original notification per 40 CFR 63.1515(b) submitted in 2004.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.o. 40 CFR 63.1510(f)(1)(x) **Bag Leak Detection System Settings**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Following initial adjustment of the system, the owner or operator shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.	See method discussion 4.o	Bag leak detection systems are adjusted per the current OM&M plan. Original notification per 40 CFR 63.1515(b) submitted in 2004.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 4.p. NA **CAM**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Refer to Compliance Assurance Monitoring (CAM) Plan	See method discussion 4.p	Refer to Compliance Assurance Monitoring (CAM) Plan
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.a. NA **Hours of Operation Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of monthly and 12-month rolling total hours of operation	See method discussion 5.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.b. NA **Scrap Throughput Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of monthly and 12-month rolling total scrap throughput	See method discussion 5.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.c. NA **Hourly Emission Rates Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of hourly pollutant emission rates.	See method discussion 5.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly average hourly emissions data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.d. NA **Flowrate-based Emission Rates Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of flowrate-based emission rates.	See method discussion 5.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: flowrate-based emission rates obtained from stack tests and used in emission factor development tracked in most recent performance test reports.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.e. NA **Pressure Drop Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of daily pressure drop of each baghouse.	See method discussion 5.e	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; continuous pressure drop data evaluated and missing or out-of-range readings presented in semiannual reports.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.f. NA **Control Equip. Incident Logs**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Requirements for operating emission units without the associated control equipment	See method discussion 5.f	Novelis does not operate process equipment without associated control equipment in operation.

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001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.g. NA **Control Equip. Maintenance Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of all maintenance activities performed at each piece of control equipment.	See method discussion 5.g	Novelis does record/report malfunctions as required and conducts records maintenance activities in the Environmental Incident Reporting database.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.g. 40 CFR 63.1517(a) **General SMACT Recordkeeping**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	40 CFR 63.1517(a) record keeping requirements	See method discussion 5.h	Novelis maintains electronic and paper records for five years.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.g. 40 CFR 63.1517(b)(1,2) **Bag Leak Detection System Alarm Recordkeeping**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Keep records of total operating hours, each alarm, time of alarm, corrective action, and cause of alarm.	See method discussion 5.	Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 5.i. NA **OM&M Plan**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Maintain records of current operation, maintenance, and monitoring plan (OM&M) plan	See method discussion 5.	Novelis maintains current copy of OM&M plan on file
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.a. NA **Hours of Operation Reports**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit a semi-annual summary report containing the following information: monthly and 12-month rolling total hours of operation	See method discussion 6.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.b. NA **Scrap Throughput Reports**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit a semi-annual summary report containing the following information: monthly and 12-month rolling total scrap throughput.	See method discussion 6.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.c. NA **Hourly Emission Rates Reports**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit a semi-annual summary report containing the following information: hourly pollutant emission rates.	See method discussion 6.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly average emission rate data submitted semi-annually.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.d. NA **Flowrate-based Emission Rates Records**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit a semi-annual summary report containing the following information: flowrate-based emission rates.	See method discussion 6.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; flowrate-based emission rates obtained from stack tests and used in emission factor development tracked in most recent performance test reports.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.e. NA **Pressure Drop Reports**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Submit a semi-annual summary report containing the following information: daily pressure drop of each baghouse.	See method discussion 6.e	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; continuous pressure drop data evaluated and missing or out-of-range readings presented in semiannual reports.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.f. 40 CFR 63.1510(b) **OM&M Plan**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Comply with all of the provisions of the OM&M plan, unless and until the plan is revised in accordance with the specified procedures in 40 CFR 63.1510(b)	See method discussion 6.f.	Novelis complies with the most current OM&M plan.
001 (01 and 02) {P-1 and P-5}	Section B, Condition 6.g. NA **Section D**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	See Section D 6.	See method discussion 6.g.	Refer to Section D 6.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
001 (01 and 02) (P-1 and P-5)	Section B, Condition 7.a. 40 CFR 63.1506(c) **Capture/Collection System Installation and Operation**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	Capture collection systems must comply with 40 CFR 63.1506(c).	See method discussion 7.a	Capture collection system designed and installed to conform to 1506(c)(1): Installation design: P-1 in 1998 (confirmed in 2003 initial compliance notification) and P-5 in 2013 DEP 7007CC: Annual system inspection by contractor recorded in ACGIH Flow Assessment/Report; system operated per current OM&M plan.
001 (01 and 02) (P-1 and P-5)	Section B, Condition 10 NA **Section D**	Line 1 & Line 2 Shredders Line 1 & Line 2 Shredder Rooms and Conveying Equipment	See Section D 8.	See method discussion 10.	Conformance with the DEP 7007CC certified submittal.
002 (P-2 and P-10)	Section B, Condition 1.a 401 KAR 52:020, Section 7 **Furnace Classification Changes**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Submit application prior to changing furnace classifications to incorporate applicable standards from 40 CFR 63, Subpart RRR.	See method discussion 1.a	Not Applicable during this reporting period.
002 (P-2 and P-10)	Section B, Condition 1.b. 40 CFR 63.1506(a) **Operating Requirements**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Operate sources and control equipment according to 40 CFR 63.1506.	See method discussion 1.b	Novelis operates sources and control equipment according to the requirements in 40 CFR 63.1506.
002 (P-2 and P-10)	Section B, Condition 1.c 40 CFR 63.1506(b) **Labeling**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and	Provide and maintain labels according to 40 CFR 63.1506(b).	See method discussion 1.c	Novelis complies with 40 CFR 63.1506(b) with labels maintained at the process control panels operating limits ranges in PI (with alarms) based on current OM&M plan.
002 (P-2 and P-10)	Section B, Condition 1.d. 40 CFR 63.1506(c) **Capture/Collection System Installation and Operation**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Capture collection systems must comply with 40 CFR 63.1506(c).	See method discussion 1.d	Capture collection system designed and installed to conform to 40 CFR 1506(c)(1): Installation design: P-2 in 1998 (confirmed in 2003 initial compliance notification) and P-10 in 2006 DEP 7007CC: Annual system inspection by contractor recorded in ACGIH Flow Assessment/Report; system operated per current OM&M plan.
002 (P-2 and P-10)	Section B, Condition 1.e. 40 CFR 63.1506(d) **Feed/Charge Measurements**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Measure and record weight of feed/charge and operate system in accordance with OM&M.	See method discussion 1.e	Novelis installed and measures scrap throughput using calibrated weighing devices. Weigh scales are calibrated per the OM&M plan and tracked in ETQ database used to verify their calibration; devices operated per the current OM&M, and weight record data stored in the PI system. Performance test production data complies with 40 CFR 1506(d)(3).
002 (P-2 and P-10)	Section B, Condition 1.f. 40 CFR 63.1506(m)(3) **Baghouse Inlet Temperature Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Maintain the 3-hour block average inlet temperature for each fabric filter.	See method discussion 1.f	Novelis monitors baghouse inlet temperature and records 3-hour block average, which has not deviated from the rate established during the most recent performance test. Data recorded in PI.
002 (P-2 and P-10)	Section B, Condition 1.g. 40 CFR 63.1506(m)(5) **Flux Injection Rate Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Maintain the total reactive chlorine flux injection rate.	See method discussion 1.g	Novelis monitors the total reactive chlorine flux injection rate and records. Chlorine flux rate into holders and ACD has not deviated from the rate established during the most recent performance test. Data recorded in PI.
002 (P-2 and P-10)	Section B, Condition 1.h. 40 CFR 63.1506(m)(6) **Sidewell Furnace Operating Restrictions**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Operate each sidewell furnace in accordance with 40 CFR 63.1506(m)(6).	See method discussion 1.h	Novelis operates each sidewell in conformance with 40 CFR 1506(m)(6) and records the melter level in PI. Data recorded in PI.

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
002 {P-2 and P-10}	Section B, Condition 1.i. 40 CFR 63.1506(m)(7) **Capture/Collection System and Control Device Temporary Stop Allowance**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	The operation of capture/collection systems and control devices associated with Group 1 furnaces that will be idled for at least 24 hours may be temporarily stopped.	See method discussion 1.i	Novelis operates the group 1 furnaces in accordance with the OM&M plan.
002 {P-2 and P-10}	Section B, Condition 1.j. 40 CFR 63.1506(p) **Corrective Actions for OM&M Plan Deviations**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Initiate corrective action when process parameter deviates from value or range established in performance test.	See method discussion 1.j	Novelis monitors the process parameters in PI. PI alarms upon parameter deviation. No deviations during this reporting period for parameters established in most recent OM&M for these units based on most recent performance testing.
002 {P-2 and P-10}	Section B, Condition 1.k. NA **Flux Restriction**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Do not employ gaseous or liquid flux materials in the melt furnaces and the holding furnaces	See method discussion 1.k	Novelis does not use gaseous or liquid flux in the melting or holding furnaces. Only solid flux is used.
002 {P-2 and P-10}	Section B, Condition 2.a 401 KAR 59:010 **Visible Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Visible emissions from each stack shall not equal or exceed 20%.	See method discussion 2.a	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 CO Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of CO from P-2 shall not exceed 20.64 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test Stack Test Results Test Date P-2 CO: 5.6 lb/hr (Oct 2018)
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 CO Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of CO from P-2 shall not exceed 90.4 ton/yr	20.50 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling CO emissions tracking in accordance with Section D.2.b.
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 NOx Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of NOX from P-2 shall not exceed 8.0 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-2 NOX: 3.2 lb/hr (Oct 2018)
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 NOx Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of NOX from P-2 shall not exceed 35.0 ton/yr	11.63 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling NOX emissions tracking in accordance with Section D.2.b.
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 VOC Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of VOC from P-2 shall not exceed 7.2 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-2 VOC: 2.2 lb/hr (Oct 2018)
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 VOC Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of VOC from P-2 shall not exceed 31.5 ton/yr	8.11 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling VOC emissions tracking in accordance with Section D.2.b.
002 {P-2 and P-10}	Section B, Condition 2.b. 401 KAR 51:017 **P-2 PM10 Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of PM10 from P-2 shall not exceed 6.0 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test based on filterable PM only. Condensable PM not included in PM10 emission limits established under PSD program prior to January 1, 2011 in accordance with regulated NSR pollutant definition in 401 KAR 51:001 Section 1(207)(a)1.e.(ii). Stack Test Results Test Date: P-2 Filt. PM10: 0.54 lb/hr (Oct 2018)

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002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-2 PM10 Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of PM10 from P-2 shall not exceed 25.3 ton/yr	1.86 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling filt. PM10 emissions tracking in accordance with Section D.2.b.
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 CO Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of CO from P-10 shall not exceed 20.64 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-10 CO: 4.9 lb/hr (Dec 2016)
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 CO Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of CO from P-10 shall not exceed 90.4 ton/yr	17.77 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling CO emissions tracking in accordance with Section D.2.b. Emission factor used is 84 lb CO/MMscf from AP-42, Table 1.4.1 - Small Boilers, Ch. 1, Sect. 4, Nat. Gas Combustion, 7/1998 Ed.
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 NOx Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of NOX from P-10 shall not exceed 8.0 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-10 NOX: 4.7 lb/hr (Dec 2018)
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 NOx Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of NOX from P-10 shall not exceed 35.0 ton/yr	16.99 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling NOX emissions tracking in accordance with Section D.2.b.Emission factor used is 100 lb NOX/MMscf from AP-42, Table 1.4.1 - Small Boilers, Ch. 1, Sect. 4, Nat. Gas Combustion, 7/1998 Ed.
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 VOC Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of VOC from P-10 shall not exceed 7.2 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-10 VOC: 3.9 lb/hr (Dec 2018)
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 VOC Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of VOC from P-10 shall not exceed 31.5 ton/yr	14.16 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling VOC emissions tracking in accordance with Section D.2.b. Emission factor used is 5.5 lb VOC/MMscf from AP-42, Table 1.4.2 - Small Boilers, Ch. 1, Sect. 4, Nat. Gas Combustion, 7/1998 Ed.
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 PM10 Hourly Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of PM10 from P-10 shall not exceed 6.0 lbs/hr	See test results in method discussion 2.b	Compliance demonstrated from most recent performance test based on filterable PM only. Condensable PM not included in PM10 emission limits established under PSD program prior to January 1, 2011 in accordance with regulated NSR pollutant definition in 401 KAR 51:001 Section 1(207)(a)1.e.(ii). Stack Test Results Test Date: P-10 Filt. PM10: 0.39 lb/hr (Dec 2018)
002 (P-2 and P-10)	Section B, Condition 2.b. 401 KAR 51:017 **P-10 PM10 Annual Emissions Limit**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Mass emissions of PM10 from P-10 shall not exceed 26.3 ton/yr	1.31 tpy for Jan.-Dec 2019	Monthly and 12-month rolling PM10 emissions tracking in accordance with Section D.2.b.

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002 (P-2 and P-10)	Section B, Condition 2.c. 40 CFR 63.1505(i) and (k) **SMACT Emissions Limits**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Emissions from Melt Furnaces shall not exceed the following PM: 0.40 lb/ton charge HCl and HF: 0.40 lb/ton charge D/F: 2.1 x 10-4 gr TEQ/ton charge	See test results in method discussion 2.c	Based on SMACT testing in October and December 2018, compliance was demonstrated for melt furnaces (Group 1 furnaces) as follows: PM Limit 0.40 lbs/ton Test Date P-10 0.013 lbs/ton (Dec 2018) P-2 0.02 lbs/ton (Oct 2018) HCl Limit 0.40 lbs/ton P-10 0.037 lbs/ton (Dec 2018) P-2 0.063 lbs/ton (Oct 2018) HF Limit 0.40 lbs/ton P-10 0.010 lbs/ton (Dec 2018) P-2 0.0029 lbs/ton (Oct 2018) D/F Limit 2.1 x 10-4 gr TEQ/ton P-10 2.3x10-5 gr/ton (Dec 2018) P-2 8.8x10-6 gr/ton (Oct 2018)
002 (P-2 and P-10)	Section B, Condition 2.c.(5) 40 CFR 63.1505(i) and (k) **SMACT Emissions Limits**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Comply with emission limits of paragraphs (c)(1) through (4) on the basis of combined emissions from the sidewell and the hearth.	See method discussion 2.c(5)	Novelis operates each sidewell in conformance with 40 CFR 1505(m)(6) and records the melter level in PI. Data recorded in PI.
002 (P-2 and P-10)	Section B, Condition 3.a 40 CFR 63.1511(a) **Site-specific Test Plan**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Prepare a site-specific test plan and conduct performance testing under representative conditions	See method discussion 3.a	Novelis submitted site-specific test plans for the most recent performance tests of the P-2 and P-10 stacks. Operating conditions for the melting and holding furnaces during the P-2 and P-10 SMACT testing were representative of sources tested.
002 (P-2 and P-10)	Section B, Condition 3.b. 40 CFR 63.1511(e) **Repeat Tests**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Conduct performance test every 5 years.	See method discussion 3.b	Novelis conducts SMACT testing every 5 years, complies with the requirements of 40 CFR 63.1511, and submits the performance test reports as required.
002 (P-2 and P-10)	Section B, Condition 3.c. 40 CFR 63.1512(c) **Flux-Related Testing Considerations**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	May choose to determine the rate of reactive flux addition and assume that all reactive flux is emitted then avoid conducting an emission test for HCl. Conduct performance tests required by paragraph (d)(1) or (d)(2) of 40 CFR 63.1512.	See method discussion 3.c	Novelis does not choose to rely on this compliance option and tests for HCl. Novelis does not allow the molten metal to fall below the passageway between the melter and sidewell. Levels are monitored by operator and recorded in PI database.
002 (P-2 and P-10)	Section B, Condition 3.d. 40 CFR 63.1512(e)(1) **HF Emissions Testing Requirements**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Conduct HF performance test every 5 years.	See method discussion 3.d	Novelis conducts SMACT testing every 5 years, complies with the requirements of 40 CFR 63.1511, and submits the performance test reports as required.
002 (P-2 and P-10)	Section B, Condition 3.e. 40 CFR 63.1512(e)(3) **HCl-HF Emissions Testing Avoidance Option**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	No testing required if performing flux addition chlorine/fluorine mass balance assuming 100% loss as HCl/HF emissions.	See method discussion 3.e	NA- Novelis does not rely on this compliance option. P2 and P10 stacks are tested for HCl and HF emissions.
002 (P-2 and P-10)	Section B, Condition 3.f. 40 CFR 63.1512(e)(4) **Capture/Collection Systems - HF Testing**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Assess capture efficiency of hoods for uncontrolled group 1 furnaces in conjunction with stack testing.	See method discussion 3.f	Hoods serving the melting and holding furnaces meet ACGIH guidelines referenced in 63.1512(e)(4)(i).
002 (P-2 and P-10)	Section B, Condition 3.g. 40 CFR 63.1512(k) **Feed/Charge Measurement during Testing**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Measure and record total weight of feed/charge to or aluminum production from the affected source	See method discussion 3.g	Novelis measures and records aluminum scrap fed into the furnaces from the weighbelt and data is recorded in the PI for each furnace line. The pounds of direct charge material are recorded on weigh tickets and tracked in a spreadsheet for each furnace per cycle.

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002 (P-2 and P-10)	Section B, Condition 3.h. 40 CFR 63.1512(o) **Flux Injection Rate Testing**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Use procedures to establish operating parameter value or range for total reactive chlorine or fluorine flux injection rate according to 40 CFR 63.1512(o).	See method discussion 3.h	Novelis monitors salt flux into sidewells continuously and monitored/recorded the composition of the salt flux during the performance tests for Stack P-2 and P-10. Values of chlorine and the type of salt flux used were recorded and included in the most recent OM&M plan. The chlorine injection rate limit and use of same salt flux as most recent performance test inherently restricts the fluorine injection rate.
002 (P-2 and P-10)	Section B, Condition 3.i. 40 CFR 63.1512(q) **Bag Leak Detection System Conformance**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Submit information in 40 CFR 1515(b)(6) for compliance status for bag leak detection system	See method discussion 3.i	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) through (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or on annual DEP7007CC certifications. Bag leak detection systems installed per manufacturer's specifications and detection certification, annual calibrations by contractor conducted to conform to 40 CFR 63.1510(f), records retained in ETQ database. Notification report submitted with first system in 2004 and all subsequent detection units are identical.
002 (P-2 and P-10)	Section B, Condition 3.j. 40 CFR 63.1512(r) **Labeling Conformance**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Submit information for notification of compliance to document conformance with 40 CFR 63.1515(b)	See method discussion 3.j	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) thru (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or and in annual DEP7007CC compliance certification. Labels maintained at operator control panels.
002 (P-2 and P-10)	Section B, Condition 3.k. 40 CFR 63.1512(s) **Capture/Collection System Conformance**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Submit information in 40 CFR 63.1515(b)(2) for compliance of capture collection system.	See method discussion 3.k	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) through (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or on annual DEP7007CC certifications.
002 (P-2 and P-10)	Section B, Condition 3.l. NA **Section D**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	See Section D.3.	See method discussion 3.l.	Refer to Section D.3.
002 (P-2 and P-10)	Section B, Condition 4.a. NA **Hours of Operation Tracking**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor monthly and 12-month rolling total hours of operation.	See method discussion 4.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 (P-2 and P-10)	Section B, Condition 4.b. NA **Scrap Throughput Tracking**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor monthly and 12-month rolling total scrap throughput.	See method discussion 4.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 (P-2 and P-10)	Section B, Condition 4.c. NA **Aluminum Produced Tracking**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor monthly and 12-month rolling total aluminum produced.	See method discussion 4.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 (P-2 and P-10)	Section B, Condition 4.d. NA **Natural Gas Usage Tracking**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor monthly natural gas usage.	See method discussion 4.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly data submitted semi-annually.
002 (P-2 and P-10)	Section B, Condition 4.e. NA **Hourly Emission Rates Tracking**	P2 - Melter, sidewell, and hood 1A&1B, hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor hourly pollutant emission rates (based on a monthly average).	See method discussion 4.e	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly average hourly emissions data submitted semi-annually.

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002 {P-2 and P-10}	Section B, Condition 4.f. NA **Production-based Emission Rates Tracking**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor production-based pollutant emission rates.	See method discussion 4.f	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 {P-2 and P-10}	Section B, Condition 4.g. NA **Flux Type Tracking**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Maintain a record of the type and quality of gaseous or liquid flux materials employed in each emission unit.	See method discussion 4.g	NA: Only solid salt is used to flux per Novelis procedures and engineering design. Gaseous and liquid flux materials are not used due to inherent engineering design of flux addition system.
002 {P-2 and P-10}	Section B, Condition 4.h 40 CFR 63.1510(a) **SMACT Controls/Processes Tracking**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor all control equipment and processes according to 40 CFR 63.1510(a).	See method discussion 4.h	Novelis complies with 40 CFR 63.1510(a) by monitoring and operating control equipment and processes according to the current OM&M plan. Process parameters and records are maintained in PI; control equipment calibrations are maintained in the ETQ database.
002 {P-2 and P-10}	Section B, Condition 4.i. 40 CFR 63.1510(b) **OM&M Plan**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Prepare and implement a written OM&M plan.	See method discussion 4.i	The current OM&M plan identifies the compliance methods and procedures used by Novelis to comply with 40 CFR 1510(b) and air permit terms (h)(1) thru (h)(9).
002 {P-2 and P-10}	Section B, Condition 4.j. 40 CFR 63.1510(c) **Label Inspections**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Inspect labels for group 1 furnaces each month.	See method discussion 4.j	Novelis inspects all process unit labels monthly as part of site environmental inspection, records the status, and implements corrective action if required.
002 {P-2 and P-10}	Section B, Condition 4.k 40 CFR 63.1510(d) **Capture/Collection System Operation and Inspection**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Install, operate, and maintain a capture/collection system, and inspect system once per calendar year.	See method discussion 4.k	Capture collection system designed and installed to conform to 40 CFR 1508(c)(1); Installation design: P-2 in 1998 (confirmed in 2003 initial compliance notification) and P-10 in 2006 DEP 7007CC. Annual system inspection by contractor recorded in AOGH Flow Assessment Report; system operated per current OM&M plan.
002 {P-2 and P-10}	Section B, Condition 4.l. 40 CFR 63.1510(e) **Feed/Charge Measurement Device**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Install, calibrate, operate, and maintain device to measure and record total weight of feed/charge.	See method discussion 4.l	Novelis installed and measures scrap throughput using calibrated weighing devices accurate to +-1%; Novelis measures cast product by calculation methodology presented to DAQ; Maintenance electrician following ETQ database periodically verifies scale calibration; devices operated per the current OM&M; and weight record data stored in the PI system.
002 {P-2 and P-10}	Section B, Condition 4.m. 40 CFR 63.1510(f) **Bag Leak Detection System Installation and Operation**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Install, calibrate, maintain, and continuously operate bag leak detection system.	See method discussion 4.m	Novelis installed and operates a bag leak detection system in conformance to 40 CFR 1510(f)(1) and the current OM&M plan.
002 {P-2 and P-10}	Section B, Condition 4.n. 40 CFR 63.1510(j)(3) **Flux Injection Rates Tracking**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record flux addition for each 15-minute block period during each operating cycle or time period used in the performance test.	See method discussion 4.n	Novelis recorded in PI total solid flux added to melter sidewells (line 1 and 2) during most recent performance test and included those values as limits in the current OM&M plan.
002 {P-2 and P-10}	Section B, Condition 4.o. 40 CFR 63.1510(j)(4) **Flux Injection Rate Calculations**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Calculate flux injection rate for each operating cycle or time period used in the performance test.	See method discussion 4.o	Novelis electronically collects, records, and reports in the production information (PI) system.
002 {P-2 and P-10}	Section B, Condition 4.p. 40 CFR 63.1510(j)(5) **Flux Injection Rate Alternate Tracking Method**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	40 CFR 63.1510(j)(5)	See method discussion 4.p	Not applicable.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
002 {P-2 and P-10}	Section B, Condition 4.q. 40 CFR 63.1510(n)(1) **Molten Metal Level Tracking**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record in operating log if molten metal is above top of passage between sidewell and hearth.	See method discussion 4.q	Novelis manually enters melter level above top of passage for each melter cycle into PI database to confirm above.
002 {P-2 and P-10}	Section B, Condition 4.r 40 CFR 63.1510(u) **SAPU Alternative**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Compliance demonstration according to 40 CFR 63.1510(u).	See method discussion 4.r	Novelis complies with emission limits for these SAPUs based on most recent performance test pursuant to 40 CFR 1510(u).
002 {P-2 and P-10}	Section B, Condition 4.s. NA **SAPU Alternative**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	See Section D.4	See method discussion 4.s	Refer to Section D.4.
002 {P-2 and P-10}	Section B, Condition 4.t. NA **CAM Plan**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Refer to Compliance Assurance Monitoring (CAM) Plan	See method discussion 4.t	Refer to Compliance Assurance Monitoring (CAM) Plan
002 {P-2 and P-10}	Section B, Condition 5.a NA **Hours of Operation Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record monthly and 12-month rolling total hours of operation	See method discussion 5.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 {P-2 and P-10}	Section B, Condition 5.b. NA **Scrap Throughput Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record monthly and 12-month rolling total scrap throughput	See method discussion 5.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 {P-2 and P-10}	Section B, Condition 5.c. NA **Aluminum Produced Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record monthly and 12-month rolling total aluminum produced.	See method discussion 5.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
002 {P-2 and P-10}	Section B, Condition 5.d. NA **Natural Gas Usage Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record monthly natural gas usage.	See method discussion 5.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly data submitted semi-annually.
002 {P-2 and P-10}	Section B, Condition 5.e. NA **Hourly Emission Rates Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record hourly pollutant emission rates (based on a monthly average).	See method discussion 5.e	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly average hourly emissions data submitted semi-annually.
002 {P-2 and P-10}	Section B, Condition 5.f. NA **Production-based Emission Rates Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record production-based pollutant emission rates.	See method discussion 5.f	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
002 {P-2 and P-10}	Section B, Condition 5.g. 40 CFR 63.1514(d)(5) **Furnace Classification Change Records**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Records according to 40 CFR 63.1514(d)(5).	See method discussion 5.g	Not applicable.
002 {P-2 and P-10}	Section B, Condition 5.h. 40 CFR 63.1517(a) **General SMACT Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Maintain files required by 40 CFR 63.10(b) and 40 CFR 63 Subpart RRR	See method discussion 5.h	Novelis maintains electronic and paper records for five years
002 {P-2 and P-10}	Section B, Condition 5.i.(1) 40 CFR 63.1517(b)(1)(i) **Bag Leak Detection System Alarm Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Keep records of total operating hours, each alarm, time of alarm, corrective action, and cause of alarm.	See method discussion 5.i.(1)	Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually
002 {P-2 and P-10}	Section B, Condition 5.i.(2) 40 CFR 63.1517(b)(5) **Flux Injection Rate Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record 15-minute block average weights of flux injection, total flux injection rate, and periods rate exceeds compliant operating parameter	See method discussion 5.i.(2)	Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually.
002 {P-2 and P-10}	Section B, Condition 5.i.(3) 40 CFR 63.1517(b)(7) **Feed/Charge Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record feed charge weights	See method discussion 5.i.(3)	Novelis collects and records feed charge data per cycle in PI
002 {P-2 and P-10}	Section B, Condition 5.i.(4) 40 CFR 63.1517(b)(10) **Molten Metal Level Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Document maintaining level of molten metal above top of passage between sidewell and hearth.	See method discussion 5.i.(4)	Novelis maintains operating log of melter level in PI system database for each melter cycle.
002 {P-2 and P-10}	Section B, Condition 5.i.(5) 40 CFR 63.1517(b)(13) **Labeling Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record monthly inspections of unit labels.	See method discussion 5.i.(5)	Novelis records monthly label inspections as part of monthly site environmental inspections.
002 {P-2 and P-10}	Section B, Condition 5.i.(6) 40 CFR 63.1517(b)(14) **Capture/Collection System Inspection Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record annual inspections of capture/collection systems.	See method discussion 5.i.(6)	Novelis maintains records annual contractor ACGIH assessment/inspections of capture/control systems.
002 {P-2 and P-10}	Section B, Condition 5.i.(7) 40 CFR 63.1517(b)(15) **SMACT Alternative Monitoring Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Record alternative monitoring	See method discussion 5.i.(7)	Not applicable.
002 {P-2 and P-10}	Section B, Condition 5.i.(8) 40 CFR 63.1517(b)(16) **SMACT Plan Recordkeeping**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Maintain copy of all required plans, document conformance to plans.	See method discussion 5.i.(8)	Novelis maintains copies of all required plans at the plant.
002 {P-2 and P-10}	Section B, Condition 6.a. NA **General Reporting**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Monitor monthly and 12-month rolling total hours of operation, monthly and 12-month rolling total scrap throughput, monthly and 12-month rolling total aluminum produced, monthly natural gas usage, hourly pollutant emission rates, production-based pollutant emission rates, and daily baghouse pressure drop.	See method discussion 6.a	Novelis electronically collects and records the data in the PI database and reports semi-annually.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
002 (P-2 and P-10)	Section B. Condition 6.b. NA **Deviation Reporting**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Submit reports within 30 days of each deviation associated with using gaseous or liquid flux	See method discussion 6.b	NA- Novelis did not experience deviations related to liquid and gaseous flux usage in the furnaces during the reporting period because these types of fluxes are not used.
002 (P-2 and P-10)	Section B. Condition 6.c. NA **Section D**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	See Section D.6.	See method discussion 6.c.	Refer to Section D.6.
002 (P-2 and P-10)	Section B. Condition 7.a. NA **Control Operating Parameters**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Operate all dropout boxes and baghouses properly and in accordance with parameters set during testing.	See method discussion 7.a.	Novelis operates the baghouse systems according to most current OM&M Plan and records maintenance in the MAXIMO system.
002 (P-2 and P-10)	Section B. Condition 7.b. NA **Controls Required for Process Operation**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	Operate all dropout boxes and baghouses at all times units are in operation.	See method discussion 7.b.	Novelis operates the baghouse systems at all times units are in operation.
002 (P-2 and P-10)	Section B. Condition 8. NA **Section D**	P2 - Melter, sidewell, and hood 1A&1B; hold furnace doors 1C&2C P10-Melter, sidewell, and hood 2A&2B	See Section D.8.	See method discussion 8.	Refer to Section D.8.
003 (03-P3)	Section B. Condition 2.a 401 KAR 59:010 **Visible Emissions Limit**	Dross Cooling Building	Visible emissions shall not exceed 20%.	See method discussion 2.a	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.
003 (03-P3)	Section B. Condition 2.b. 401 KAR 51:017 **P-3 PM10 Hourly Emissions Limit**	Dross Cooling Building	PM10 shall not exceed 0.24 lbs/hr.	Max. of 0.16 lb/hr for Jan.-Dec. 2019	Compliance demonstrated using performance test PM10 emission factor from February 2017 and monthly average hourly emission rate calculation in Title V permit.
003 (03-P3)	Section B. Condition 2.b. 401 KAR 51:017 **P-3 PM10 Annual Emissions Limit**	Dross Cooling Building	PM10 shall not exceed 1.05 ton/yr	0.55 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling emissions tracking in accordance with Section D.2.b.
003 (03-P3)	Section B. Condition 2.c. 401 KAR 63:020 **Section D**	Dross Cooling Building	See Section D.2.	See method discussion 2.c	Refer to Section D.2.
003 (03-P3)	Section B. Condition 3. NA **Section D**	Dross Cooling Building	See Section D.3.	See method discussion 3.	Refer to Section D.3.
003 (03-P3)	Section B. Condition 4.a. NA **Hours of Operation Tracking**	Dross Cooling Building	Monitor monthly and 12-month rolling total hours of operation.	See method discussion 4.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
003 (03-P3)	Section B. Condition 4.b. NA **Total Dross Processed Tracking**	Dross Cooling Building	Monitor monthly and 12-month rolling total dross processed.	See method discussion 4.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
003 (03-P3)	Section B, Condition 4.c. NA **Hourly Emission Rates Tracking**	Dross Cooling Building	Monitor hourly pollutant emission rates (based on monthly average).	See method discussion 4.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly average hourly emissions data submitted semi-annually.
003 (03-P3)	Section B, Condition 4.d. NA **Pressure Drop Tracking**	Dross Cooling Building	Monitor daily pressure drop for baghouse. Monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations.	See method discussion 4.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: continuous pressure drop data evaluated and missing or out-of-range readings presented in semiannual reports. Equipment installed, calibrated, operated, and maintained in accordance with manufacturer's recommendations.
003 (03-P3)	Section B, Condition 4.e. NA **Visible Emissions Records**	Dross Cooling Building	Maintain visible emission log.	See method discussion 4.e	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.
003 (03-P3)	Section B, Condition 4.f. NA **CAM Plan**	Dross Cooling Building	Refer to Compliance Assurance Monitoring (CAM) Plan.	See method discussion 4.f	Refer to Compliance Assurance Monitoring (CAM) Plan
003 (03-P3)	Section B, Condition 5.a. NA **Hours of Operation Records**	Dross Cooling Building	Record monthly and 12-month rolling total hours of operation.	See method discussion 5.a	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
003 (03-P3)	Section B, Condition 5.b. NA **Total Dross Processed Records**	Dross Cooling Building	Record monthly and 12-month rolling total dross generated.	See method discussion 5.b	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
003 (03-P3)	Section B, Condition 5.c. NA **Hourly Emission Rates Records**	Dross Cooling Building	Record hourly pollutant emission rates.	See method discussion 5.c	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: monthly average hourly emissions data submitted semi-annually.
003 (03-P3)	Section B, Condition 5.d. NA **Pressure Drop Records**	Dross Cooling Building	Record daily pressure drop for baghouse. Recording equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations.	See method discussion 5.d	Novelis electronically collects, records, and reports the parameters in the production information (PI) system: continuous pressure drop data evaluated and missing or out-of-range readings presented in semiannual reports. Equipment installed, calibrated, operated, and maintained in accordance with manufacturer's recommendations.
003 (03-P3)	Section B, Condition 5.e. NA **Malfunctions Records**	Dross Cooling Building	Malfunctions	See method discussion 5.e	Novelis does not operate process equipment without associated control equipment in operation. Novelis does record/report malfunctions as required and conducts/records maintenance activities in the Environmental Incident Reporting database.
003 (03-P3)	Section B, Condition 5.f. NA **Visible Emissions Records**	Dross Cooling Building	Maintain visible emission log.	See method discussion 5.f	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.
003 (03-P3)	Section B, Condition 5.f. NA **Maintenance Records**	Dross Cooling Building	Record all maintenance.	See method discussion 5.g	Novelis operates the baghouse according to most current OM&M Plan and records maintenance in the MAXIMO system.
003 (03-P3)	Section B, Condition 6.a. NA **Semi-annual Reporting**	Dross Cooling Building	Submit semi-annual report.	See method discussion 6.a	Novelis reports a.(1) thru a.(4) in the summary semi-annual report.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
003 (03-P3)	Section B, Condition 6.b. 401 KAR 53:020 **Section D**	Dross Cooling Building	See Section D 6.a and 6.b.	See method discussion 6.b	Refer to Section D 6.a. and 6.b.
003 (03-P3)	Section B, Condition 7.a. NA **PM Control Requirement**	Dross Cooling Building	Capture and control emissions.	See method discussion 7.a.	Novelis operates the baghouse according to most current OM&M Plan and records maintenance in the MAXIMO system.
003 (03-P3)	Section B, Condition 7.b. NA **Control Operation**	Dross Cooling Building	Operate the baghouse in accordance with manufacturer's specifications.	See method discussion 7.b.	Novelis operates the baghouse according to most current OM&M Plan and records maintenance in the MAXIMO system.
003 (03-P3)	Section B, Condition 7.c. NA **Control Operation during Dross Handling**	Dross Cooling Building	Operate baghouse at all times dross is being loaded.	See method discussion 7.c.	Novelis operates the baghouse according to most current OM&M Plan and records maintenance in the MAXIMO system.
005 (P-9a & P-9b)	Section B, Condition 1.a. 401 KAR 52:020, Section F **Furnace Classification Changes**	Decoating and Holding Furnaces	Submit application prior to changing furnace classifications.	See method discussion 1.a	Not Applicable during this reporting period.
005 (P-9a & P-9b)	Section B, Condition 1.b. 40 CFR 63.1506(a) **Operating Requirements**	Decoating and Holding Furnaces	Operate sources and control equipment according to 40 CFR 63.1506.	See method discussion 1.b	Novelis operates sources and control equipment according to the requirements in 40 CFR 63.1506.
005 (P-9a & P-9b)	Section B, Condition 1.c. 40 CFR 63.1506(b) **Labeling**	Decoating and Holding Furnaces	Provide and maintain labels according to 40 CFR 63.1506(b).	See method discussion 1.c	Novelis complies with 40 CFR 63.1506(b) with labels maintained at the process control panels; operating limits ranges in PI (with alarms) based on current OM&M plan.
005 (P-9a & P-9b)	Section B, Condition 1.d. 40 CFR 63.1506(c) **Capture/Collection System Installation and Operation**	Decoating and Holding Furnaces	Capture and collection systems must conform to 40 CFR 63.1506(c).	See method discussion 1.d	Capture collection system designed and installed to conform to 40 CFR 1506(c)(1). Installation design: P-9A in 1998 and P-9B in 2003 (confirmed in 2003 initial compliance notification). Annual system inspection by contractor recorded in ACGIH Flow Assessment Report; system operated per current OM&M plan.
005 (P-9a & P-9b)	Section B, Condition 1.e. 40 CFR 63.1506(d) **Feed/Charge Measurements**	Decoating and Holding Furnaces	Measure and record weight of feed/charge and operate system in accordance with OM&M.	See method discussion 1.e	Novelis installed and measures scrap throughput using calibrated weighing devices; Weigh scales are calibrated per the OM&M plan and tracked in ETQ database used to verify their calibration; devices operated per the current OM&M, and weight record data stored in the PI system. Performance test production data complies with 40 CFR 1506(d)(3).
005 (P-9a & P-9b)	Section B, Condition 1.f.(1) 40 CFR 63.1506(g) **Afterburner Operating Temperature**	Decoating and Holding Furnaces	Maintain 3-hour block average operating temperature of each afterburner and operate in accordance with OM&M plan.	See method discussion 1.f(1)	Novelis maintains afterburner temperature at or above value from the most recent performance test per alarms in PI, and operates afterburner per the current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.f.(2)(i) 40 CFR 63.1506(g) **Bag Leak Detection System Alarm Corrective Actions**	Decoating and Holding Furnaces	Initiate corrective action within 1-hour of a bag leak detection system alarm and complete any necessary corrective action procedures in accordance with the OM&M plan.	See method discussion 1.f(2)(i)	Novelis follows OM&M to comply with operating and corrective action procedures for these source(s)/control unit(s).
005 (P-9a & P-9b)	Section B, Condition 1.f.(2)(ii) 40 CFR 63.1506(g) **Bag Leak Detection System Alarms**	Decoating and Holding Furnaces	Operate fabric filter system so that bag leak detection alarm does not sound more than 5% of operating time.	See method discussion 1.f(2)(ii)	Novelis follows OM&M to comply with operating and corrective action procedures for these source(s)/control unit(s).

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005 (P-9a & P-9b)	Section B, Condition 1.f.(2)(iii) 40 CFR 63.1506(g) **Baghouse Inlet Temperature Limit**	Decoating and Holding Furnaces	Maintain 3-hour block average inlet temperature for each fabric filter and operate in accordance with OM&M plan.	See method discussion 1.f.(iii)	Novelis maintains AGRS baghouse inlet at or below value per the most recent performance test per alarms in PI; and operates each fabric filter per the current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.f.(2)(iv) 40 CFR 63.1506(g) **Lime Injection Rate Limit**	Decoating and Holding Furnaces	Maintain free-flowing lime in the hopper to feed device at all times and maintain lime feeder setting at or above level established in performance test.	See method discussion 1.f.(iv)	Novelis monitors lime flow at rate from most recent performance test in PI; as identified in current OM&M. Intermittent compliance for one (1) lime slurry flow disruption on the Line 1 AGRS system (Stack P-9a); refer to Section D0.3.10c).
005 (P-9a & P-9b)	Section B, Condition 1.g.(1)(i) 40 CFR 63.1506(k) **Bag Leak Detection System Alarm Corrective Actions**	Decoating and Holding Furnaces	Initiate corrective action within 1-hour of a bag leak detection system alarm and complete any necessary corrective action procedures in accordance with the OM&M plan.	See method discussion 1.g.(1)(i)	Novelis follows OM&M to comply with operating and corrective action procedures for these source(s)/control unit(s).
005 (P-9a & P-9b)	Section B, Condition 1.g.(1)(ii) 40 CFR 63.1506(k) **Bag Leak Detection System Alarms**	Decoating and Holding Furnaces	Operate fabric filter system so that bag leak detection alarm does not sound more than 5% of operating time.	See method discussion 1.g(1)(ii)	Novelis follows OM&M to comply with operating and corrective action procedures for these source(s) control unit(s).
005 (P-9a & P-9b)	Section B, Condition 1.g.(2) 40 CFR 63.1506(k) **Lime Injection Rate Limit**	Decoating and Holding Furnaces	Maintain free-flowing lime in the hopper to feed device at all times and maintain lime feeder setting at or above level established in performance test.	See method discussion 1.g(2)	Novelis monitors lime flow at rate from most recent performance test in PI; as identified in current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.g.(3) 40 CFR 63.1506(k) **Flux Injection Rate Limit**	Decoating and Holding Furnaces	Maintain total reactive chlorine flux injection rate for each operating cycle at or below average rate established during performance test.	See method discussion 1.g.(3)	Novelis monitors chlorine flux rate from most recent performance test in PI; as identified in current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.h 40 CFR 63.1506(m)(1) **Bag Leak Detection System Corrective Actions**	Decoating and Holding Furnaces	Initiate corrective action within 1 hour of bag leak alarm, and complete corrective action procedures in accordance with OM&M.	See method discussion 1.h	Novelis follows OM&M to comply with operating and corrective action procedures for these source(s) control unit(s).
005 (P-9a & P-9b)	Section B, Condition 1.i. 40 CFR 63.1506(m)(3) **Baghouse Inlet Temperature Limit**	Decoating and Holding Furnaces	Maintain 3-hour block average inlet temperature at or below average temperature established in performance test plus 14 deg C.	See method discussion 1.i	Novelis maintains baghouse inlet temperature at or below value from most recent performance test per alarms in PI; and operates baghouse per the current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.j. 40 CFR 63.1506(m)(4) **Lime Injection Rate Limit**	Decoating and Holding Furnaces	Maintain free-flowing lime in the hopper to feed device at all times and maintain lime feeder setting at or above level established in performance test.	See method discussion 1.j	Novelis monitors lime flow at rate from most recent performance test in PI; as identified in current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.k. 40 CFR 63.1506(m)(5) **Flux Injection Rate Limit**	Decoating and Holding Furnaces	Maintain total reactive chlorine flux injection rate at or below rate established in performance test.	See method discussion 1.k	Novelis monitors chlorine flux injection rate flow at rate from most recent performance test in PI; as identified in current OM&M.
005 (P-9a & P-9b)	Section B, Condition 1.l. 40 CFR 63.1506(m)(7) **Capture/Collection System and Control Device Temporary Stop Allowance**	Decoating and Holding Furnaces	The operation of capture/collection systems and control devices associated with Group 1 furnaces that will be idled for at least 24 hours may be temporarily stopped.	See method discussion 1.l	Novelis operates the group 1 furnaces in accordance with the OM&M plan.
005 (P-9a & P-9b)	Section B, Condition 1.m. 40 CFR 63.1506(p) **Corrective Action for OM&M Plan Deviations**	Decoating and Holding Furnaces	Initiate corrective action when a process parameter deviates from value or range established in performance test.	See method discussion 1.m	Novelis monitors the process parameters in PI. PI alarms upon parameter deviation. No deviations during this reporting period for parameters established in most recent OM&M for these units based on most recent performance testing.
005 (P-9a & P-9b)	Section B, Condition 2.a. 401 KAR 59:010 **Visible Emissions Limit**	Decoating and Holding Furnaces	Visible emissions from each stack shall not equal or exceed 20%.	See method discussion 2.a	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
005 (P-9a & P-9b)	Section B, Condition 2.b.(1) 401 KAR 51:017 **P-9a CO Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of CO from P-9a shall not exceed 13.3 lbs/hr	See test results in method discussion 2.b.(1)	Compliance demonstrated from most recent performance test Stack Test Results Test Date P-9a CO: 5.2 lb/hr (Aug 2018)
005 (P-9a & P-9b)	Section B, Condition 2.b.(1) 401 KAR 51:017 **P-9a CO Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of CO from P-9a shall not exceed 58.3 ton/yr	15.68 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling CO emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(2) 401 KAR 51:017 **P-9a NOx Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of NOX from P-9a shall not exceed 13.0 lbs/hr	See test results in method discussion 2.b.(2)	Compliance demonstrated from most recent performance test Stack Test Results Test Date P-9a NOX: 10.3 lb/hr (Aug 2018)
005 (P-9a & P-9b)	Section B, Condition 2.b.(2) 401 KAR 51:017 **P-9a NOx Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of NOX from P-9a shall not exceed 56.9 ton/yr	31.07 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling NOX emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(3) 401 KAR 51:017 **P-9a VOC Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of VOC from P-9a shall not exceed 3.55 lbs/hr	See test results in method discussion 2.b.(3)	Compliance demonstrated from most recent performance test Stack Test Results Test Date P-9a VOC: 0.32 lb/hr (Aug 2018)
005 (P-9a & P-9b)	Section B, Condition 2.b.(3) 401 KAR 51:017 **P-9a VOC Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of VOC from P-9a shall not exceed 15.5 ton/yr	0.98 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling VOC emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(4) 401 KAR 51:017 **P-9a PM10 Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of PM10 from P-9a shall not exceed 1.6 lbs/hr	See test results in method discussion 2.b.(4)	Compliance demonstrated from most recent performance test based on filterable PM only. Condensable PM not included in PM10 emission limits established under PSD program prior to January 1, 2011 in accordance with regulated NSR pollutant definition in 401 KAR 51:001 Section 1(207)(a)1.e.(iii) Stack Test Results Test Date: P-9a Filt. PM10: 0.31 lb/hr (Aug 2018)
005 (P-9a & P-9b)	Section B, Condition 2.b.(4) 401 KAR 51:017 **P-9a PM10 Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of PM10 from P-9a shall not exceed 7.9 ton/yr	0.50 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling filt. PM10 emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(1) 401 KAR 51:017 **P-9b CO Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of CO from P-9b shall not exceed 13.3 lbs/hr	See test results in method discussion 2.b.(1)	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-9b CO: 5.1 lb/hr (May 2019)
005 (P-9a & P-9b)	Section B, Condition 2.b.(1) 401 KAR 51:017 **P-9b CO Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of CO from P-9b shall not exceed 58.3 ton/yr	36.32 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling CO emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(2) 401 KAR 51:017 **P-9b NOx Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of NOX from P-9b shall not exceed 13.0 lbs/hr	See test results in method discussion 2.b.(2)	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-9b NOX: 10.8 lb/hr (May 2019)
005 (P-9a & P-9b)	Section B, Condition 2.b.(2) 401 KAR 51:017 **P-9b NOx Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of NOX from P-9b shall not exceed 56.9 ton/yr	35.57 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling NOX emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(3) 401 KAR 51:017 **P-9b VOC Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of VOC from P-9b shall not exceed 3.55 lbs/hr	See test results in method discussion 2.b.(3)	Compliance demonstrated from most recent performance test Stack Test Results Test Date: P-9b VOC: 2.4 lb/hr (Sept 2018)

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005 (P-9a & P-9b)	Section B, Condition 2.b.(3) 401 KAR 51:017 **P-9b VOC Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of VOC from P-9b shall not exceed 15.5 ton/yr	7.58 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling VOC emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.b.(4) 401 KAR 51:017 **P-9b PM10 Hourly Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of PM10 from P-9b shall not exceed 1.8 lbs/hr	See test results in method discussion 2.b.(4)	Compliance demonstrated from most recent performance test based on filterable PM only. Condensable PM not included in PM10 emission limits established under PSD program prior to January 1, 2011 in accordance with regulated NSR pollutant definition in 401 KAR 51:001 Section 1(207)(a)1.e.(i). Stack Test Results Test Date: P-9b Filt. PM10: 0.31 lb/hr (Sept 2018)
005 (P-9a & P-9b)	Section B, Condition 2.b.(4) 401 KAR 51:017 **P-9b PM10 Annual Emissions Limit**	Decoating and Holding Furnaces	Mass emissions of PM10 from P-9b shall not exceed 7.9 ton/yr	0.97 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling PM10 emissions tracking in accordance with Section D.2.b.
005 (P-9a & P-9b)	Section B, Condition 2.c. 40 CFR 63.1505(e) **P-9a Decoater SMACT Emissions Limits**	Decoating and Holding Furnaces	Decoating Furnace #1 (P9-a) shall not exceed the following limits: THC: 0.20 lb/ton charge PM: 0.30 lb/ton charge D/F: 7.0 x 10-5 gr TEQ/ton charge HCl: 1.50 lb/ton charge	See test results in method discussion 2.c	Based on SMACT testing in August 2018 compliance was demonstrated for decoaters as follows: THC Limit 0.20 lbs/ton Test Date P9a 0.020 lbs/ton (Aug 2018) PM Limit 0.30 lbs/ton P9a 0.0058 lbs/ton (Aug 2018) D/F Limit 7.0 x 10-5 gr TEQ/ton P9a 1.2x10-5 gr/ton (Aug 2018) HCl Limit 1.5 lbs/ton P9a 0.014 lbs/ton (Aug 2018)
005 (P-9a & P-9b)	Section B, Condition 2.c. 40 CFR 63.1505(e) **P-9b Decoater SMACT Emissions Limits**	Decoating and Holding Furnaces	Decoating Furnace #2 (P9-b) shall not exceed the following limits: THC: 0.20 lb/ton charge PM: 0.30 lb/ton charge D/F: 7.0 x 10-5 gr TEQ/ton charge HCl: 1.50 lb/ton charge	See test results in method discussion 2.c	Based on SMACT testing in September 2018 and May 2019 compliance was demonstrated for decoaters as follows: THC Limit 0.20 lbs/ton Test Date P9b 0.12 lbs/ton (Sept 2018) PM Limit 0.30 lbs/ton P9b 0.013 lbs/ton (Sept 2018) D/F Limit 7.0 x 10-5 gr TEQ/ton P9b 4.4 x 10-5 gr/ton (May 2019) HCl Limit 1.5 lbs/ton P9b 0.16 lbs/ton (Sept 2018)
005 (P-9a & P-9b)	Section B, Condition 2.d. 40 CFR 63.1505(i) and (k) **SMACT Emissions Limits**	Decoating and Holding Furnaces	Individual emissions shall not exceed: PM: 0.40 lb/ton charge HCl: 0.40 lb/ton charge D/F: 2.1 x 10-4 gr TEQ/ton charge	See test results in method discussion 2.d	Based on SMACT testing in August and September 2018 compliance was demonstrated for holders (Group 1 furnaces) as follows: PM Limit 0.40 lbs/ton Test Date: P9a (line 1) 0.0061 lbs/ton (Aug 2018) P9b (line 2) 0.00051 lbs/ton (Sept 2018) D/F Limit 2.1 x 10-4 gr TEQ/ton NA - clean charge only (NA) HCl Limit 0.40 lbs/ton P9a (line 1) 0.023 lbs/ton (Aug 2018) P9b (line 2) 0.0076 lbs/ton (Sept 2018)

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005 (P-9a & P-9b)	Section B, Condition 2.e. 40 CFR 63.1505(j) **In-Line Fluxer SMACT Emissions Limits**	Decoating and Holding Furnaces	Emissions from compact degasser shall not exceed the following PM: 0.01 lb/ton charge HCl: 0.04 lb ton charge	See test results in method discussion 2.e	Based on SMACT testing in August 2018 compliance was demonstrated for in-line fluxer as follows: PM Limit 0.01 lbs/ton Test Date: P9a (line 1) 6.0x10-4 lbs/ton (Aug 2018) HCl Limit 0.04 lbs/ton P9a (line 1) 2.5x10-6 lbs/ton (Aug 2018)
005 (P-9a & P-9b)	Section B, Condition 3.a 40 CFR 63.1511(a) **Site-specific Test Plan**	Decoating and Holding Furnaces	Prepare site-specific test plan and conduct performance testing under representative conditions.	See method discussion 3.a	Novelis submitted site-specific test plans for the most recent performance tests of the P-9a and P-9b stacks. Operating conditions for the decoating and holding furnaces during the P-9a and P-9b SMACT testing were representative of source's tested.
005 (P-9a & P-9b)	Section B, Condition 3.b 40 CFR 63.1511(e) **Repeat Tests**	Decoating and Holding Furnaces	Conduct performance tests every 5 years.	See method discussion 3.b	Novelis conducts SMACT testing every 5 years, complies with the requirements of 40 CFR 63.1511, and submits the performance test reports as required.
005 (P-9a & P-9b)	Section B, Condition 3.c.(1) 40 CFR 63.1512(d) **Group 1 Furnace Testing**	Decoating and Holding Furnaces	Conduct performance tests to measure PM, D/F, and HCl emissions.	See method discussion 3.c(1)	Novelis prepared, submitted, obtained approval for, and conducted the most recent performance test within the 5 year cycle to comply with 40 CFR 1511(d).
005 (P-9a & P-9b)	Section B, Condition 3.c.(2) 40 CFR 63.1512(d) **Group 1 Furnace Testing**	Decoating and Holding Furnaces	3.c.(2) & (3)	See method discussion 3.c(2)	Not applicable.
005 (P-9a & P-9b)	Section B, Condition 3.c.(3) 40 CFR 63.1512(d) **Group 1 Furnace Testing**	Decoating and Holding Furnaces	3.c.(2) & (3)	See method discussion 3.c(3)	Not applicable.
005 (P-9a & P-9b)	Section B, Condition 3.d.(1) 40 CFR 63.1512(h) **In-Line Fluxer Testing**	Decoating and Holding Furnaces	Conduct a performance test to measure HCl and PM emissions or otherwise demonstrate compliance.	See method discussion 3.d(1)	Novelis prepared, submitted, obtained approval for, and conducted the most recent performance test on the in-line fluxer by presenting in the test protocol HCl data in support of 40 CFR 1512(h)(2).
005 (P-9a & P-9b)	Section B, Condition 3.d.(2) 40 CFR 63.1512(h) **Flux Injection Rate Tracking Alternative**	Decoating and Holding Furnaces	Alternative method for monitoring and recording total reactive flux addition rate.	See method discussion 3.d(2)	NA- Novelis does not rely on this compliance option.
005 (P-9a & P-9b)	Section B, Condition 3.e. 40 CFR 63.1512(n) **Baghouse Inlet Temperature Testing**	Decoating and Holding Furnaces	Use procedures to establish operating parameter value or range for inlet gas temperature.	See method discussion 3.e	Novelis monitored the inlet temperature per the requirements of 40 CFR 1512(n), recorded the data in PI during the most recent performance test, and included it in the current OM&M.
005 (P-9a & P-9b)	Section B, Condition 3.f. 40 CFR 63.1512(o) **Flux Injection Rate Testing**	Decoating and Holding Furnaces	Use procedures to establish operating parameter value or range for total reactive chlorine flux injection rate.	See method discussion 3.f	Novelis monitored the reactive flux injection rate per the requirements of 40 CFR 1512(o); recorded the data in PI during the most recent performance test, and included it in the current OM&M.
005 (P-9a & P-9b)	Section B, Condition 3.g. 40 CFR 63.1512(p) **Lime Injection Rate Testing**	Decoating and Holding Furnaces	Use procedures during HCl and D/F test to establish operating parameter value for feeder setting.	See method discussion 3.g	Novelis monitored the lime injection rate per the requirements of 40 CFR 1512(p), recorded the data in PI during the most recent performance test, and included it in the current OM&M.
005 (P-9a & P-9b)	Section B, Condition 4.a. NA **Hours of Operation Tracking**	Decoating and Holding Furnaces	Monitor monthly and 12-month rolling total hours of operation.	See method discussion 4.a	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 4.b. NA **Aluminum Throughput Tracking**	Decoating and Holding Furnaces	Monitor monthly and 12-month rolling total aluminum throughput.	See method discussion 4.b	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.

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005 (P-9a & P-9b)	Section B, Condition 4.c. NA **Aluminum Produced Tracking**	Decoating and Holding Furnaces	Monitor monthly and 12-month rolling total aluminum produced.	See method discussion 4.c	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 4.d NA **Natural Gas Usage Tracking**	Decoating and Holding Furnaces	Monitor monthly natural gas usage.	See method discussion 4.d	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system: monthly data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 4.e NA **Hourly Emission Rates Tracking**	Decoating and Holding Furnaces	Monitor hourly pollutant emission rates	See method discussion 4.e	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system: monthly average hourly emissions data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 4.f. NA **Production-based Emission Rates Tracking**	Decoating and Holding Furnaces	Monitor production-based pollutant emission rates	See method discussion 4.f	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 4.g 40 CFR 63.1510(a). **SMACT Controls/Processes Tracking**	Decoating and Holding Furnaces	Monitor all control equipment and processes according to 40 CFR 63.1510(a).	See method discussion 4.g	Novelis complies with 40 CFR 1510(a) by monitoring and operating control equipment and processes according to the current OM&M plan. Process parameters and records are maintained in PI; control equipment calibrations are maintained in the ETQ database.
005 (P-9a & P-9b)	Section B, Condition 4.h. 40 CFR 63.1510(b). **OM&M Plan**	Decoating and Holding Furnaces	Prepare and implement a written OM&M plan	See method discussion 4.h	The current OM&M plan dated identifies the compliance methods and procedures used by Novelis to comply with 40 CFR 1510(b) and permit sections (h)(1) thru (h)(3).
005 (P-9a & P-9b)	Section B, Condition 4.i. 40 CFR 63.1506(b) **Label Inspections**	Decoating and Holding Furnaces	Inspect labels for group 1 furnaces each month.	See method discussion 4.i	Novelis inspects all process unit labels monthly as part of site environmental inspection, records the status, and implements corrective action if required.
005 (P-9a & P-9b)	Section B, Condition 4.j NA **Capture/Collection System Operation and Inspection**	Decoating and Holding Furnaces	Install, operate, and maintain a capture collection system, and inspect system once per calendar year.	See method discussion 4.j	Capture collection system designed and installed to conform to 40 CFR 1506(c)(1). Installation design: P-9A in 1998 and P-9B in 2003 (confirmed in 2003 initial compliance notification). Annual system inspection by contractor recorded in ACGIH Flow Assessment Report; system operated per current OM&M plan.
005 (P-9a & P-9b)	Section B, Condition 4.k. NA **Capture/Collection System Operation and Inspection**	Decoating and Holding Furnaces	Install, calibrate, operate, and maintain device to measure and record total weight of feed charge.	See method discussion 4.k	Novelis installed and measures scrap throughput using calibrated weighing devices accurate to +/- 1%. Novelis measures cast product by calculation methodology presented to DAQ. Maintenance electrician following ETQ database periodically verifies scale calibration; devices operated per the current OM&M, and weight record data stored in the PI system.
005 (P-9a & P-9b)	Section B, Condition 4.l. 40 CFR 1510(f)(1) **Bag Leak Detection System Installation and Operation**	Decoating and Holding Furnaces	Install, calibrate, maintain, and continuously operate bag leak detection system.	See method discussion 4.l	Novelis demonstrates compliance with 40 CFR 1510(f)(1) through records in PI and from annual contractor data in ETQ for the broken bag detector.
005 (P-9a & P-9b)	Section B, Condition 4.m. 40 CFR 1510(g) **Afterburner Temperature Measurements**	Decoating and Holding Furnaces	Install, calibrate, maintain, and operate a device to continuously monitor and record operating temperature of afterburner.	See method discussion 4.m	Novelis operates the afterburner temperature monitor according to the current OM&M plan; meets performance standards with data records in PI; and conducts inspections annually with calibrations are maintained in the ETQ database.
005 (P-9a & P-9b)	Section B, Condition 4.n. 40 CFR 1510(h) **Baghouse Inlet Temperature Measurements**	Decoating and Holding Furnaces	Install, calibrate, maintain, and operate a device to continuously monitor and record temperature of fabric filter inlet gases.	See method discussion 4.n	Novelis operates the baghouse temperature monitor according to the current OM&M plan; meets performance standards with data records in PI; and conducts inspections annually with calibrations maintained in the ETQ database.

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005 (P-9a & P-9b)	Section B. Condition 4.o. 40 CFR 1510(t)(1) **Lime Injection Rate Tracking**	Decoating and Holding Furnaces	Conduct inspections verifying lime is present/flowing incl. cause of blockage if found and corrective action incl. more frequent inspections for subsequent 3 days following blockage. Also conduct daily/monthly inspections of lime feed setting incl. explanation of deviation from feed setting used in performance test and record repairs/replacements with new feeder calibration if relevant.	See method discussion 4.o	Novelis complies with 40 CFR 1510(t) by monitoring and recording in PI lime injection into each baghouse; alarming if lime injection rate is below rate from most recent performance test inspection; and operating these systems according to the current OM&M plan.
005 (P-9a & P-9b)	Section B. Condition 4.p. 40 CFR 1510(t)(2) **Lime Injection Rate Recordkeeping**	Decoating and Holding Furnaces	Record lime feeder setting once per day.	See method discussion 4.p	Novelis complies with 40 CFR 1510(t) by monitoring and recording in PI lime injection into each baghouse; alarming if lime injection rate is below rate from most recent performance test inspection; and operating these systems according to the current OM&M plan.
005 (P-9a & P-9b)	Section B. Condition 4.q. 40 CFR 1510(t)(4) **Lime Injection Rate Limit Tracking**	Decoating and Holding Furnaces	Verify lime injection rate is no less that 90% of rate used in compliance test.	See method discussion 4.q	Novelis complies with 40 CFR 1510(t) by monitoring and recording in PI lime injection into each baghouse; alarming if lime injection rate is below rate from most recent performance test inspection; and operating these systems according to the current OM&M plan.
005 (P-9a & P-9b)	Section B. Condition 4.r 40 CFR 1510(t)(1) **Flux Injection Measurement Device Installation**	Decoating and holding Furnaces	Install device to measure weight of reactive flux injected.	See method discussion 4.r	For P9b (Line 2 ACD) Novelis monitors and records chlorine injection and solid reactive flux in holders in PI system during each cast cycle; PI alarms if rate is above rate from most recent performance test inspection and calibration records maintained in ETQ and operates this system according to the current OM&M plan.
005 (P-9a & P-9b)	Section B. Condition 4.s 40 CFR 1510(t)(3) **Flux Injection Rate Calculations**	Decoating and Holding Furnaces	Calculate reactive flux injection rate.	See method discussion 4.s	For P9b (Line 2 ACD) Novelis monitors and records chlorine injection and solid reactive flux in holders in PI system during each cast cycle; PI alarms if rate is above rate from most recent performance test inspection and calibration records maintained in ETQ and operates this system according to the current OM&M plan.
005 (P-9a & P-9b)	Section B. Condition 4.t 40 CFR 1510(t)(3) **Flux Injection Rate Limit Tracking**	Decoating and Holding Furnaces	Record 15-min block reactive flux injection rate, record time, weight, and type of flux used, and calculate total reactive flux injection rate.	See method discussion 4.t	For P9b (Line 2 ACD) Novelis monitors and records chlorine injection and solid reactive flux in holders in PI system during each cast cycle; PI alarms if rate is above rate from most recent performance test inspection and calibration records maintained in ETQ and operates this system according to the current OM&M plan.
005 (P-9a & P-9b)	Section B. Condition 4.u 40 CFR 1510(t)(4) **Flux Injection Rate Calculations**	Decoating and Holding Furnaces	Calculate total reactive flux injection rate.	See method discussion 4.u	For P9b (Line2 ACD) Novelis monitors and records chlorine injection and solid reactive flux in holders in PI system during each cast cycle; PI alarms if rate is above rate from most recent performance test inspection and calibration records maintained in ETQ and operates this system according to the current OM&M plan dated November 2013.
005 (P-9a & P-9b)	Section B, Condition 4.v. NA **Flux Injection Rate Tracking Alternative**	Decoating and Holding Furnaces	Alternative method for monitoring and recording total reactive flux addition rate.	See method discussion 4.v	NA- Novelis does not rely on this compliance option.
005 (P-9a & P-9b)	Section B. Condition 4.w. 40 CFR 1510(u) **SAPU Alternative**	Decoating and Holding Furnaces	Alternative to 3-day rolling 24-hour average SAPU emission rate monitoring.	See method discussion 4.w	Novelis complies with Section D 4 a. for these SAPUs based on SAPU compliance demonstrated in most recent performance test pursuant to 40 CFR 1510(u).
005 (P-9a & P-9b)	Section B. Condition 4.x. NA **Section D**	Decoating and Holding Furnaces	Section D 4. Specific Monitoring Requirements a.	See method discussion 4.x	Novelis complies with Section D 4 a. for these SAPUs based on SAPU compliance demonstrated in most recent performance test pursuant to 40 CFR 1510(u).
005 (P-9a & P-9b)	Section B. Condition 4.y. NA **CAM**	Decoating and Holding Furnaces	Refer to Compliance Assurance Monitoring (CAM) Plan.	See method discussion 4.y	Refer to Compliance Assurance Monitoring (CAM) Plan
005 (P-9a & P-9b)	Section B, Condition 5.a. NA **Hours of Operation Records**	Decoating and Holding Furnaces	Record monthly and 12-month rolling total hours of operation.	See method discussion 5.a	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B. Condition 5.b. NA **Aluminum Throughput Records**	Decoating and Holding Furnaces	Record monthly and 12-month rolling total aluminum throughput.	See method discussion 5.b	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.

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005 (P-9a & P-9b)	Section B, Condition 5.c. NA **Aluminum Produced Records**	Decoating and Holding Furnaces	Record monthly and 12-month rolling total aluminum produced.	See method discussion 5.c	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.d. NA **Natural Gas Usage Records**	Decoating and Holding Furnaces	Record monthly natural gas usage.	See method discussion 5.d	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.e. NA **Hourly Emission Rates Records**	Decoating and Holding Furnaces	Record hourly pollutant emission rates.	See method discussion 5.e	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly average hourly emissions data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.f. NA **Production-based Emission Rates Records**	Decoating and Holding Furnaces	Record production-based pollutant emission rates.	See method discussion 5.f	Novelis electronically collects, calculates rates, records, and reports the parameters in the production information (PI) system; monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.g NA **NOxOUT Records**	Decoating and Holding Furnaces	5.g. For each NOxOUT system, keep continuous records of reagent flowrate, results of calibrations, and results of testing performed on the system.	See method discussion 5.g	Novelis monitors and operates the Line 1 and Line 2 NOxOUT systems according to the current OM&M plan. Process parameters and records are maintained in PI; control equipment calibrations are maintained in the ETO database.
005 (P-9a & P-9b)	Section B, Condition 5.h 40 CFR 63.1514 **Furnace Classification Change Records**	Decoating and Holding Furnaces	Maintain records pursuant to 40 CFR 63.1514 change of furnace classification for nature of mode change, time change is initiated, and time exhaust gas is diverted from control device to bypass or vice versa.	See method discussion 5.h	Not Applicable during this reporting period.
005 (P-9a & P-9b)	Section B, Condition 5.i. 40 CFR 63.1517(b) **General SMACT Recordkeeping**	Decoating and Holding Furnaces	Maintain files required by 40 CFR 63.10(b) and 40 CFR 63 Subpart RRR	See method discussion 5.i	Novelis maintains electronic and paper records for five years.
005 (P-9a & P-9b)	Section B, Condition 5.j.(1) 40 CFR 63.1517(b)(1)(i) **Bag Leak Detection System Alarm Recordkeeping**	Decoating and Holding Furnaces	Keep records of total operating hours, each alarm, time of alarm, corrective action, and cause of alarm.	See method discussion 5.j.(1)	Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.j.(2) 40 CFR 63.1517(b)(2) **Afterburner Temperature Recordkeeping**	Decoating and Holding Furnaces	Record 15-minute block average afterburner temperature in any 3-hr block period that falls below compliant operating parameter value with cause and corrective action as well as annual inspection records.	See method discussion 5.j.(2)	Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.j.(3) 40 CFR 63.1517(b)(3) **Baghouse Inlet Temperature Recordkeeping**	Decoating and Holding Furnaces	Record 15-minute block average lime-injected fabric filter inlet temperature including any 3-hr block period that exceeds the compliant operating parameter value + 14C with cause and corrective action.	See method discussion 5.j.(3)	Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.j.(4) 40 CFR 63.1517(b)(4)(i) **Lime Injection Rate Recordkeeping**	Decoating and Holding Furnaces	Record inspections verifying lime is present/flowing incl. cause of blockage if found and corrective action incl. more frequent inspections for subsequent 3 days following blockage. Also record daily/monthly inspections of lime feed setting incl. explanation of deviation from feed setting used in performance test and record repairs/replacements with new feeder calibration if relevant.	See method discussion 5.j.(4)	Novelis electronically collects and records lime flow data in PI, daily lime slurry concentration checks are performed and recorded in the daily baghouse inspection spreadsheet. Records alarms in the Incident Reporting Database, and reports semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.j.(5) 40 CFR 63.1517(b)(5) **Flux Injection Rate Recordkeeping**	Decoating and Holding Furnaces	Record 15-minute block average weights of flux injection, total flux injection rate, and periods rate exceeds compliant operating parameter.	See method discussion 5.j.(5)	NA for decoating furnaces. For Holding Furnaces, Novelis electronically collects, records, and reports the data in PI, records alarms in the Incident Reporting Database, and reports semi-annually.
005 (P-9a & P-9b)	Section B, Condition 5.j.(6) 40 CFR 63.1517(b)(7) **Feed/Charge Recordkeeping**	Decoating and Holding Furnaces	Record feed/charge weights.	See method discussion 5.j.(6)	Novelis uses a calibrated weighbelt on each line. Collects and records feed/charge data per cycle in PI.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
005 (P-9a & P-9b)	Section B, Condition 5.j.(7) 40 CFR 63.1517(b)(13) **Labeling Recordkeeping**	Decoating and Holding Furnaces	Record monthly inspections of unit labels.	See method discussion 5.j.(7)	Novelis records monthly label inspections as part of monthly site environmental inspections.
005 (P-9a & P-9b)	Section B, Condition 5.j.(8) 40 CFR 63.1517(b)(14) **Capture/Collection System Inspections Recordkeeping**	Decoating and Holding Furnaces	Record annual inspections of capture/ collection systems.	See method discussion 5.j.(8)	Novelis maintains records annual contractor ACGIH assessment/inspections of capture/control systems.
005 (P-9a & P-9b)	Section B, Condition 5.j.(9) 40 CFR 63.1517(b)(16) **SMACT Plan Recordkeeping**	Decoating and Holding Furnaces	Maintain copy of all required plans, document conformance to plans.	See method discussion 5.j.(9)	Novelis maintains copies of all required plans at the plant.
005 (P-9a & P-9b)	Section B, Condition 6.a NA **Hours of Operation Reports**	Decoating and Holding Furnaces	Report monthly and 12-month rolling total hours of operation.	See method discussion 6.a	Novelis electronically collects, calculates rates, records, and reports the parameters in PI, monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 6.b NA **Aluminum Throughput Reports**	Decoating and Holding Furnaces	Report monthly and 12-month rolling total aluminum throughput.	See method discussion 6.b	Novelis electronically collects, calculates rates, records, and reports the parameters in PI, monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 6.c NA **Aluminum Produced Reports**	Decoating and Holding Furnaces	Report monthly and 12-month rolling total aluminum produced.	See method discussion 6.c	Novelis electronically collects, calculates rates, records, and reports the parameters in PI, monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 6.d. NA **Hourly Emission Rates Reports**	Decoating and Holding Furnaces	Report hourly pollutant emission rates.	See method discussion 6.d	Novelis electronically collects, calculates rates, records, and reports the parameters in PI, monthly average hourly emissions data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 6.e. NA **Production-based Emission Rates Reports**	Decoating and Holding Furnaces	Report production-based pollutant emission rates.	See method discussion 6.e	Novelis electronically collects, calculates rates, records, and reports the parameters in PI, monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 6.f. NA **NOx-OUT Reports**	Decoating and Holding Furnaces	Report NOxOUT reagent flowrate.	See method discussion 6.f	Novelis electronically collects, calculates rates, records, and reports the parameters in PI, monthly and 12-month rolling data submitted semi-annually.
005 (P-9a & P-9b)	Section B, Condition 6.g. 40 CFR 1512(q) **Bag Leak Detection System Conformance**	Decoating and Holding Furnaces	Submit information for notification of compliance to document conformance with 40 CFR 63.1510(f).	See method discussion 6.g	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) thru (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or on annual DEP7007CC certifications.
005 (P-9a & P-9b)	Section B, Condition 6.h. 40 CFR 1512(r) **Labeling Conformance**	Decoating and Holding Furnaces	Submit information for notification of compliance to document conformance with 40 CFR 63.1506(b).	See method discussion 6.h	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) thru (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or and in annual DEP7007CC compliance certification. Labels maintained at operator control panels.
005 (P-9a & P-9b)	Section B, Condition 6.i. 40 CFR 1512(s) **Capture/Collection System Reports**	Decoating and Holding Furnaces	Submit information for notification of compliance to document conformance with 40 CFR 63.1506(c).	See method discussion 6.i	Novelis submitted the initial notification per 40 CFR 63.1515(b)(1) thru (b)(10) in 2004. Subsequent notifications related to new construction since 2004 have been submitted with performance tests or in annual DEP7007CC compliance certification.
005 (P-9a & P-9b)	Section B, Condition 6.j. NA **Section D**	Decoating and Holding Furnaces	Section D 6. Specific Reporting Requirements	See method discussion 6.j	Novelis operates all baghouses per OM&M plan; reports VE data semi-annually; includes Method 9 readings if applicable; and records corrective action in Incident Reporting Database.
005 (P-9a & P-9b)	Section B, Condition 7.a NA **NOx Emissions Control**	Decoating and Holding Furnaces	Capture and control NOx emissions.	See method discussion 7.a	Novelis operates the Line 1 and Line 2 NOXOUT systems per OM&M plan; monitors rates in PI; records and reports alarms in Incident Reporting Database; and conducts tests/calibrations every four months with a submitted report showing the data recorded.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data (such as test methods, monitoring procedures, recordkeeping and reporting)
005 (P-9a & P-9b)	Section B, Condition 7.b NA **Proper NOxOUT Operation**	Decoating and Holding Furnaces	Operate NOxOUT systems in accordance with specifications.	See method discussion 7.b	Novelis operates the Line 1 and Line 2 NOXOUT systems per OM&M plan, monitors rates in PI, records and reports alarms in Incident Reporting Database, and conducts tests/calibrations every four months with a submitted report showing the data recorded.
005 (P-9a & P-9b)	Section B, Condition 7.c NA **Proper NOxOUT Operation**	Decoating and Holding Furnaces	Operate NOxOUT systems at all times units are in operation.	See method discussion 7.c	Novelis operates the Line 1 and Line 2 NOXOUT systems per OM&M plan, monitors rates in PI, records and reports alarms in Incident Reporting Database, and conducts tests/calibrations every four months with a submitted report showing the data recorded.
005 (P-9a & P-9b)	Section B, Condition 7.d NA **NOxOUT Reagent Injection Rate**	Decoating and Holding Furnaces	Maintain NOxOUT reagent injection rate to within +/- 10% of rate determined during last system calibration.	See method discussion 7.d	Novelis operates the Line 1 and Line 2 NOXOUT systems per OM&M plan, monitors rates in PI, records and reports alarms in Incident Reporting Database, and conducts tests/calibrations every four months with a submitted report showing the data recorded.
005 (P-9a & P-9b)	Section B, Condition 7.e NA **NOxOUT Testing and Calibration**	Decoating and Holding Furnaces	Test and calibrate NOxOUT once every four months.	See method discussion 7.e	Novelis operates the Line 1 and Line 2 NOXOUT systems per OM&M plan, monitors rates in PI, records and reports alarms in Incident Reporting Database, and conducts tests/calibrations every four months with a submitted report showing the data recorded.
005 (P-9a & P-9b)	Section B, Condition 9. NA **Section D**	Decoating and Holding Furnaces	See Section D.9	See method discussion 9.	Refer to Section D.9
05 (C-11c)	Section B, Condition 2.a. 401 KAR 51:017 **Visible Emissions Limit**	Sow Preheaters	Visible emissions shall not exceed 20%	See method discussion 2.a	Novelis only uses natural gas so compliance is assumed.
05 (C-11c)	Section B, Condition 2.b.(1) 401 KAR 51:017 **CO Hourly Emissions Limit**	Sow Preheaters	Mass emissions of CO from C-11c shall not exceed 1.46 lbs/hr	See test results in method discussion 2.b	Maximum capacity of burner is 20 MMBTU/hr. AP-42 Emissions for Natural Gas based on 20 MMBTU/hr are less than BACT limits.
05 (C-11c)	Section B, Condition 2.b.(1) 401 KAR 51:017 **CO Annual Emissions Limit**	Sow Preheaters	Mass emissions of CO from C-11c shall not exceed 6.4 ton/yr	0.40 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling CO emissions tracking in accordance with Section D.2.b.
05 (C-11c)	Section B, Condition 2.b.(2) 401 KAR 51:017 **NOx Hourly Emissions Limit**	Sow Preheaters	Mass emissions of NOX from C-11c shall not exceed 1.080 lbs/hr	See test results in method discussion 2.b	Maximum capacity of burner is 20 MMBTU/hr. AP-42 Emissions for Natural Gas based on 20 MMBTU/hr are less than BACT limits.
05 (C-11c)	Section B, Condition 2.b.(2) 401 KAR 51:017 **NOx Annual Emissions Limit**	Sow Preheaters	Mass emissions of NOX from C-11c shall not exceed 4.7 ton/yr	0.46 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling NOX emissions tracking in accordance with Section D.2.b.
05 (C-11c)	Section B, Condition 2.b.(3) 401 KAR 51:017 **VOC Hourly Emissions Limit**	Sow Preheaters	Mass emissions of VOC from C-11c shall not exceed 0.110 lbs/hr	See test results in method discussion 2.b	Maximum capacity of burner is 20 MMBTU/hr. AP-42 Emissions for Natural Gas based on 20 MMBTU/hr are less than BACT limits.
05 (C-11c)	Section B, Condition 2.b.(3) 401 KAR 51:017 **VOC Annual Emissions Limit**	Sow Preheaters	Mass emissions of VOC from C-11c shall not exceed 0.48 ton/yr	0.03 tpy for Jan.-Dec 2019	Monthly and 12-month rolling VOC emissions tracking in accordance with Section D.2.b.
05 (C-11c)	Section B, Condition 2.b.(4) 401 KAR 51:017 **PM10 Hourly Emissions Limit**	Sow Preheaters	Mass emissions of PM10 from C-11c shall not exceed 0.152 lbs/hr	See test results in method discussion 2.b	Maximum capacity of burner is 20 MMBTU/hr. AP-42 Emissions for Natural Gas based on 20 MMBTU/hr are less than BACT limits.
05 (C-11c)	Section B, Condition 2.b.(4) 401 KAR 51:017 **PM10 Annual Emissions Limit**	Sow Preheaters	Mass emissions of PM10 from C-11c shall not exceed 0.67 ton/yr	0.04 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling PM10 emissions tracking in accordance with Section D.2.b.

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05 (C-11c)	Section B, Condition 3. 401 KAR 59:005 and 50:045 **Testing as Required**	Sow Preheaters	Performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.	See test results in method discussion 3.	No testing required.
05 (C-11c)	Section B, Condition 4.a NA **Hours of Operation Tracking**	Sow Preheaters	Monitor monthly and 12-month rolling total hours of operation.	See method discussion 4.a	Novelis monitors these parameters monthly.
05 (C-11c)	Section B, Condition 4.b. NA **Natural Gas Usage Tracking**	Sow Preheaters	Monitor monthly natural gas usage.	See method discussion 4.b	Novelis monitors these parameters monthly.
05 (C-11c)	Section B, Condition 4.c. NA **Hourly Emission Rates Tracking**	Sow Preheaters	Monitor hourly pollutant emission rates (based on a monthly average).	See method discussion 4.c	Novelis monitors these parameters monthly.
05 (C-11c)	Section B, Condition 5.a NA **Hours of Operation Records**	Sow Preheaters	Record monthly and 12-month rolling total hours of operation.	See method discussion 5.a	Novelis records this data monthly in PI.
05 (C-11c)	Section B, Condition 5.b NA **Natural Gas Usage Records**	Sow Preheaters	Record monthly natural gas usage.	See method discussion 5.b	Novelis records this data monthly in PI.
05 (C-11c)	Section B, Condition 5.c NA **Hourly Emission Rates Records**	Sow Preheaters	Record hourly pollutant emission rates.	See method discussion 5.c	Novelis records this data monthly in PI.
05 (C-11c)	Section B, Condition 6.a. NA **Reporting Requirements**	Sow Preheaters	Submit monthly and 12-month rolling total hours of operation, monthly natural gas usage, and hourly pollutant emission rates.	See method discussion 6.a	Novelis reports this information in the semi-annual reports.
05 (C-11c)	Section B, Condition 6.b. NA **Section D**	Sow Preheaters	See Section D 6.a.	See method discussion 6.b	Refer to Section D 6.a.
008 (DB-1)	Section B, Condition 2.a 401 KAR 59:010 **Visible Emissions Limit**	Bale Breaker	Visible emissions shall not exceed 20%.	See method discussion 2.a	VE monitored per OM&M, recorded, and reported. No opacity incidents during this reporting year.
008 (DB-1)	Section B, Condition 2.b. 401 KAR 59:010 **PM10 Hourly Emissions Limit**	Bale Breaker	PM10 emissions shall not exceed 2.0 lbs/hr.	See test results in method discussion 2.b	Compliance to be demonstrated with PM10 performance test conducted in 2017. PM-10 emissions were 0.71 lbs/hour based on PM10 performance test in Feb 2017. Note – cannot apply D 2.a. equation because EF and CE are not known.
008 (DB-1)	Section B, Condition 2.b. 401 KAR 59:010 **PM10 Annual Emissions Limit**	Bale Breaker	PM10 emissions shall not exceed 8.8 ton/yr.	0.83 tpy for Jan.-Dec. 2019	Monthly and 12-month rolling PM10 emissions tracking in accordance with Section D.2.b.
008 (DB-1)	Section B, Condition 3. NA **Section D**	Bale Breaker	See Section D 3.b. and j.	See method discussion 3.	Refer to Section D 3.b. and j.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
008 (DB-1)	Section B. Condition 4.a NA **Hours of Operation Tracking**	Bale Breaker	Monitor monthly and 12-month rolling total hours of operation.	See method discussion 4.a	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
008 (DB-1)	Section B. Condition 4.b. NA **Scrap Throughput Tracking**	Bale Breaker	Monitor monthly and 12-month rolling total scrap throughput.	See method discussion 4.b	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
008 (DB-1)	Section B. Condition 4.c. NA **Hourly Emission Rates Tracking**	Bale Breaker	Monitor hourly pollutant emission rates.	See method discussion 4.c	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly average hourly emissions data submitted semi-annually.
008 (DB-1)	Section B. Condition 4.d NA **CAM**	Bale Breaker	Refer to Compliance Assurance Monitoring (CAM) Plan.	See method discussion 4.d	Refer to Compliance Assurance Monitoring (CAM) Plan
008 (DB-1)	Section B. Condition 5.a NA **Hours of Operation Records**	Bale Breaker	Record monthly and 12-month rolling total hours of operation.	See method discussion 5.a	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
008 (DB-1)	Section B. Condition 5.b. NA **Scrap Throughput Records**	Bale Breaker	Record monthly and 12-month rolling total scrap throughput.	See method discussion 5.b	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
008 (DB-1)	Section B. Condition 5.c. NA **Hourly Emission Rates Records**	Bale Breaker	Record hourly pollutant emission rates.	See method discussion 5.c	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly average hourly emissions data submitted semi-annually.
008 (DB-1)	Section B. Condition 6.a. NA **Reporting Requirements**	Bale Breaker	Submit monthly and 12-month rolling total hours of operation, monthly and 12-month rolling total scrap throughput, and hourly pollutant emission rates.	See method discussion 6.	Novelis electronically monitors, records, and reports the parameters in the production information (PI) system: monthly and 12-month rolling data submitted semi-annually.
008 (DB-1)	Section B. Condition 6.b. NA **Section D**	Bale Breaker	See Section D 6.a.	See method discussion 6.b	Refer to Section D 6.a.
009	Section B. Condition 1.a. NA **Halogenated Solvent Prohibition**	Parts Washer	The use of halogenated solvent is prohibited in the cold cleaner.	See method discussion 1.a	Novelis does not use halogenated solvent.
009	Section B. Condition 1.b. 401 KAR 59:185, Section 8(1) **Operation without Solvent Reservoir Prohibition**	Parts Washer	The permittee shall not operate any of the cleaning tank without a remote solvent reservoir equipped.	See test results in method discussion 1.b	Novelis does not operate the cleaning tank without a remote solvent reservoir equipped.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
009	Section B, Condition 1.c. 401 KAR 59:185, Section 8(2) **Solvent Prohibition**	Parts Washer	The solvent used in the cold cleaner shall not have a vapor pressure that exceeds thirty-three (33) mm Hg measured at 100°F or be heated above 120°F.	See test results in method discussion 1.c	Novelis does not use a solvent with a vapor pressure exceeding the applicable threshold or a heated solvent exceeding the applicable temperature limit.
009	Section B, Condition 1.d. 401 KAR 59:185, Section 8(3) **Work Area Prohibition**	Parts Washer	The sink-like work area shall have an open drain area less than 100 square centimeters.	See test results in method discussion 1.d	Novelis does not have a open drain area larger than 100 square centimeters.
009	Section B, Condition 3. 401 KAR 59:005 and 50:045 **Testing as Required**	Parts Washer	Performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.	See test results in method discussion 3.	No testing required.
009	Section B, Condition 4.a. 401 KAR 59:185 Section (8)(4) **Waste Solvent Evaporation Monitoring**	Parts Washer	The permittee shall monitor the storage and disposal of the waste solvent to ensure minimal loss due to evaporation.	See test results in method discussion 4.a.	Novelis monitors the waste solvent storage and disposal.
009	Section B, Condition 4.b. NA **Section F**	Parts Washer	See Section F	See method discussion 4.b	Refer to Section F
009	Section B, Condition 5.a 401 KAR 59:185 Section (8)(4) **Waste Solvent Evaporation Records**	Parts Washer	The permittee shall maintain records of evidence that waste solvent is stored or properly disposed of with minimal loss due to evaporation. These records shall be provided to the Division upon request.	See test results in method discussion 5.a.	Novelis records the waste solvent storage and disposal.
009	Section B, Condition 5.b. NA **Solvent Prohibition Records**	Parts Washer	The permittee shall maintain records of the MSDSs for the solvent used in the cold cleaner to enable verification of compliance with 1. Operating Limitations (c).	See test results in method discussion 5.b	Novelis maintains records of the MSDS for the solvent used
009	Section B, Condition 5.c. NA **Section F**	Parts Washer	See Section F	See method discussion 5.c	Refer to Section F
009	Section B, Condition 6. NA **Section F**	Parts Washer	See Section F	See method discussion 6.	Refer to Section F
009	Section B, Condition 7. NA **401 KAR 59:185 Compliance**	Parts Washer	The permittee shall operate and maintain the parts cleaning tank such that they continue to meet the requirements in 401 KAR 59:185.	See method discussion 7	Novelis meets the requirements in 401 KAR 59:185.
IA #1-4	Section C NA **Visual Emissions Limit**	Insignificant Activities	Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.	See method discussion	Novelis inspects the insignificant activities subject to an opacity standard at least monthly during the normal course of work for responsible operations personnel.
NA	Section D, Condition A. 401 KAR 52:020, Section 26 **Source Emission Limits**	Facility	Compliance with annual emissions and processing limitations contained in this permit shall be based on emissions and processing rates for any 12 consecutive months.	See method discussion A.	Condition is a statement of fact. No actionable requirement.
NA	Section D, Condition B. NA **Source Emission Limits**	Facility	PM_{10}, CO, NO_x, VOC, HCL, HF, SO_2, and D/F TEQ emissions measured by applicable reference methods shall not exceed the respective limitations specified herein.	See method discussion B.	Review of annual emissions inventory report. Compliance with the emission limits of the permit are appropriately determined in accordance with the specific terms of the permit.
NA	Section D, Condition B.2.a. NA **Hourly Emission Limits Calculation**	Facility	Compliance with the hourly mass emission limits described in SECTION B above shall be determined by comparing the allowable rate to the actual rate as calculated using the equation in the permit.	See method discussion B.2.a	Novelis computes the actual hourly mass emission rate per the equation in the permit.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
NA	Section D, Condition B.2.b. NA **Annual Emission Limits Calculation**	Facility	Compliance with the annual mass emission limits described in SECTION B above shall be determined by comparing the allowable rate to the actual rate as calculated using the equation in the permit.	See method discussion B.2.b	Novelis computes the actual annual mass emission rate per the equation in the permit.
NA	Section D, Condition B.2.c. NA **Production-based Emission Limits Calculation**	Facility	Compliance with the production-based mass emission limits described in SECTION B above shall be determined by comparing the allowable rate to the actual rate as calculated using the equation in the permit.	See method discussion B.2.c	Novelis computes the actual production-based mass emission rate per the equation in the permit.
NA	Section D, Condition B.2.d. 401 KAR 63:020 **Source Toxics Emission Limits**	Facility	No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.	See method discussion B.2.d	Novelis is in compliance based on the rates provided in the application but will evaluate any changes that could alter the determination and submit the information to KDAQ.
NA	Section D, Condition B.2.e. 401 KAR 53:006, Section 1(3) **Source HF Emission Limits**	Facility	The permittee shall not violate, or interfere with the attainment or maintenance of, ambient air quality standards as specified in 401 KAR 53:010.	See method discussion B.2.e	Novelis is in compliance based on the rates provided in the application but will evaluate any changes that could alter the determination and submit the information to KDAQ.
NA	Section D, Condition B.2.f. 40 CFR 63.1505(h) **SAPU Emission Limits**	Facility	Emission limits shall be calculated for each SAPU using the equations listed in the permit for PM, HCl, HF, and D/F.	See method discussion B.2.f	NA- Novelis does not rely on this compliance option.
NA	Section D, Condition B.2.g 40 CFR 63.1510(u) **SAPU Individual Emission Limits**	Facility	Secondary aluminum processing unit compliance by individual emission unit demonstration. As an alternative to the procedures of paragraph (t) of 40 CFR 63.1510, the permittee may demonstrate, through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit.	See method discussion B.2.g	Refer to individual unit performance test results presented in each Condition B.2 permit section for SMACT affected sources.
NA	Section D, Condition B.2.h. 40 CFR 63.1505(v)(5) **SAPU Re-Designation**	Facility	With the prior approval of the permitting authority for major sources, the permittee may redesignate any existing group 1 furnace or in-line fluxer at a secondary aluminum production facility as a new emission unit. Any emission unit so redesignated may thereafter be included in a new SAPU at that facility. Any such redesignation will be solely for the purpose of this NESHAP and will be irreversible.	See method discussion B.2.h	NA- Novelis does not rely on this compliance option.
NA	Section D, Condition B.2.i 40 CFR 63.1505(a) **SMACT Compliance**	Facility	The permittee of a new or existing affected source shall comply at all times with each applicable limit in 40 CFR 63, Subpart RRR, including periods of startup and shutdown. Table 1 to this subpart summarizes the emission standards for each type of source.	See method discussion B.2.i	Novelis complies with SMACT at all times.
NA	Section D, Condition B.3.a. 401 KAR 59:005 and 50:045 **Testing as Required**	Facility	Performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.	See test results in method discussion 3.a	No testing required.
NA	Section D, Condition B.3.b NA **Non-SMACT Test Methods**	Facility	Testing to determine compliance with the applicable emission limits or standards that are not specifically addressed in 40 CFR 63, Subpart RRR (i.e. BACT limits under 401 KAR 51:017, shall be performed using the following methods from Appendix A to 40 CFR 60, Standards of Performance for New Stationary Sources or Appendix M to 40 CFR 51 Recommended Test Methods for State Implementation Plans or Division approved alternative.	See test results in method discussion 3.b	Novelis uses these testing methods when applicable.
NA	Section D, Condition B.3.c 40 CFR 63.1511(a) **Site-specific Test Plan**	Facility	Prepare site-specific test plan and conduct performance testing under representative conditions.	See test results in method discussion 3.c	Novelis submits site-specific test plans for performance testing and conducts testing under representative conditions.
NA	Section D, Condition B.3.d. 40 CFR 63.1511(c) **SMACT Test Methods**	Facility	The permittee must use the methods in appendix A to 40 CFR part 60 to determine compliance with the applicable emission limits or standards.	See test results in method discussion 3.e	Novelis uses these testing methods when applicable.
NA	Section D, Condition B.3.e. 40 CFR 63.1511(d) **SMACT Alternative Test Methods**	Facility	The permittee may use alternative test methods as provided in paragraphs (d)(1) through (3) of 40 CFR 63.1511.	See test results in method discussion 3.d	Novelis uses these testing methods when applicable.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
NA	Section D. Condition B.3.f. 40 CFR 63.1511(e) **Repeat Tests**	Facility	Conduct performance tests every 5 years.	See method discussion 3.f	Novelis conducts SMACT testing every 5 years, complies with the requirements of 40 CFR 63.1511, and submits the performance test reports as required
NA	Section D. Condition B.3.g. 40 CFR 63.1511(g) **Establishing Parametric Monitoring Values**	Facility	The permittee of new or existing affected sources and emission units must establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit or standard.	See method discussion 3.g	Novelis has established monitoring and operating parameter values when applicable.
NA	Section D. Condition B.3.h. 40 CFR 63.1511(h) **Testing of Commonly-Ducted SAPU Units**	Facility	When group 1 furnaces and or in-line fluxers are included in a single existing SAPU or new SAPU, and the emissions from more than one emission unit within that existing SAPU or new SAPU are manifolded to a single control device, compliance for all units within the SAPU is demonstrated if the total measured emissions from all controlled and uncontrolled units in the SAPU do not exceed the emission limits calculated for that SAPU based on the applicable equation in §63.1505(k).	See method discussion 3.h	NA- Novelis does not rely on this compliance option
NA	Section D. Condition B.3.i. 40 CFR 63.1511(i) **Testing of Commonly-Ducted non-SAPU Units**	Facility	With the prior approval of the permitting authority for major sources, or the Administrator for area sources, the permittee may do combined performance testing of two or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the basic requirements listed in the permit.	See method discussion 3.i	Novelis has complied with this testing method when applicable.
NA	Section D. Condition B.3.j. NA **Non-SMACT Repeat Tests**	Facility	Testing to determine compliance with the applicable emission limits or standards for equipment that are not specifically subject to 40 CFR 63 Subpart RRR [i.e. BACT limits under 401 KAR 51:017] shall be conducted once per lifetime of the permit concurrently with performance testing of equipment that is subject to 40 CFR Part 63, Subpart RRR. This is applicable to Emission Units 003 and 009 and shall be done to determine compliance with 2. Emission Limitations item b. in permit SECTION B – EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS AND OPERATING CONDITIONS, As listed for each affected unit.	See method discussion 3.j	Novelis conducts non-SMACT testing per this timeline as required
NA	Section D. Condition B.4.a. 40 CFR 63.1510(j) **SAPU Monitoring**	Facility	Except as provided in 40 CFR 63.1510 (u), the permittee shall calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the permittee shall use the methods specified in the permit.	See method discussion 4.a	NA- Novelis does not rely on this compliance option.
NA	Section D. Condition B.5.a. NA **BACT Limit Compliance Records**	Facility	Results of initial and subsequent compliance testing with BACT emission limits, as well as applicable rolling twelve-month emissions totals and any calculations required, shall be recorded, compared with the limits listed in SECTION B 2. Emission Limitations, item b. and the compliance or non-compliance with the limits shall be recorded.	See method discussion 5.a	Novelis records results of BACT testing, calculations, and compliance with limits as required.
NA	Section D. Condition B.5.b. 40 CFR 1517(b) **SMACT Recordkeeping**	Facility	Maintain files required by 40 CFR 63.1517(b).	See method discussion 5.b	Novelis maintains these records.
NA	Section D. Condition B.6.a. NA **Visible Emissions Limit**	Facility	The permittee shall report all visible emissions readings in excess of the 20 percent limit specified in this permit on a semi-annual basis to the Division's Frankfort Regional office.	See method discussion 6.a	Novelis reports these records as required.
NA	Section D. Condition B.6.b. NA **Semiannual Monitoring Reports Non-Compliance**	Facility	Should two consecutive semi-annual reports show noncompliance, the permittee will be required to submit quarterly reports until three consecutive reports show compliance.	See method discussion 6.b	Review of semiannual monitoring report (SAMR) submittals and initiating quarterly reporting as required.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
NA	Section D, Condition B.6.c, 40 CFR 1516(b) **SMACT Excess Emissions Reporting**	Facility	The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3). Except, the permittee shall submit the semiannual reports within 60 days after the end of each 6-month period instead of within 30 days after the calendar half as specified in 40 CFR 63.10(e)(3)(v). When no deviations of parameters have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.	See method discussion 6.c	Submitting semiannual reports containing the specified certification statements and excess emissions event details (when excess emissions events occur).
NA	Section D, Condition B.6.d, NA **SMACT Annual Compliance Certification**	Facility	For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the permittee of a major source subject to subpart RRR must certify continuing compliance based upon, but not limited to, the conditions listed in the permit.	See method discussion 6.d	Submitting ACC containing the specified details regarding excess emissions events and compliance demonstration method information for each applicable SMACT monitoring, recordkeeping, and reporting requirement during the reporting period.
NA	Section D, Condition B.6.e, 40 CFR 1506(a)(5) **SMACT Malfunction Reporting**	Facility	If there was a malfunction during the reporting period, the permittee must submit a report that includes the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must include a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions, including, but not limited to, product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The report must also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.1506(a)(5).	See method discussion 6.e	Refer to "SEMI-ANNUAL AIR COMPLIANCE REPORT ATTACHMENT" provided with first and second half semiannual monitoring reports.
NA	Section D, Condition B.6.f, 40 CFR 1516 **SMACT Report Submittal**	Facility	All reports required by this subpart not subject to the requirements in paragraph (b) of 40 CFR 63.1516 must be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to paragraph (b) of this section in paper format.	See method discussion 6.f	Condition is a statement of fact. No actionable requirement.
NA	Section D, Condition B.8, 40 CFR 15110(n)(2) **SMACT Semiannual Reporting**	Facility	The permittee shall submit a certification of compliance with the operational standards in 40 CFR 63.1506(m)(6) for each 6-month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(iii).	See method discussion 8.	Submitting semiannual reports containing the specified certification statement.
NA	Section E, Condition 1, 401 KAR 50:055 **Source Control Equipment Requirements**	Facility	At all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.	See method discussion 1.	All monitoring records, opacity observations, visible emissions qualifications, maintenance and inspection records, etc. are maintained on-site for 5 years and are available for review upon request. Intermittent compliance for two (2) P-9a control system shutdowns and one (1) Stack P-9a control system shutdown where emissions were not captured and vented through a closed vent system to the AGRS control system; refer to Section CC.2.10(a).
NA	Section F, Condition 2, 401 KAR 52:020 **General Monitoring Record Obligations**	Facility	Permittee must compile records of all required monitoring information including: (a) date and time of measurements; (b) analyses performance dates; (c) company performing analyses; (d) analytical methods used; (e) analyses results; and (f) operating conditions during time of measurements.	See method discussion 2.	Review of monitoring records. All testing and monitoring records are maintained in accordance with provisions of permit.
NA	Section F, Condition 3, 401 KAR 52:020 **Records Retention Obligations**	Facility	Records of all monitoring data and support information shall be retained by the permittee for a period of five years.	See method discussion 3.	Review of monitoring records. All monitoring records, opacity observations, maintenance, calibration and inspection records, etc. are maintained on-site for 5 years and available for review upon request.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
NA	Section F, Condition 4. 401 KAR 52:020 **Cabinet Access to Facility**	Facility	Permittee shall allow authorized members of the Cabinet to enter and inspect the facility at any reasonable time. No person shall obstruct or interfere with any Cabinet employee.	See method discussion 4.	Follow establish protocols for allowing access to Cabinet personnel to the facility.
NA	Section F, Condition 5. 401 KAR 52:020 **Semiannual Monitoring Reports**	Facility	Summary reports of any monitoring required by the permit shall be submitted every 6 months.	See method discussion 5.	Review of SAMR correspondence. The 2nd half SAMR for the prior year was submitted by January 30th. The 1st half SAMR for the current year was submitted by July 30th.
NA	Section F, Condition 6. 401 KAR 52:020 **Semiannual Monitoring Reports**	Facility	Semiannual reports due no later than January 30th and July 30th of each year.	See method discussion 6.	Review of SAMR correspondence. The 2nd half SAMR for the prior year was submitted by January 30th. The 1st half SAMR for the current year was submitted by July 30th.
NA	Section F, Condition 7. 401 KAR 50:055 **Startup, Shutdown, Malfunction Reporting**	Facility	Notify the Regional Office of any startups, shutdowns, or malfunctions where emissions will (or do) exceed the permitted standards.	See method discussion 7.	Review of operating logs and history. During the current reporting period, there were no excess emissions during startups, shutdowns, or malfunctions.
NA	Section F, Condition 8. 401 KAR 52:020 **Excess Emissions Reporting**	Facility	Report excess emissions including those related to upset conditions to the Regional Office within 30 days and also include in semiannual monitoring report.	See method discussion 8.	Review of operating logs and history. There were no excess emission events that necessitated reporting in the current reporting period.
NA	Section F, Condition 9. 401 KAR 52:020 **Annual Compliance Certification**	Facility	Annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form to the Regional Office and U.S. EPA Region 4.	See method discussion 9.	The annual compliance certification using Form 7007CC was properly completed and submitted for the prior year by January 30th.
NA	Section F, Condition 10. 401 KAR 52:020 **KyEIS Survey**	Facility	Provide Division with emissions information within 31 days of the date the KYEIS emission survey is mailed to the permittee.	See method discussion 10.	Review of KyEIS correspondence records. The KyEIS survey response was properly completed and submitted to KDAQ for the prior year within the required timeframe.
NA	Section G, Condition 1.a. 401 KAR 52:020 **General Compliance Obligations**	Facility	Comply with the conditions of the permit. Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit.	See method discussion 1.a	Certification of compliance via this DEP 7007CC submittal
NA	Section G, Condition 1.b. 401 KAR 52:020 **Permit Stay Provisions**	Facility	The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.	See method discussion 1.b	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.c. 401 KAR 52:020 **Permit Revision**	Facility	Condition stating the Division's authority to revise, revoke, reopen, reissue or terminate permit.	See method discussion 1.c	This permit was not revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19 in the current reporting period.
NA	Section G, Condition 1.d. 401 KAR 52:020 **Obligations to Respond to Division**	Facility	Respond to requests from the Division to determine if cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance.	See method discussion 1.d	No such requests were made in the reporting period.
NA	Section G, Condition 1.e. 401 KAR 52:020 **Response to Special Compliance Demonstration Requests**	Facility	Emission units shall demonstrate compliance with applicable requirements if requested by the Division.	See method discussion 1.e	All records of compliance demonstrations as referenced herein are maintained on-site for 5 years and are available for review upon request.
NA	Section G, Condition 1.f. 401 KAR 52:020 **Duty to Correct Applications**	Facility	Promptly submit supplementary facts or corrected information upon becoming aware that any relevant facts or incorrect information was submitted in the permit application.	See method discussion 1.f	Review of air permitting correspondence. Any supplementary information necessary associated with permit actions was submitted as appropriate.
NA	Section G, Condition 1.g. 401 KAR 52:020 **Suspended Conditions Applicability**	Facility	Suspended or invalid conditions do not invalidate other portions of the permit.	See method discussion 1.g	Condition is a statement of fact. No actionable requirement.

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
NA	Section G, Condition 1.h. 401 KAR 52:020 **Defense Stipulation**	Facility	Permittee shall not use as a defense in enforcement action the contention that it would have been necessary to halt or reduce the permitted activity to maintain compliance.	See method discussion 1.h	An event to trigger this obligation did not occur during the reporting period. As such, no compliance assessment is applicable.
NA	Section G, Condition 1.i. 401 KAR 52:020 **General Enforceability**	Facility	All emission limits and standards shall be enforceable as a practical matter.	See method discussion 1.i	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.j. 401 KAR 52:020 **Emission Fees**	Facility	Permit is subject to suspension if permittee fails to pay all emission fees within 90 days after the date of notice.	See method discussion 1.j	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.k. 401 KAR 52:020 **Liability Applicability**	Facility	Nothing in this permit alters or affects the liability of the permittee for any violations of applicable requirements prior to or at the time of permit issuance.	See method discussion 1.k	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.l. 401 KAR 52:020 **Property Rights**	Facility	Permit does not convey property rights.	See method discussion 1.l	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.m. 401 KAR 52:020 **Permitting Responsibility**	Facility	Issuance of permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.	See method discussion 1.m	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.n. 401 KAR 52:020 **EPA Authority**	Facility	Nothing in permit alters or affects the authority of EPA to obtain information pursuant to 42 USC 7414.	See method discussion 1.n	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.o. 401 KAR 52:020 **EPA Authority**	Facility	Nothing in permit alters or affects the authority of EPA to impose emergency orders pursuant to 42 USC 7603.	See method discussion 1.o	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.p. 401 KAR 52:020 **Consolidated Authority**	Facility	Permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms.	See method discussion 1.p	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 1.q. 401 KAR 52:020 **Permit Shield**	Facility	A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance.	See method discussion 1.q	Condition is a statement of fact. No actionable requirement.
NA	Section G, Condition 2.a. 401 KAR 52:020 **Expiration of Permit**	Facility	Permit remains in effect for 5 years following original date of issue. Permit expiration shall terminate source's right to operate unless a timely and complete application has been submitted to the Division at least 6 months prior to the expiration date.	See method discussion 2.a	Permit renewal application is not due until March 30, 2021.
NA	Section G, Condition 2.b. 401 KAR 52:020 **Authority to Operate**	Facility	Authority to operate shall cease if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application.	See method discussion 2.b	No such requests were made in the reporting period.
NA	Section G, Condition 3.a. 401 KAR 52:020 **Minor Revisions**	Facility	Minor permit revision procedure may be used for certain types of projects.	See method discussion 3.a	Review of permitting records.
NA	Section G, Condition 3.b. NA **Non-transferrable**	Facility	Permit is not transferrable by the permittee.	See method discussion 3.b	Condition is a statement of fact. No actionable requirement.

Emission Unit Permit ID=	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
NA	Section G. Condition 4. NA **Permit Applicability**	Facility	No construction authorized by this permit	See method discussion 4.	No construction of new emission units occurred over the reporting period not otherwise authorized via permit revisions, Section 502b10 notifications, or off-permit notifications.
NA	Section G. Condition 5.a. 401 KAR 50:045 **Test Protocol Submittal Deadlines**	Facility	Submit a test protocol 60 days prior to scheduled test date and notify Division of actual test date at least 30 days prior.	See method discussion 5.a	Review of testing records and correspondence.
NA	Section G. Condition 5.b. 401 KAR 50:045 **Operating Rates during Tests**	Facility	Conduct performance tests under normal conditions representative of worst-case operations that create the highest emissions. Limit production to 110% of rate achieved during test.	See method discussion 5.b	Review of testing records and correspondence.
NA	Section G. Condition 5.c. NA **Test Report Submittal Deadlines**	Facility	Submit results of performance tests within 45 days of completion of required by an applicable standard after completion of the fieldwork.	See method discussion 5.c	Review of testing records and correspondence. Note that the 45-day deadline is superseded by the 60-day allowance provided under SMAP for testing conducted for those regulations.
NA	Section G. Condition 6.a NA **Acid Rain Requirements**	Facility	If an applicable requirement of the Clean Air Act more stringent than an applicable requirement pursuant to Title IV of the Act, both provisions shall apply and be federally enforceable.	See method discussion 6.a	Acid rain regulations are not applicable to this facility.
NA	Section G. Condition 6.b. NA **Acid Rain Requirements**	Facility	The permittee shall comply with all applicable requirements and conditions.	See method discussion 6.b	Acid rain regulations are not applicable to this facility.
NA	Section G. Condition 7.a. 401 KAR 52:020 **Emergency Provisions**	Facility	An emergency shall constitute an affirmative defense to an action brought for the noncompliance of emission limitations if there is relevant evidence of the cause of the emergency, the facility was being properly operated at the time of the emergency, all reasonable steps were taken to minimize emissions, the permittee notified the Division as promptly as possible. This requirement does not relieve other notification requirements.	See method discussion 7.a	No emergencies, as covered by 401 KAR 52:020 Section 24(1) occurred during the reporting period.
NA	Section G. Condition 7.b. 401 KAR 52:020 **Emergency Provisions**	Facility	Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement.	See method discussion 7.b	No emergencies, as covered by 401 KAR 52:020 Section 24(1) occurred during the reporting period.
NA	Section G. Condition 7.c. 401 KAR 52:020 **Emergency Provisions**	Facility	In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.	See method discussion 7.c	No emergencies, as covered by 401 KAR 52:020 Section 24(1) occurred during the reporting period.
NA	Section G. Condition 8.a. 40 CFR 82, Subpart F **Ozone Depleting Substances- Refrigeration Equipment**	Facility	Comply with standards for recycling and emissions reductions pursuant to 40 CFR 82, Subpart F.	See method discussion 8.a	Procedures used to manage maintenance of refrigeration equipment containing ODS
NA	Section G. Condition 8.b. 40 CFR 82, Subpart F **Ozone Depleting Substances- Servicing of Motor Vehicle ACs**	Facility	Comply with requirements pursuant to 40 CFR 82, Subpart B for servicing of motor vehicle air conditioners.	See method discussion 8.b	Procedures used to manage maintenance of motor vehicle air conditioners.
NA	Section G. Condition 9.a. 401 KAR 68 **Risk Management Provisions**	Facility	Comply with all requirements of 401 KAR 68, Chemical Accident Prevention. If required submit a Risk Management Plan to the RMP Reporting Center.	See method discussion 9.a	Review of Risk Management Plant records and correspondence.
NA	Section G. Condition 9.b. 401 KAR 68 **Risk Management Provisions**	Facility	If requested, submit additional relevant information to the Division or U.S. EPA.	See method discussion 9.b	Review of Risk Management Plant records and correspondence.

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Subject to Future Compliance Dates

10b) Emission Units Subject to Future Compliance Dates. *The following emission units will achieve compliance on a timely basis and maintain compliance with future compliance dates as they become applicable during the permit term. If additional space is required, reproduce this page as needed.*

Emission Unit Permit ID#	Future Compliance Schedule	Emission Unit Description	Reason for Future Compliance Date
No future compliance dates for existing emissions units.			

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Not in Continuous Compliance

10c)(1) Emission Units Not in Continuous Compliance. *The following emission units were not in continuous compliance with each permit term or condition and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or Requirement	Actual Emissions or Status of Requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data *(such as test methods, monitoring procedures, recordkeeping and reporting)*
005 (P-9a)	Section B, Condition 1 f(2)(v) 40 CFR 63.1506(g) **Lime Injection Rate Limit**	Dedicating and Holding Furnaces	Maintain free-flowing lime in the hopper to feed device at all times and maintain lime feeder settings at or above level established in performance test	See method discussion 1 f(i)	Novelis monitors lime flow at rate from most recent performance test in PI as identified in current OM&M
005 (P-9a & P-9b)	Section E, Condition 1 401 KAR 50:055 **Source Control Equipment Requirements**	Factory	At all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source	See method discussion 1	All monitoring records, opacity observations, visible emissions qualifications, maintenance and inspection records, etc. are maintained on site for 5 years and are available for review upon request

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Not in Continuous Compliance (continued)

10c)(2) Emission Units Not in Continuous Compliance. *For the emission units and requirements listed in 10c)(1) that were not in continuous compliance since the last reporting period, state the duration, magnitude, and reason or reasons for non-compliance. Each row of 10c)(2) must relate to the corresponding row of 10c)(1). If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID=	Description of duration, magnitude, and reason(s) for non-compliance and corrective steps taken or planned
005 {P-9a} Section B, Condition 1.f.(2)(iv) 40 CFR 63.1506(g) Lime Injection Rate Limit Section E, Condition 1. 401 KAR 50:055 Source Control Equipment Requirements	On 8/13/19 at 8:00 PM, the lime slurry flow to the Line 1 AGRS (Stack P-9a) was disrupted due to a clog in the system triggering an automated shutdown of the Line 1 AGRS control system to protect the equipment and prevent unsafe operating conditions. The process control system automatically cut scrap feed to the Line 1 weigh belt to stop feed to the Decoater Furnace #1. During the event residual SMACT regulated emissions from the remaining material in the decoater had the potential to be discharged from the decoater emergency bypass stack without the benefit of control offered by the Line 1 AGRS control system. Power was restored to the system at 11:34 PM (total duration 3 hours 34 minutes) as soon as the cause of the problem was detected.
005 {P-9b} Section E, Condition 1. 401 KAR 50:055 Source Control Equipment Requirements	On 12/7/19 at 5:35 AM, the Stack P-9b AGRS control system automatically shutdown due to a low inlet temperature outside of the permitted range to protect the equipment and prevent unsafe operating conditions. The malfunction was caused by a damper failure between winter / summer mode resulting in too much cold air entering the AGRS system. The process control system automatically cut scrap feed to the Line 2 weigh belt to stop feed to the Decoater Furnace #2. During the event, residual SMACT regulated emissions from the remaining material in the decoater had the potential to be discharged from the decoater emergency bypass stack without the benefit of control offered by the Line 1 AGRS control system. As immediate containment actions for the unplanned AGRS shutdown, observations and checks were conducted on the AGRS system. Dampers were set accordingly, and the system was restarted at 9:04 AM (total duration of 3 hours and 29 minutes). Observation of stack for visible emissions was conducted during the incident. Semiannual inspection of winter / summer damper have been added to SAP enterprise software to prevent a similar occurrence in the future.

Emission Unit/Permit ID#	Description of duration, magnitude, and reason(s) for non-compliance and corrective steps taken or planned
005 (P-9b) Section E. Condition 1. 401 KAR 50:055 Source Control Equipment Requirements	On 12/20/19 at 9:46 PM, the Stack P-9b AGRS control system automatically shutdown due to a low inlet temperature outside of the permitted range to protect the equipment and prevent unsafe operating conditions. The malfunction was caused by a failed thermo-coupler device resulting in in-accurate temperature readings, shutting down the system. The process control system automatically cut scrap feed to the Line 2 weigh belt to stop feed to the Decoater Furnace #2. During the event, residual SMACT regulated emissions from the remaining material in the decoater had the potential to be discharged from the decoater emergency bypass stack without the benefit of control offered by the Line 1 AGRS control system. As immediate containment actions for the unplanned AGRS shutdown, observations and checks were conducted on the AGRS system. Failed thermos-coupler was replaced, and the system was restarted at 11:38 PM (total duration of 1 hours and 52 minutes). Observation of stack for visible emissions was conducted upon restart. Semiannual inspection of thermo-couplers added to SAP enterprise software to prevent a similar occurrence in the future.

Section CC.4: Notes, Comments, and Explanations

Notes and Clarifications:

1. Text provided in the "Permit Limit" column is only intended to be a paraphrase of the actual limit or requirement for readability and reference. Refer to the permit condition for the official limit or requirement.
2. The compliance status for all requirements listed is "Continuous Compliance" unless otherwise noted. Any conditions for which compliance is not continuous are listed in Section CC.3.10c)(1) and (2).
3. The compliance method for all requirements listed is "Intermittent" unless otherwise noted.