

Prevention of Significant Deterioration

Preliminary Determination

Facility No.: 501-0052

June 10, 2026

TABLE OF CONTENTS

1.0 PSD Permitting History	1
2.0 As-Built PSD Reconciliation Application	2
3.0 Summary of Reconciliation Changes	2
4.0 Potential Emissions Summary	3
5.0 Best Available Control Technology (BACT) Summary	3
6.0 Scrap Processing Area	4
6.1 Flex Line #1 & #2	4
6.1.1 Equipment Changes	4
6.1.2 Emission Changes	4
6.1.3 BACT	5
6.1.4 Proposed PSD Permit Modifications	6
7.0 Melting and Casting Area	6
7.0.1 Equipment Changes – Summary	7
7.1 Decoaters	7
7.1.1 Equipment Changes	7
7.1.2 Emission Changes	7
7.1.3 BACT	8
7.1.4 Proposed PSD Permit Modifications	10
7.2 Sidewell Melting Furnaces	10
7.2.1 Equipment Changes	10
7.2.2 Emission Changes	10
7.2.3 BACT	11
7.2.4 Proposed PSD Permit Modifications	12
7.3 Novelis Dual Chamber (NDC) Recycle Furnace	12
7.3.1 Equipment Changes	12
7.3.2 Emission Changes	12
7.3.3 BACT	13
7.3.4 Proposed PSD Permit Modifications	14
7.4 Round Top Melting Furnaces	14
7.4.1 Equipment Changes	15
7.4.2 Emissions Changes	15
7.4.3 BACT	15
7.4.4 Proposed PSD Permit Modifications	16

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

7.5 Holding Furnaces	16
7.5.1 Equipment Changes	17
7.5.2 Emissions Changes	17
7.5.3 BACT	17
7.5.4 Proposed PSD Permit Modifications	19
7.6 In-Line Degassers	19
7.6.1 Equipment Changes	19
7.6.2 Emission Changes	19
7.6.3 BACT	20
7.6.4 Proposed PSD Permit Modifications	20
7.7 Sow Dryers	21
7.7.1 Equipment Changes	21
7.7.2 Emission Changes	21
7.7.3 BACT	22
7.7.4 Proposed PSD Permit Modifications	23
7.8 Dross Handling and Storage	24
7.8.1 Equipment Changes	24
7.8.2 Emissions Changes	24
7.8.3 BACT	25
7.8.4 Proposed PSD Permit Modifications	26
7.9 Molten Metal Transfer and Casting	26
7.9.1 Equipment Changes	27
7.9.2 Emissions Changes	27
7.9.3 BACT	27
7.9.4 Proposed PSD Permit Modifications	27
7.10 Melting and Casting Ingot Saw	27
7.10.1 Equipment Changes	28
7.10.2 Emission Changes	28
7.10.3 BACT	28
7.10.4 Proposed PSD Permit Modifications	29
8.0 Hot Rolling Area.....	29
8.0.1 Equipment Change Summary.....	29
8.0.2 BACT Summary.....	30
8.1 Ingot Scalper	30

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

8.1.1 Equipment Changes	30
8.1.2 Emission Changes	30
8.1.3 BACT	31
8.1.4 Proposed PSD Permit Modifications	31
8.2 Scalper Chip Handling System Pneumatic Conveyor	31
8.2.1 Equipment Changes	32
8.2.2 Emission Changes	32
8.2.3 BACT	32
8.2.4 Proposed PSD Permit Modifications	32
8.3 Pusher Furnaces #1 - #3	33
8.3.1 Equipment Changes	33
8.3.2 Emissions Changes	33
8.3.3 BACT	33
8.3.4 Proposed PSD Permit Modifications	34
8.4 Hot Rolling Mill – Reversing Mill and Finishing Mill	34
8.4.1 Equipment Changes	34
8.4.2 Emissions Changes	34
8.4.3 BACT	34
8.4.4 Proposed PSD Permit Modifications	35
9.0 Cold Rolling Area	35
9.1 Tandem Cold Mill #1	35
9.1.1 Equipment Changes	36
9.1.2 Emission Changes	36
9.1.3 BACT	36
9.1.4 Proposed PSD Permit Modifications	37
10.0 Coil Finishing Area	37
10.1 Tension Leveler	37
10.1.1 Equipment Changes	38
10.1.2 Emission Changes	38
10.1.3 BACT	39
10.1.4 Proposed PSD Permit Modifications	39
10.2 Alkaline Cleaning Line	40
10.2.1 Equipment Changes	40
10.2.2 Emission Changes	40

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

10.2.3 BACT	40
10.2.4 Proposed PSD Permit Modifications	41
10.3 Coating Line #1	41
10.3.1 Equipment Changes	41
10.3.2 Emission Changes	41
10.3.3 BACT	42
10.3.4 Proposed PSD Permit Modifications	43
10.4 Edge Trimmer	44
10.4.1 Equipment Changes	44
10.4.2 Emissions Changes	45
10.4.3 BACT	45
10.4.4 New Source Performance Standards (NSPS)	47
10.4.5 National Emission Standards for Hazardous Air Pollutants (NESHAP)	48
10.4.6 CAM	48
11.0 Auxiliary Systems	49
11.0.1 Removal of As-Permitted Equipment	49
11.0.2 Addition of New Emission Units	49
11.0.3 BACT	49
11.1 Hot Water Boilers #1 - #3 X019-Void	50
11.2 Cooling Towers	50
11.2.1 Equipment Changes	50
11.2.2 Emissions Changes	50
11.2.3 BACT	50
11.2.4 Proposed PSD Permit Modifications	51
11.3 Emergency Engines	51
11.3.1 Emergency Generator Engines	51
11.3.2 BACT	52
11.3.3 Proposed PSD Permit Modifications	52
11.4 Fire Pump Engines	52
11.4.1 Equipment Changes	53
11.4.2 Emission Changes	53
11.4.3 BACT	53
11.4.4 Proposed PSD Permit Modifications	53
11.6 Fugitive Dust	54

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

11.6.1 Haul Roads & Lime/Sorbent Silos	54
11.6.2 Emissions.....	54
11.6.3 BACT.....	54
11.6.4 Proposed PSD Permit Changes	54
11.7 Building Heating Systems.....	54
11.7.1 Emissions.....	55
11.7.2 BACT.....	56
11.7.3 Compliance Assurance Monitoring (CAM)	58
11.7.4 Proposed PSD Permit.....	59
12.0 Process Support Auxiliary Systems Sources.....	59
12.1 Summary of Changes	59
12.2 New Sources.....	59
12.3 BACT.....	60
13.0 Air Quality Analysis	60
13.1 Summary.....	60
13.2 Area Classifications	61
13.3 Additional Impact Areas.....	62
13.3.1 Growth	62
13.3.2 Soils and Vegetation	62
13.2.3 Visibility Impairment	62
14.0 Recommendation	62
Attachment A.....	A
Air Quality Analysis	A
Attachment B	B
Proposed Permit Provisos.....	B

1.0 PSD PERMITTING HISTORY

On August 25, 2022, Novelis Corporation submitted an air permit application for a new integrated aluminum rolling mill and melting and casting area to be located within Baldwin County's South Alabama Mega Site at 49700 Alabama Highway 287, Bay Minette, Alabama. A revision to the application was received on November 30, 2022.

The application proposed an integrated mill consisting of four scrap processing/shredding lines, three decoaters or delacquering kilns, eight melting furnaces (two of which are clean charge), four refining furnaces and associated in-line fluxers (degassers), three casting pits, ingot prep saws and scalping operations, three reheat or pusher furnaces, one single-stand hot reversing mill, one 4-stand hot finishing mill, one 2-stand cold tandem mill, coating line and associates processes, three hot water boilers, cooling towers, emergency engines and several insignificant sources including lime silos and assorted storage tanks.

As presented, the new facility was determined to be a new major source with respect to PSD (ADEM Admin. Code r. 335-3-14-.04) since the potential emissions of particulate matter (PM), Nitrogen Oxides (NO_x), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) would be above the 100 tons per year (TPY) major stationary source thresholds listed in ADEM Admin. Code r. 335-3-14-.04(a). As a major source, the project is also subject to significant emission rate thresholds of ADEM Admin. Code r. 335-3-14-.04(w); accordingly, the proposed mill is also a major source of PM less than 10 microns (PM₁₀), PM less than 2.5 microns (PM_{2.5}) and greenhouse gases (as CO_{2e}).

PSD regulations were designed to limit pollutant concentration increases in areas that are cleaner than the National Ambient Air Quality Standards (NAAQS). The regulations establish increments that set ceilings on the amount of increased ambient pollutant concentrations that will be allowed in a PSD area. Sources subject to PSD regulations must comply with specific pre-construction review requirements.

A major source or major modification under PSD review must be constructed with Best Available Control Technology (BACT). Novelis included their BACT analysis in their application. In addition, the effects on soils, vegetation, visibility, and ambient air quality were addressed for each applicable pollutant.

Based on Novelis' application and BACT determination, on December 22, 2022, ADEM drafted a PSD Preliminary Determination of the proposed Novelis sources. The Preliminary Determination discusses each source at the Novelis facility, the BACT determination for each source and presents applicable regulations each source is subject too. Based on the Preliminary Determination, draft air permits were developed. A 30-day public comment period for the Department's Preliminary Determination and draft air permits was held from December 28, 2022, until January 27, 2023. During the comment period, copies of the Preliminary Determination, the draft air permits, the air permit application and related correspondence with Novelis were made available for public review.

On February 3, 2023, a Final Determination was issued which included comments on the Preliminary Determination received from EPA Region 4, the Department's responses

to comments and final draft air permits for the Novelis facility. Air Permits 501-0052-X001 through X022 were issued to Novelis.

2.0 AS-BUILT PSD RECONCILIATION APPLICATION

Construction of the Novelis facility commenced after the initial PSD permits were issued on February 3, 2023. As a result of the final engineering design and construction process, certain changes were made to the original equipment configuration and design specifications. As such on November 25, 2025, as revised on April 3, 2026, and May 8, 2026, Novelis submitted an As-Built Reconciliation PSD application to the Department for review.

The As-Built Reconciliation application was submitted to address project changes and facilitate issuance of revised air permits for the Bay Minette facility. The application reconciled engineering design details and operating details contained in the initial PSD permit application to the as-built project configuration. The As-Built Reconciliation application includes changes in the project equipment scope, evaluation of new sources, re-evaluation of various regulatory applicability determinations from the original application, updated emission calculations and a revised PSD applicability summary.

3.0 SUMMARY OF RECONCILIATION CHANGES

Changes made as a result of new sources, project scope, engineering design and construction constraints can affect emission rates from sources and various other parameters evaluated as part of the initial PSD application. These changes can affect the determination made by the Department as they relate to emission limits and BACT limits presented in the initial permits, the results of ambient air modeling results, as well as nomenclature and designation of new sources and those sources previously permitted.

The details of each change were submitted in the As-Built Reconciliation application and will not be extensively addressed as part of this evaluation; however, it should be noted that changes evaluated are summarized, and any significant change that either affects a BACT limit or a re-evaluation of ambient air modeling results have been included. Novelis notes that no new updates to the RBLC have been made since the original determination was made.

Physical location and structural changes, including building and emission unit locations, size, and configuration, from the as-permitted estimates are addressed in the Modeling Results section.

Changes that are addressed in this evaluation can be characterized in three general categories: equipment (emission source or control device) addition/removal from those previously identified; emission modifications due to changes in design or process parameters; and as-built construction changes that resulted in modification to emission rates and or BACT limits of the associated with the process equipment.

Naming or identification of emission sources will be presented but generally not discussed unless the physical location or naming convention is associated with a change

that affects the emission rate, BACT limit and/or the ambient air modeling results. The nomenclature changes will be updated in the associated draft as-built air permits as necessary.

This preliminary determination is organized in such a way that generally follows the production process through the facility.

4.0 POTENTIAL EMISSIONS SUMMARY

Based on the as-built reconciliation application the overall proposed project emissions decreased from the initial application estimation. PM_{filterable}, PM₁₀, PM_{2.5}, NO_x, CO, SO₂, Pb (lead), and GHG (as CO₂e) were reduced from the original application estimates. Only VOCs increased as a result of the as-built configuration of the facility. Novelis noted that the main increase in VOC emissions was a result of an accounting error discovered in the initial application for the tandem cold mill which resulted in an increase of VOCs by an estimated 31.5 TPY of the estimated total 47.5 TPY increase in VOCs from the as-permitted estimates. The overall as-built Potential to Emit (PTE) as compared to the as-permitted PTE are presented below.

Facility Wide As-Permitted vs As-Built PTE (TPY)			
Pollutant	As-Permitted PTE	As-Built PTE	Change
PM	249.62	246.94	-2.68
PM ₁₀	384.85	383.22	-1.63
PM _{2.5}	326.34	326.06	-0.28
NO _x	723.81	698.62	-25.19
CO	666.62	605.54	-61.08
VOC	617.26	664.73	47.47
SO ₂	2.94	2.63	-0.30
Pb (Lead)	1.27x10 ⁻⁰²	1.16x10 ⁻⁰²	-1.11x10 ⁻⁰³
GHG (as CO ₂ e)	726,601	660,908	-65,693

Table 1: Facility Wide PTE

5.0 BEST AVAILABLE CONTROL TECHNOLOGY (BACT) SUMMARY

Novelis completed a top-down BACT analysis for NSR regulated pollutants as part of the original PSD permitting process for all emission sources at the Novelis, Bay Minette facility. Novelis notes in the reconciliation application that most of the proposed BACT limit changes are a function of as-built updates to process equipment and control devices specifications and not an underlying change to the emission calculation methodology or reference emission factors that were applied in the original evaluation. Additionally, the GHG warming potentials for CH₄ and N₂O were adjusted to the new 89 FR 31894, April 25, 2024, requirements for each emission source as appropriate.

In instances where new sources of emissions were added as a result of the as-built configuration Novelis completed a top-down BACT analysis for NSR regulated pollutants and consideration of the BACT analysis for the underlying sources was made.

In instances where a BACT limit is being updated to reflect minor as-built design specification changes, the prior top-down BACT analyses presented in the original PSD permit application are still applicable and do not require an updated BACT determination. Conversely, in instances where an as-built potential emission calculation change has resulted in a substantive regulated NSR pollutant emission factor increase not related to process rate and control device flow capacity changes, reconsideration of the original BACT determination was made.

Novelis has confirmed that no more recent RBLC entries for the secondary aluminum sector meeting the original search criteria of the original PSD application have been posted, and thus, Novelis' proposed BACT limits after the as-built changes continue to reflect determinations for similar operations.

6.0 SCRAP PROCESSING AREA

6.1 Flex Line #1 & #2

Scrap Processing includes two lines, the Flex line and CBS line. In addition to shredding that occurs on the scrap processing lines, the flex line also includes a sorting line. Primary emissions from the Scrap Processing area include PM. The final as-built configuration of the Scrap Processing Lines is as follows:

1. X001 – Flex Line
Scrap Processing Line #1 (SP-01) vented to Cold Baghouse #1 (CBH1)
Scrap Sorting Line #1 (SP-05) vented to Cold Baghouse #4 (CBH4)
2. X002 – CBS Line
Scrap Processing Line #2 (UBC) (SP-02) vented to Cold Baghouse #2 (CBH2)
Scrap Processing Line #3 (Class 1 & 3) (SP-03) vented to Cold Baghouse #3 (CBH3)

6.1.1 Equipment Changes

Novelis made the following equipment changes to the scrap processing area as a result of the as-built configuration:

1. Removal of Scrap Processing Line #4 (LIBS Line).
2. Removal of Scrap Sorting Line #5 (Flex Line) Baghouse (CBH5).

6.1.2 Emission Changes

Potential emissions that changed from the as-permitted estimates to the as-built estimates are summarized below. Changes in potential emissions estimates were the result of changes to the emission unit material throughput based on vendor design parameters for both the emission unit and control devices, and removal of the Libs Process line #4. The designed flow capacity of the Cold Baghouses changed for Cold Baghouses #1, #2, #3, and #4. and the designed aluminum production capacity for Scrap Processing Line #3 increased, in the as-built configuration. Emission parameters utilized to estimate emissions such as control device grain loading and control efficiency of the control devices remain unchanged.

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

Overall throughput to the shredding lines was estimated to be approximately 870,840 TPY. However, the individual throughput to each line was balanced. Hourly PM/PM₁₀/PM_{2.5} emission rates increased for each Scrap Processing Line; however, by reducing the throughput rates (tons/hr) for these sources, annual emissions from each line except Line 3 were reduced.

6.1.3 BACT

Novelis states the top-down BACT analyses presented in the original PSD application continues to apply to the as-built configuration of the Scrap Processing Area with no necessary changes or updates to reflect the relatively minor changes to equipment process rates and baghouse flow capacities.

The previous BACT analysis for these processes identified fabric filter baghouses as the most effective control devices for filterable PM emissions arising from material shredding and handling. No changes to the control devices have been proposed by Novelis based on the as-built configuration.

Novelis has suggested the following changes be made to the as-permitted BACT limits associated with the as-built Scrap Processing lines.

EU Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As- Built (lb/ton)	As-Built (lb/hr)
SP Line #1	SP-01	CBH1	PM _{filterable}	0.17	5.66
			PM ₁₀	0.087	2.89
			PM _{2.5}	0.026	0.85
SP Line #2	SP-02	CBH2	PM _{filterable}	0.16	5.31
			PM ₁₀	0.082	2.71
			PM _{2.5}	0.024	0.80
SP Line #3	SP-03	CBH3	PM _{filterable}	0.063	2.71
			PM ₁₀	0.032	1.06
			PM _{2.5}	0.0094	0.31
SS Line #1	SP-05	CBH4	PM _{filterable}	0.057	1.89
			PM ₁₀	0.029	0.96
			PM _{2.5}	0.0086	0.28

Table 2: Proposed PM/PM₁₀/PM_{2.5} BACT Limit Changes

Novelis proposes that the top-down analysis from original analysis is still applicable to the as-built configuration, with changes or updates made to reflect the changes to equipment process rates and baghouse flow capacities and thus the unit-specific emission limits. The associated grain loading control device design (0.002 gr/dscf) still applies and remains unchanged and is more stringent than RACT/BACT/LAER clearinghouse (RBLCL) database entries identified.

The Department's review of the RBLCL database indicated that the emissions from the Scrap Processing Lines have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLCL) database, as specified above. The Department accepts the proposed as-built BACT emission rate limits proposed.

6.1.4 Proposed PSD Permit Modifications

The following Air Permit (X001 & X002) modifications will be required as a result of the as-built configuration changes made.

- Remove all references to Scrap Processing Line #4 (SP-04) from X001
- Replace all references to Cold Baghouse #5 serving Scrap Sorting Line #1 (SP-05)
- Update all PM/PM₁₀/PM_{2.5} hourly BACT limits (lb/hr)
- Update all Aluminum production rates (lb/ton) emission limits established as supporting limits for the Proposed BACT limits.

7.0 MELTING AND CASTING AREA

The Melting and Casting Area as-built configuration includes the following units. The unit identifiers that changed are included in italicized red print after the new identifier:

1. X003 – Flexline
Decoater #3 (#1) (MC-01) with Afterburner with Hot Baghouse #1 (HBH1)
2. X004 – CBS Line
Decoater #2 (MC-02) with Afterburner & Dross House (MC-21) with Hot Baghouse #2 (HBH2)
3. X005 – CBS Line
Decoater #1 (#3) (MC-03) with Afterburner & Hot Baghouse #3 (HBH3)
4. X006 – Flex Line
Sidewell Melting Furnaces #5 (#1) and #4 (#2) (MC-04 and MC-05) with Hot Baghouse #4 (HBH4)
Sow Dryer #2 (#1) (MC-19)
5. X007 – CBS Line
Sidewell Melting Furnaces #2 (#3) and #1 (#4) (MC-06 and MC-07) with Hot Baghouse #5 (HBH5)
Sow Dryer #1 (#2) (MC-20)
6. X008 – CBS Line
Sidewell Melting Furnace #3 (#5) (MC-08), Holding Furnace #2 (#4) (MC-14) (MC-15), In-Line Degasser #2 (#3) (MC-17) (MC-18), with Hot Baghouse #6 (HBH6)
Dross Presses #1 (#3 and #4) (MC-24) (MC-24 and MC-25) with New Dross Press Filtration Unit #1 (DBH2)
7. X009 – Flex Line
Novelis Dual Chamber (NDC) Recycle Furnace #1 (MC-09), Holding Furnace #3 (#1) (MC-13) (MC-12), In-Line Degasser #3 (#1)[shared with X010] (MC-33) (MC-16), with Hot Baghouse #7 (HBH7)
New Dross Presses #2 (#1 and #2) (MC-22) (MC-22 & MC-23) with Dross Press Filtration Unit #2 (DBH1)
8. X010 – Flex Line

- Round Top Furnace #2 (**#1**) (MC-10), Holding Furnace #4 (**#2**) (MA-12) (**MC-13**), New Inline Degasser #4 (**#1**) *][shared with X009]* (MC-16) with Hot Baghouse #8 (HBH8)
9. X011 – CBS Line
Round Top Furnace #1 (**#2**) (MC-11), Holding Furnace #1 (**#3**) (MC-15) (**MC-14**), In-Line degasser #1 (**#2**) (MC-18) (**MC-17**) and Hot Baghouse #9 (HBH9)
- 10.X012 – Melting & Casting Ingot Saw (MC-32) With Filtration Unit #1 (FLT1) *Four (4) Hot Rolling Ingot Saws (HR-01) with Filtration Units #2 and #3 (FLT2/3) eliminated.*

7.0.1 Equipment Changes – Summary

The following equipment changes to the Melting and Casting Area have been proposed by Novelis in the Reconciliation Application:

1. Hot Bag House Changes - The overall number (9) and connections to the Hot Baghouses have not changed. However, Hot Baghouses #6 to #9 with one melting furnace and one holding furnace have a different configuration from the as-permitted arrangement.
2. Dross Press Changes – Novelis Removed two Dross Presses from the scope of project and emissions are now discharged to integral filtration units that vent inside the Melting and Casting area production building, instead of emitting to Hot Baghouse #2 or #3.
3. Installation of a 4th Casting Pit (second casting pit on the Flex Line) including a ceramic foam filter (CFF) and deep bed filter (DBF) with associated natural gas-fired preheating system on each casting line.
4. The Ingot Saw was redesigned from a continuously operating production unit with high short-term throughput capability to a batch process used solely for material handling of rejected ingots.

7.1 Decoaters

The final as-built configuration of the decoaters is noted below:

1. X003 - Decoater #3 (EU ID MC01), emissions from Decoater #3 and the flex line hot scrap conveyor are routed to Hot Baghouse #1 (HBH1).
2. X004 - Decoater #2 (EU ID MC02), emissions from Decoater #2 and the Dross house (MC-21) are routed to Hot Baghouse #2 (HBH2)
3. X005 - Decoater #1 (EU ID MC03), emissions from Decoater #1 and from CBS Lines 1 & 2 hot scrap conveyors are routed to Hot Baghouse #3 (HBH3)

7.1.1 Equipment Changes

Three decoaters were originally proposed and previously permitted. The reconciliation application still proposes three decoaters.

7.1.2 Emission Changes

The as-built configuration of the decoaters included changes to the aluminum throughput to the decoaters and baghouse flow capacity associated with the decoaters.

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

Filterable PM emissions increased in the as-built configuration. PM₁₀, PM_{2.5}, NO_x, CO, VOC, GHG, and total HAPs decreased.

Each decoater has the operational flexibility to operate in either the primary decoating mode or the secondary drying mode. The primary decoating mode represents the worst-case emissions profile; as such, Novelis utilized hourly and annual potential emission rates and associated BACT limits based on the regulated pollutant emissions profiles associated with the primary decoating mode.

Novelis modified each decoater's annual Natural gas throughput capacity (+1.8 MMscf/y). Adjustments to the nominal stack temperature and minimum nominal moisture content used in the derivation of the dry standard volumetric flow rate (dscfm) for the associated Hot Baghouses have been made to reflect the final engineering design basis for the associated capture and collection systems and engineering estimates for the expected properties of the collected exhaust streams.

The as-built design specification changes resulted in increases in PM, PM₁₀, PM_{2.5} emission factors utilized to calculate PM PTE from the decoaters. In addition, the lb-lead (Pb)/ton and the lb-Metal HAP/ton emission factors were normalized to the PM emitted. No changes were made to the emission factors for HCL, D/F, NO_x, CO, VOC, and GHG.

7.1.3 BACT

Changes to the throughput rates and baghouse flow capacity and assumed operating conditions contribute to changes in regulated NSR pollutants and HAP emission rates from the decoaters. As such, Novelis has suggested the following changes be made to the as-permitted BACT emission limits associated with the as-built decoater lines:

PM

EU Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
Decoater #3	MC-01	HBH1	PM _{filterable} ¹	0.059	1.62
			PM ₁₀	0.194	5.36
			PM _{2.5}	0.188	5.19
Decoater #2	MC-02	HBH2	PM _{filterable} ¹	0.035	0.96
			PM ₁₀	0.173	4.76
			PM _{2.5}	0.169	4.66
Decoater #1	MC-03	HBH3	PM _{filterable} ¹	0.061	1.69
			PM ₁₀	0.197	5.42
			PM _{2.5}	0.191	5.52

¹PM_{filterable}- Subpart RRR limit

Table 4: Decoater PM BACT Limit Changes

The BACT analysis from the as-permitted application selected fabric filter as BACT for PM emissions from the decoaters, which are also subject to the standards found in 40 CFR Part 63, Subpart RRR. Additionally, in the PSD Determination, the Department imposed a filterable PM BACT limit of 0.002 gr/dscf at the outlet of each baghouse. These limits have not changed as a result of the as-built configuration.

NO_x

EU Description	EU ID		Pollutant	BACT Emission Limits

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

		Control Device		As-Built (l/ton)	As-Built (lb/hr)
Decoater #3	MC-01	HBH1	NOx	0.32	8.82
Decoater #2	MC-02	HBH2			
Decoater #1	MC-03	HBH3			

Table 5: Decoater NOx BACT Limit Changes

The BACT analysis from the as-permitted application selected cold-air low-NOx burners and GCOP as BACT for NOx emissions from the decoaters. The basis for the as-permitted emission rate did not change as a result of the as-built changes made.

CO

EU Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Perm (lb/ton)	As-Built (lb/hr)
Decoater #3	MC-01	HBH1	CO	0.24	7.78
Decoater #2	MC-02	HBH2			
Decoater #1	MC-03	HBH3			

Table 6: CO BACT Limit Changes

The BACT analysis from the as-permitted application selected integral afterburners as a form of thermal oxidization. Novelis' proposed a reduction of the required CO BACT limit from 0.28 lb/ton to 0.24 lb/ton in their reconciliation application.

VOC

EU Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Perm (lb/ton)	As-Built (lb/hr)
Decoater #3	MC-01	HBH1	VOC	0.17	4.69
Decoater #2	MC-02	HBH2			
Decoater #1	MC-03	HBH3			

Table 7: VOC BACT Limit Changes

In the initial PSD application, Novelis did not include the VOC emissions contributions from natural gas combustion. This was addressed in the reconciliation application and as such, an increase in the as-built VOC BACT limit, from 0.16 lb-VOC/ton to 0.17 lb-VOC/ton, was proposed.

CO₂e

EU Description	EU ID	Control Device	Pollutant	As-Built BACT Emission Limits (GHG TPY)
Decoater #3	MC-01	HBH1	GHG	52,290
Decoater #2	MC-02	HBH2		
Decoater #1	MC-03	HBH3		

Table 8: GHG BACT Limit Changes

The overall reduction in throughput and increased flow capacities to the hot baghouses and the updated global warming potential rates resulted in lower GHG emissions; as such, the GHG BACT limits were reduced to reflect the changes made.

The Department's review of the RBLC database indicated that the emissions from decoaters have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.1.4 Proposed PSD Permit Modifications

The following Air Permit (X003, X004, & X005) modifications will be required as a result of the as-built configuration changes made.

- Update numbering for Decoaters #1-#3 to match the as-built nomenclature on the cover pages and in the unit-specific provisos of each affected air permit.
- Update all Decoater BACT limits proposed by Novelis and the corresponding aluminum process rate normalized emission limits.

7.2 Sidewell Melting Furnaces

Five sidewell melting furnaces are used to melt the prepared aluminum from the Flex and CBS lines. The final configurations of the sidewell melting furnaces are described below:

1. X006 Sidwell Melting Furnace #4 (EU MC-05) (Flex Line)
 - a. Emissions are routed to Hot Baghouse #4 (HBH4)
2. X006 Sidwell Melting Furnace #5 (EU MC-04) (Flex Line)
 - a. Emissions are routed to Hot Baghouse #4 (HBH4)
3. X007 Sidwell Melting Furnace #1 (EU MC-07) (CBS Line)
 - a. Emissions are routed to Hot Baghouse #5 (HBH5)
4. X007 Sidwell Melting Furnace #2 (EU MC-06) (CBS Line)
 - a. Emissions are routed to Hot Baghouse #5 (HBH5)
5. X008 Sidwell Melting Furnace #3 (EU MC-08) (CBS Line)
 - a. Emissions are routed to Hot Baghouse #6 (HBH6)

7.2.1 Equipment Changes

Five (5) Sidewell Melting Furnaces were originally proposed and previously permitted. The reconciliation application still proposes five sidewell melting furnaces.

7.2.2 Emission Changes

Per Novelis, changes in Hot Baghouse #4 and #5 flow capacities produce corresponding reductions in the filterable PM emissions from all Sidewell Melting Furnaces. Due to a redistribution of the overall baghouse flow capacity between Sidewell Melting Furnace #3 and Holding Furnace #2 associated with Hot Baghouse #6, Sidewell Melting Furnace #3 shows a filterable PM emissions decrease compared to the other melting furnaces routed to Hot Baghouses #4 and #5. The NO_x and CO emission factors for natural gas combustion for the Sidewell Melting Furnaces decreased for NO_x and for CO based on the final burner performance specifications. All other emission factors and emission calculation methodologies for the Sidewell Melting Furnaces remain unchanged from the original PSD application.

No maximum hourly aluminum throughput changes were made as result of the as-built construction. The maximum natural gas burner heat input and the natural gas usage for each furnace remained unchanged as well.

The changes to the designed control device flow capacities resulted in increases in PM, PM₁₀, PM_{2.5} emission factors utilized to calculate PTE from the Sidewell Melting Furnaces. In addition, the lb-lead (Pb)/ton and the lb-Metal HAP/ton emission factors

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

were normalized to the PM emitted. No changes were made to the emission factors for HCL, D/F, NO_x, CO, VOC, and GHG.

7.2.3 BACT

Changes to the proposed BACT limits for the sidewell melting furnaces are a result of the as-built updates to the process equipment and control device specifications and the redistribution of flow capacities to the Hot Baghouses. As such, the BACT limits are being updated to reflect as-built design specification changes.

Novelis has requested the following changes to the PM BACT Limits.

PM

Sidewell Melting Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#5	MC-04	HBH4	PM _{filterable}	0.049	1.18
#4	MC-05		PM ₁₀	0.160	3.89
#2	MC-06	HBH5	PM _{2.5}	0.143	3.47
#1	MC-07		PM _{filterable}	0.046	1.11
#3	MC-08	HBH6	PM ₁₀	0.158	3.84
			PM _{2.5}	0.142	3.45

Table 9: Sidewell Melting Furnace PM BACT Limit Changes

The as-built emission factors (lb/ton) for PM, PM₁₀, and PM_{2.5} increased as a result of the changes proposed for Sidewell Melting furnaces 1, 2, 4, & 5. The as-built emission factors (lb/ton) for PM, PM₁₀, and PM_{2.5} decreased as a result of the changes proposed for Sidewell Melting furnaces 3.

The BACT analysis from the as-permitted application selected lime-injected fabric filter baghouses as BACT for PM emissions from the sidewell melting furnaces, which are also subject to an emission standard in 40 CFR Part 63, Subpart RRR. Additionally, the Department imposed filterable PM BACT limit of 0.002 gr/dscf at the outlet of each baghouse has not changed as a result of the as-built configuration.

CO

Based on the vendor specifications for final burner performance, Novelis proposed a minor reduction of the lb/ton emission factors for CO. Novelis has requested the following CO BACT Limit changes to reflect the changes made:

Sidewell Melting Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#5	MC-04	HBH4	CO	0.34	8.26
#4	MC-05				
#2	MC-06	HBH5			
#1	MC-07				
#3	MC-08	HBH6			

Table 10: Sidewell Melting Furnace CO BACT Limit Changes

The BACT analysis from the as-permitted application selected GCOP as BACT for CO emissions from the sidewell melting furnaces. As stated in the Preliminary Determination, the proposed CO BACT limits for the sidewell furnaces are higher than those found in the RBLC for other units, as the proposed BACT limits were derived from 95% UPL analyses of the results of stack tests at a similar facility. However, as a result of the as-built configuration, Novelis has proposed to reduce the (lb-CO/ton) emission limits.

The Department's review of the RBLC database indicated that the emissions from the Sidewell Melting Furnaces have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.2.4 Proposed PSD Permit Modifications

The following Air Permit (X006, X007, & X008) modifications will be required as a result of the as-built configuration changes made:

- Update numbering for Sidewell Melting Furnaces #1-#5 to match the as-built nomenclature on the cover page and in the unit-specific provisos of each affected permit.
- Update all Sidewell Melting Furnace BACT limits proposed by Novelis and the corresponding mass emission rate-based limits.

7.3 Novelis Dual Chamber (NDC) Recycle Furnace

One Novelis Dual Chamber (NDC) Recycle Furnace is installed on the Flex line and is classified as a Group 1 furnace. The final configuration of the NDC furnace is described below:

1. X009 NDC Recycle Furnace (EU MC-09) (Flex Line)
 - a. Emissions are routed to Hot Baghouse #7 (ID HBH7)

7.3.1 Equipment Changes

The NDC Recycle Furnace source has not changed from as it was originally proposed and previously permitted.

7.3.2 Emission Changes

Based on vendor supplied data, the as-built equipment specifications for throughput to the furnace and the furnace burner heat capacity were adjusted from the as-permitted configuration. These changes resulted in an increase in the maximum hourly aluminum throughput for the NDC Recycle Furnace and thus emissions. However, a decrease in Hot Baghouse #7 flow capacity, on a dry standard volumetric flow rate basis, causes a corresponding decrease in annual potential filterable PM emissions from the NDC Recycle Furnace. Overall, the increase in design aluminum throughput to the furnace resulted in an increase in annual potential PM₁₀ and PM_{2.5} emissions in the as-built configuration.

The vendor supplied specifications also resulted in emission increases for NO_x, VOC and GHG on a production basis and reduced the emission factors for CO. There were no changes made to the VOC or GHG emission factors from the as-permitted emission

calculations; however, the higher aluminum throughput rate and lower burner heat input capacity resulted in VOC and GHG potential emissions increases. All other emission factors and emission calculation methodologies for the NDC Recycle Furnace remain unchanged from the original PSD application.

7.3.3 BACT

Based on vendor supplied data, the as-built equipment specifications for throughput to the furnace and furnace burner heat capacity, resulted in the BACT limits being updated to reflect as-built design specification changes.

Novelis has requested the following BACT Limit changes:

EU Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
NDC Recycle Furnace #1	MC-09	HBH7	PM _{filterable}	0.076	2.10
			PM ₁₀	0.180	4.97
			PM _{2.5}	0.153	4.22
			NO _x	0.51	14.1
			CO	0.38	10.5

Table 11: NDC Recycle Furnace BACT Limits

EU Description	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (TPY)
NDC Recycle Furnace #1	MC-09	HBH7	GHG	30,414

Table 12: NDC Recycle Furnace BACT Limit

PM

The as-built emission factors (lb/ton) for PM, PM₁₀, and PM_{2.5} decreased as a result of the changes proposed for the NDC Recycle Furnace. In the BACT analysis from the as-permitted application, Novelis selected lime-injected fabric filter baghouses as BACT for PM emissions from the NDC Recycle Furnace, which is also subject to an emission standard from 40 CFR Part 63, Subpart RRR. Additionally, the Department imposed a filterable PM BACT limit of 0.002 gr/dscf at the outlet of each baghouse. These limits have not changed as a result of the as-built configuration.

NO_x

In the NO_x BACT top-down determination in the original PSD application, Novelis selected the use of good combustion and operating practices (GCOP) and the use of low NO_x burners (LNB) as BACT in the main hearth chamber and cold air LNBs in the charging chambers of the NDC Recycle Furnace. In the As-Built reconciliation application, Novelis has noted that the uncontrolled NO_x emission factor tied to natural gas combustion increased from 143.25 lb-NO_x/MMscf to 163.5 lb- NO_x/MMscf based on the final, as-built NO_x emissions estimates from the selected furnace equipment and burner system vendors. With the changes made to the NDC Hot Baghouse #7 design specifications and various process equipment specification updates for the associated

NDC Recycle Furnace and Holding Furnace #3, Novelis proposed a reduction of the NOx BACT limit from 0.54 lb-NOx/ton to 0.51 lb-NOx/ton in the as-built configuration.

As part of the reconciliation application, to confirm that this annual potential NOx emissions change for the NDC Recycle Furnace does not influence the conclusions of the original top-down BAT analysis and specifically the SCR control cost analysis, Novelis updated the SCR cost analysis in the Reconciliation Application to reflect the as-built design specifications of Hot Baghouse #7 and the associated NOx emissions produced by the NDC Recycle Furnace and Holding Furnace #3. The updated NOx control cost analysis demonstrated that SCR remains economically infeasible for the NDC Recycle Furnace.

CO

Based on the vendor specifications for final burner performance, Novelis proposed a minor reduction of the lb/ton emission factor for CO. The BACT analysis from the as-permitted application selected GCOP as BACT for CO emissions from the NDC Recycle Furnace. As with the Sidewell Mating Furnaces, the CO limits proposed for the NDC Recycle Furnace are higher than those found in the RBLC for other units, as the proposed BACT limits are derived from 95% UPL analyses of the results of stack tests at a similar facility. However, as a result of the as-built configuration, Novelis has proposed to reduce the (lb-CO/ton) emission limits.

GHG

The increase in burner heat capacity and increased throughput to the combustion sources resulted in an increase in CO₂e emissions from the NDC Recycle furnace. A review of the RBLC database found no facilities with similar process types. In the original determination, the Department accepted Optimum Combustion Efficiency, Fuel Selection, and GCOP to be BACT for CO₂e from the NDC Recycle furnace. This finding has not changed as a result of the as-built configuration; however, the annual CO₂e emission rate was adjusted from the as-permitted factor to account for the changes made.

The Department's review of the RBLC database indicated that the emissions from the NDC Recycle Furnace have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.3.4 Proposed PSD Permit Modifications

Update all NDC Recycle Furnace BACT limits expressed in units of lb/ton proposed by Novelis and summarized in Appendix A and the corresponding mass emission rate-based (lb/hr) emission limits added by ADEM with reference to Section 5 of Appendix C of the application.

7.4 Round Top Melting Furnaces

Two round top melting furnaces are to be installed, one on the Flex line and one on the CBS line. Novelis is seeking operational flexibility to melt third-party scrap in the round top melting furnaces that may not be classified as clean charge; as such, these furnaces are to be considered Group 1 furnaces. The final configuration of the Round Top Melting furnaces is described below:

1. Round Top Melting Furnace #2 (EU MC-10) (Flex Line)
 - a. Emissions are routed to Hot Baghouse #8 (HBH8)
2. Round Top Melting Furnace #1 (EU MC-11) (CBS Line)
 - a. Emissions are routed to Hot Baghouse #9 (HBH9)

7.4.1 Equipment Changes

Two Round Top Furnaces were originally proposed and previously permitted. The reconciliation application still proposes two round top furnaces.

7.4.2 Emissions Changes

As a result of the as-built equipment specifications from the vendor, a decrease in maximum burner heat input capacity for the Round Top Furnaces from 115 MMBtu/hr to 112 MMBtu/hr in the as-built configuration was made. This as-built change to the combustion system specifications only impacts pollutants with emissions from natural gas combustion.

The allocation of the total flow capacity for Hot Baghouses #8 and #9 between the Holding Furnaces and Round Top Furnaces has changed due to a redistribution of the baghouse flow for the as-built configuration of the capture and collection system. This updated flow capacity contribution for Hot Baghouses #8 and #9 assigned to each Round Top Furnace results in a corresponding decrease in filterable PM emissions.

The vendor-supplied NO_x emission factor was updated from 127.4 lb NO_x/MMscf to 121.3 lb NO_x/MMscf in the as-built configuration. The burner heat input capacity was also reduced, resulting in an annual potential NO_x emissions reduction from each Round Top Furnace. The as-built annual potential emissions changes for all other regulated NSR pollutants and HAP emissions from the Round Top Furnaces are a result of control device process rate changes. All other emission factors and emission calculation methodologies for the Round Top Furnaces remained unchanged from the original PSD application. The moisture content adjustments, however, resulted in a decrease in the emission factors utilized.

7.4.3 BACT

Changes to the proposed BACT limits for the Round Top Furnaces are a result of the as-built updates to the process equipment and control devices specifications. As such, Novelis has requested the following changes to the PM, NO_x, VOC, and GHG BACT limits. Novelis did not request changes to the other regulated NSR pollutants associated with the Round Top Melting Furnaces.

PM

Novelis has requested the following PM BACT limit changes:

Round Top Melting Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#2	MC-10	HBH8	PM _{filterable}	0.024	1.11
			PM ₁₀	0.078	3.60

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

#1	MC-11	HBH9	PM _{2.5}	0.076	3.52

Table 13: Round Top Furnace Particulate BACT Limit Changes

NO_x

Novelis has requested the following NO_x BACT limit changes:

Round Top Melting Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#2	MC-10	HBH8	NO _x	0.30	13.9
#1	MC-11	HBH9			

Table 14: Round Top Furnace NO_x BACT Limit Changes

VOC

Novelis has requested the following VOC BACT Limit changes:

Round Top Melting Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Perm (lb/ton)	As-Built (lb/hr)
#2	MC-10	HBH8	VOC	0.071	3.29
#1	MC-11	HBH9			

Table 15: Round Top Furnace VOC BACT Limit Changes

GHG

Novelis has requested the following GHG BACT Limit changes:

Round Top Melting Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built
#2	MC-10	HBH8	CO ₂ e	57,443
#1	MC-11	HBH9		

Table 16: Round Top Furnace GHG BACT Limit Changes

The Department's review of the BACT Limit changes proposed by Novelis for the Round Top furnaces are the same as proposed for the Sidewell and NDC furnaces above. The Department's review of the RBLC database indicated that the emissions from Round Top Furnaces have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.4.4 Proposed PSD Permit Modifications

Update numbering for Round Top Furnaces #1 and #2 to match the as-built nomenclature reflected in the Emission Unit Index provided in Appendix A on the cover page and in the unit-specific provisos of each affected air permit.

Update all Round Top Furnace BACT limits expressed in units of lb/ton proposed by Novelis and summarized in Appendix A and the corresponding mass emission rate-based (lb/hr) limits.

7.5 Holding Furnaces

Four holding furnaces receive molten metal from the upstream melting furnaces. Two holding furnaces will be installed on the Flex line and two holding furnaces will be

installed on the CBS line. The holding furnaces can receive solid reactive fluxing and as such are considered Group 1 furnaces. Hoods are located over each furnace hearth door and flux door, where emissions are routed to a baghouse. PM/PM₁₀/PM_{2.5}, NO_x, CO, VOC, SO₂, and GHG are the primary pollutants expected to be emitted from the holding furnaces. Emissions of each will be generated from natural gas combustion as well as from flux addition and dross formation from the salt fluxing.

The final configuration of the holding furnaces is described below.

1. X008 Holding Furnace #2 (EU MC-14) (CBS Line)
 - a. Emissions are routed to Hot Baghouse #6 (HBH6)
2. X009 Holding Furnace #3 (EU MC-13) (Flex Line)
 - a. Emissions are routed to Hot Baghouse #7 (HBH7)
3. X010 Holding Furnace #4 (EU MC-12) (Flex Line)
 - a. Emissions are routed to Hot Baghouse #8 (HBH8)
4. X011 Holding Furnace #1 (EU MC-15) (CBS Line)
 - a. Emissions are routed to Hot Baghouse #9 (HBH9)

7.5.1 Equipment Changes

Four holding furnaces were proposed and permitted. No changes were proposed as a result of the as-built configuration. Changes only include equipment designation and configuration changes.

7.5.2 Emissions Changes

The as-built emission factors for the Holding Furnaces have been adjusted to account for the adjustment in allocated flow capacities to the hot baghouses and aluminum processing rates. These changes have increased the annual filterable PM emissions and the NO_x emission factor. In addition, the annual potential NO_x emissions estimates increased as a result of the changes made. No changes were made to the emission factors for the remaining regulated NSR pollutants or HAPs.

7.5.3 BACT

Changes to the proposed BACT limits for the holding furnaces are a result of the as-built updates to the process equipment and control device specifications. The original top down BACT analysis used for the NDC Recycle Furnace was applied to the Holding Furnaces. As such, Novelis has requested the following changes to the PM, NO_x, VOC, and GHG BACT Limits. Novelis did not request changes to the other regulated NSR pollutants associated with the Holding Furnaces.

PM

Novelis has requested the following PM BACT limit changes:

Holding Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#4	MC-12	HBH8	PM _{filterable}	0.012	0.734
			PM ₁₀	0.024	1.47
			PM _{2.5}	0.023	1.41
#3	MC-13	HBH7	PM _{filterable}	0.013	0.796
			PM ₁₀	0.024	1.47
			PM _{2.5}	0.024	1.47

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

#2	MC-14	HBH6	PM _{filterable}	0.012	0.714
			PM ₁₀	0.024	1.43
			PM _{2.5}	0.023	1.37
#1	MC-15	HBH9	PM _{filterable}	0.013	0.774
			PM ₁₀	0.024	0.143
			PM _{2.5}	0.023	1.37

Table 17: Holding Furnace PM BACT Limit Changes

NO_x

Novelis has requested the following NO_x BACT limit changes:

Holding Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#4	MC-12	HBH8	NO _x	0.034	2.08
#3	MC-13	HBH7		0.034	2.08
#2	MC-14	HBH6		0.034	2.02
#1	MC-15	HBH9		0.034	2.02

Table 18: Holding Furnace NO_x BACT Limit Changes

Novelis notes that the NO_x emissions change attributable to the as-built updates for the Holding Furnaces does not affect any of the prior conclusions of the NO_x BACT determination including the cost effectiveness basis for eliminating SCR as an available NO_x control option. Novelis proposes to reduce the NO_x BACT limit for the Holding Furnaces. Therefore, Novelis updated the NO_x BACT determination for the Holding Furnaces based on the use of GCOP and LNB.

CO

Novelis has requested the following CO BACT limit changes:

Holding Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
#4	MC-12	HBH8	CO	0.037	2.26
#3	MC-13	HBH7		0.037	2.26
#2	MC-14	HBH6		0.038	2.26
#1	MC-15	HBH9		0.038	2.26

Table 19: Holding Furnace CO BACT Limit Changes

GHG

Novelis has requested the following GHG BACT limit changes:

Holding Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits (TPY)
				As-Built
#4	MC-12	HBH8	CO _{2e}	13,848
#3	MC-13	HBH7		13,848
#2	MC-14	HBH6		13,848
#1	MC-15	HBH9		13,848

Table 20: Holding Furnace GHG BACT Limit Changes

The Department's review of the BACT limit changes proposed by Novelis for the Holding Furnaces are the same as proposed for the Sidewell and NDC Furnaces above. The changes reflect a reduction for PM, NO_x, VOC, and GHG pollutant emissions. The Department's review of the RBLC database indicated that the emissions from the Holding Furnaces have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.5.4 Proposed PSD Permit Modifications

Align the PSD permit references as appropriate. Update the numbering for Holding Furnaces #1-#4 to match the as-built nomenclature and the unit-specific provisos of each affected PSD permit

Update all Holding Furnace BACT limits expressed in units of lb/ton proposed by Novelis and the corresponding mass emission rate-based (lb/hr) emission limits added by ADEM.

7.6 In-Line Degassers

Four in-line degassers will be installed to refine (or flux) molten aluminum downstream of the holding furnaces. Two will be installed on the Flex line and two on the CBS line. The in-line degassers are to be installed on the transfer lines from the holding furnaces to the casting bays. The final configuration of the in-line degassers is described below.

1. X008 In-Line Degasser #2 (EU ID MC-17) (CBS Line)
 - a. Emissions are routed to Holding Furnace #2
2. X009 In-Line Degasser #3 (EU ID MC-33) (Flex Line)
 - a. Emissions are routed to Holding Furnace #3
3. X010 In-Line Degasser #4 (EU ID MC-16) (Flex Line)
 - a. Emissions are routed to Holding Furnace #4
4. X011 In-Line Degasser #1 (EU ID MC-18) (CBS Line)
 - a. Emissions are routed to Holding Furnace #1

7.6.1 Equipment Changes

Novelis made the following equipment changes to the in-line degassers as a result of the as-built configuration:

1. Addition of one (1) In-line Degasser. In the as-permitted configuration, ILD #1 was shared between Holding Furnace #1 and Holding Furnace #2. In the as-built configuration, each of the four holding furnaces is associated with an In-Line Degasser.

7.6.2 Emission Changes

Novelis reported that the maximum hourly aluminum throughput for the In-Line Degassers was reconciled to match the maximum process rate assigned to the casting pits during the batch casting cycle which is expected to extend beyond the 1-hour timeframe, defining the maximum hourly process rate. This new maximum hourly throughput for the as-built configuration of the In-Line Degassers (109.1 ton/hr) cannot be sustained due to upstream inherent process limitations (bottlenecking) imposed by the equipment capabilities of the melting and holding furnaces. Therefore, Novelis set

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

the maximum annual throughput assigned to each In-Line Degasser (535,921 tpy) to equal the maximum annual throughput for each associated Holding Furnace.

The addition of a fourth In-Line Degasser and updates to annual process rates with no changes to the underlying technical basis of the controlled filterable PM/PM₁₀/PM_{2.5} emission factors applied to the In-Line Degassers result in an annual potential emissions increase across all four (4) In-Line Degassers in the as-built configuration. Annual potential HCl emissions are also influenced by the equipment count and process rate changes.

7.6.3 BACT

The only change made to the BACT determination for the in-line degassers is the addition of the 4th unit. All BACT limits for the other units remain unchanged.

Novelis has requested the following PM BACT limit changes:

As Permitted			As-Built					
ILD	EU ID	Control Device	ILD	EU ID	Control Device	Pollutant	Emission Limits (lb/ton)	Emission Limits (lb/hr)
#1	MC-16	HBH7	#1	MC-18	HBH-9	PM _{filterable}	0.010	1.09
						PM _{10-filter}	0.00532	0.580
						PM _{2.5-filter}	0.00198	0.216
		HBH8	#2	MC-17	HBH-6	PM _{filterable}	0.010	1.09
						PM _{10-filter}	0.00532	0.580
						PM _{2.5-filter}	0.00198	0.216
#2	MC-17	HBH9	#3	NEW MC-33	HBH-7	PM _{filterable}	0.010	1.09
						PM _{10-filter}	0.00532	0.580
						PM _{2.5-filter}	0.00198	0.216
#3	MC-18	HBH6	#4	MC-16	HBH-8	PM _{filterable}	0.010	1.09
						PM _{10-filter}	0.00532	0.580
						PM _{2.5-filter}	0.00198	0.216

Table 21: In-line Degasser BACT Limit Changes

The Department's review of the RBLC database indicated that the emissions from the In-line Degassers have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.6.4 Proposed PSD Permit Modifications

Update the name of In-Line Degasser #3 (Flex Line) (MC-33) in Air Permit X009 associated with Holding Furnace #3 to replace the prior In-Line Degasser #2 (MC-17) reference.

Update the name of In-Line Degasser #4 (Flex Line) (MC-16) in Air Permit X010 associated with Holding Furnace #4 to replace the prior In-Line Degasser #3 (MC-18) reference.

Update the name of In-Line Degasser #2 (CBS Line) (MC-17) in Air Permit X008 associated with Holding Furnace #2 to replace the prior In-Line Degasser #1 (MC-16) reference.

Update the name of In-Line Degasser #1 (CBS Line) (MC-18) in Air Permit X011 associated with Holding Furnace #1 to replace the prior In-Line Degasser #1 (MC-16)

Add In-Line Degasser #3 BACT limits expressed in units of lb/ton proposed by Novelis and the corresponding mass emission rate-based (lb/hr) emission limits.

7.7 Sow Dryers

To support the melting furnaces, Novelis proposes to install two sow dryers to dry and preheat aluminum sows and other forms of hard “clean charge” material prior to manually feeding into the melting furnaces. The final configuration for the sow dryers is described below:

1. X006 - Sow Dryer #2 (EU ID MC-19) CBS Line
2. X007 - Sow Dryer #1 (EU ID MC-20) Flex Line

7.7.1 Equipment Changes

Novelis did not make equipment changes to the Sow Dryers as a result of the as-built configuration. Changes only include equipment designation and configuration changes.

7.7.2 Emission Changes

There was an increase in maximum hourly aluminum throughput and corresponding maximum burner heat input capacity increases for the identical Sow Dryer #1 (Flex Line) and Sow Dryer #2 (CBS Line). The maximum hourly aluminum throughput (15.90 ton/hr to 26.01 ton/hr in as-built configuration) was increased to accommodate the preheated sow demands of the melting processes on each production line and to reconcile with as-built equipment specifications from the vendor.

The maximum burner heat input capacity is a function of the aluminum batch size and associated aluminum throughput rate; therefore, the corresponding increase in the burner heat input rating from 20 MMBtu/hr to 30 MMBtu/hr in the as-built configuration is reflected as an increase in the Sow Dryer potential emission calculations. Novelis states that based on the batch nature and operating profile of how the Sow Dryers are utilized during the typical sow preheating cycle, the maximum hourly burner heat input is only used for brief periods (typically less than 1 hour). Sow Dryers operate with sustained high firing rates for the initial phase of the dryer cycle to reach target temperature and then cycle from high fire to low fire (idle) to maintain the temperature target profile to properly homogenize the multiple stacks of sows in the dryer.

As such, Novelis proposed an annual operating limitation for the Sow Dryers natural gas usage that produces equivalent annual potential emissions from the two (2) Sow Dryers for all regulated NSR pollutants other than NO_x. The as-permitted NO_x emission factor (54.0 lb NO_x/MMscf) was replaced with the vendor estimate NO_x emissions (109.2 lb NO_x/MMscf) in the as-built configuration. The Sow Dryers require a direct-fired, high velocity burner system with a high turndown capacity which carries a distinct NO_x emissions performance profile from other more conventional natural gas-fired burner applications for other aluminum furnace and preheating systems. The higher design short-term burner heat input capacity and the resulting higher instantaneous NO_x emission factor combine to contribute to a 4.8 tpy NO_x emissions increase from each of

the two (2) Sow Dryers. All other emission factors and emission calculation methodologies for the Sow Dryers remain unchanged from the original PSD application.

Novelis has proposed a new annual operating limitation on Sow Dryer natural gas usage (175.2 MMscf/yr for each Sow Dryer) to ensure that the as-built maximum hourly burner heat input capacity change does not translate into a calculated maximum annual potential emissions increase for the Sow Dryers.

7.7.3 BACT

Changes to the proposed BACT limits for the Sow Dryers are a result of the as-built updates to the process equipment. As such, Novelis has requested changes to the PM, NO_x, CO, and VOC BACT limits.

The Sow Dryer NO_x emission factor changed based on the vendor supplied equipment in the as-built configuration utilizing Algas-SDI Phoenix Velocity Heat (VH) direct fired burners in the Sow Dryers. The change represents an increase in the NO_x emission factor and a change to the NO_x emissions profile which may not readily be considered “low NO_x” for conventional, indirect-fired natural gas combustion systems on various other industrial boilers and process heaters.

In the updated analysis, Novelis conducted a detailed technical investigation into the reasons why the vendor-supplied NO_x emissions for the selected LNB (Algas-SDI Phoenix Velocity Heat (VH) direct fired burners) exceed the more typically expected performance for more conventional combustion systems.

Given the case-by-case nature of the BACT review process and the recently permitted Novelis Guthrie Sow Dryer with a comparable NO_x BACT limit, Novelis considers the proposed NO_x emission factor (0.109 lb/MMBtu, 109.2 lb NO_x/MMscf) supporting the Bay Minette facility’s Sow Dryer NO_x BACT limit (3.28 lb NO_x/hr) in its as-built configuration to satisfy applicable BACT requirements. Compliance with the proposed NO_x emission limit for the as-built configuration of the Sow Dryers will be demonstrated by operating and maintaining the dryer in accordance with the manufacturer’s recommendations, instructions, and/or operating manual(s).

In the original application’s top-down BACT analysis, Novelis had identified the use of Low-NO_x Burners (LNB) and Good Combustion Practices (GCP) as the only feasible control options for the Sow Dryers. In the updated analysis, Novelis again rules out the option of using SCR, stating the as-built changes to the Sow Dryers would not alter the prior conclusion of eliminating SCR as an available, technically feasible, and/or cost effective control option for reducing NO_x emissions from a small, batch-type combustion unit like the Bay Minette facility’s Sow Dryers. Novelis has since clarified that the burners in the as-built Sow Dryers would not be considered “Low NO_x”. Novelis contends that although the selected Algas-SDI burner system cannot necessarily meet the same short-term maximum NO_x emissions performance as the alternative nozzle mixing-type direct fired burners in melting furnace and other solid metal processing furnace applications, when evaluated exclusively on a NO_x concentration basis or heat input rate normalized NO_x emission factor basis (lb-NO_x/MMBtu), the as-built burners provide better overall energy efficiency and performance for the selected Sow Dryers. Novelis made a similar argument in the original as permitted application for the pusher

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

furnaces, which the Department accepted. The Department similarly accepts Novelis' argument that replacing the LNB with the Algas-SDI burner system satisfies the requirements of BACT.

Novelis has requested the following PM BACT limit changes:

Sow Dryer Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/MMBtu)	As-Built (lb/hr)
#2	MC-19	UNC	PM _{filterable}	0.0019	0.057
			PM ₁₀	0.0035	0.104
#1	MC-20		PM _{2.5}	0.0035	0.104

Table 21: Sow Dryer PM BACT Limit Changes

Novelis has requested the following NO_x BACT limit changes:

Sow Dryer Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/MMBtu)	As-Built (lb/hr)
#2	MC-19	UNC	NO _x	0.109	3.28
#1	MC-20	UNC			

Table 22: Sow Dryer NO_x BACT Limit Changes

Novelis has requested the following CO BACT limit changes:

Sow Dryer Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/MMBtu)	As-Built (lb/hr)
#2	MC-19	UNC	CO	0.073	2.19
#1	MC-20	UNC			

Table 23: Sow Dryer CO BACT Limit Changes

Novelis has requested the following VOC BACT limit changes:

Sow Dryer Description	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/MMBtu)	As-Built (lb/hr)
#2	MC-19	UNC	VOC	0.0055	0.17
#1	MC-20	UNC			

Table 24: Sow Dryer VOC BACT Limit Changes

The Department's review of the RBLC database indicated that the emissions from Sow Dryers have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. In addition, Novelis has proposed an annual natural gas usage limit for each sow dryer of 175.2 MMscf/yr which would be BACT. The Department accepts the proposed as-built BACT emission limits.

7.7.4 Proposed PSD Permit Modifications

Update numbering for Sow Dryers #1-#2 to match the as-built nomenclature reflected in the Emission Unit Index.

Update all Sow Dryer BACT limits expressed in units of lb/hr proposed by Novelis and the corresponding natural gas heat input rate normalized (lb/MMBtu) emission limits and add the proposed annual natural gas usage limit for each sow dryer of 175.2 MMscf/yr.

7.8 Dross Handling and Storage

In the as-built configuration, Novelis removed two (2) of the four (4) Dross Presses proposed in the original application. In the current configuration, the dross removed from each melting unit will be collected in dross pans, transported to either Dross Press #1 or #2 or transported directly to the Dross House. The Dross Presses will have integral filtration units used to control “nuisance fume/dust” to prevent worker exposure when the presses are opened. Emissions from the integral collection/filtration system will be discharged directly into the production building as opposed to the as-permitted control of directing uncontrolled emissions from the Dross Presses to Hot Baghouses. The final configuration for dross handling and storage is described below:

1. X008 Dross Press #1 (EU ID MC-24)
 - a. Emissions are controlled via integral filtration system (DPBH2) discharged inside process area.
2. X009 Dross Press #2 (EU ID MC-22)
 - a. Emissions are controlled via integral filtration system (DPBH1) discharged inside process area.
3. X004 Dross House (EU ID MC-21)
 - a. Emissions are routed to Hot Baghouse #2 (HBH2)

7.8.1 Equipment Changes

Novelis made the following equipment changes to dross handling and storage as a result of the as-built configuration:

1. Removal of two (2) Dross Presses, one (1) Dross Press on each of the CBS and Flex Lines
2. Route emissions from the Dross Presses through dedicated integral filtration units discharging to the Melting and Casting area production building.

7.8.2 Emissions Changes

The annual potential PM emissions change from each individual Dross Press associated with this control configuration is 0.62 tpy of filterable PM. On an overall basis, the two (2) remaining Dross Presses in the as-built configuration will produce approximately 1 tpy of filterable PM more than the as-permitted filterable PM emissions from the four (4) presses, based on the reconfiguration of the PM control from the Hot Baghouses to the integral filtration system. The potential emissions are considered stack emissions; however, the integral filtration system will be discharging inside the production area.

An adjustment to the shared Hot Baghouse #2 flow capacity contribution from the Dross House, at standard conditions, resulted in a decrease in the annual potential filterable PM emissions assigned to the Dross House. All other aspects of the filterable PM/PM10/PM2.5 emission calculation methodology for the Dross House remain unchanged from the original PSD application.

7.8.3 BACT

In the original PM/PM₁₀/PM_{2.5} top-down BACT determination, Novelis identified the use of fabric filtration as the only feasible control of PM for Dross Storage and Handling operations. It was also determined in the original evaluation, based on the process control parameters and that it was technically infeasible to measure PM emissions from the dross presses such that an individual BACT limit was not feasible for the Dross Presses.

The change in control configuration for the Dross Presses from the uncontrolled exhaust being routed to a Hot Baghouse to one being equipped with a dedicated, integral filtration unit, affects the potential PM emission calculation methodology. Updates to the controlled filterable PM exit grain loading design basis and dry standard volumetric flow capacity of the filtration unit from the (0.002 gr/dscf) for the hot baghouses in the original determination, to 0.01 gr/dscf design basis for the integral filtration unit, were made. Novelis notes the 0.01 gr/dscf loading design matches EPA's default reference value for achievable filterable PM emissions performance of similar cartridge filter type PM control systems, and the dry standard flow capacity of the controlled Dross Presses in the as-built configuration (1,947 dscfm) generally falls within the same range as the flow capacity of the uncontrolled Dross Presses from the as-permitted configuration (1,500 dscfm).

Novelis also notes that although the integral filtration units associated with the as-built configuration of the Dross Presses do not achieve as low of an exit grain loading as the original Hot Baghouse control configuration, the new filtration units still achieve a reasonable PM exit concentration and provide adequate capture and control of any PM emissions generated by the dross pressing activity. Therefore, Novelis considers the prior Dross Storage and Handling operation PM/PM₁₀/PM_{2.5} BACT determination to be applicable to the as-built configuration without specifically revisiting any of the specific steps in the top-down BACT review process. The Department accepts Novelis' argument that the control change and the corresponding grain loading design satisfies the requirement of BACT for the Dross Presses.

No specific BACT limits were applied to the Dross Handling system in the as-permitted configuration; however, since the control system redesign is more lenient than the as-permitted design, the Department agrees with Novelis that BACT limits should be assigned to the Dross Press process.

Novelis has proposed the following unit-specific BACT limits as follows. Additionally, the Department is requiring a filterable BACT limit of 0.01 gr/dscf at the outlet of each integral filtration unit.

Dross Press	EU ID	Control Device	Pollutant	As-Built BACT Emission Limits	
				(lb/ton)	(lb/hr)
#1	MC-24	DPBH2	PM _{filterable}	0.023	0.17
			PM ₁₀	0.022	0.16
			PM _{2.5}	0.018	0.13
#2	MC-22	DPBH1	PM _{filterable}	0.023	0.17
			PM ₁₀	0.022	0.16
			PM _{2.5}	0.018	0.13

Table 25: Dross Press BACT Limit Changes

The Department's review of the RBLC database indicated that the emissions from Dross Handling and Storage have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.8.4 Proposed PSD Permit Modifications

Update the name of the Dross Press reference in Air Permit X008 from Dross Presses #3 and #4 (MC24 & MC-25) to Dross Press #1 (CBS Line) (MC-24).

Update the name of the Dross Press reference in Air Permit X009 from Dross Presses #1 and #2 (MC22 and MC-23) to Dross Press #2 (Flex Line) (MC-22).

Add new BACT-specific provisos to Air Permits X008 and X009 to reflect the updated PM BACT determination for the Dross Presses in their as-built configuration with interior venting integral filtration units.

7.9 Molten Metal Transfer and Casting

The Casting Process emissions sources have been updated to reflect installation of the fourth casting pit (second casting pit on the Flex Line) and to make all casting lines carry the same configuration of metal filtration equipment including a ceramic foam filter (CFF) and deep bed filter (DBF) with associated natural gas-fired preheating system on each casting line. In addition, periodic oil lubricating of the casting molds is required to prevent the molten aluminum from adhering to the surface of the molds.

The maximum hourly burner heat input capacity of the small CFF and DBF preheaters has been reconciled with as-built equipment specifications from the vendor. The maximum hourly lubricant usage for the casting lines has been increased to represent the increase from three casting lines to the as-built configuration with four casting lines.

To facilitate the transfer of molten metal from the melting furnaces to the holding furnaces, 46 small hand-held Molten Metal Utility Heater units are to be utilized to preheat and remove moisture from hand tools used in direct contact with the molten metal as opposed to the as-permitted natural gas-fired Trough Heaters which are to be replaced by electrically pre-heated units.

Emissions from the Molten Metal Utility heaters and the CFF & DBF preheaters consist primarily of the products of natural gas combustion and are released inside the Melting and Casting Area building. Emissions from the periodic lubricating of the casting molds primarily consist of VOC. The VOC emissions are released inside the Melting and Casting Area building. The final configuration for Molten Metal Transfer and Casting is described below:

1. Removal of natural gas-fired Trough Heaters on both the Flex Line (MC29) and CBS line (MC-30). Replacement of the natural gas-fired Trough Heaters with electric heaters.
2. Forty-six (46) Molten Metal Utility Heaters (EU ID MC-35)
 - a. Emissions are uncontrolled inside the Melting and Casting building
3. Four (4) CCF & DBF Filter Preheaters for DC#1 (MC-28), DC#2 (MC-27), DC#3 (MC-34), and DC#4 (MC-26)
 - a. Emissions are uncontrolled inside the Melting and Casting building

4. Four (4) Direct Chill Casting Bays DC#1 through DC#4 (EU ID MC-31) lubricant usage
 - a. Emissions are uncontrolled inside the Melting and Casting building

7.9.1 Equipment Changes

Novelis made the following equipment changes to Molten Metal transfer and Casting as a result of the as-built configuration:

1. Addition of a 4th Casting Pit (2nd casting pit on the Flex line) DC#3 (MC-34) with associated CCF & DBF preheaters.
2. Addition of CCF systems on DC#2, DC#3 and DC#4. (Only DC#1 had a CCF system in the as-permitted configuration).
3. Addition of 46 Molten Metal Utility natural gas heaters (MC-35)
4. Removal of portable natural gas-fired Trough Heaters (MC-29 & MC-30)

7.9.2 Emissions Changes

The combined maximum burner heat input capacity of the molten metal filtration unit preheating systems when both a CFF and DBF are used increased from 3.48 MMBtu/hr to 6.32 MMBtu/hr in the as-built configuration. This change in CFF and DBF systems preheater burner capacity produces potential emissions changes for PM/PM₁₀/PM_{2.5}, VOC, CO, SO₂, and total HAP. The CFF and DBF system preheater NOx emission factors were increased to reflect updated estimates from the selected equipment vendor. In addition, the casting process has the potential to produce VOC emissions from evaporative loss of the organic compound fraction of the lubricant periodically applied to the casting molds during the direct chill casting process.

The natural gas-fired Trough Heaters have been removed and forty-six (46) Molten Metal Utility Heaters associated with molten metal management in the Melting & Casting area have been added. The emission rates from these units were updated to reflect this change in equipment.

7.9.3 BACT

In the original application, BACT limits were not set for the CCF/DBF or the molten utility heaters primarily based on the assertion that limits are not technically feasible because the units' combustion byproduct emissions are not captured in a hood or duct for subsequent measurement using EPA Reference Test Methods. In cases where emissions cannot be measured, work practice standards can be established as BACT in lieu of emission limits. Compliance will be ensured through work practice standards and Good Combustion and Operating Practices. The Department agrees with Novelis' argument that no additional BACT requirements for the Molten Metal Utility Heaters are necessary.

7.9.4 Proposed PSD Permit Modifications

No air permits were issued for the Casting Process; as such, no changes are to be made.

7.10 Melting and Casting Ingot Saw

The ingot saw operation will be located in the Melting & Casting area for cutting reject ingots down to smaller sizes before feeding them to the melting furnaces. Emissions from the operation of the Ingot Saw are collected by a saw process cyclone which will

vent to a filtration unit that discharges exhaust into the production building. The Ingot Saw in the Melting and Casting area has been redesignated from the as-permitted configuration as a unit with the capability to function as a continuously operating production unit with a high short-term throughput capability to the as-built configuration as a non-routine process used solely for material handling of reject ingots. Therefore, the maximum hourly throughput and associated maximum hourly throughput rate have been reduced in the as-built configuration. The maximum annual ingot processing capacity remains unchanged and is based on the maximum hourly ingot rolling capacity and the estimate for the amount of reject ingots produced by the casting and rolling processes. The aluminum process rate normalized emission factors changed which resulted in a change in the maximum annual potential emissions of PM/PM₁₀/PM_{2.5} and VOC.

The final configuration for the Melting and Casting Ingot Saw is described below:

1. X012 Melting and Casting Ingot Saw (MC-32)
 - a. Emissions are routed to Filtration Unit #1 (FLT1) and vented directly into the production building

7.10.1 Equipment Changes

In the as-permitted configuration, the Ingot Saw operation included four (4) ingot saws to process all ingot from the melting and casting areas and one Ingot Saw to cut up reject ingots. The four (4) ingot saws from the melting and casting area have been removed from the scope of this project. As such, this operation has been reduced to the one reject Ingot Saw in the as-built configuration and will operate on a as needed basis. The filtration unit specifications were updated as a result of the as-built configuration.

7.10.2 Emission Changes

Changes to the process rates, integral filtration unit flow capacity, and maximum hourly lubricant usage for the Melting & Casting Ingot Saw (MC-32) contribute to an increase in annual potential PM/PM₁₀/PM_{2.5} emissions and an increase in annual potential VOC & HAP emissions in the as-built configuration.

7.10.3 BACT

In the original application's top-down BACT analysis, Novelis had identified the use of fabric filters as the only feasible control options for the Ingot Saw. Given the estimated controlled potential emissions from the ingot saw dust collector exhausting inside, Novelis has requested that the BACT limits be adjusted to match the specifications of the as-built control device and require that the dust collectors be operated and maintained according to best practices as BACT.

Novelis has requested the following PM BACT limit changes:

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
Melting & Casting Ingot Saw	MC-32	FLT1	PM _{filterable}	1.48E-04	0.011
			PM ₁₀		
			PM _{2.5}		

Table 26: Ingot Saw PM BACT Limit Changes

Novelis has requested the following VOC BACT limit changes:

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
Melting & Casting Ingot Saw	MC-32	FLT1	VOC	0.0356	2.65

Table 27: Ingot Saw VOC BACT Limit Changes

The Department's review of the RBLC database indicated that the emissions from Ingot Saw have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission limits.

7.10.4 Proposed PSD Permit Modifications

Update the ADEM Melting & Casting Ingot Saw numerical BACT limits.

8.0 HOT ROLLING AREA

The proposed Hot rolling area consists of one (1) Ingot Scalper, one (1) Scalper Chip Handling System pneumatic conveyor associated with a briquetting machine, three (3) Pusher Furnaces, one (1) Hot Reversing Mill (HRM), and one (1) Hot Finishing Mill (HFM). PM emissions from the ingot scalper are controlled by a filtration system. Emissions from the scalper chip handling system and the pusher furnaces are uncontrolled. Emissions from the HRM and HFM consist primarily of filterable PM, condensable PM, and VOC. Emissions from the mills are directed to dedicated mist eliminators for control.

The final as-built configuration of the Hot Rolling Areas is as follows:

1. X013 – Scalper 1(HR-02) vented to Filtration Unit #4 (FLT4)
2. X013 – Scalper Chip Handling System Conveyor (HR-03) – Uncontrolled/(FLT4)
3. X014 – Pusher Furnace 1 (HR-07), Pusher Furnace 2 (HR-08), and Pusher Furnace 3 (HR-09) – Uncontrolled
4. X015 – Hot Reversing Mill (HR10) vented to Mist Eliminator 1 (ME1)
5. X016 – Hot Finishing Mill (HR11) vented to Mist Eliminator 2 (ME2)

8.0.1 Equipment Change Summary

Novelis has proposed the following equipment changes to hot rolling area as a result of the as-built configuration.

Units Removed:

1. In the as permitted configuration emissions from the Scalper Chip Handling System were routed to the Sidewell Melting Furnaces. In the proposed as-built configuration, emissions from this process are controlled by ingot scalper filtration unit (FLT4).

New Unit

1. In the as-built proposed configuration, emissions from the Ingot Scalper and emission from the Scalper Chip Handling System are controlled by the ingot scalper filtration unit (FLT4). However, Novelis elected to calculate emissions from

the Scalper Chip Handling System as uncontrolled to allow for operational flexibility.

8.0.2 BACT Summary

All proposed BACT limit changes are a function of as-built updates to process equipment and control device specifications and not an underlying change to the emission calculation methodology or reference emission factors applied. The proposed BACT limits were updated to reflect as-built design specification changes, the prior top-down BACT analysis for NSR regulated pollutants as part of the original PSD permitting process is still applicable and does not require an updated BACT determination. None of the hot rolling process area BACT analyses were reconsidered as a result of the as-built revisions.

8.1 Ingot Scalper

One (1) Ingot Scalper is included on the front end of the hot rolling area. This scalper will be used for machining the rolling surfaces and edges of the ingots. The chip processing system for the Ingot Scalper will consist of a dedicated crusher, product collection cyclones, a filtration unit (FLT4) for PM control, and associated chip storage bins.

The Ingot Scalper generates aluminum chips, which are captured by a chip collection hood and routed to a dedicated crusher. The scalped chips are pneumatically conveyed through one of two (2) product collection cyclones, of which the exhaust air is discharged directly to FLT4. Emissions from the ingot scalper consist of filterable PM associated with metal dust generated by the scalpers and VOC associated with lubricant usage.

The final configuration for the Ingot Scalper is described below.

1. X013 One Ingot Scalper (HR-02)
 - a. Emissions are routed to Filtration Unit #4 (FLT4)

8.1.1 Equipment Changes

One (1) Ingot Scalper was originally proposed and previously permitted. The reconciliation application still proposes one Ingot Scalper.

8.1.2 Emission Changes

Emission changes made to the ingot scalper are based on specification changes made to the control device. The ingot scalper filtration unit flow capacity decreased from 114,000 acfm to 78,063 acfm in the as-built configuration which resulted in a decrease in hourly potential PM/PM10/PM2.5 and VOC emissions. The flow capacity of the ingot scalper filtration unit has been reconciled to the final specifications.

The potential emissions for PM were estimated using the expected exit grain loading (0.001 gr/dscf) associated with the process cyclones which has not changed as a result of the as -built configuration.

The changes made to the Ingot Scalper Filtration unit flow capacity and hourly ingot processing rate collectively produce an annual potential PM/PM10/PM2.5 emissions decrease.

8.1.3 BACT

Changes to the proposed BACT limits for the ingot scalper are a result of the as-built updates to the control device specifications and the redistribution of flow to the filtration unit.

Novelis has requested the following PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
Ingot scalper 1	HR-02	FLT4	PM _{filterable}	0.0010	0.65
			PM _{10-filt}		
			PM _{2.5-filt}		

Table 28: Ingot Scalper PM BACT Limit Change

Novelis has requested the following VOC BACT Limit changes. Novelis maintains the existing 2,118, 414 TPY ingos processed throughput BACT limit from the as-permitted configuration.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (lb/ton)	As-Built (lb/hr)
Ingot scalper 1	HR-02	FLT4	VOC	0.033	20.31

Table 29: Ingot Scalper VOC BACT Limit Change

The Department's review of the RBLC database indicated that the emissions from ingot scalper has been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission rate limits proposed.

8.1.4 Proposed PSD Permit Modifications

Suggested Ingot Scalper (X013) PSD Permit changes include:

1. Update all Ingot Scalper BACT limits expressed in units of lb/hr proposed by Novelis the corresponding aluminum process rate normalized emission limits.

8.2 Scalper Chip Handling System Pneumatic Conveyor

As originally proposed, the Scalper Chip Handling System included 4 conveyors that directed chips from the scalper to 4 cyclones that dropped chips to sidewall melting furnaces 1-4. The emissions from the cyclones were directed through dedicated stacks to the atmosphere.

In the as-built configuration, the proposed Scalper Chip Handling System (HR-03), a pneumatic conveyor will transport scalper chips from the ingot scalper cyclone chip bins to a hopper feeding a briquetting machine. The exhaust air from the product collection cyclone will be routed to the main ingot scalper filtration unit's collection system for PM emission control (FLT4) which vents to a dedicated stack. Novelis has estimated emissions from this unit as uncontrolled in order to allow for operational flexibility.

Condensable PM emissions will result from potential vaporization of residual ingot scalper lubricant on the surface of the scalped chips which subsequently condense into liquid aerosols as the exhaust air cools in the chip collection and conveyance system.

The final configuration for the Scalper Chip Handling System is described below.

1. X013 Scalper Chip Handling System (EU ID HR-03)
 - a. Emissions are sent to filtration system FLT-4 or directly vented uncontrolled to the atmosphere as operationally necessary.

8.2.1 Equipment Changes

Novelis has made the following changes to the scalper chip handling system as a result of the as-built configuration.

1. Removal of three (3) scalper chip handling system pneumatic conveyors and repurposing the remaining one (1) scalper chip handling system pneumatic conveyor for the briquetter.

8.2.2 Emission Changes

No control efficiency is applied for filterable PM removal in the ingot scalping filtration unit to allow for the operational flexibility to route the product collection cyclone's exhaust directly to atmosphere and to be consistent with the emission calculation methodology that was conducted for the as-permitted set of four (4) scalper chip handling system pneumatic conveyors.

The changes made to the scalper chip handling system unit flow capacity and hourly processing rate collectively produce an annual potential PM/PM10/PM2.5 emissions decrease.

8.2.3 BACT

Changes to the proposed BACT limits for the scalper chip handling system are a result of the as-built updates to the process equipment and control device specifications. As such, the BACT limits are being updated to reflect as-built design specification changes.

In the as-permitted top-down BACT analysis, Novelis selected good operation and maintenance practices of the conveyance system as BACT. Novelis has requested the following PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Perm (lb/ton)	As-Built (lb/hr)
Scalper Chip Handling System	HR-03	UNC	PM _{filterable}	0.014	0.19
			PM ₁₀	0.0069	0.10
			PM _{2.5}	0.0069	0.10

Table 30: Scalper Chip Handling System PM BACT Limit Change

The Department's review of the RBLC database indicated that the emissions from the Scalper Chip Handling System have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. The Department accepts the proposed as-built BACT emission rate limits proposed.

8.2.4 Proposed PSD Permit Modifications

Suggested Scalper Chip Handling System (X013) Air Permit changes include:

1. Remove all references to three (3) Scalper Chip Handling System Pneumatic Conveyors for Sidewell Melting Furnaces (HR-04, HR-05, and HR-06) and update naming for one remaining unit (HR-03)
2. Update all Scalper Chip Handling System BACT limits expressed in units of lb/ton and lb/hr proposed by Novelis and the corresponding aluminum process rate normalized emission limits.

8.3 Pusher Furnaces #1 - #3

As proposed and previously permitted, three (3) Pusher Furnaces were to be installed in the hot rolling area. Each pusher furnace is equipped with multiple natural gas-fired open flame burners that will have a total rated capacity of 104.9 MMBtu/hr per furnace. Each pusher furnace will exhaust through a dedicated natural draft stack to discharge natural gas combustion by product emissions.

The final configuration for the Pusher Furnaces is described below.

1. X014 Pusher Furnaces PF#1 - PF#3 (HR-07 – HR-09)
 - a. Uncontrolled emissions are vented through natural draft stacks.

8.3.1 Equipment Changes

Three pusher furnaces were proposed and previously permitted. The reconciliation application still proposes three (3) pusher furnaces.

8.3.2 Emissions Changes

In the as-built reconciliation application updates to the applicable global warming potential (GWP) for methane (CH₄) and nitrous oxide (N₂O) have been made.

8.3.3 BACT

Changes to the proposed BACT limits for the Pusher Furnaces are a result of the as-built updates to the GHG emission rate estimation. Novelis maintains the combined natural gas usage BACT limit of 1,281.6 MMScf per year based on a 12-month rolling total.

GHG

Novelis has requested the following GHG BACT Limit changes.

Pusher Furnace Description	EU ID	Control Device	Pollutant	BACT Emission Limits)
				As-Built (TPY)
#1	HR-07	Uncontrolled	CO ₂ e	25,012
#2	HR-08			
#3	HR-09			

Table 31: Pusher Furnaces GHG BACT Limit Changes

The Department's review of the proposed BACT Limit changes proposed by Novelis for the pusher furnaces have not changed. The BACT Limit changes made reflect a reduction for GHG pollutant emission limits. The Department's review of the RBLC database indicated that the emissions from the pusher furnaces have been limited appropriately when compared to similar source entries identified in the

RACT/BACT/LAER clearinghouse (RBLCL) database, as specified above. The Department accepts the proposed as-built BACT emission rate limits proposed.

8.3.4 Proposed PSD Permit Modifications

Suggested pusher furnace #1-#3 (X014) Air Permit changes include:

Update the GHG BACT limit for Pusher Furnaces #1-#3 (HR-07 through HR-09) to match the revised annual potential emission rate for each furnace.

8.4 Hot Rolling Mill – Reversing Mill and Finishing Mill

The proposed Hot Rolling Mill included one (1) single-stand reversing mill (HRM) and one (1) four (4)-stand finishing mill (HFM), along with roller tables, a vertical edger, shears, and coilers.

Emissions from the HRM and HFM consist of filterable PM, condensable PM, and VOC, which are collected via the use of hoods and enclosures for both the HRM and HFM. Each of the HRM and HFM “fume exhaust systems” will route the collected emissions from the mills to dedicated mist eliminators (ME1 & ME2). The final configuration for the HRM and HFM are described below.

1. X015 Hot Reversing Mill (HR-10)
 - a. Emissions are routed to dedicated Mist Eliminator #1 (ME-1)
2. X016 Hot Finishing Mill (HR-11)
 - a. Emissions are routed to dedicated Mist Eliminator #2 (ME-2)

8.4.1 Equipment Changes

One (1) HRM and one (1) HFM were previously proposed and permitted. The reconciliation application still proposes one HRM and one HFM.

8.4.2 Emissions Changes

The design exhaust flow capacity for the HRM mist eliminator has increased from 210,000 acfm to 217,500 acfm, and the nominal operating temperature has increased from 95.6 deg. F to 130 deg. F in the as-built configuration. This change results in a decrease in the volumetric flow rate from 191,380 dscfm to 186,651 dscfm in the as-built configuration. As a result, PM and VOC emissions from the HRM decrease.

The HFM mist eliminator nominal operating temperature was increased from 107.5 deg. F to 130 deg. F in the as-built configuration. As such, the as-built standard volumetric flow rate, used in the filterable PM/PM10/PM2.5 emission factor derivation, decreased from 385,463 dscfm to 370,755 dscfm. As a result, PM emissions from the HFM decreased.

8.4.3 BACT

Changes to the proposed BACT limits for the HRM & HFM are a result of the as-built updates to the control device specifications. Novelis has requested that the BACT limits be adjusted to match the specifications of the as-built control device. Novelis maintains the 159.5 TPY VOC emissions, the 16,800 liters per year bite-aid usage, and the 1,968,377 tons of aluminum throughput BACT limits from the as-permitted configuration.

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

Novelis has requested the following HRM PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Perm (lb/hr)
Hot Reversing Mill	HR-10	ME-1	PM _{filterable}	3.20
			PM ₁₀	7.07
			PM _{2.5}	6.50

Table 32: HRM BACT Limit Change

Novelis has requested the following HFM PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (lb/hr)
Hot Finishing Mill	HR-11	ME-2	PM _{filterable}	6.36
			PM ₁₀	14.4
			PM _{2.5}	13.0

Table 33: HFM BACT Limit Change

The Department's review of the RBLC database indicated that the emissions from Hot Rolling Mill have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. Accounting for the throughput, the proposed limits are in line with or more stringent than the BACT limits imposed on similar facilities. The Department accepts the proposed as-built BACT emission rate limits proposed.

8.4.4 Proposed PSD Permit Modifications

Novelis has requested the following PSD Permit Changes:

Hot Reversing Mill (X015) PSD Permit Changes:

- Update all HRM BACT limits for PM/PM₁₀/PM_{2.5}

Hot Finishing Mill (X016) PSD Permit Changes:

- Update all HFM BACT limits for PM/PM₁₀/PM_{2.5}

9.0 COLD ROLLING AREA

The proposed cold rolling area consists of the Tandem Cold Mill which is utilized to produce coils with accurate dimensions, appropriate flatness, and freedom from surface defects.

9.1 Tandem Cold Mill #1

One (1) 4-high Tandem (2-stand) Cold Mill (TCM) will provide cold rolling capability. A water-based oil emulsion roll coolant, and a secondary "bite lube" rolling oil are applied during rolling. Entrained water-oil emulsion coolant and rolling oil mist are captured through the mills' hooding and fume containment systems. Emissions are routed to a condenser designed primarily for condensable PM emissions control and secondarily for VOC control. Emissions are then routed to a mist eliminator system. The final configuration for the TCM is described below.

1. X017 - Tandem Cold Mill #1 (EU ID CR-01)

- a. Emissions from the TCM are routed to a condenser (CND1) and mist eliminator (ME3)

9.1.1 Equipment Changes

One TCM was previously proposed and permitted. The reconciliation application still proposes one TCM.

9.1.2 Emission Changes

The basic engineering design and operating details of the Tandem Cold Mill (CR-01) have not changed. However, Novelis noted in the reconciliation application, the lb/hr potential emission rate for the TCM was underestimated in the as-permitted application and thus updated the emission rate calculation methodology to include assigning two separate sets of TCM potential emissions factors. These include a short-term emission factor, using the maximum short-term process rate as the normalizing process variable, and a long-term emission factor using the annual average hourly process rate.

As such, changes to the maximum short-term and annual throughput rates were proposed to reflect the maximum capability of the TCM. The maximum product throughput on a short-term basis has been updated from 231.5 ton/hr to 310 ton/hr, and the annual average process rate and operating time, have been updated from 114.2 ton/hr and continuous annual operation, to 158 ton/hr at maximum expected annual operating hours. This adjustment produces an increase in the proposed annual operating throughput from 999,428 tpy to 1,099,680 tpy. In addition, a change in the nominal operating temperature of the mist eliminator results in a change in the dry standard volumetric flow capacity of the TCM mist eliminator from 137,468 dscfm, to 136,568 dscfm in the as-built configuration. These changes result in an overall increase in potential PM/PM10/PM2.5 and VOC emissions from the TCM.

9.1.3 BACT

In the original top-down BACT analysis, Novelis selected a mist eliminator with integral condenser as BACT for the TCM. Based on the as-built changes to the TCM annual potential emissions Novelis revisited Step 4 of the BACT analysis for the TCM to confirm that a mist eliminator with integral condenser were still considered BACT. Based on the results, Novelis confirmed that control of the TCM with mist eliminator with integral condenser were still BACT.

In addition, Novelis contends that based on introducing a separate long-term average set of PM/PM10/PM2.5 emission factors, the annual operating limit for the TCM is no longer adequately enforceable as the sole basis for ensuring the annual potential PM/PM10/PM2.5 emissions are not exceeded in practice. As such, Novelis requested similar annual PM/PM10/PM2.5 BACT limits to those in place for VOCs would introduce consistency across all of the regulated NSR pollutants generated by the TCM. The proposed rates are based on a capture efficiency of at least 95%.

Novelis has requested the following PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits (ton/yr) rolling	BACT Emission Limits

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

				As Built	As-Built (lb/hr)
Tandem Cold Mill	CR-01	CND-1 ME-3	PM _{filterable}	8.15	2.34
			PM ₁₀	7.72	2.22
			PM _{2.5}	6.90	1.98

TABLE 34: TCM BACT Limit Change

Novelis has requested the following VOC BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	BACT Emission Limits
				As-Built (ton/yr)	As-Built (lb/hr)
Tandem Cold Mill	CR-01	CND-1 ME-3	VOC	79.59	22.9

TABLE 35: TCM BACT Limit Change

Novelis has requested the following annual throughput BACT Limit changes.

Unit	EU ID	Control Device	BACT Throughput Limit
			As-Built (TPY)
Tandem Cold Mill	CR-01	CND-1 ME-3	1,099,680

TABLE 36: TCM BACT Limit Change

The Department's review of the RBLC database indicated that the emissions from TCM have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. Since Novelis reduced the BACT limits from those presented in the original determination, and the proposed limits are in line with or more stringent than the BACT limits imposed on similar facilities. The Department accepts the proposed as-built BACT emission rate limits proposed.

9.1.4 Proposed PSD Permit Modifications

Novelis has requested the following PSD Permit Changes:

1. Update the short-term TCM PM/PM₁₀/PM_{2.5} BACT limits expressed in units of lb/hr.
2. Add annual PM/PM₁₀/PM_{2.5} BACT limits expressed in units of ton/yr on a 12-month rolling total basis.
3. Update the annual throughput BACT limit on a 12-month rolling total basis.

10.0 COIL FINISHING AREA

The proposed Coil Finishing Area consists of the Can Coating line including: one (1) Tension Leveler, one (1) Alkaline Cleaning Line, one (1) Coating Line, and one (1) Edge Trimmer consisting of one (1) electrostatic oiler and one (1) scrap baller.

10.1 Tension Leveler

The proposed Tension Leveler consists of a set of rolls that flex and stretch process metal to remove any buckling and promote flatness and uniformity "bending mode". The

Tension Leveler can also operate in “pure stretch mode” in which the work rolls are opened and not engaged on the strip. When operating in bending mode a low vapor pressure lubricant is utilized which contributes to VOC emissions within the coil finishing area. The tension leveler lubricant is subsequently removed from the coils during the alkaline cleaning process where emissions are recovered and controlled. The final configuration for the Tension Leveler is described below.

1. X018 Tension Leveler #1 (EU ID CF-01)
 - a. Emissions from the Tension Leveler are uncontrolled.

10.1.1 Equipment Changes

One (1) Tension Leveler was proposed and permitted. The reconciliation application still proposes one Tension Leveler.

10.1.2 Emission Changes

The maximum hourly lubricant application rate for the tension leveler has decreased from 11.5 gal/hr to 0.42 gal/hr in the as-built configuration. This change reflects a change in the lubricant application technology to achieve the desired strip properties with a lower lubricant application rate.

In the as permitted application Novelis utilized an evaporative loss-based VOC emission factor. In the as-built reconciliation application, this rate was compared against the density of the applied lubricant utilizing the change in lubricant application rate, the evaporative loss calculation produced a VOC emission estimate which exceeds the mass of lubricant applied. To resolve this discrepancy, Novelis applied a 100% evaporative loss assumption for all lubricant applied at the Tension Leveler, using the lubricant density as the VOC emission factor expressed in lb/gal for the purposes of calculating both the hourly and annual potential VOC emissions. Implementing this alternative VOC emission factor basis for the Tension Leveler results in an increase in calculated annual potential VOC emissions.

Process Unit	Control device ID	Process Term	Pollutant	As-Perm Emission Factor		As-Built Emission Factor	
				lb/hr	lb/gal *	lb/hr	lb/gal
TL	Unc	Short	VOC	5.68	0.49	2.87	6.87
		Long	VOC	2.52	0.22	2.87	6.87

- Note1: Application of the Evaporative Loss Calculation estimate utilizing the updated application rate of 0.42 gal/hr relates to a 13.58 lb/gal emission rate which based on the density of the applied lubricant exceeds 100% VOC emission rate. As such the density of the lubricant was utilized to calculate the as-built VOC emission rate.
- Note2: Density of lubricant utilized 6.87 lb/gal.

Table 37: TL Emission Factor Changes

Process Unit	Pollutant	As-Perm Emission rate (lb/hr)	As-Built Emission rate (lb/hr)	As-Perm Emission rate (TPY)	As-Built Emission rate (TPY)
TL	VOC	5.68	2.87	11.0	12.6

Table 38: TL Emission Rate & PTE Changes

10.1.3 BACT

In the original top-down BACT analysis good operating and maintenance practices were selected as BACT to control VOC emissions. An 11.03 TPY VOC emission BACT limit was included in the as-permitted configuration. The annual potential VOCs proposed for the Tension Leveler changed in the as built configuration based on Novelis seeking to change the emission calculation methodology to reflect the reduction in lubricant application rate for the as-built configuration. The proposed change to the annual potential VOC emission rate does not implicate any of the available control options, technical feasibility statements, and/or economic, environmental, and energy impact evaluation conclusions from the original VOC BACT analysis.

In the as-built reconciliation application Novelis proposed a Tension Leveler lubricant usage limit of 3,664 gal/yr, as a work practice standard alternative to a numerical TPY VOC emission limit. Novelis notes that the Tension Leveler will not be equipped with a capture and collection system in the as-built configuration, as such directly measuring the VOC emissions is not technically feasible. Novelis believes that the proposed gal/yr VOC BACT limit and work practice standards are comparable to the most stringent control determinations in the RBLC for similar operations based on review of the RBLC database and available permit files for potentially similar facilities. Novelis has suggested that a TPY BACT limit for the Tension Leveler was not necessary and that good operation and maintenance practices were sufficient to control VOC emissions from the Tension Leveler. The Department rejects this assertion and accepts Novelis' proposed 3,664 gal/yr operational BACT limit and the proposed 12.6 TPY VOC BACT limit for the tension leveler, using the proposed as-built assumption that 100% of the lubricant applied is emitted as VOC. As such, based on the change in emission calculation method, the proposed increase to the BACT limit for the Tension Leveler to align with the reduced throughput and increased potential emissions is as follows.

The following VOC BACT Limit changes are proposed.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits	
				As-Built (gal-lubricant/yr) rolling	As-Built (ton/yr) rolling
Tension Leveler	CF-01	UNC	VOC	3,664	12.6

Table 39: TL BACT Limit Change

10.1.4 Proposed PSD Permit Modifications

Novelis has requested the following PSD Permit Changes:

1. Update the TL VOC BACT limits expressed in units of ton/year on rolling 12-month basis.
2. Update the annual VOC BACT limit compliance demonstration method to the 100% evaporative loss mass balance approach.
3. Update the Recordkeeping and Reporting Requirements for the tension Leveler to reference lubricant density.

10.2 Alkaline Cleaning Line

After passing through the tension leveling section the coil then passes through the alkaline cleaning line (ACL) where a water-based alkaline solution is sprayed onto the sheet to remove applied lubricant oil from the tension leveler line. Mist generated from the spray cleaning is collected and routed through a scrubber with an integral demister, to control organic material and inorganic PM. Primary emissions from this process include PM, PM₁₀, PM_{2.5}, and VOC. The Final Configuration for the Alkaline Cleaning Line is described below.

1. X018 Alkaline Cleaning Line (EU CF-02)
 - a. Emissions are routed to Wet Scrubber #1 (SC1)

10.2.1 Equipment Changes

One (1) Alkaline Cleaning Line was proposed and permitted. The reconciliation application still proposes one Alkaline Cleaning Line.

10.2.2 Emission Changes

The maximum aluminum throughput and associated annual operating rates for the alkaline cleaning line (CF-02) decreased from 22.5 ton/hr to 19.4 ton/hr in the as-built configuration. This change reflects the final specifications from the selected equipment vendors.

The filterable PM emissions based on an exit concentration basis for the scrubber has decreased from 10 mg/m³ to 5 mg/m³ in the as-built configuration, reflecting the expected PM removal capabilities of the scrubber's demister. The exhaust flow capacity of the capture and collection system associated with the scrubber has increased from 5,240 acfm to 7,653 acfm in the as-built configuration. Throughput to the alkaline cleaning line decreased as a result from 197,100 tpy to 169,948 tpy, as such the emission factors and PTE for PM and VOC emissions were also reduced.

10.2.3 BACT

The proposed BACT limit changes are a function of as-built updates to process equipment and control device specifications and not an underlying change to the emission calculation methodology or reference emission factors applied.

In the original top-down BACT analysis, Novelis selected wet scrubbing with integral demister as BACT for the ACL. Based on the as-built changes to the ACL annual potential emissions, Novelis noted that wet scrubbing with integral demister were still considered BACT in the as-built Configuration. Novelis has suggested the following BACT limit changes to align the limits with the new potential emissions estimated based on the change in control device specifications and annual throughput changes to the can coating line.

Novelis has requested the following PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (lb/hr)
Alkaline Cleaning	CF-02	SC-1	PM _{filterable}	0.14
			PM ₁₀	
			PM _{2.5}	

Table 40: ACL (SC1) BACT Limit Change

Novelis has requested the following VOC BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (lb/hr)
Alkaline Cleaning	CF-02	SC-1	VOC	0.08

Table 41: ACL (SC1) BACT Limit Change

The Department's review of the RBLC database indicated that the emissions from ACL have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. Since Novelis reduced the BACT limits from those presented in the original determination, and the proposed limits are in line with or more stringent than the BACT limits imposed on similar facilities. The Department accepts the proposed as-built BACT emission rate limits proposed.

10.2.4 Proposed PSD Permit Modifications

Novelis has requested the following PSD Permit Changes:

1. Update the Alkaline Cleaning Line Scrubber (SC1) filterable PM/PM10/PM2.5 and VOC BACT limits to reflect the as-built potential emission calculations.

10.3 Coating Line #1

The coating line is used to apply coating to both sides of the coil. A curing oven is utilized to cure the coating at maximum process speed. The oven is heated by recovered heat from a regenerative thermal oxidizer (RTO1) and by a series of natural gas fired burners in the circulation chamber. An air cooler will cool the strip after it leaves the curing oven. A multi-chamber RTO will be used to control VOC emissions from the coating line and the curing oven. Filtered ambient air will be fed to the air cooler's last zone which will then cascade to the upstream cooling zones. Exhaust air from the first zone at the entry end of the air cooler will be discharged into the atmosphere without treatment. Primary Emissions from Coating line include the products of combustion and VOCs. The final configuration for the Coating Line is described below.

1. X018 Coating Line #1 (EU CF-03)
 - a. Emissions form the Coating line are routed to Regenerative Thermal Oxidizer #1 (RTO1)

10.3.1 Equipment Changes

One (1) Coating Line was proposed and permitted. The reconciliation application still proposes one (1) Coating Line.

10.3.2 Emission Changes

The maximum hourly aluminum coil processing rate for the coating line (CF-03) was updated to match the throughput from the alkaline cleaning Line. The maximum hourly heat input capacity of the coating line burners (both curing oven individual zone burners and RTO burners) has decreased from 93.2 MMBtu/hr to 44.1 MMBtu/hr in the as-

built configuration. This change is based on the final specifications of the Coating Line's natural gas-fired combustion systems from the selected equipment vendors.

With the reduced curing oven heat input rate, changes to the hot air recirculation fans, and other final engineering design updates for the coating line, the maximum exhaust flow rate at standard conditions for the coating line RTO has decreased from 90,000 Nm³/hr to 60,000 Nm³/hr in the as-built configuration. This reduced exhaust flow rate also allows for a lower burner heat input capacity for the RTO representing a decrease from 7.2 MMBtu/hr to 6.2 MMBtu/hr in the as-built configuration.

The changes made result in reductions in the annual potential emissions. The maximum VOC inlet loading to the RTO from coating usage has decreased from 1,557 lb/hr to 1,184 lb/hr in the as-built configuration, which affects the nominal RTO VOC control efficiency, increasing it from 99.75% to 99.78%.

10.3.3 BACT

In the original top-down BACT analysis, Novelis selected thermal oxidization as BACT for the Coating Line. Based on the as-built changes to the coating line, hourly and annual potential emissions for all regulated NSR pollutants decrease. However, the originally proposed NO_x BACT limit expressed in units of lb NO_x/MMscf increases as a result of the as-built configuration. Novelis notes that the natural gas usage rate normalized NO_x emissions performance of the coating line still falls within the low NO_x emissions performance range for the types of direct-fired burners used in the curing oven and RTO.

Novelis also notes none of the similar source BACT determinations to the original PSD application for aluminum coil coating lines included NO_x BACT limits that can be used to evaluate the NO_x emissions performance of Novelis' proposed NO_x BACT limit. Therefore, Novelis continues to consider the proposed NO_x BACT limits for the coating line to be the most stringent limits established for any recently permitted aluminum coil coating lines currently in operation.

The proposed BACT limit changes are a function of as-built updates to process equipment and control device specifications and not an underlying change to the emission calculation methodology or reference emission factors applied.

Novelis has suggested the following BACT limit changes to align the limits with the new potential emissions estimated based on the change in control device specifications and annual throughput changes to the can coating line.

Novelis has requested the following PM BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (lb/hr)
Coating Line	CF-03	RTO-1	PM _{filterable}	2.73
			PM ₁₀	2.64
			PM _{2.5}	2.22

Table 42: Coating Line PM BACT Limit Change

Novelis has requested the following NO_x BACT Limit changes.

Unit	EU ID		Pollutant	BACT Emission Limits

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

		Control Device		As-Built (lb/MMBtu)
Coating Line	CF-03	RTO-1	NO _x	0.150

Table 43: Coating Line NO_x BACT Limit Change

Novelis has requested the following CO BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (lb/hr)
Coating Line	CF-03	RTO-1	CO	13.23

Table 44: Coating Line CO BACT Limit Change

Novelis has requested the following VOC BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (lb/hr)
Coating Line	CF-03	RTO-1	VOC	2.89

Table 45: Coating VOC Line BACT Limit Change

Novelis has requested the following GHG BACT Limit changes.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built (tpy)
Coating Line	CF-03	RTO-1	CO ₂ e	22,598

Table 46: Coating Line GHG BACT Limit Change

The Department's review of the RBLC database indicated that the emissions from the coating line have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database, as specified above. Since Novelis reduced the BACT limits, for all regulated NSR pollutants except NO_x, from those presented in the original determination, and the proposed limits are in line with or more stringent than the BACT limits imposed on similar facilities. The Department accepts the proposed as-built BACT emission rate limits proposed for PM, CO, VOC and GHG.

For NO_x, the Department concurs with Novelis' contention that the natural gas usage rate normalized NO_x emissions performance of the coating line still falls within the low NO_x emissions performance range for the types of direct-fired burners used in the curing oven and RTO. The Department's review of the RBLC database indicated that NO_x emissions from the coating line have been limited appropriately when compared to similar source entries identified in the RACT/BACT/LAER clearinghouse (RBLC) database. Therefore, The Department accepts the increased proposed NO_x BACT limit for the coating line.

10.3.4 Proposed PSD Permit Modifications

Novelis has requested the following PSD Permit Changes:

1. Update Coating Line RTO BACT limits for PM, total PM10, total PM2.5, NOX, CO, and VOC expressed in units of lb/hr and the corresponding natural gas heat input rate normalized NOX emission limit.
2. Update the Coating Line RTO annual GHG BACT limit expressed in units of tons per year on 12-month rolling total.

10.4 Edge Trimmer

As part of the reconciliation application Novelis added a previously unpermitted Edge Trimmer process to the Coil Finishing Line. The Edge Trimmer consists of a coil entry system, in-line coil preparation, electrostatic oiling, side trimming, scrap suction and high-speed recoiling, along with various auxiliary systems and electrics/automation. The final configuration for the Edge Trimmer is described below.

1. X018 Electrostatic Oiler (EU CF-04)
 - a. Emissions are uncontrolled inside the Coil Finishing building
2. X018 Scrap Baller (EU CF-05)
 - a. Emissions are controlled with a wet scrubber with integral demister (SC2).

10.4.1 Equipment Changes

Novelis did not propose an edge trimmer in the original permitting action. The reconciliation application Novelis has proposed the following edge trimmer equipment be added to the coil finishing line as a result of the as-built configuration.

1. Coil entry system
2. In-line Coil preparation
3. Electrostatic oiling
4. Side trimming (Trimming shears)
5. Scrap suction (Scrap Baller)
6. High speed recoiling

Emission sources associated with the edge trimmer include: the Electrostatic Oiler (CF-04) which is a source of VOC and PM emissions from the electrostatic application of lubricant, and the scrap baller (CF-05) which is a source of PM emissions associated with the scrap suction and processing component of the edge trimmer.

Novelis states that the electrostatic oiler is used to apply a thin coat of lubricant to the surface of the coil. The lubricant is applied via a spray blade. A high voltage charge is applied to the lubricant as it leaves the spray blade. The opposite charge of the lubricant to the coil causes the lubricant to be drawn to the coil surface. Novelis notes that due to the nature of the electrostatic oiler lubricant applicator, transfer efficiencies are very high and overspray is minimal. The PM and VOC emissions from the Electrostatic Oiler are uncontrolled and discharged into the Coil Finishing Building.

The scrap suction system continuously collects thin, ribbon-like, edge trimmings from the high-speed edge trimmer shears and conveys the raw scrap to a "Scrap Baller" which compacts the edge trimming into balls which are collected in a bin below the machine. Exhaust duct pickup points located on the discharge section of the Scrap Baller route aluminum fines and other forms of PM generated by the scrap baller and conveyance process, to a venturi-type, water-based wet scrubber for PM removal. The exhaust from

the scrubber is discharged to the atmosphere from a roof penetrating stack on the coil finishing building.

10.4.2 Emissions Changes

The potential VOC emission calculations for the electrostatic oiler are based on the maximum application rate, density, and VOC content of the lubricant and an engineering estimate for the amount of evaporative loss of the lubricant.

The filterable PM/PM10/PM2.5 annual potential emission calculations for the electrostatic oiler are based on the vendor supplied estimate for the transfer efficiency of the electrostatic applicator (98%) and an engineering estimate for the enclosure/building removal efficiency (90%). The unit's enclosure and surrounding coil finishing building are expected to prevent a majority of any fugitive lubricant sprays from escaping the building vents or other openings. This same 90% building removal efficiency was used in the as-permitted annual potential PM emission calculation basis for the Ingot Saw, HRM, HFM, and TCM.

The Scrap Baller is a potential source of controlled filterable PM emissions from the scrubber stack. Potential PM emissions from the scrubber are estimated based on the vendor-supplied PM emissions performance expressed on an exit concentration basis and the exhaust flow capacity for the scrubber consistent with the emission calculation methodology applied to the Alkaline Cleaning Line.

10.4.3 BACT

10.4.3.1 Electrostatic Oiler

“Novelis is proposing to implement good operating and maintenance practices as a work practice standard combined with a proposed annual operating limitation on lubricant usage to ensure that the annual potential VOC emissions are not exceeded in practice”. Novelis notes, with respect to similar source VOC emissions benchmarking, the annual potential VOC emissions, assigned to the electrostatic oiler for the Novelis Bay Minette facility, are generally comparable to other recently permitted similar source facilities and any difference in VOC emissions is primarily attributable to differences in the assigned process rates for each site-specific application of this coil finishing technology.

Particulate Matter

In Novelis' revised the top-down BACT analysis (04/03/2026), Novelis addressed good operating and maintenance practices, baghouses, electrostatic precipitators, wet scrubbers, and mist eliminators as potential control devices for reducing particulate matter emissions from the electrostatic oiler. All were eliminated as technically infeasible. Novelis noted that for wet scrubbers, and mist eliminators that due to the agglomerate/coalescing nature of the charged emissions, the metal surfaces in the capture system would attract the charged emissions and even if a non-metallic capture and collection system was utilized pm emissions would be so low that making additional control ineffective at removing the residual emissions present. Thus, other than good operation and work practices, these options are not technically feasible.

The Electrostatic Oiler is not equipped with a capture and collection system routed to a duct, stack, or vent where direct measurement of PM/PM10/PM2.5 emissions can be

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY NO.: 501-0052

made utilizing EPA Methods. Therefore, Novelis has proposed to implement good operating and maintenance practices including controlling lubrication application rates, spill prevention and other waste reduction measures, and written operating instructions and procedures, as a work practice standard combined with a proposed annual operating limitation on lubricant usage to ensure that the annual potential PM/PM10/PM2.5 emissions are not exceeded in practice. The Department concurs with Novelis' contention that good operating and maintenance practices and a lubricant usage limit is BACT.

Novelis has requested the following PM BACT Limits.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built Strip Lubricant (gal/yr) rolling
Electrostatic Oiler	CF-04	Unc	PM _{filterable}	341,092
			PM ₁₀	
			PM _{2.5}	

TABLE 47: Electrostatic Oiler BACT Limit

VOC

In the top-down BACT analysis, Novelis addressed alternative material formulation, good operating and maintenance practices, thermal and catalytic oxidation, condensation, adsorption, and absorption as potential control devices for reducing VOC emissions from the Electrostatic Oiler. All of the control technologies except good operating and maintenance practices were deemed technically infeasible for VOC control.

The Electrostatic Oiler is not equipped with a capture and collection system routed to a duct, stack, or vent where direct measurement of VOC emissions is considered technically feasible. Novelis is proposing to implement good operating and maintenance practices as a work practice standard to a numerical emission-based VOC BACT limit combined with a proposed annual operating limitation on lubricant to ensure that the estimated annual potential VOC emissions are not exceeded in practice. The Department concurs with Novelis' contention that good operating and maintenance practices and a lubricant usage limit is BACT.

The following VOC BACT Limits are proposed.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				As-Built Strip Lubricant (gal/yr) rolling
Electrostatic oiler	CF-04	UNC	VOC	341,092

TABLE 48: Electrostatic Oiler BACT Limit

10.4.3.2 Scrap Baller

Particulate Matter

Novelis proposes the use of a wet scrubber as BACT control for PM emissions from the Scrap Baller to achieve compliance with a proposed filterable PM/PM10/PM2.5 BACT

limit of 0.27 lb/hr. In their top-down BACT analysis, Novelis addressed good operating and maintenance practices, baghouses, electrostatic precipitators (ESP), wet scrubbers, and cyclones as potential control for reducing particulate matter emissions from the Scrap Baller. ESPs and cyclones were deemed technically infeasible based on health and safety concerns.

Baghouses were determined to be technically feasible for additional filtration of PM emissions downstream of another control device such as a wet scrubber. Baghouses and wet scrubbers were evaluated in step 3 on the analysis. Baghouses were subsequently deemed economically infeasible, leaving only wet scrubbers as the remaining control device. As such, Novelis has chosen a wet scrubber, that can meet Novelis' combustible dust management requirements, as BACT for PM control from the scrap baller.

The design of the Scrap Baller operation includes a wet scrubber with integral demister for combustible dust management which cannot readily be changed for the purposes of air pollutant emissions minimization. Compliance with the proposed particulate emission limits will be demonstrated by operating and maintaining the process units and control devices in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications as deemed necessary by Novelis. The Department concurs with Novelis that a wet scrubber with integral demister for combustible dust management is BACT.

Novelis has requested the following PM BACT Limits.

Unit	EU ID	Control Device	Pollutant	BACT Emission Limits
				(lb/hr)
Scrap Baller	CF-05	SC2	PM _{filterable}	0.27
			PM _{10-filt}	
			PM _{2.5-filt}	

Table 49: Scrap Baller BACT Limits

10.4.4 New Source Performance Standards (NSPS)

Subpart TT – Standards of Performance for Metal Coil Surface Coating

The provisions of this subpart apply to the affected facilities in a metal coil surface coating operation: each prime coat operation, each finish coat operation, and each prime and finish coat operation combined when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously.

This subpart applies to any facility identified in 40 CFR 60.460 that commences construction, modification, or reconstruction after January 5, 1981, which includes the Novelis facility.

The applicability of this subpart is dependent on the definition of coating as it is applied to the context of the electrostatic oiler at the Novelis facility. Novelis contends and the Departments agrees that the term coating as it applies to Subpart TT, does not include the protective oils utilized at Novelis. The more recent federal NESHAP Subpart SSSS coating definition that excludes protective oils from the definition of regulated coatings

is also consistent with the “Coatings Used in Coil Coating” provided in Table 3-1 of the Metal Surface Coating Industry- Background Information for Proposed Standards EPA background document associated with the initial NSPS Subpart TT emissions standards. Specifically, the list of coatings commonly used by the metal coil surface coating industry at the time of promulgation of the NSPS Subpart TT emissions standards did not include the types of protective lubricants/oils used in the Electrostatic Oilers, and instead the list of coatings in the NSPS Subpart TT background document only addresses the classes of more common solvent-based and water-based coatings used to achieve desired protective, decorative, or functional properties.

The types of lubricants applied in the Electrostatic Oiler do not form the type of continuous films that is commonly understood as representing a surface “coating”, so excluding such lubricants from being considered as coating is a reasonable interpretation of even the more limited NSPS Subpart TT definition.

As such, the Edge Trimmer Electrostatic Oiler is not subject to 40 CFR Part 60, Subpart TT “*Standards of Performance for Metal Coil Surface Coating*”, since the coating applied does not meet the definition of a “coating”.

10.4.5 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Subpart SSSS - National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil

Pursuant to 40 CFR 63.5110, regulated coatings do not include decorative, protective, or functional materials that consist only of solvents, protective oils, acids, bases, or any combination of these substances. Protective oil is defined as an organic material applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. Decorative, protective, or functional materials that consist only of solvents, protective oils, acids, bases, or any combination of these substances are not considered coatings for the purposes of this subpart. The various lubricants applied to the surface of the aluminum metal strip processed in the Electrostatic Oiler will be classified as protective lubricants. Therefore, the requirements of NESHAP Subpart SSSS do not apply to this process.

10.4.6 CAM

The Bay Minette mill will be a major source, and upon beginning operations, Novelis will be required to apply for a Title V Major Source Operating Permit under Part 70. As such, Novelis is not subject to CAM at this time, but this analysis addresses the expected CAM applicability of these sources after beginning production.

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given pollutant, (2) if that unit uses a control device to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold.

Scrap Baller

With uncontrolled potential to emit that pollutant at less than the major-source threshold, CAM would not apply.

Electrostatic Oiler

With uncontrolled potential to emit that pollutant at less than the major-source threshold and no control device on the Electrostatic Oiler, CAM would not apply.

11.0 AUXILIARY SYSTEMS

The Auxiliary Systems emission unit grouping are sources which provide utilities or critical functions to the process equipment but are not directly associated with any of the core process areas, and process support operations which are affiliated with a process area but are not directly integrated with manufacturing products.

11.0.1 Removal of As-Permitted Equipment

Several emission units were removed from the as-permitted project scope as a result of design changes that were made for the as-built configuration. Permitted equipment removed from the Auxiliary Systems equipment scope, include:

- Hot Water Boilers #1 through #3 (AS-01 through AS-03); Novelis requests that the permit (X019) for these be removed along with the associated BACT limits.
- Emergency Generator Engine #3 (Remelt Cold End) (AS-08),
- Emergency Generator Engine #4 (Remelt Hot End) (AS-09),
- Emergency Generator Engine #8 (Coating Line) (AS-13), and
- Emergency Generator Engine #9 (Edge Trimmer) (AS-14);
- Fire Pump Engine #2 (South Pump House) (AS-16); and
- One (1) 5,000 gallon Diesel Fuel Storage and Refueling Station (AS-21).

11.0.2 Addition of New Emission Units

Several new emission units were added to the project scope during construction as engineering designs for the associated utility, power supply, and firewater systems changed since the start of construction. Novelis notes that no new *types* of Auxiliary Systems have been added to the scope. The number of units and sizes of the cooling towers, building heating systems, emergency generator engines, and diesel storage and refueling systems changed.

11.0.3 BACT

In the original application for the Bay Minette facility, the Department determined certain equipment that would not be considered for BACT analysis generally including small sources that are otherwise subject to generally applicable requirements, those deemed not technically feasible for BACT considerations, and those where emissions are not captured in a hood or duct or emitted via a stack for subsequent measurement using EPA Reference Test Methods. As such, BACT limits for these sources were not established. In cases where emissions cannot be measured, work practice standards can be established as BACT in lieu of emission limits. Such work practice standards are required through a duty to minimize emissions requirement to 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.

11.1 Hot Water Boilers #1 - #3 X019-Void

These sources were removed from the as-built configuration at the Bay Minette facility. Novelis has requested that these sources be removed from consideration in the as-built reconciliation and Air Permit 501-0052-X019 – *Hot water Boiler #1 (AS-01), Hot water Boiler #2 (AS-02), Hot water Boiler #3 (AS-03)*, be voided.

11.2 Cooling Towers

The cooling towers at the Bay Minette facility are all multi-cell mechanical draft, wet cooling towers with associated mist eliminators to minimize drift loss. The final configuration of the cooling towers in the as-built configuration include a total of five (5) cooling towers as opposed to two (2) colling towers presented in the as-permitted configuration. They include the following, under Air Permit X020:

- Caster Cooling Tower #1; AS-04 - supports the casting area.
- Hot Mill Cooling Tower; AS-05 - supports the hot mill.
- Cold Mill Cooling Tower; AS-26 - supports the cold mill.
- Finishing Cooling Tower; AS-27 - supports the finishing area.
- Round Tops/Pushers Cooling Tower; AS-28 - supports the needs of the round top furnaces and the pusher furnaces.

11.2.1 Equipment Changes

Two (2) cooling towers were proposed and permitted. In the reconciliation application Novelis proposes to remove and replace the general plant colling tower with the hot mill cooling tower and add three (3) additional cooling towers, listed below.

- Cold Mill Cooling Tower (AS-26),
- Finishing Cooling Tower (AS-27), and
- Round Tops/Pushers Cooling Tower (AS-28).

The total cooling tower recirculating water flow rate, 38,800 gal/min, has increased in the as-built configuration to 42,960 gal/min. Updates to as-permitted process equipment specifications, the number of cells, and associated cooling water recirculating flow rate and the name for the Hot Mill Cooling Tower (AS-05) (formerly designated as the General Plant Cooling Tower) have been updated to reflect the final engineering design basis for the affected cooling water systems.

11.2.2 Emissions Changes

The methodology for estimating the emissions from the cooling towers has not changed from the method presented in the initial PSD application. The combined PM emissions from cooling towers have increased due to an increase in recirculating cooling water flow rate reflected in the as-built configuration.

11.2.3 BACT

For the cooling towers, the BACT original analysis from the as-permitted determination will not change, as such no additional BACT evaluation would be required. Maintaining circulating water flow rates and total dissolved solids content at or below the level specified in the hourly and annual potential PM/PM10/PM2.5 emission calculations can be considered good design and operating practices. Novelis will continue to comply

with the requirement to utilize drift eliminators with 0.001% drift of recirculated water as established in the X020 permit, and the recirculation rates specified below as BACT.

EU-ID	Emission Unit	Maximum Recirculation Rate
		Gal/min
AS-04	Caster Cooling Tower	10,580
AS-05	Hot Mill Cooling Tower	18,000
AS-26	Cold Mill Cooling Tower	12,000
AS-27	Finishing Mill Cooling Tower	980
AS-28	Round Top/Pushers Cooling Tower	1,400

Table 50: Cooling Tower BACT Limits

11.2.4 Proposed PSD Permit Modifications

Novelis Has requested the following changes to the air permits associated with the Cooling Towers:

- Change the name of emission unit AS-05 from “General Plant Cooling Tower” to “Hot Mill Cooling Tower”
- Add the following emission units to the X020 permit:
 - AS-26 – Cold Mill Cooling Tower
 - Maximum Circulating Water Flow Rate = 12,000 gal/min
 - AS-27 – Finishing Cooling Tower
 - Maximum Circulating Water Flow Rate = 980 gal/min
 - AS-28 – Round Tops/Pushers Cooling Tower
 - Maximum Circulating Water Flow Rate = 1,400 gal/min
- Update the following maximum circulating water flow rates:
 - AS-04 – Caster Cooling Tower #1
 - Update from 7,800 gal/min to 10,580 gal/min
 - AS-05 – Hot Mill Cooling Tower
 - Update from 31,000 gal/min to 18,000 gal/min

11.3 Emergency Engines

11.3.1 Emergency Generator Engines

In the as-built configuration, the number of emergency engines (nine (9)), has not changed from the as-permitted configuration. Four emergency engines (AS-8, AS-9, AS-13 & AS-14) were removed from the scope of the project and Four (4) new emergency engines listed below were included in the as-built configuration. The final Configuration of the Emergency Generator Engines (X021) is as follows:

- Emergency Generator Engine #1- 304 BHP (Security Office) (AS-06),
- Emergency Generator Engine #2 - 304 BHP (Admin Bldg.) (AS-07),
- Emergency Generator Engine #5 – 160.9 BHP (Hot Reversing Mill) (AS-10),
- Emergency Generator Engine #6 – 261.5 BHP (Hot Finishing Mill) (AS-11),
- Emergency Generator Engine #7 – 160.9 BHP (Cold Mill) (AS-12),
- Emergency Generator Engine #10 - 304 BHP (Maintenance Bldg.) (AS-29),
- Emergency Generator Engine #11 – 63.9 BHP (Decoater #1) (AS-30),
- Emergency Generator Engine #12 – 63.9 BHP (Decoater #2) (AS-31), and

- Emergency Generator Engine #13 – 63.9 BHP (Decoater #3) (AS-32)

The combined engine rating for all emergency generator engines has decreased from 2,736 hp to 1,788 hp in the as-built configuration. All emergency generator engines are natural gas-fired and will emit typical combustion by-product pollutants. No changes to the underlying emissions estimation methodology for emergency generator engines are included in the as-built calculation updates.

11.3.2 BACT

For the emergency engines, the changes proposed for the as-built configuration should not impact applicability of the formerly selected BACT limits, considering the restriction on hours of operation required by NSPS Subpart IIII. Novelis will continue to comply with applicable NSPS Subpart IIII limits for the emergency generator engines, and these limits will serve as BACT.

11.3.3 Proposed PSD Permit Modifications

Novelis has requested the following changes to the air permits associated with the emergency engines:

Remove the following emission units from the associated air permit along with any associated requirements and emissions limitations.

- AS-08 – Emergency Generator Engine #3 (Remelt Cold End)
- AS-09 – Emergency Generator Engine #4 (Remelt Hot End)
- AS-13 – Emergency Generator Engine #8 (Coating Line)
- AS-14 – Emergency Generator Engine #9 (Edge Trimmer)

Add the following emission units to the associated air permit.

- AS-29 – 304.0 HP Emergency Generator Engine #10 (Maintenance Bldg)
- AS-30 – 63.9 HP Emergency Generator Engine #11 (Decoater #1)
- AS-31 – 63.9 HP Emergency Generator Engine #12 (Decoater #2)
- AS-32 – 63.9 HP Emergency Generator Engine #13 (Decoater #3)

Update the following engine rating changes not affecting the applicability of NSPS Subpart JJJJ or associated emissions limitations and requirements

- AS-10 – Emergency Generator Engine #5 (Hot Reversing Mill)
 - Engine rating from 304.0 HP to 160.9 HP
- AS-11 – Emergency Generator Engine #6 (Hot Finishing Mill)
 - Engine rating from 304.0 HP to 261.5 HP
- AS-12 – Emergency Generator Engine #7 (Cold Mill)
 - Engine rating from 304.0 HP to 160.9 HP

11.4 Fire Pump Engines

In the as Permitted configuration, there are two (2) emergency firewater “pump houses”, each equipped with two (2) engines, two 755 BHP Fire Pump Engines and two 422 BHP Fire Pump Engines used to power the emergency firewater pumps. In the As-built configuration the north pump house contains one (1) electric engine and one (1) diesel-driven engine rated at 700 BHP (AS-15). The west pump house contains two (2) diesel

engines rated at 510 BHP, each (AS-17 and AS-18). The final configuration of the fire pump engines (X021) is as follows:

- AS-15 Fire Pump Engine #1 – 700 BHP (North Pump House)
- AS-17 Fire Pump Engine #3 – 510 BHP (West Pump House)
- AS-18 Fire Pump Engine #4 – 510 BHP (West Pumo House)

11.4.1 Equipment Changes

Four (4) diesel fire pump engines were proposed and permitted. In the reconciliation application Novelis proposes three (3) fire pump engines, with the fourth engine being electrically driven. Fire Pump Engine #1 (AS-15) has been redesignated as being associated with the “North Pump House”, and the engine rating and associated maximum hourly and annual fuel usage rates for all fire pump engines (AS-15, AS-17, and AS-18) have been updated to match the final engineering design basis of the firewater supply systems.

11.4.2 Emission Changes

The engine rating and associated maximum hourly and annual fuel usage rates for all fire pump engines have been updated to match the final engineering design basis of the firewater supply systems.

11.4.3 BACT

For the fire pump engines, the changes proposed for the as-built configuration should not impact applicability of the formerly selected BACT limits, considering the restriction on hours of operation required by NSPS Subpart JJJJ. Novelis will continue to comply with applicable NSPS Subpart JJJJ limits for the fire pump engines, and these limits will serve as BACT.

11.4.4 Proposed PSD Permit Modifications

Novelis Has requested the following changes to the air permits associated with the Fire Pump Engines:

- AS-15 from Fire Pump Engine #1 (South Pump House) to Fire Pump Engine #1 (North Pump House)

Remove the following emission units from the permit along with any associated requirements and emissions limitations

- AS-16 – Fire Pump Engine #2 (South Pump House)

Update the following engine rating changes

- AS-15 – Fire Pump Engine #1 (North Pump House)
 - Engine rating from 755 HP to 700 HP
- AS-17 – Fire Pump Engine #3 (West Pump House)
 - Engine rating from 755 HP to 510 HP
- AS-18 – Fire Pump Engine #4 (West Pump House)
 - Engine rating from 422 HP to 510 HP

11.6 Fugitive Dust

11.6.1 Haul Roads & Lime/Sorbent Silos

Six (6) lime silos were proposed and permitted. In the reconciliation application Novelis proposed to reduce the lime silos from six (6) to five (5) and add two (2) cold baghouse sorbent silos (AS-33). The cold baghouse sorbent silos will be installed with bin vent filters and equipped with level sensors to avoid overfilling. These units are included as a source of fugitive dust along with the mill roads.

The final configuration for Fugitive Dust (X022) is as follows:

- AS-20 Five (5) Hot Baghouse Lime Silos
- AS-25 Plant Haul Roads
- AS-33 Two (2) Cold Baghouse Sorbent Silos

11.6.2 Emissions

The basic haul truck types, material types, and storage areas from the as-permitted configuration were carried forward into the as-built configuration, however the vehicle miles travelled were updated to reconcile to the as-built route distances and process rates for materials being received/shipped.

Emissions from the silos and haul roads were updated to reflect the as-built configuration.

11.6.3 BACT

The BACT evaluation from the original determination has not changed as a result of the changes proposed in the reconciliation application. Novelis will maintain roadways in a manner to minimize emissions and will comply with the applicable Fugitive Dust Plan established for the Bay Minette facility as BACT level work practice standards. The Department is still requiring that within twelve months of startup, Novelis must submit a facility-wide fugitive dust plan addressing these details after fugitive dust from the site is properly assessed. Prior to submitting the fugitive dust plan, the Department requires that reasonable precautions be implemented.

11.6.4 Proposed PSD Permit Changes

Novelis requests no changes to Air Permit X022 since the general provisions of the permit are not affected by the as-built updates to the paved haul road potential emission calculations.

11.7 Building Heating Systems

In the as-permitted configuration, fifty-six (56) similarly sized, small units designed for the building heating systems were identified. In the as-built configuration, a total of sixty-six (66) units with varying heat input capacity are being installed across the Bay Minette facility. The Building Heating Systems (AS-19) emission unit category now consists of the following emission units in the as-built configuration, under Air Permit X023:

Main Production Building Make-Up Air Units

- Building Heating Systems (30 MAU @ 11.55 MMBtu/hr each) (AS-19a),

- Building Heating Systems (4 MAU @ 7.50 MMBtu/hr each) (AS-19b),
- Building Heating Systems (2 MAU @ 3.75 MMBtu/hr each) (AS-19c), and
- Building Heating Systems (1 MAU @ 2.25 MMBtu/hr each) (AS-19d).

Central Maintenance Building Unit Heaters

- Building Heating Systems (7 @ 0.175 MMBtu/hr each) (AS-19e),
- Building Heating Systems (12 @ 0.150 MMBtu/hr each) (AS-19f),
- Building Heating Systems (6 @ 0.105 MMBtu/hr each) (AS-19g), and
- Building Heating Systems (4 @ 0.045 MMBtu/hr each) (AS-19h).

The number of units and total heat input capacity comprising the building heating systems (AS-19) increased (from 56 to 66 units) primarily due to an increase in the number of required HVAC units necessary to meet the building air cooling needs of the main production buildings. Novelis details the basis for increasing the number changing the proposed building heating units in the reconciliation application.

The maximum potential emissions increase is directly related to the amount of natural gas burned and the maximum heat input capacity. Novelis notes, the proposed systems include significantly oversized short-term rated heating capacity for the actual heating duty on cooler months to balance with the more critical needed cooling system requirements in typically available single dual function heating and cooling compatible HVAC units.

The building heating system units were not permitted as part of the original analysis. As part of the reconciliation application, Novelis has proposed to permit these units and limit natural gas usage for this source-wide grouping to 486.7 MMscf/yr. Novelis notes that the proposed maximum annual potential natural gas usage limit would be equal to the original as-permitted configuration basis.

11.7.1 Emissions

The building system heating units use direct-fired, low NO_x natural gas burners which emit typical natural gas combustion byproduct pollutants. The maximum potential emissions are directly related to the amount of natural gas burned and the maximum heat input capacity. Novelis however proposes to install significantly oversized short-term rated heating capacity units for the actual heating duty that would be needed to warm the interior of the building on cooler months.

Instead of utilizing the burner heat input capacity over an annual period to estimate PTE, Novelis chose to determine a “more realistic” short-term potential operating rate and associated emissions level for the building heating systems. Novelis developed a maximum daily average capacity factor on an individual MAU category basis. This capacity factor was determined by estimating the natural gas usage rate necessary for the heater to increase the temperature of the air within the MAU from 27°F (average wintertime temperature) to 55°F (temperature determined as sufficient to protect equipment from cold temperatures). The short-term natural gas usage assigned to each MAU is dependent upon air flow capacity, air temperature rise associated with design conditions, heat capacity of air, density of air, and thermal efficiency of the selected MAU.

For annual natural gas usage, Novelis is proposing to impose an annual operating limitation of 486.7 MMscf/yr for the source-wide grouping of Building Heating Systems such that the total maximum annual potential natural gas usage would be equal to the original as-permitted configuration basis. A ratio of the hourly natural gas usage rate extrapolated to continuous usage (8,760 hr/yr) and the as-permitted configuration was used to estimate the individual unit annual fuel consumption required to estimate the annual potential emissions on a unit-by-unit basis.

11.7.2 BACT

The smaller Building Heating Systems with maximum hourly heat input rates of less than 5 MMBtu/hr can generally qualify for more streamlined consideration in the BACT determination as was the case for the as-permitted configuration of this emission unit category. However, the larger Building Heating Systems with maximum hourly heat input rates above 5 MMBtu/hr have been added to the as-built configuration. Novelis conducted a top-down BACT evaluation for the larger Building Heating System category (AS-19a and AS-19b).

Particulate Matter

Novelis addressed fabric filters (Baghouses), electrostatic precipitators, wet scrubbers, cyclones and good design and operation as generally available control technologies for PM control.

Baghouses were determined to be infeasible due to the inlet loading concentrations being orders of magnitude lower than the filter design inlet concentration range and moisture produced by the combustion reactions can clog filters. Also, as the heated air is mixed with the combustion gases, the heated air could not be effectively treated and then discharged into the buildings without significant heat transfer impacts which would be detrimental to the design and operating features of the systems.

The use of dry ESPs is technically infeasible for the building heating systems due to the moisture and condensable matter that would clog the ESP. Additionally, the inlet loading concentration is orders of magnitude smaller than dry and wet ESPs are capable of handling. Also, ESPs are very sensitive to fluctuations in gas stream conditions and are not suited for use in processes which are highly variable. The Building heating systems will not be operated continuously but rather on an as needed basis meaning combustion rates and air flows will vary, resulting in variable particulate flow to the ESP. Additionally, ESPs have a large space and power requirements, and the heated air would experience significant heat transfer if it were to be treated before being released into the building which would nullify the basic function of the Building heating systems.

Wet scrubbers were determined to be infeasible due to, among other considerations, wet scrubbers not allowing for any air flow to be released into the building to be used for heat as intended.

Since all particulate matter emissions from combustion are assumed to be less than one micron and cyclone control efficiency for PM between 0 and 2.5 microns is typically less than 10%, cyclones were determined to be technically infeasible.

As such, Novelis proposes the implementation of good design and operating practices as BACT control for PM emissions from the Building Heating Systems. Novelis notes that the burners associated with the Building Heating Systems will represent modern equipment design for achieving maximum process efficiency and will only combust natural gas. Heated air mixed with the exhaust from combustion will be directed through the vents and into the buildings as such all PM emissions will be defined as uncaptured or fugitive. Compliance with the proposed particulate emissions will be demonstrated by operating and maintaining the process units in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s). In addition, hourly, daily average and annual average (12-month rolling) natural gas usage limitations for source-wide Building Heating System natural gas consumption were proposed as enforceable BACT limits.

NO_x

Novelis addressed low NO_x burners (LNB), selective catalytic reduction (SCR), selective non-catalytic reduction (SCNR), and good design and operation as generally available control technologies for NO_x control.

LNB were deemed technically feasible. Specifically, the direct-fired, line-style burners proposed in the building heating systems implement a two-stage combustion system for NOX and CO emissions minimization. Having two separate flames within the burner combustion zone, minimizes the emissions levels and allows for higher temperature rise and higher tolerance to varying conditions as compared to single stage burner design when utilized in the Building Heating Systems.

Both SCR and SCNR were determined to be technically infeasible due to the required temperature ranges required for effective control of NO_x emissions.

Good combustion and operating practices implemented to minimize NOX formation were determined to be the only technically feasible control technology. By minimizing the amount of air used in the combustion process while maintaining proper burner operation, the formation of NOX can be reduced.

CO

Novelis addressed thermal oxidization/afterburner, catalytic oxidization (CatOx) and good design and operation as generally available control technologies for CO control.

Thermal oxidation was determined to be not technically feasible as the combustion processes occurring in the oxidizer are not expected to be any more efficient at minimizing CO formation than the burner systems in the Building Heating Systems when operated in accordance with GCOP. Utilizing a thermal oxidizer add-on control device for CO emissions reduction would not provide any additional CO removal beyond what is already achieved through proper operation of the burners.

CatOx was deemed technically infeasible due to the catalytic oxidation process for CO control, which is very temperature sensitive, the relatively small quantities of CO present in the exhaust gas and the direct fired design of the Building Heating Systems. Furthermore, thermal oxidation required would increase combustion emissions and require additional fuel use.

The formation of CO can be minimized by proper combustion system design and operation. CO emissions are minimized by combustion practices that promote high combustion temperatures, long residence times at those temperatures, and turbulent mixing of fuel and combustion air. For the Building Heating Systems, good combustion and operating practices implemented to minimize CO formation are technically feasible.

VOC

Novelis addressed thermal oxidization/afterburner, catalytic oxidization (CatOx) and good design and operation as generally available control technologies for VOC control.

Thermal Oxidizers and CatOX were deemed technically infeasible for the same reasons as those for CO.

Utilizing good combustion and operating practices, VOC formation can be minimized. For the Building Heating Systems, good combustion and operating practices implemented to minimize VOC formation are technically feasible.

Green House Gases (CO₂e)

Novelis addressed carbon capture and sequestration, optimum combustion efficiency, fuel selection and good design and operating practices as generally available control technologies for GHG emissions. These control options were determined to be technically feasible however, carbon capture and sequestration was determined to not be economically feasible and as such, Novelis has proposed utilizing optimum combustion efficiency, natural gas usage and good design and operating practices as BACT for GHG emissions from the building heating systems.

Proposed Limits

Novelis has selected good combustion and operating practices, the use of low-NO_x burners and a source-wide building heating system annual natural gas usage operating limitation, daily average hourly natural gas usage limitation and hourly natural gas usage BACT limits for the building heating systems.

The following natural gas usage limits have been selected for BACT

Stack	Unit	Usage Limits		
		Annual 12-Month Rolling (MMscf/yr)	Daily Average (MMscf/hr)	Hourly (MMscf/hr)
AS-19	Facility Wide	486.7	0.168	0.390

Table 51: Building Heating Systems (MAU) BACT Limits

The Department concurs with Novelis' contention that good operating and maintenance practices and hourly, daily average and hourly usage limits is BACT for the Building Heating Systems.

11.7.3 Compliance Assurance Monitoring (CAM)

The Bay Minette mill will be a major source, and upon beginning operations, Novelis will be required to apply for a Title V Major Source Operating Permit under Part 70. As such, Novelis is not subject to CAM at this time, but this analysis addresses the expected CAM applicability of these sources after beginning production.

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given pollutant, (2) if that unit uses a control device to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold. With no control device on the building heating systems, CAM would not apply.

11.7.4 Proposed PSD Permit

The building heating systems were not permitted during the original determination. In the reconciliation application, Novelis proposed that an air permit for the building systems be added that includes the desired annual operating limitation for combined natural gas usage from all units within the Building Heating Systems (AS-19) emission unit category. The following units will share the combined annual natural gas usage rate limitation of 486.7 MMscf/yr, under Air Permit X023.

- AS-19a – Building Heating Systems (30 MAU @ 11.55 MMBtu/hr, each)
- AS-19b – Building Heating Systems (4 MAU @ 7.50 MMBtu/hr, each)
- AS-19c – Building Heating Systems (2 MAU @ 3.75 MMBtu/hr, each)
- AS-19d – Building Heating Systems (1 MAU @ 2.25 MMBtu/hr, each)
- AS-19e – Building Heating Systems (7 @ 0.175 MMBtu/hr, each)
- AS-19f – Building Heating Systems (12 @ 0.150 MMBtu/hr, each)
- AS-19g – Building Heating Systems (6 @ 0.105 MMBtu/hr, each)
- AS-19h – Building Heating Systems (4 @ 0.045 MMBtu/hr, each)

12.0 PROCESS SUPPORT AUXILIARY SYSTEMS SOURCES

The Process Support Auxiliary Systems emission units provide utilities or critical functions to the process equipment not directly associated with any of the core process areas, and process support operations which are affiliated with a process area but are not directly integrated with manufacturing products. Many of these sources were updated and new emission sources were added as a result of the changing project scope. Novelis notes that emissions from each of these sources have been evaluated and determined to be minor or insignificant sources of emissions at the Bay Minette facility.

12.1 Summary of Changes

The final configuration of these sources is as follows:

- AS-21 Diesel Fuel Storage and Refueling Stations – redesigned from two 5,000-gallon storage tanks and associated refueling stations to one, 15,000-gallon storage tank and refueling station and three 572-gallon storage tanks to support the emergency fire pump engines.
- AS-22 Hot Rolling Area Storage Tanks – redesigned from 16 tanks to 14.
- AS-23 Cold Rolling Area Storage Tanks – redesigned from 6 tanks to 13.
- AS 24 Cold Finishing Area Storage Tanks – redesigned from 9 tanks to 22.

12.2 New Sources

The following Emission sources are new to the project scope and were not included in the as-permitted application.

- AS-34 Anodizing Test Unit

- AS-35 Filtering Aid Material Handling
- AS-36 Cold Mill Coil Marking Machine
- AS-39 Bearings Washing Machine
- AS-40 Hot Mill Parts Washing Bay
- AS-41 Roll Shop Parts Washer (4)
- AS-42 Maintenance Parts Washers (7)

The Onsite Wastewater Treatment Plant has the following new emission sources associated with it:

- AS-43a Hot Mill Oil Tanks (2)
- AS-43b Cold Mill Oil Tank
- AS-43c Hot Mill DAF
- AS-43d Cold Mill DAF

12.3 BACT

Each of these sources include equipment are smaller sources that are otherwise subject to generally applicable requirements. Novelis noted that these sources were deemed not technically feasible for BACT considerations as their emissions are not captured in a hood or duct for subsequent measurement using EPA Reference Test Methods. Department concurs with Novelis that these sources have low potential emissions under 5 TPY for any given regulated NSR pollutants from any one source. These sources will eventually not be included in Novelis' subsequent Title V Major Source Operating Permit, as such the department is not requiring BACT analysis for these sources or requiring construction permits for these sources.

13.0 AIR QUALITY ANALYSIS

13.1 Summary

The Air quality analysis was conducted as part of the initial application process and included an air quality analysis of the ambient air associated with the construction and operation of the as-permitted proposed sources. The main purpose of the air quality analysis is to demonstrate the new emissions from a proposed major stationary source or major modification will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment. Ambient impacts of non-regulated NSR pollutants must also be evaluated. The analysis will generally include an assessment of existing air quality, which may include ambient monitoring data and air quality dispersion modeling results, and predictions, using dispersion modeling, of ambient concentrations that will result from the applicant's proposed project and future growth associated with the project.

As part of the reconciliation process the air quality analysis was completed utilizing the as-built conditions and emissions concentrations taking into account the updated emissions data and the new sources at the facility that were not included in the initial analysis.

Based on the as-built changes proposed by Novelis, Novelis proposed and the Department agreed that a new PSD air quality analysis addressing the as-built changes would not be required and Novelis could instead use a footprint modeling approach.

As stated in their as-built application volume II, “Novelis evaluated the as-built changes in the application affecting modeling inputs within the basic modeling infrastructure in place at the time of submitting the final as-permitted modeling report in November 2022.” No new modeling protocol [was] required based on carrying forward the substantive elements of all prior modeling methodologies. Novelis proposed and the Department agreed to use all prior input data that was not related to Novelis’ modeled facility inputs. Such as meteorological data, regional inventory data, background concentrations, and terrain data. As such this approach adheres to the procedures, modeling options, requirements and regulations in effect when the Novelis submitted the as-permitted modeling protocol on July 21, 2022, and approved by the Department on July 27, 2022. In addition, the Novelis analysis is based on the AERMOD modeling suite (v22112) in effect at the time of the initial PSD permit issuance.

The complete review of the air quality analysis can be found in Attachment 1. As can be seen from the review, emissions of PM₁₀, PM_{2.5}, NO₂, and CO from the proposed project including updated emission concentrations in the as-built configuration are not expected to cause or contribute to any violation of the NAAQS or PSD Class II Increments.

13.2 Area Classifications

PSD requirements provide for a system of area classifications which affords an opportunity to identify land use goals. There are three area classifications. Each classification differs in terms of the amount of growth it would permit before significant air quality deterioration would be deemed to occur. Class I areas have the smallest increments and thus allow only a small degree of air quality deterioration. Class II areas can accommodate normal, well-managed industrial growth. Class III areas have the largest increments and thereby provide for a larger amount of development than either Class I or Class II areas. Presently, there are no Class III areas in Alabama. The table below shows the pollutants and associated Class I and Class II PSD increments.

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Class I (µg/m³)</u>	<u>Class II (µg/m³)</u>
PM ₁₀	Annual	4	17
	24-Hour	8	30
PM _{2.5}	Annual	1	4
	24-Hour	2	9
SO ₂	Annual	2	20
	24-Hour	5	91
	3-Hour	25	512
NO ₂	Annual	2.5	25

A synopsis of the Class areas was included in the review of the original air quality analysis and has been excluded here for brevity.

13.3 Additional Impact Areas

All PSD applicants must prepare an additional impact analysis, for each pollutant subject to regulation, which would be emitted by the proposed new source or modification. This analysis assesses the impacts of air, ground and water pollution on soils, vegetation, and visibility caused by an increase in emissions from associated growth. The additional impact analysis generally has three parts:

1. Growth
2. Soils and Vegetation
3. Visibility impairment

13.3.1 Growth

Though the site was a greenfield, the site has since been and is currently being developed for the Novelis Bay Minette facility. Outside of the immediate site ground, Novelis' proposed construction will have a minimal impact on the anticipated growth in the area. Commercial growth is anticipated to occur at a gradual rate in the future.

13.3.2 Soils and Vegetation

The project is not expected to have significant impact on the surrounding soil. Modeled impacts of annual NO₂ are less than the significant impact level (SIL). In summary, the project is not expected to result in significant impact on soil, vegetation, or wildlife in the area surrounding the facility.

13.2.3 Visibility Impairment

Opacity limits are imposed on all sources at the Novelis Bay Minette facility by ADEM Admin. Code r. 335-3-4.01(1). These limits reduce the events of visible plumes; thus, visibility impacts in the immediate vicinity of the facility should be negligible; therefore, no visibility analyses were required.

14.0 RECOMMENDATION

Based on the above analysis of the Novelis as-built reconciliation application for the Novelis Bay Minette facility, I recommend that, upon receiving permitting fees and pending the completion of the appropriate public comment period, the following air permits be issued with the attached provisos (Attachment 2):

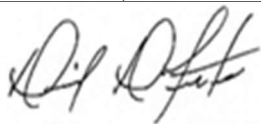
X001 – Flex Line Scrap Processing Line #1 (SP-01) vented to Cold Baghouse #1 (CBH1) Scrap Sorting Line #1 (SP-05) vented to Cold Baghouse #4 (CBH4)	X002 – CBS Line Scrap Processing Line #2 (UBC) (SP-02) vented to Cold Baghouse #2 (CBH2) Scrap Processing Line #3 (Class 1 & 3) (SP-03) vented to Cold Baghouse #3 (CBH3)
X003 – Flex Line Decoater #3 (MC-01) with Afterburner with Hot Baghouse #1 (HBH1)	X004 – CBS Line Decoater #2 (MC-02) with Afterburner & Dross House (MC-21) with Hot Baghouse #2 (HBH2)
X005 – CBS Line Decoater #1 (MC-03) with Afterburner & Hot Baghouse #3 (HBH3)	X006 – Flex Line

NOVELIS CORPORATION

BALDWIN COUNTY, AL

FACILITY NO.: 501-0052

	Sidewell Melting Furnaces #5 and #4 (MC-04 and MC-05) with Hot Baghouse #4 (HBH4) Sow Dryer #2 (MC-19)
X007 – CBS Line Sidewell Melting Furnaces #2 and #1 (MC-06 and MC-07) with Hot Baghouse #5 (HBH5) Sow Dryer #1 (MC-20)	X008 – CBS Line Sidewell Melting Furnace #3 (MC-08), Holding Furnace #2 (MC-14), In-Line Degasser #2 (MC-17), with Hot Baghouse #6 (HBH6) Dross Presses #1 (MC-24) with New Dross Press Filtration Unit #1 (DBH2)
X009 – Flex Line Novelis Dual Chamber (NDC) Recycle Furnace #1 (MC-09), Holding Furnace #3 (MC-13), In-Line Degasser #3 (MC-33), with Hot Baghouse #7 (HBH7) Dross Presse #2 (MC-22) with Dross Press Filtration Unit #2 (DBH1)	X010 – Flex Line Round Top Furnace #2 (MC-10), Holding Furnace #4 (MA-12), Inline Degasser #4 (MC-16) with Hot Baghouse #8 (HBH8)
X011 – CBS Line Round Top Furnace #1 (MC-11), Holding Furnace #1 (MC-15), In-Line degasser #1 (MC-18) and Hot Baghouse #9 (HBH9)	X012 –Melting & Casting Ingot Saw (MC-32) With Filtration Unit #1 (FLT1)
X013 – Scalper 1 (HR-02) and Scalper Chip Handling System Conveyor (HR-03) vented to Filtration Unit #4 (FLT4)	X014 – Pusher Furnace 1 (HR-07), Pusher Furnace 2 (HR-08), and Pusher Furnace 3 (HR-09)
X015 – Hot Reversing Mill (HR10) vented to Mist Eliminator 1 (ME1)	X016 – Hot Finishing Mill (HR11) vented to Mist Eliminator 2 (ME2)
X017 - Tandem Cold Mill #1 (CR-01) Vented to Condenser (CND1) and Mist Eliminator (ME3)	X018 - Tension Leveler #1 (CF-01) - Alkaline Cleaning Line (CF-02) with Wet Scrubber #1 (SC1) - Coating Line #1 (CF-03) with RTO1 -Edge Trimmer Electrostatic Oiler (CF-04) -Edge Trimmer Scrap Baller (CF-05) with wet scrubber and demister (SC2)
X019 – Hot Water Boilers - VOID	X020 – Cooling Towers
X021- Engines (NSPS III & JJJJ)	X022 – Facility Wide Fugitive Emissions
X023 – Building Heating Systems (AS-19a – AS-19h)	



David DiFante
Industrial Minerals Section
Energy Branch
Air Division

June 10, 2026

Date

ATTACHMENT A
Air Quality Analysis

EDWARD F. POLOS
DIRECTOR

JEFFERY W. KITCHENS
DEPUTY DIRECTOR



KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
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May 19, 2026

MEMORANDUM

TO: David DiFante
Industrial Minerals Section
Energy Branch
Air Division

FROM: Jim Owen/Michael Leach *JMO MJL*
Meteorological Section
Planning Branch
Air Division

SUBJECT: Air Dispersion Modeling for Novelis Corporation Prevention of
Significant Deterioration Permit Application

ADEM has completed its review of an air quality modeling analysis performed by Trinity for the Novelis Corporation. The purpose of the analysis was to assess the impacts on air quality from emissions of particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), Carbon Monoxide (CO), and Nitrogen Dioxide (NO₂) from the proposed new facility located in Baldwin County, Alabama. An air quality analysis was performed for these pollutants to demonstrate that emissions from the proposed facility will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD Increment.

AIR QUALITY MODELS:

The AERMOD model and associated processors were used in default mode when performing modeling for all pollutants.

METEOROLOGICAL DATA:

Five years (2017-2021) of surface and upper air meteorological data from the closest National Weather Service (NWS) office were used in the analysis. The surface data was from Mobile, Alabama and the upper air data was from Slidell, Louisiana.



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Mobile, AL 36605
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(251) 479-2593 (FAX)

GOOD ENGINEERING PRACTICE ANALYSIS:

A Good Engineering Practice (GEP) Analysis was performed to assess possible building downwash effects. It was determined that the stacks modeled will be within 5L (the influence area) of one or more of the controlling buildings. Building downwash was considered for those sources in the modeling.

SCREENING MODELING:

The sources modeled at the facility associated with the project are provided in Appendix A of the Novelis As-Built Air Dispersion Modeling Report submitted by Trinity. The tables include stack parameters as well as emission rates for the sources.

The specific receptor grids used for each significance analysis, were as follows.

1. For PM₁₀ (24-hr and Annual), CO (1-hr and 8-hr) and NO₂ (Annual) – a 10 km (radius) cartesian receptor grid (circular in shape) with 100 meter spacing from the facility out to 3 km (radius), 250 meter spacing from 3 km to 6 km (radius), and 500 meter spacing from 6 km to 10 km (radius) from the site.
2. For PM_{2.5} (24-hr and Annual) – a 30 km (radius) cartesian receptor grid (circular in shape), with spacing identical to item 1 above out to 10 km (radius), 750 meter spacing from 10 km to 20 km (radius), and 1,000 meter spacing from 20 km to 30 km (radius) from the site.
3. For NO₂ (1-hr) – a 50 km (radius) cartesian receptor grid (circular in shape), with spacing identical to Item 2 above out to 20 km (radius), and 1,000 meter spacing from 20 km to 50 km (radius) from the site.

All maximum concentrations were resolved to within 100 meters.

Receptor terrain elevations were developed from the USGS digital elevation model (DEM) using data from the one third arc second resolution map. Results of screening modeling performed for PM₁₀, PM_{2.5}, NO₂ and CO using all five years of meteorological data are below.

TABLE 1
Screening Modeling Results for NO₂, PM_{2.5}, PM₁₀ and CO

Pollutant	Averaging Period	Max. Conc. (µg/m³)	Significance Level (µg/m³)
NO ₂	1-Hour	108.01	7.5
NO ₂	Annual	2.9	1
CO	1-Hour	321.00	2000
CO	8-Hour	75.00	500
PM _{2.5}	24-Hour	8.45	1.2
PM _{2.5}	Annual	1.27	0.3
PM ₁₀	24-Hour	10.70	5.0
PM ₁₀	Annual	1.58	1.0

Results of the modeling indicated that the maximum predicted concentrations exceeded the significance levels for all averaging periods for NO₂, PM_{2.5}, and PM₁₀. Therefore, refined modeling was required for these pollutants.

Also, during this initial screening modeling analysis, preconstruction monitoring requirements were addressed, and it was determined that preconstruction monitoring was not required for this application. Representative monitoring data provided by ADEM was included in the application.

REFINED MODELING:

NAAQS and Class II Increment Analyses:

Since impacts for annual and 1-hour NO₂, 24-hour and annual PM_{2.5}, and 24-hr and annual PM₁₀ were above the significance levels, refined modeling was required. These analyses included all emission sources at Novelis as well as an inventory of other nearby sources. Results of the refined analyses, in TABLE 2 and TABLE 3, showed that impacts associated with Annual NO₂, 24-hour and annual PM_{2.5}, and 24-hr and annual PM₁₀ concentrations fall below their respective NAAQS and PSD Increments. Therefore, further modeling of those pollutants was not required. However, modeling of the 1-hour NO₂ NAAQS predicted exceedances above 188 µg/m³. Therefore, further modeling was required. A source contribution analysis of the 1-hr NO₂ NAAQS modeling showed that Novelis was not a significant contributor to any of the predicted violations and that they were being caused by other existing facilities in the area.

TABLE 2
NAAQS Modeling Results

Pollutant	Averaging Period	Predicted Conc. ($\mu\text{g}/\text{m}^3$)*	NAAQS ($\mu\text{g}/\text{m}^3$)	% of NAAQS
NO ₂	1-Hour	2,489.00	188	1,324
NO ₂	Annual	12.60	100	13
PM _{2.5}	24-Hour	22.76	35	65
PM _{2.5}	Annual	9.59	12	80
PM ₁₀	24-hour	40.7	150	27

*Includes background and MERPS concentrations

TABLE 3
PSD Class II Increment Modeling Results

Pollutant	Averaging Period	Predicted Conc. ($\mu\text{g}/\text{m}^3$)*	PSD Increment ($\mu\text{g}/\text{m}^3$)	% of Increment
NO ₂	Annual	3.42	25	14
PM _{2.5}	24-Hour	8.33	9	93
PM _{2.5}	Annual	1.25	4	31
PM ₁₀	24-hour	9.60	30	32
PM ₁₀	Annual	1.30	17	8

*Includes MERPS concentrations.

MERPs ANALYSIS:

Precursor emission impacts to Ozone and PM_{2.5} (secondary PM_{2.5}) were considered and a Modeled Emission Rates for Precursors (MERPs) analysis was performed for this application. The Ozone precursors include the pollutants VOC and NO_x, and the precursor emissions of interest for secondary PM_{2.5} are NO_x and SO₂. The results for the MERPs analyses are presented in Table 4 and Table 5. The details of the analyses can be found in the application.

TABLE 4
MERPs Analysis Results
Secondary PM_{2.5}

Averaging Period	Precursor	Critical Air Quality Threshold (µg/m ³)	PM _{2.5} MERP (tpy)	Project Emissions (tpy)	% of Critical Air Quality Threshold	Secondary PM _{2.5} Impact (µg/m ³)
24-hr	NO _x	1.2	7,875	698.62	8.87%	0.10646
Annual	NO _x	0.2	50,999	698.62	1.37%	0.00274
24-hr	SO ₂	1.2	2,224	2.63	0.12%	0.00142
Annual	SO ₂	0.2	14,816	2.63	0.02%	0.00004
24-hr Total						0.10788
Annual Total						0.00278

These secondary PM_{2.5} concentrations were added to the project's direct modeled PM_{2.5} concentrations (using AERMOD) to estimate total project concentrations for both the SIL and NAAQS/PSD increment analyses, as applicable.

TABLE 5
MERPs Analysis Results
Ozone

Averaging Period	Precursor	Critical Air Quality Threshold (ppb)	Ozone MERP (tpy)	Project Emissions (tpy)	% of Critical Air Quality Threshold	Ozone Project Impact (ppb)	SIL (ppb)
8-hour	NO _x	1.0	207	698.62	337.5%	3.37	1.0
	VOC	1.0	9,362	664.73	7.1%	0.07	
					Total	3.446	

The three year (2019-2021) 8-hour ozone NAAQS design value for Chickasaw is 56 ppb based on design value summaries from EPA. The project's estimated ozone impact (from Table 5) of 3.446 ppb is added to the 56 ppb design value resulting in a total concentration of 59.446 ppb, which is below the ozone NAAQS of 70 ppb. Thus, no additional analyses are warranted to show compliance with the ozone NAAQS.

CLASS I AREA ANALYSIS:

The proposed facility is located approximately 146 km from the nearest Class I area, the Breton Wildlife Refuge. ADEM did not require a Class I Increment analysis and Fish and Wildlife did not request an AQRV analysis for this project.

CONCLUSION:

In conclusion, emissions of PM₁₀, PM_{2.5}, NO₂, and CO from the proposed Novelis Corporation project in Baldwin County, Alabama, are not expected to cause or contribute to any violation of the NAAQS or PSD Class II Increments.

NOVELIS CORPORATION
BALDWIN COUNTY, AL
FACILITY No.: 501-0052

ATTACHMENT B
Proposed Permit Provisos

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X001	<u>Flex Line</u> Scrap Processing Line #1 (SP-01) vented to Cold Baghouse #1 (CBH1) Scrap Sorting Line #1 (SP-05) vented to Cold Baghouse #4 (CBH4)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X001)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X001

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

FLEX LINE
Scrap Processing Line #1 (SP-01) and Scrap Sorting Line #1 (SP-05)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>"Control of Particulate Emissions: Visible Emissions"</i> .	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>"Control of Particulate Emissions: Process Industries – General"</i> .	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. The aluminum scrap shredder associated with Scrap Processing Line #1 is subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>"National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production"</i> . Scrap Sorting Line #1 (SP-05) vented to Cold Baghouse #4 (CBH4) is not an affected source under 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(1)
5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>"General Provisions"</i> , as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from the stacks associated with these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the CBH1 stack shall not exceed 0.002 gr/dscf and 5.66 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
4. Filterable PM emissions from the CBH4 stack shall not exceed 0.002 gr/dscf and 1.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from the aluminum scrap shredder shall not exceed 0.023 grams (g) per dry standard cubic meter (dscm) (0.010 grain (gr) of PM per dry standard cubic foot (dscf)).	40 CFR §63.1505(b)(1)
6. Filterable PM ₁₀ emissions from the CBH1 stack shall not exceed 0.087 lb/ton of feed and 2.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable PM _{2.5} emissions from the CBH1 stack shall not exceed 0.026 lb/ton of feed and 0.85 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable PM ₁₀ emissions from the CBH4 stack shall not exceed 0.029 lb/ton of feed and 0.96 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable PM _{2.5} emissions from the CBH4 stack shall not exceed 0.0086 lb/ton of feed and 0.28 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. These sources shall utilize good design and operating practices.	Rule 335-3-14-.04 (PSD/BACT)
11. At all times, the Permittee must operate and maintain the aluminum scrap shredders, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
12. With regard to CBH1, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with CBH1 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14);	
(b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and	

	Regulations
(c) Operate CBH1 according to the procedures and requirements in the OM&M plan.	
13. The Permittee shall operate a bag leak detection system concurrently with CBH1.	40 CFR §63.1506(e)(1)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm.	
(b) The Permittee shall operate CBH1 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
14. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, & 5.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 6, 7, 8, & 9.	Rule 335-3-1-.05

	Regulations
4. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
5. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup.	40 CFR §63.1511(b)
(a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed contamination and feed rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed rate, and low contamination at high feed rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.	
(b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.	
(c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:	
i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of	

	Regulations
four hours and divide the sampling time evenly between the required number of traverse points); ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) The Permittee may not conduct performance tests during periods of malfunction. 6. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d). 7. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 5 of this section of the Permit. 8. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report.	40 CFR §63.1511(c) 40 CFR §63.1511(d) 40 CFR §63.1511(e) 40 CFR §63.1511(g)

	Regulations
(d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site-specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 8(a) through (d) above must be met.	
9. The Permittee must conduct performance tests to measure PM emissions at the outlet of the control system.	40 CFR §63.1512(a)
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the CBH1 and CBH4 stacks in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 6, 7, 8, & 9 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of CBH1 and CBH4 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the	Rule 335-3-1-.04(1)

	Regulations
pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	
4. The Permittee shall prepare and implement for the aluminum scrap shredders, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information: (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device. (b) A monitoring schedule for each affected source and emission unit. (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505. (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.	40 CFR §63.1510(b)

	Regulations
(e) Procedures for monitoring process and control device parameters. (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.	
5. The Permittee must inspect the capture/collection and closed vent systems of CBH1 at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii). (a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	40 CFR §63.1510(d)
6. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with CBH1, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of CBH1.	40 CFR §63.1510(f)(1)

	Regulations
(b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
7. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40	40 CFR §63.1510(w)

	Regulations
CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
4. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
5. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 5 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the aluminum scrap shredders. A complete performance test	

	Regulations
report includes all data, associated measurements, and calculations (including visible emission and opacity tests); (b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system; (c) The compliant operating parameter value or range established for the aluminum scrap shredders with supporting documentation and a description of the procedure used to establish the value, including the operating cycle or time period used in the performance test; (d) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 12 of the <i>Emission Standards</i> section of the Permit; (e) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 6 of the <i>Emission Monitoring</i> section of the Permit; (f) The OM&M plan. 6. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including: (a) All required maintenance performed on the air pollution control and monitoring equipment. 7. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR: (a) The number of total operating hours for the aluminum scrap shredders during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. (b) For each continuous monitoring system, records required by 40 CFR §63.10(c). (c) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure	40 CFR §63.1517(b) 40 CFR §63.1517(b)(1) 40 CFR §63.1517(b)(6) 40 CFR §63.1517(b)(14)

	Regulations
measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	
(d) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(e) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan.	40 CFR §63.1517(b)(16)
(f) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(g) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
8. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	
ii. An excursion of a compliant process or operating parameter value or range.	

	Regulations
iii. The aluminum scrap shredders were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. (b) 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) and Proviso No. 11 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13.	
9. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X002	<u>CBS Line</u> Scrap Processing Line #2 (SP-02) vented to Cold Baghouse #2 (CBH2) Scrap Processing Line #3 (SP-03) vented to Cold Baghouse #3 (CBH3)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X002)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X002

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

CBS LINE
Scrap Processing Line #2 (SP-02) and Scrap Processing Line #3 (SP-03)

Provisos

	Regulations
Applicability 1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>. 4. The aluminum scrap shredders associated with Scrap Processing Lines #2 and #3 are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>“National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production”</i>. 5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i>, as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(1) Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards 1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from the stacks associated with these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM emissions from the CBH2 stack shall not exceed 0.002 gr/dscf and 5.31 lb/hr. 4. Filterable PM emissions from the CBH3 stack shall not exceed 0.002 gr/dscf and 2.07 lb/hr.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
5. Filterable PM emissions from the aluminum scrap shredders shall not exceed 0.023 grams (g) per dry standard cubic meter (dscm) (0.010 grain (gr) of PM per dry standard cubic foot (dscf)).	40 CFR §63.1505(b)(1)
6. Filterable PM ₁₀ emissions from the CBH2 stack shall not exceed 0.082 lb/ton of feed and 2.71 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable PM _{2.5} emissions from the CBH2 stack shall not exceed 0.024 lb/ton of feed and 0.80 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable PM ₁₀ emissions from the CBH3 stack shall not exceed 0.032 lb/ton of feed and 1.06 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable PM _{2.5} emissions from the CBH3 stack shall not exceed 0.0094 lb/ton of feed and 0.31 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. These sources shall utilize good design and operating practices.	Rule 335-3-14-.04 (PSD/BACT)
11. At all times, the Permittee must operate and maintain the aluminum scrap shredders, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
12. With regard to CBH2 and CBH3, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with CBH2 and CBH3 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14);	
(b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and	
(c) Operate CBH2 and CBH3 according to the procedures and requirements in the OM&M plan.	

	Regulations
13. The Permittee shall operate a bag leak detection system concurrently with CBH2 and CBH3. (a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm. (b) The Permittee shall operate CBH2 and CBH3 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	40 CFR §63.1506(e)(1)
14. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, & 5.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 6, 7, 8, and 9.	Rule 335-3-1-.05
4. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain	40 CFR §63.1511(a)

	Regulations
approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	
5. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup. (a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed contamination and feed rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed rate, and low contamination at high feed rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested. (b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. (c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle: i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points);	40 CFR §63.1511(b)

	Regulations
ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) The Permittee may not conduct performance tests during periods of malfunction.	
6. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d).	40 CFR §63.1511(c) 40 CFR §63.1511(d)
7. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 5 of this section of the Permit.	40 CFR §63.1511(e)
8. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met:	40 CFR §63.1511(g)
(a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40	

	Regulations
CFR Part 63, Subpart RRR and documented in the test report.	
(e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site-specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 8(a) through (d) above must be met.	
9. The Permittee must conduct performance tests to measure PM emissions at the outlet of the control system.	40 CFR §63.1512(a)
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the CBH2 and CBH3 stacks in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 6, 7, 8, and 9 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of CBH2 and CBH3 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the	Rule 335-3-1-.04(1)

	Regulations
pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	
4. The Permittee shall prepare and implement for the aluminum scrap shredders, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information: (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device. (b) A monitoring schedule for each affected source and emission unit. (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505. (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.	40 CFR §63.1510(b)

	Regulations
(e) Procedures for monitoring process and control device parameters. (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.	
5. The Permittee must inspect the capture/collection and closed vent systems of CBH2 and CBH3 at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii). (a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	40 CFR §63.1510(d)
6. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with CBH2 and CBH3, as required below:	40 CFR §63.1510(f)(1)

Regulations

- (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of CBH2 and CBH3.
- (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions.
- (c) The bag leak detection system must 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.
- (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings.
- (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.
- (f) The bag leak detection system must 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.
- (g) For positive pressure fabric filter systems, a bag leak detection system must 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.
- (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
- (j) Following initial adjustment of the system, the Permittee must 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.

	Regulations
7. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).	40 CFR §63.1510(w)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
4. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
5. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 5 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who	40 CFR §63.1515(b)

	Regulations
must certify its accuracy. A complete notification of compliance status report must include the following information: (a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the aluminum scrap shredders. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests); (b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system; (c) The compliant operating parameter value or range established for the aluminum scrap shredders with supporting documentation and a description of the procedure used to establish the value, including the operating cycle or time period used in the performance test; (d) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 12 of the <i>Emission Standards</i> section of the Permit; (e) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 6 of the <i>Emission Monitoring</i> section of the Permit; (f) The OM&M plan. 6. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including: (a) All required maintenance performed on the air pollution control and monitoring equipment. 7. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR: (a) The number of total operating hours for the aluminum scrap shredders during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b) 40 CFR §63.1517(b)(1)

	Regulations
(b) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(c) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(d) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(e) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan.	40 CFR §63.1517(b)(16)
(f) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(g) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
8. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)

	Regulations
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period: i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour. ii. An excursion of a compliant process or operating parameter value or range. iii. The aluminum scrap shredders were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. (b) 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) and Proviso No. 11 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13.	
9. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X003	<u>Flex Line</u> Decoater #3 (MC-01) with Afterburner vented to Hot Baghouse #1 (HBH1)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X003)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X003

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

**FLEX LINE
Decoater #3 (MC-01) with Afterburner**

Provisos

	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>"Control of Particulate Emissions: Visible Emissions"</i> .	Rule 335-3-4-.01(1)
2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>"Control of Particulate Emissions: Process Industries – General"</i> .	Rule 335-3-4-.04(1)
3. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. This source is subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>"National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production"</i> .	Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(3)
5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>"General Provisions"</i> , as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards	
1. This source shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from the HBH1 stack shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the HBH1 stack shall not exceed 0.002 gr/dscf..	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM emissions from Decoater #3 shall not exceed 0.059 lb/ton of feed/charge and 1.62 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
5. Filterable PM emissions from the HBH1 stack shall not exceed 0.3 lb per ton of feed/charge.	40 CFR §63.1505(e)(1)(ii)
6. Filterable and condensable PM ₁₀ emissions from the HBH1 stack shall not exceed 0.194 lb/ton of feed/charge and 5.36 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable and condensable PM _{2.5} emissions from the HBH1 stack shall not exceed 0.188 lb/ton of feed/charge and 5.19 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Nitrogen oxide (NO _x) emissions from the HBH1 stack shall not exceed 0.32 lb/ton of feed/charge and 8.82 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Carbon monoxide (CO) emissions from the HBH1 stack shall not exceed 0.24 lb/ton of feed/charge and 7.78 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Volatile organic compound (VOC) emissions from the HBH1 stack shall not exceed 0.17 lb/ton of feed/charge and 4.69 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Total hydrocarbon (THC) emissions from the HBH1 stack shall not exceed 0.20 lb of THC, as propane, per ton of feed/charge.	40 CFR §63.1505(e)(1)(i)
12. Dioxins and furans (D/F) emissions from the HBH1 stack shall not exceed 5.0 µg of D/F TEQ per Mg (7.0×10^{-5} gr of D/F TEQ per ton) of feed/charge.	40 CFR §63.1505(e)(1)(iii)
13. Hydrochloric acid (HCl) emissions from the HBH1 stack shall not exceed 1.50 lb per ton of feed/charge.	40 CFR §63.1505(e)(1)(iv)
14. CO ₂ e emissions from the HBH1 stack shall not exceed 52,290 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
15. This source shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
16. This source shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
17. The afterburner shall have a design residence time of at least 1 second and be operated at a temperature of at least 1400 °F at all times.	40 CFR §63.1505(e)
18. At all times, the Permittee must operate and maintain the decoater and afterburner, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and	40 CFR §63.1506(a)(5)

	Regulations
maintenance procedures, review of operation and maintenance records, and inspection of the source. 19. The Permittee must provide and maintain easily visible labels posted at the decoater that identifies the applicable emission limits and means of compliance, including: (a) The type of affected source or emission unit (e.g., decoating kiln). (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the applicable operating parameter ranges and requirements as incorporated in the OM&M plan. 20. With regard to HBH1, the Permittee must: (a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH1 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH1 according to the procedures and requirements in the OM&M plan. 21. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements: (a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. 22. The Permittee shall operate the afterburner in accordance with the OM&M plan and maintain the 3-hour block average operating temperature of the afterburner at or above the average	40 CFR §63.1506(b) 40 CFR §63.1506(c) 40 CFR §63.1506(d) 40 CFR §63.1506(g)(1)

	Regulations
temperature established during the most recent performance test.	
23. The Permittee shall operate a bag leak detection system concurrently with HBH1.	40 CFR §63.1506(g)(2)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm.	
(b) The Permittee shall operate HBH1 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
24. The Permittee shall maintain the 3-hour block average inlet temperature for HBH1 at or below the average temperature established during the most recent performance test, plus 25 °F.	40 CFR §63.1506(g)(4)
25. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(g)(5)
26. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)

	Regulations
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, & 5.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 6 & 7.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 8.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 9.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 10.	Rule 335-3-1-.05
7. Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 11.	40 CFR §63.1511(c)(8)
8. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 12.	40 CFR §63.1511(c)(7)
9. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 13.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	
10. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
11. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in	40 CFR §63.1511(b)

Regulations

40 CFR Part 63, Subpart RRR for each source within 180 days of startup.

- (a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.
- (b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.
- (c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:
 - i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points);
 - ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix

	Regulations
A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) Apply Proviso Nos. 11(a) through (d) above for each pollutant separately if a different production rate or charge material would apply and thereby result in a higher expected emissions rate for that pollutant. (e) The Permittee may not conduct performance tests during periods of malfunction. 12. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d). 13. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 11 of this section of the Permit. 14. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40	40 CFR §63.1511(c) 40 CFR §63.1511(d) 40 CFR §63.1511(e) 40 CFR §63.1511(g)

	Regulations
CFR Part 63, Subpart RRR and documented in the test report.	
(e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 14(a) through (d) above must be met.	
15. The Permittee must conduct performance tests to measure emissions of THC, PM, HCl, and D/F at the outlet of the control device.	40 CFR §63.1512(c)
(a) The average afterburner operating temperature in each 3-hour block period must be maintained at or above 1400 °F for the test.	
16. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the decoater for each of the three test runs and calculate and record the total weight.	40 CFR §63.1512(k)
17. Prior to the initial performance test, the Permittee must conduct a performance evaluation for the temperature monitoring device on the afterburner according to the requirements of 40 CFR §63.8.	40 CFR §63.1512(m)(1)
18. The Permittee must use the following procedures to establish an operating parameter value or range for the afterburner operating temperature:	40 CFR §63.1512(m)(2)
(a) Continuously measure and record the operating temperature of the afterburner every 15 minutes during the THC and D/F performance tests;	
(b) Determine and record the 15-minute block average temperatures for the three test runs; and	
(c) Determine and record the 3-hour block average temperature measurements for the 3 test runs.	
19. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature:	40 CFR §63.1512(n)

	Regulations
(a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.	
20. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test: (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs.	40 CFR §63.1512(p)
21. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH1 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission	Rule 335-3-1-.04(1)

	Regulations
Standard Nos. 3, 4, 6, 7, 8, 9 and 10 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	
(a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test.	
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH1 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall prepare and implement for the decoater and afterburner, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:	40 CFR §63.1510(b)
(a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.	
(b) A monitoring schedule for each affected source and emission unit.	
(c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.	

	Regulations
(d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A. (e) Procedures for monitoring process and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used. (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.	
5. The Permittee must inspect the labels for decoater at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH1's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts	40 CFR §63.1510(d)

Regulations

from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii).

(a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.

7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to the decoater over the same operating cycle or time period used in the most recent performance test. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge to the affected source or emission unit.

40 CFR §63.1510(e)

(a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the decoater will meet the relevant emission standard.

(b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH1, as required below:

40 CFR §63.1510(f)(1)

(a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH1.

(b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions.

	Regulations
(c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee shall comply with the following requirements for the afterburner: (a) The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the	40 CFR §63.1510(g)

Regulations

requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A.

- (b) The temperature monitoring device must meet each of the following performance and equipment specifications:
 - i. The temperature monitoring device must be installed at the exit of the combustion zone of each afterburner.
 - ii. The monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.
 - iii. The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(m) and Proviso Nos. 17 & 18 of the *Compliance and Performance Test Methods and Procedures* section of this Permit.
- (c) The Permittee must conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:
 - i. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
 - ii. Inspection for proper adjustment of combustion air;
 - iii. Inspection of internal structures (e.g., baffles) to ensure structural integrity;
 - iv. Inspection of dampers, fans, and blowers for proper operation;
 - v. Inspection for proper sealing;
 - vi. Inspection of motors for proper operation;
 - vii. Inspection of combustion chamber refractory lining and clean and replace lining as necessary;
 - viii. Inspection of afterburner shell for corrosion and/or hot spots;
 - ix. Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and

	Regulations
x. Verification that the equipment is maintained in good operating condition. xi. Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.	
10. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH1 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
11. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH1. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period. (b) The Permittee must record the lime feeder setting once each day of operation. (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the	40 CFR §63.1510(i)

Regulations

most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

12. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).

Recordkeeping and Reporting Requirements

1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation. Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form. Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO_{2e} emissions from these sources. Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken. Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:
 - (a) The Permittee shall provide notification of the following:
 - i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;

	Regulations
ii. Anticipated date of startup; and iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 11 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information: (a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the decoater and afterburner. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests); (b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system; (c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 19 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements; (d) The compliant operating parameter value or range established for the decoater and afterburner with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test; (e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 20 of the <i>Emission Standards</i> section of the Permit; (f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag	40 CFR §63.1515(b)

	Regulations
leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit;	
(g) Manufacturer's specification or analysis documenting the design residence time of no less than 1 second for the afterburner; and	
(h) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including:	40 CFR §63.1517(b)
(a) All required maintenance performed on the air pollution control and monitoring equipment.	
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR:	
(a) The number of total operating hours for the decoater during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)
(b) Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken, <u>and</u> records of annual afterburner inspections.	40 CFR §63.1517(b)(2)
(c) Records of 15-minute block average inlet temperatures for HBH1, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(d) For HBH1, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event	40 CFR §63.1517(b)(4)

	Regulations
where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) Records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(h) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(i) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(j) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan.	40 CFR §63.1517(b)(16)
(k) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	

	Regulations
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(l) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period: i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour. ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, afterburner operating temperature, fabric filter inlet temperature, or other approved operating parameter). iii. The decoater and/or afterburner were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. (b) 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,	

	Regulations
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) and Proviso No. 18 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13. 10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X004	<u>CBS Line</u> Decoater #2 (MC-02) with Afterburner and Dross House (MC-21) vented to Hot Baghouse #2 (HBH2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X004)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

CBS LINE
Decoater #2 (MC-02) with Afterburner and Dross House (MC-21)

Provisos

	Regulations
Applicability 1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>. 4. The decoater and afterburner are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>“National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production”</i>. Dross House (MC-21) vented to Hot Baghouse #2 (HBH2) is not an affected source under 40 CFR Part 63, Subpart RRR. 5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i>, as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(3) Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards 1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM emissions from the HBH2 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
4. Filterable PM emissions from the Dross House shall not exceed 1.54 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from Decoater #2 shall not exceed 0.035 lb/ton of feed/charge and 0.96 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM emissions from Decoater #2 shall not exceed 0.3 lb per ton of feed/charge.	40 CFR §63.1505(e)(1)(ii)
7. Filterable PM ₁₀ emissions from the Dross House shall not exceed 1.45 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable PM _{2.5} emissions from the Dross House shall not exceed 1.20 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable and condensable PM ₁₀ emissions from Decoater #2 shall not exceed 0.173 lb/ton of feed/charge and 4.76 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Filterable and condensable PM _{2.5} emissions from Decoater #2 shall not exceed 0.169 lb/ton of feed/charge and 4.66 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Nitrogen oxide (NO _x) emissions from the HBH2 stack shall not exceed 0.32 lb/ton of feed/charge and 8.82 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Carbon monoxide (CO) emissions from the HBH2 stack shall not exceed 0.24 lb/ton of feed/charge and 7.78 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. Volatile organic compound (VOC) emissions from the HBH2 stack shall not exceed 0.17 lb/ton of feed/charge and 4.69 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Total hydrocarbon (THC) emissions from the HBH2 stack shall not exceed 0.20 lb of THC, as propane, per ton of feed/charge.	40 CFR §63.1505(e)(1)(i)
15. Dioxins and furans (D/F) emissions from the HBH2 stack shall not exceed 5.0 µg of D/F TEQ per Mg (7.0×10^{-5} gr of D/F TEQ per ton) of feed/charge.	40 CFR §63.1505(e)(1)(iii)
16. Hydrochloric acid (HCl) emissions from the HBH2 stack shall not exceed 1.50 lb per ton of feed/charge.	40 CFR §63.1505(e)(1)(iv)
17. CO _{2e} emissions from the HBH2 stack shall not exceed 52,290 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
18. The decoater shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
19. Dross cooling and storage shall take place in the dross house.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
20. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
21. The afterburner shall have a design residence time of at least 1 second and be operated at a temperature of at least 1400 °F at all times.	40 CFR §63.1505(e)
22. At all times, the Permittee must operate and maintain the decoater and afterburner, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
23. The Permittee must provide and maintain easily visible labels posted at the decoater that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)
(a) The type of affected source or emission unit (e.g., decoating kiln).	
(b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
24. With regard to HBH2, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH2 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14);	
(b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and	
(c) Operate HBH2 according to the procedures and requirements in the OM&M plan.	

	Regulations
25. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements: (a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.	40 CFR §63.1506(d)
26. The Permittee shall operate the afterburner in accordance with the OM&M plan and maintain the 3-hour block average operating temperature of the afterburner at or above the average temperature established during the most recent performance test.	40 CFR §63.1506(g)(1)
27. The Permittee shall operate a bag leak detection system concurrently with HBH2. (a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm. (b) The Permittee shall operate HBH2 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	40 CFR §63.1506(g)(2)
28. The Permittee shall maintain the 3-hour block average inlet temperature for HBH2 at or below the average temperature established during the most recent performance test, plus 25 °F.	40 CFR §63.1506(g)(4)
29. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(g)(5)

	Regulations
30. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, & 6.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 7 & 8.	
4. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 9 & 10.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 11.	Rule 335-3-1-.05
6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 12.	Rule 335-3-1-.05
7. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 13.	Rule 335-3-1-.05
8. Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 14.	40 CFR §63.1511(c)(8)
9. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 15.	40 CFR §63.1511(c)(7)

	Regulations
10. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 16.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	
11. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
12. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup.	40 CFR §63.1511(b)
(a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.	
(b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.	
(c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where	

	Regulations
isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle: i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points); ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) Apply Proviso Nos. 12(a) through (d) above for each pollutant separately if a different production rate or charge material would apply and thereby result in a higher expected emissions rate for that pollutant. (e) The Permittee may not conduct performance tests during periods of malfunction.	
13. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d).	40 CFR §63.1511(c) 40 CFR §63.1511(d)
14. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 12 of this section of the Permit.	40 CFR §63.1511(e)
15. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may	40 CFR §63.1511(g)

	Regulations
use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 15(a) through (d) above must be met.	
16. The Permittee must conduct performance tests to measure emissions of THC, PM, HCl, and D/F at the outlet of the control device. (a) The average afterburner operating temperature in each 3-hour block period must be maintained at or above 1400 °F for the test.	40 CFR §63.1512(c)
17. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the decoater for each of the three test runs and calculate and record the total weight.	40 CFR §63.1512(k)
18. Prior to the initial performance test, the Permittee must conduct a performance evaluation for the temperature monitoring device on the afterburner according to the requirements of 40 CFR §63.8.	40 CFR §63.1512(m)(1)

	Regulations
19. The Permittee must use the following procedures to establish an operating parameter value or range for the afterburner operating temperature: (a) Continuously measure and record the operating temperature of the afterburner every 15 minutes during the THC and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the three test runs; and (c) Determine and record the 3-hour block average temperature measurements for the 3 test runs.	40 CFR §63.1512(m)(2)
20. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature: (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.	40 CFR §63.1512(n)
21. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test: (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs.	40 CFR §63.1512(p)
22. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1513

	Regulations
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH2 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 7, 8, 9, 10, 11, 12 and 13 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup. (a) For the initial performance test to demonstrate compliance with Emission Standard Nos. 11 and 12, the Permittee may test <u>either</u> Decoater #2 (MC-02) <u>or</u> Decoater #1 (MC-03) to show compliance for both sources, provided the following conditions are met: i. The feed materials and charge rates are comparable; ii. The sources are operated according to the same work practices; iii. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and iv. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 3, 5, 9, 10, 11, 12, and 13.	Rule 335-3-1-.04(1)

	Regulations
i. For each subsequent performance test to demonstrate compliance with Emission Standard Nos. 11 and 12, the Permittee may test <u>either</u> Decoater #2 (MC-02) <u>or</u> Decoater #1 (MC-03) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (iv) are met. (c) NO_x and CO performance testing shall be conducted on both Decoater #2 (MC-02) and Decoater #1 (MC-03) at intervals not to exceed 10 years (120 months) from the most recent NO_x and CO performance test conducted on that source. 3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH2 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated. 4. The Permittee shall prepare and implement for the decoater and afterburner, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information: (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device. (b) A monitoring schedule for each affected source and emission unit.	Rule 335-3-1-.04(1) 40 CFR §63.1510(b)

	Regulations
(c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505. (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A. (e) Procedures for monitoring process and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used. (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.	
5. The Permittee must inspect the labels for decoater at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH2's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection.	40 CFR §63.1510(d)

	Regulations
This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii). (a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to the decoater over the same operating cycle or time period used in the most recent performance test. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge to the affected source or emission unit. (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the decoater will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.	40 CFR §63.1510(e)
8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH2, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH2.	40 CFR §63.1510(f)(1)

	Regulations
(b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee shall comply with the following requirements for the afterburner:	40 CFR §63.1510(g)

Regulations

- (a) The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A.
- (b) The temperature monitoring device must meet each of the following performance and equipment specifications:
 - i. The temperature monitoring device must be installed at the exit of the combustion zone of each afterburner.
 - ii. The monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.
 - iii. The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(m) and Proviso Nos. 18 & 19 of the *Compliance and Performance Test Methods and Procedures* section of this Permit.
- (c) The Permittee must conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:
 - i. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
 - ii. Inspection for proper adjustment of combustion air;
 - iii. Inspection of internal structures (e.g., baffles) to ensure structural integrity;
 - iv. Inspection of dampers, fans, and blowers for proper operation;
 - v. Inspection for proper sealing;
 - vi. Inspection of motors for proper operation;
 - vii. Inspection of combustion chamber refractory lining and clean and replace lining as necessary;
 - viii. Inspection of afterburner shell for corrosion and/or hot spots;

	Regulations
ix. Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and x. Verification that the equipment is maintained in good operating condition. xi. Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.	
10. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH2 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
11. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH2. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period. (b) The Permittee must record the lime feeder setting once each day of operation. (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore	40 CFR §63.1510(i)

	Regulations
normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.	
12. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).	40 CFR §63.1510(w)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO ₂ e emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	

	Regulations
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced; ii. Anticipated date of startup; and iii. Actual date of startup. (b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR. 6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 12 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information: (a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the decoater and afterburner. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests); (b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system; (c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 23 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements; (d) The compliant operating parameter value or range established for the decoater and afterburner with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test; (e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR	40 CFR §63.1515(b)

	Regulations
§63.1506(c) and Proviso No. 24 of the <i>Emission Standards</i> section of the Permit;	
(f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit;	
(g) Manufacturer's specification or analysis documenting the design residence time of no less than 1 second for the afterburner; and	
(h) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including:	40 CFR §63.1517(b)
(a) All required maintenance performed on the air pollution control and monitoring equipment.	
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR:	
(a) The number of total operating hours for the decoater during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)
(b) Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken, <u>and</u> records of annual afterburner inspections.	40 CFR §63.1517(b)(2)
(c) Records of 15-minute block average inlet temperatures for HBH2, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(d) For HBH2, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at	40 CFR §63.1517(b)(4)

	Regulations
least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) Records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(h) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(i) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(j) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan.	40 CFR §63.1517(b)(16)
(k) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the	

	Regulations
event, end date and time of the event, cause of the deviation or exceedance and corrective action taken. ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (l) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii). 9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period. (a) A report must be submitted if any of the following conditions occur during a 6-month reporting period: i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour. ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, afterburner operating temperature, fabric filter inlet temperature, or other approved operating parameter). iii. The decoater and/or afterburner were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. (b) 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	40 CFR §63.1517(b)(19) 40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)

	Regulations
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) and Proviso No. 22 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13. 10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X005	<u>CBS Line</u> Decoater #1 (MC-03) with Afterburner vented to Hot Baghouse #3 (HBH3)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X005)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X005

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

CBS LINE
Decoater #1 (MC-03) with Afterburner

Provisos

	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>"Control of Particulate Emissions: Visible Emissions"</i> .	Rule 335-3-4-.01(1)
2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>"Control of Particulate Emissions: Process Industries – General"</i> .	Rule 335-3-4-.04(1)
3. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. This source is subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>"National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production"</i> .	Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(3)
5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>"General Provisions"</i> , as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards	
1. This source shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from the HBH3 stack shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the HBH3 stack shall not exceed 0.002 gr/dscf and 1.69 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM emissions from the HBH3 stack shall not exceed 0.3 lb per ton of feed/charge.	40 CFR §63.1505(e)(1)(ii)

	Regulations
5. Filterable and condensable PM ₁₀ emissions from the HBH3 stack shall not exceed 0.197 lb/ton of feed/charge and 5.42 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable and condensable PM _{2.5} emissions from the HBH3 stack shall not exceed 0.191 lb/ton of feed/charge and 5.52 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Nitrogen oxide (NO _x) emissions from the HBH3 stack shall not exceed 0.32 lb/ton of feed/charge and 8.82 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Carbon monoxide (CO) emissions from the HBH3 stack shall not exceed 0.24 lb/ton of feed/charge and 7.78 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Volatile organic compound (VOC) emissions from the HBH3 stack shall not exceed 0.17 lb/ton of feed/charge and 4.69 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Total hydrocarbon (THC) emissions from the HBH3 stack shall not exceed 0.20 lb of THC, as propane, per ton of feed/charge.	40 CFR §63.1505(e)(1)(i)
11. Dioxins and furans (D/F) emissions from the HBH3 stack shall not exceed 5.0 µg of D/F TEQ per Mg (7.0×10^{-5} gr of D/F TEQ per ton) of feed/charge.	40 CFR §63.1505(e)(1)(iii)
12. Hydrochloric acid (HCl) emissions from the HBH3 stack shall not exceed 1.50 lb per ton of feed/charge.	40 CFR §63.1505(e)(1)(iv)
13. CO _{2e} emissions from the HBH3 stack shall not exceed 52,290 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
14. This source shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
15. This source shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
16. The afterburner shall have a design residence time of at least 1 second and be operated at a temperature of at least 1400 °F at all times.	40 CFR §63.1505(e)
17. At all times, the Permittee must operate and maintain the decoater and afterburner, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)

	Regulations
18. The Permittee must provide and maintain easily visible labels posted at the decoater that identifies the applicable emission limits and means of compliance, including: (a) The type of affected source or emission unit (e.g., decoating kiln). (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	40 CFR §63.1506(b)
19. With regard to HBH3, the Permittee must: (a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH3 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH3 according to the procedures and requirements in the OM&M plan.	40 CFR §63.1506(c)
20. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements: (a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.	40 CFR §63.1506(d)
21. The Permittee shall operate the afterburner in accordance with the OM&M plan and maintain the 3-hour block average operating temperature of the afterburner at or above the average temperature established during the most recent performance test.	40 CFR §63.1506(g)(1)

	Regulations
22. The Permittee shall operate a bag leak detection system concurrently with HBH3.	40 CFR §63.1506(g)(2)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm.	
(b) The Permittee shall operate HBH3 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
23. The Permittee shall maintain the 3-hour block average inlet temperature for HBH3 at or below the average temperature established during the most recent performance test, plus 25 °F.	40 CFR §63.1506(g)(4)
24. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(g)(5)
25. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)

	Regulations
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, & 4.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 5 & 6.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 7.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 8.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 9.	Rule 335-3-1-.05
7. Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 10.	40 CFR §63.1511(c)(8)
8. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 11.	40 CFR §63.1511(c)(7)
9. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 12.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	
10. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
11. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup.	40 CFR §63.1511(b)
(a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge	

Regulations

contamination and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.

- (b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.
- (c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:
 - i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points);
 - ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run;
 - iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling

	Regulations
for run 2 could begin in port 4 and continue in reverse order.)	
(d) Apply Proviso Nos. 11(a) through (d) above for each pollutant separately if a different production rate or charge material would apply and thereby result in a higher expected emissions rate for that pollutant.	
(e) The Permittee may not conduct performance tests during periods of malfunction.	
12. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d).	40 CFR §63.1511(c) 40 CFR §63.1511(d)
13. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 11 of this section of the Permit.	40 CFR §63.1511(e)
14. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met:	40 CFR §63.1511(g)
(a) The complete emission test report(s) used as the basis of the parameter(s) is submitted.	
(b) The same test methods and procedures as required by this subpart were used in the test.	
(c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report.	
(d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report.	
(e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in	

	Regulations
addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 14(a) through (d) above must be met. 15. The Permittee must conduct performance tests to measure emissions of THC, PM, HCl, and D/F at the outlet of the control device. (a) The average afterburner operating temperature in each 3-hour block period must be maintained at or above 1400 °F for the test. 16. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the decoater for each of the three test runs and calculate and record the total weight. 17. Prior to the initial performance test, the Permittee must conduct a performance evaluation for the temperature monitoring device on the afterburner according to the requirements of 40 CFR §63.8. 18. The Permittee must use the following procedures to establish an operating parameter value or range for the afterburner operating temperature: (a) Continuously measure and record the operating temperature of the afterburner every 15 minutes during the THC and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the three test runs; and (c) Determine and record the 3-hour block average temperature measurements for the 3 test runs. 19. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature: (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and	40 CFR §63.1512(c) 40 CFR §63.1512(k) 40 CFR §63.1512(m)(1) 40 CFR §63.1512(m)(2) 40 CFR §63.1512(n)

	Regulations
(c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.	
20. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test:	40 CFR §63.1512(p)
(a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and	
(b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs.	
21. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH3 stack in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 5, 6, 7, 8, and 9 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)
(a) For the initial performance test to demonstrate compliance with Emission Standard Nos. 7 and 8, the Permittee may test	

Regulations

either Decoater #2 (MC-02) or Decoater #1 (MC-03) to show compliance for both sources, provided the following conditions are met:

- i. The feed materials and charge rates are comparable;
- ii. The sources are operated according to the same work practices;
- iii. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and
- iv. All 3 test runs are conducted on the same source.

(b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test.

- i. For each subsequent performance test to demonstrate compliance with Emission Standard Nos. 7 and 8, the Permittee may test either Decoater #2 (MC-02) or Decoater #1 (MC-03) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (iv) are met.

(c) NO_x and CO performance testing shall be conducted on both Decoater #2 (MC-02) and Decoater #1 (MC-03) at intervals not to exceed 10 years (120 months) from the most recent NO_x and CO performance test conducted on that source.

3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH3 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.

Rule 335-3-1-.04(1)

4. The Permittee shall prepare and implement for the decoater and afterburner, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any

40 CFR §63.1510(b)

Regulations

time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.
- (e) Procedures for monitoring process and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including:

	Regulations
i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.	
(g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.	
5. The Permittee must inspect the labels for decoater at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH3's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii).	40 CFR §63.1510(d)
(a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to the decoater over the same operating cycle or time period used in the most recent performance test. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge to the affected source or emission unit.	40 CFR §63.1510(e)
(a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The	

	Regulations
Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the decoater will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. 8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH3, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH3. (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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.	40 CFR §63.1510(f)(1)

Regulations

(h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee shall comply with the following requirements for the afterburner: (a) The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. (b) The temperature monitoring device must meet each of the following performance and equipment specifications: i. The temperature monitoring device must be installed at the exit of the combustion zone of each afterburner. ii. The monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period. iii. The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(m) and Proviso Nos. 17 & 18 of the <i>Compliance and Performance Test Methods and Procedures</i> section of this Permit. (c) The Permittee must conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include: i. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;	40 CFR §63.1510(g)

	Regulations
ii. Inspection for proper adjustment of combustion air; iii. Inspection of internal structures (e.g., baffles) to ensure structural integrity; iv. Inspection of dampers, fans, and blowers for proper operation; v. Inspection for proper sealing; vi. Inspection of motors for proper operation; vii. Inspection of combustion chamber refractory lining and clean and replace lining as necessary; viii. Inspection of afterburner shell for corrosion and/or hot spots; ix. Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and x. Verification that the equipment is maintained in good operating condition. xi. Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.	
10. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH3 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
11. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH3. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour	40 CFR §63.1510(i)

Regulations

period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period.

- (b) The Permittee must record the lime feeder setting once each day of operation.
- (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

12. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).

40 CFR §63.1510(w)

Recordkeeping and Reporting Requirements

1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems

Rule 335-3-1-.04(1)

Rule 335-3-1-.04(1)

	Regulations
observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	
3. The Permittee shall maintain a record of the 12-month rolling total CO ₂ e emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 11 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the decoater and afterburner. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests);	
(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system;	
(c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 18 of the <i>Emission Standards</i> section of the Permit,	

	Regulations
including process type or furnace classification and operating requirements;	
(d) The compliant operating parameter value or range established for the decoater and afterburner with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test;	
(e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 19 of the <i>Emission Standards</i> section of the Permit;	
(f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit;	
(g) Manufacturer's specification or analysis documenting the design residence time of no less than 1 second for the afterburner; and	
(h) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including:	40 CFR §63.1517(b)
(a) All required maintenance performed on the air pollution control and monitoring equipment.	
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR:	
(a) The number of total operating hours for the decoater during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)
(b) Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation	40 CFR §63.1517(b)(2)

	Regulations
of the cause of the excursion and the corrective action taken, <u>and</u> records of annual afterburner inspections.	
(c) Records of 15-minute block average inlet temperatures for HBH3, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(d) For HBH3, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	40 CFR §63.1517(b)(4)
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) Records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(h) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or	40 CFR §63.1517(b)(14)

	Regulations
orifice plate equipped with an associated thermocouple, as appropriate.	
(i) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(j) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan.	40 CFR §63.1517(b)(16)
(k) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(l) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	
ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, afterburner operating temperature, fabric filter inlet temperature, or other approved operating parameter).	

	Regulations
iii. The decoater and/or afterburner were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. (b) 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) and Proviso No. 17 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13.	
10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X006	<u>Flex Line</u> Sidewell Melting Furnaces #5 (MC-04) and #4 (MC-05) vented to Hot Baghouse #4 (HBH4) Sow Dryer #2 (MC-19)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X006)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X006

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

FLEX LINE
Sidewell Melting Furnaces #5 & #4 (MC-04 & MC-05)
and Sow Dryer #2 (MC-19)

Provisos

	Regulations
Applicability 1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>. 4. The sidewell melting furnaces are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>“National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production”</i>. Sow Dryer #2 (MC-19) is not an affected source under 40 CFR Part 63, Subpart RRR. 5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i>, as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(8) Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards 1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from the stacks associated with each source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM emissions from the HBH4 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
4. Filterable PM emissions from Sow Dryer #2 shall not exceed 0.0019 lb/MMBtu and 0.057 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from each sidewall melting furnace shall not exceed 0.049 lb/ton of feed/charge and 1.18 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. A secondary aluminum process unit (SAPU) is defined as any combination of individual group 1 furnaces and in-line fluxers within the facility. Sidewall Furnaces #4 and #5 comprise the SAPU vented to HBH4. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of filterable PM in excess of:	40 CFR §63.1505(i)(1) 40 CFR §63.1505(k)(1)
$L_{c\ PM} = \frac{\sum_{i=1}^n (L_{ti\ PM} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti\ PM}$ = 0.4 lb/ton of feed/charge for each furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c\ PM}$ = The daily PM emission limit for the SAPU which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewall at times when the level of molten metal falls below the top of the passage between the sidewall and the hearth, then the Permittee must comply with the 0.4 lb of PM/ton of feed/charge emission limit for the sidewall melting furnaces on the basis of the combined emissions from the sidewall and the hearth.	40 CFR §63.1505(i)(7)
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of PM/ton of feed/charge emission limit.	40 CFR §63.1505(k)(4)

	Regulations
7. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from Sow Dryer #2 shall not exceed 0.0035 lb/MMBtu and 0.104 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable and condensable PM ₁₀ emissions from each sidewall melting furnace shall not exceed 0.160 lb/ton of feed/charge and 3.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable and condensable PM _{2.5} emissions from each sidewall melting furnace shall not exceed 0.143 lb/ton of feed/charge and 3.47 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Nitrogen oxide (NO _x) emissions from Sow Dryer #2 shall not exceed 0.109 lb/MMBtu and 3.28 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. NO _x emissions from each sidewall melting furnace shall not exceed 0.35 lb/ton of feed/charge and 8.51 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Carbon monoxide (CO) emissions from Sow Dryer #2 shall not exceed 0.073 lb/MMBtu and 2.19 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. CO emissions from each sidewall melting furnace shall not exceed 0.34 lb/ton of feed/charge and 8.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Volatile organic compound (VOC) emissions from Sow Dryer #2 shall not exceed 0.0055 lb/MMBtu and 0.17 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15. VOC emissions from each sidewall melting furnace shall not exceed 0.22 lb/ton of feed/charge and 5.35 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
16. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of D/F in excess of:	40 CFR §63.1505(i)(3) 40 CFR §63.1505(k)(3)
$L_{c\ D/F} = \frac{\sum_{i=1}^n (L_{ti\ D/F} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: L_{tiD/F} = 15 µg of D/F TEQ per Mg (2.1 × 10⁻⁴ gr of D/F TEQ per ton) of feed/charge for each furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i	

	Regulations
$L_{cD/F}$ = The daily D/F emission limit for the SAPU which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU (a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge. (b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit for the sidewell melting furnaces on the basis of the combined emissions from the sidewell and the hearth. (c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit. 17. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of HCl in excess of: $L_{cHCl} = \frac{\sum_{i=1}^n (L_{tiHCl} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$ Where: L_{tiHCl} = 0.4 lb/ton of feed/charge for each furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i L_{cHCl} = The daily HCl emission limit for the SAPU which is used to calculate the 3-day, 24-hour HCl emission limit applicable to the SAPU (a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(i)(7) 40 CFR §63.1505(k)(4) 40 CFR §63.1505(i)(4) 40 CFR §63.1505(k)(2) 40 CFR §63.1505(i)(6)

	Regulations
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 0.4 lb of HCl/ton of feed/charge emission limit for the sidewell melting furnaces on the basis of the combined emissions from the sidewell and the hearth.	40 CFR §63.1505(i)(7)
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of HCl/ton of feed/charge emission limit.	40 CFR §63.1505(k)(4)
18. Combined CO ₂ e emissions from these sources shall not exceed 49,238 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
19. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
20. The Permittee shall not combust more than 175.2 MMscf of natural gas in the Sow Dryer during any consecutive, rolling 12-month period.	Rule 335-3-14-.04 (PSD/BACT)
21. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
22. At all times, the Permittee must operate and maintain the sidewell melting furnaces, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
23. The Permittee must provide and maintain easily visible labels posted at each sidewell melting furnace that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)
(a) The type of affected source or emission unit (e.g., group 1 furnace).	
(b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition	

	Regulations
practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
24. With regard to HBH4, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH4 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH4 according to the procedures and requirements in the OM&M plan.	
25. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements:	40 CFR §63.1506(d)
(a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. (c) The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that: i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.	

	Regulations
26. The Permittee shall operate a bag leak detection system concurrently with HBH4.	40 CFR §63.1506(m)(1)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm.	
(b) The Permittee shall operate HBH4 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
27. The Permittee shall maintain the 3-hour block average inlet temperature for HBH4 at or below the average temperature established during the most recent performance test, plus 14 °C (plus 25 °F).	40 CFR §63.1506(m)(3)
28. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(m)(4)
29. The Permittee shall maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the most recent performance test at or below the average rate established during the performance test.	40 CFR §63.1506(m)(5)
30. The Permittee shall operate each sidewall melting furnace such that the level of molten metal remains above the top of the passage between the sidewall and hearth during reactive flux injection, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits. Additionally, reactive flux is to be added only in the sidewall, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits.	40 CFR §63.1506(m)(6)
31. The operation of capture/collection systems and control devices associated with the sidewall melting furnaces that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these	40 CFR §63.1506(m)(7)

	Regulations
capture/collection systems and control devices must be restarted before feed/charge, flux or alloying materials are added to the furnace.	
32. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, & 6.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 7, 8, & 9.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 10 & 11.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 12 & 13.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 14 & 15.	Rule 335-3-1-.05
7. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 16.	40 CFR §63.1511(c)(7)
8. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 17.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream.	

	Regulations
Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	
9. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
10. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup.	40 CFR §63.1511(b)
(a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.	
(b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.	
(c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that	

	Regulations
sampling is conducted over the entire process operating cycle: i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points); ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter. (e) Apply Proviso Nos. 10(a) through (d) above for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant. (f) The Permittee may not conduct performance tests during periods of malfunction. 11. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d). 12. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 10 of this section of the Permit.	40 CFR §63.1511(c) 40 CFR §63.1511(d) 40 CFR §63.1511(e)

	Regulations
13. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 13(a) through (d) above must be met.	40 CFR §63.1511(g)
14. When group 1 furnaces are included in a single SAPU, and the emissions from more than one emission unit within that 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 40 CFR §63.1505(k).	40 CFR §63.1511(h)
15. With the prior approval of the Department, the Permittee may do combined performance testing of two or more individual affected sources or emission units under 40 CFR Part 63, Subpart RRR which are not included in a single SAPU, but whose emissions are manifolded to a single control device. Any such performance	40 CFR §63.1511(i)

	Regulations
testing of commonly-ducted units must satisfy the following basic requirements: (a) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; (b) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; (c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; (d) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and (e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.	
16. The Permittee must conduct performance tests to measure emissions of PM, HCl, and D/F at the outlet of the control device.	40 CFR §63.1512(d)(1)
17. The Permittee may choose to determine the rate of reactive flux addition to each furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the furnace is emitted. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	40 CFR §63.1512(d)(3)
18. For each sidewall group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewall at times when the level of molten metal falls below the top of the passage between the sidewall and the	40 CFR §63.1512(d)(4)

	Regulations
hearth, the Permittee must conduct the performance tests to measure emissions from both the sidewell and the hearth. 19. The Permittee must conduct performance tests as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, and HCl and $\mu\text{g TEQ/Mg}$ of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR §63.1510(t) and Proviso No. 12 of the <i>Emission Monitoring</i> section of the Permit. A performance test is required for: (a) Each sidewell melting furnace to measure emissions of PM and D/F and either: i. Emissions of HCl (for determining the emission limit); or ii. The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). 20. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the sidewell melting furnaces for each of the three test runs and calculate and record the total weight. If the Permittee chooses to demonstrate compliance on the basis of the aluminum production weight, it must measure the weight of aluminum produced by the sidewell melting furnaces instead of the feed/charge weight. 21. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature: (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs. 22. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate:	40 CFR §63.1512(j) 40 CFR §63.1512(k) 40 CFR §63.1512(n) 40 CFR §63.1512(o)

Regulations

- (a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
- (b) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
- (c) Determine the total reactive chlorine flux injection rate and by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the equation below:

$$W_t = F_1 W_1 + F_2 W_2$$

Where:

W_t = Total chlorine usage, by weight

F₁ = Fraction of gaseous or liquid flux that is chlorine

W₁ = Weight of reactive flux gas injected

F₂ = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride)

W₂ = Weight of solid reactive flux

- (d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and
- (e) If a solid reactive flux other than magnesium chloride is used, the Permittee must derive the appropriate proportion factor subject to approval by the Department.

23. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test:

- (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and
- (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs.

40 CFR §63.1512(p)

	Regulations
24. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH4 stack in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 5, 8, 9, 11, 13, and 15 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)
(a) For the initial performance test, the Permittee may test <u>either</u> Sidewell Melting Furnace #5 (MC-04) <u>or</u> Sidewell Melting Furnace #4 (MC-05) to show compliance for both sources, provided the following conditions are met:	
i. The feed materials and charge rates are comparable;	
ii. The sources use the same type of flux materials in the same proportions;	
iii. The sources are operated according to the same work practices;	
iv. The sources are of the same design;	

	Regulations
v. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and vi. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test. i. For each subsequent performance test, the Permittee may test <u>either</u> Sidewell Melting Furnace #5 (MC-04) <u>or</u> Sidewell Melting Furnace #4 (MC-05) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (vi) are met. (c) Each source must be tested at least once every 10 years (120 months) following the most recent performance test on that source. 3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH4 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated. 4. The Permittee shall prepare and implement for each sidewell melting furnace, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:	Rule 335-3-1-.04(1) 40 CFR §63.1510(b)

Regulations

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.
- (e) Procedures for monitoring process and control device parameters, including lime injection rates, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including:
 - i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and
 - ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (h) Procedures to be followed when changing furnace classifications under the provisions of 40 CFR §63.1514.

	Regulations
(i) If the Permittee complies with the emission standards for a SAPU, the OM&M plan must include the following: i. The identification of each emission unit in the SAPU; ii. The specific control technology or pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application; iii. The emission limit calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR Part 63, Subpart RRR; and v. The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR §63.1510(t).	40 CFR §63.1510(s)(1)
(j) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: i. Any averaging among emissions of differing pollutants; ii. The inclusion of any affected sources other than emission units in a SAPU; iii. The inclusion of any emission unit while it is shutdown; or iv. The inclusion of any periods of startup or shutdown in emission calculations.	40 CFR §63.1510(s)(2)
(k) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee must submit a request to the Department containing the information required by Proviso No. 4(i) of this section of the Permit and obtain approval of the Department prior to implementing any revisions.	40 CFR §63.1510(s)(3)
5. The Permittee must inspect the labels for each sidewall melting furnace at least once per calendar month to confirm that posted	40 CFR §63.1510(c)

	Regulations
labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	
6. The Permittee must inspect HBH4's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii). (a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	40 CFR §63.1510(d)
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, each sidewall melting furnace over the same operating cycle or time period used in the most recent performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit. (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the sidewall melting furnaces will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule	40 CFR §63.1510(e)

	Regulations
specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. 8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH4, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH4. (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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	40 CFR §63.1510(f)(1)

	Regulations
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.	
9. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH4 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
10. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH4. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period. (b) The Permittee must record the lime feeder setting once each day of operation. (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated,	40 CFR §63.1510(i)

Regulations

and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

11. The Permittee must comply with the following requirements for the total reactive flux injection rate: 40 CFR §63.1510(j)
- (a) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each sidewall melting furnace.
 - i. The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the most recent performance test.
 - ii. The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The Permittee may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards.
 - iii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
 - (b) Calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o).
 - (c) Record, for each 15-minute block period during each operating cycle or time period used in the most recent performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:

	Regulations
i. Gaseous or liquid reactive flux other than chlorine; and ii. Solid reactive flux. (d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the most recent performance test using the procedures in 40 CFR §63.1512(o). (e) The Permittee may apply for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the most recent performance test. An alternative monitoring method will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.	
12. For the sidewell melting furnaces, the Permittee must: (a) Record in an operating log for each tap of a sidewell furnace whether the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device. If visual inspection of the molten metal level is not possible, the molten metal level must be determined using physical measurement methods. (b) Submit a certification of compliance with the operational standards in 40 CFR §63.1506(m)(6) and Proviso No. 29 of the <i>Emission Standards</i> section of the Permit for each 6-month reporting period. Each certification must contain the information in 40 CFR §63.1516(b)(2)(iii).	40 CFR §63.1510(n)
13. Except as provided in Proviso No. 14 of this section of the Permit, the Permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee must: (a) Calculate and record the total weight of material charged to each emission unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in Proviso No. 7 of this section of the Permit. If the Permittee	40 CFR §63.1510(t)

Regulations

chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.

- (b) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the most recent performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.
 - i. If the Permittee has not conducted performance tests for HCl or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in Proviso No. 12(d) of this section of the Permit to determine SAPU-wide HCl emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl.
- (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
- (d) Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

Where:

E_{day} = The daily PM, HCl, and D/F emission rate for the SAPU for the 24-hour period

T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons)

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge)

n = The number of emission units in the secondary aluminum processing unit

	Regulations
(e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with Proviso Nos. 6, 16 and 17 of the <i>Emission Standards</i> section of the Permit. 14. As an alternative to the procedures of Proviso No. 13 of this section of the Permit, the Permittee may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit. 15. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6). 16. For the Sow Dryer (a) The permittee must install, calibrate, operate, and maintain a device to continuously measure and record the amount of natural gas combusted in the sow dryer.	40 CFR §63.1510(u) 40 CFR §63.1510(w) Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation. 2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form. 3. The Permittee shall maintain a record of the 12-month rolling total CO_{2e} emissions from these sources. 4. The Permittee shall maintain a record of the 12-month rolling total of natural gas combusted in the sow dryer.	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
5. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
6. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
7. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 10 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for each sidewell melting furnace. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests);	
(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system;	
(c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 22 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements;	
(d) The compliant operating parameter value or range established for each sidewell melting furnace with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive	

	Regulations
chlorine flux injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test;	
(e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 23 of the <i>Emission Standards</i> section of the Permit;	
(f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit; and	
(g) The OM&M plan.	
8. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including:	40 CFR §63.1517(b)
(a) All required maintenance performed on the air pollution control and monitoring equipment.	
9. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR:	
(a) The number of total operating hours for the sidewall melting furnaces during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)
(b) Records of 15-minute block average inlet temperatures for HBH4, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(c) For HBH4, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event	40 CFR §63.1517(b)(4)

	Regulations
where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(d) Records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.	40 CFR §63.1517(b)(5)
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) Records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Operating logs for each sidewall melting furnace documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewall and hearth during reactive flux injection and for adding reactive flux only to the sidewall or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.	40 CFR §63.1517(b)(10)
(h) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(i) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)

	Regulations
(j) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(k) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan and the site-specific SAPU emissions plan.	40 CFR §63.1517(b)(16)
(l) If the Permittee complies with the emission standard(s) for SAPUs, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.	40 CFR §63.1517(b)(17)
(m) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(n) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
10. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	

Regulations

ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, fabric filter inlet temperature, or other approved operating parameter). iii. The sidewall melting furnaces (or SAPU) were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. (b) Each report must include the following certification: "Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewall and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewall or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period." (c) 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) and Proviso No. 21 of the <i>Emission Standards</i> section of the Permit. (d) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13. 11. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X007	<u>CBS Line</u> Sidewell Melting Furnaces #2 and #1 (MC-06 and MC-07) vented to Hot Baghouse #5 (HBH5) Sow Dryer #1 (MC-20)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X007)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

CBS LINE
Sidewell Melting Furnaces #2 & #1 (MC-06 & MC-07)
and Sow Dryer #1 (MC-20)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. The sidewell melting furnaces are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>“National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production”</i> . Sow Dryer #1 (MC-20) is not an affected source under 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(8)
5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i> , as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from the stacks associated with each source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the HBH5 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
4. Filterable PM emissions from Sow Dryer #1 shall not exceed 0.0019 lb/MMBtu and 0.057 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from each sidewall melting furnace shall not exceed 0.049 lb/ton of feed/charge and 1.18 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. A secondary aluminum process unit (SAPU) is defined as any combination of individual group 1 furnaces and in-line fluxers within the facility. Sidewall Furnaces #1 and #2 comprise the SAPU vented to HBH5. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of filterable PM in excess of:	40 CFR §63.1505(i)(1) 40 CFR §63.1505(k)(1)
$L_{c\ PM} = \frac{\sum_{i=1}^n (L_{ti\ PM} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti\ PM}$ = 0.4 lb/ton of feed/charge for each furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c\ PM}$ = The daily PM emission limit for the SAPU which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewall at times when the level of molten metal falls below the top of the passage between the sidewall and the hearth, then the Permittee must comply with the 0.4 lb of PM/ton of feed/charge emission limit for the sidewall melting furnaces on the basis of the combined emissions from the sidewall and the hearth.	40 CFR §63.1505(i)(7)
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of PM/ton of feed/charge emission limit.	40 CFR §63.1505(k)(4)

	Regulations
7. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from Sow Dryer #1 shall not exceed 0.0035 lb/MMBtu and 0.104 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable and condensable PM ₁₀ emissions from each sidewall melting furnace shall not exceed 0.160 lb/ton of feed/charge and 3.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable and condensable PM _{2.5} emissions from each sidewall melting furnace shall not exceed 0.143 lb/ton of feed/charge and 3.47 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Nitrogen oxide (NO _x) emissions from Sow Dryer #1 shall not exceed 0.109 lb/MMBtu and 3.28 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. NO _x emissions from each sidewall melting furnace shall not exceed 0.35 lb/ton of feed/charge and 8.51 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Carbon monoxide (CO) emissions from Sow Dryer #1 shall not exceed 0.073 lb/MMBtu and 2.19 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. CO emissions from each sidewall melting furnace shall not exceed 0.34 lb/ton of feed/charge and 8.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Volatile organic compound (VOC) emissions from Sow Dryer #1 shall not exceed 0.0055 lb/MMBtu and 0.17 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15. VOC emissions from each sidewall melting furnace shall not exceed 0.22 lb/ton of feed/charge and 5.35 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
16. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of D/F in excess of:	40 CFR §63.1505(i)(3) 40 CFR §63.1505(k)(3)
$L_{c\ D/F} = \frac{\sum_{i=1}^n (L_{ti\ D/F} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: L_{tiD/F} = 15 µg of D/F TEQ per Mg (2.1 × 10⁻⁴ gr of D/F TEQ per ton) of feed/charge for each furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i	

	Regulations
$L_{cD/F}$ = The daily D/F emission limit for the SAPU which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU (a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge. (b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit for the sidewell melting furnaces on the basis of the combined emissions from the sidewell and the hearth. (c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit. 17. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of HCl in excess of: $L_{cHCl} = \frac{\sum_{i=1}^n (L_{tiHCl} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$ Where: L_{tiHCl} = 0.4 lb/ton of feed/charge for each furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i L_{cHCl} = The daily HCl emission limit for the SAPU which is used to calculate the 3-day, 24-hour HCl emission limit applicable to the SAPU (a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(i)(7) 40 CFR §63.1505(k)(4) 40 CFR §63.1505(i)(4) 40 CFR §63.1505(k)(2) 40 CFR §63.1505(i)(6)

	Regulations
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 0.4 lb of HCl/ton of feed/charge emission limit for the sidewell melting furnaces on the basis of the combined emissions from the sidewell and the hearth.	40 CFR §63.1505(i)(7)
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of HCl/ton of feed/charge emission limit.	40 CFR §63.1505(k)(4)
18. Combined CO ₂ e emissions from these sources shall not exceed 49,238 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
19. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
20. The Permittee shall not combust more than 175.2 MMscf of natural gas in the Sow Dryer during any consecutive, rolling 12-month period.	Rule 335-3-14-.04 (PSD/BACT)
21. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
22. At all times, the Permittee must operate and maintain the sidewell melting furnaces, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
23. The Permittee must provide and maintain easily visible labels posted at each sidewell melting furnace that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)
(a) The type of affected source or emission unit (e.g., group 1 furnace).	
(b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition	

	Regulations
practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
24. With regard to HBH5, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH5 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH5 according to the procedures and requirements in the OM&M plan.	
25. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements:	40 CFR §63.1506(d)
(a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. (c) The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that: i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.	

	Regulations
26. The Permittee shall operate a bag leak detection system concurrently with HBH5.	40 CFR §63.1506(m)(1)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm.	
(b) The Permittee shall operate HBH5 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
27. The Permittee shall maintain the 3-hour block average inlet temperature for HBH5 at or below the average temperature established during the most recent performance test, plus 14 °C (plus 25 °F).	40 CFR §63.1506(m)(3)
28. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(m)(4)
29. The Permittee shall maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the most recent performance test at or below the average rate established during the performance test.	40 CFR §63.1506(m)(5)
30. The Permittee shall operate each sidewall melting furnace such that the level of molten metal remains above the top of the passage between the sidewall and hearth during reactive flux injection, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits. Additionally, reactive flux is to be added only in the sidewall, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits.	40 CFR §63.1506(m)(6)
31. The operation of capture/collection systems and control devices associated with the sidewall melting furnaces that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these	40 CFR §63.1506(m)(7)

	Regulations
capture/collection systems and control devices must be restarted before feed/charge, flux or alloying materials are added to the furnace.	
32. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, & 6.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 7, 8, & 9.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 10 & 11.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 12 & 13.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 14 & 15.	Rule 335-3-1-.05
7. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 16.	40 CFR §63.1511(c)(7)
8. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 17.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream.	

	Regulations
Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	
9. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
10. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup.	40 CFR §63.1511(b)
(a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.	
(b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.	
(c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that	

	Regulations
sampling is conducted over the entire process operating cycle: i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points); ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter. (e) Apply Proviso Nos. 10(a) through (d) above for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant. (f) The Permittee may not conduct performance tests during periods of malfunction. 11. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d). 12. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 10 of this section of the Permit.	40 CFR §63.1511(c) 40 CFR §63.1511(d) 40 CFR §63.1511(e)

	Regulations
13. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 13(a) through (d) above must be met.	40 CFR §63.1511(g)
14. When group 1 furnaces are included in a single SAPU, and the emissions from more than one emission unit within that 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 40 CFR §63.1505(k).	40 CFR §63.1511(h)
15. With the prior approval of the Department, the Permittee may do combined performance testing of two or more individual affected sources or emission units under 40 CFR Part 63, Subpart RRR which are not included in a single SAPU, but whose emissions are manifolded to a single control device. Any such performance	40 CFR §63.1511(i)

	Regulations
testing of commonly-ducted units must satisfy the following basic requirements: (a) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; (b) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; (c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; (d) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and (e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.	
16. The Permittee must conduct performance tests to measure emissions of PM, HCl, and D/F at the outlet of the control device.	40 CFR §63.1512(d)(1)
17. The Permittee may choose to determine the rate of reactive flux addition to each furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the furnace is emitted. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	40 CFR §63.1512(d)(3)
18. For each sidewall group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewall at times when the level of molten metal falls below the top of the passage between the sidewall and the	40 CFR §63.1512(d)(4)

	Regulations
hearth, the Permittee must conduct the performance tests to measure emissions from both the sidewell and the hearth. 19. The Permittee must conduct performance tests as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, and HCl and $\mu\text{g TEQ/Mg}$ of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR §63.1510(t) and Proviso No. 12 of the <i>Emission Monitoring</i> section of the Permit. A performance test is required for: (a) Each sidewell melting furnace to measure emissions of PM and D/F and either: i. Emissions of HCl (for determining the emission limit); or ii. The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). 20. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the sidewell melting furnaces for each of the three test runs and calculate and record the total weight. If the Permittee chooses to demonstrate compliance on the basis of the aluminum production weight, it must measure the weight of aluminum produced by the sidewell melting furnaces instead of the feed/charge weight. 21. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature: (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs. 22. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate:	40 CFR §63.1512(j) 40 CFR §63.1512(k) 40 CFR §63.1512(n) 40 CFR §63.1512(o)

Regulations

- (a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
- (b) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
- (c) Determine the total reactive chlorine flux injection rate and by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the equation below:

$$W_t = F_1 W_1 + F_2 W_2$$

Where:

W_t = Total chlorine usage, by weight

F₁ = Fraction of gaseous or liquid flux that is chlorine

W₁ = Weight of reactive flux gas injected

F₂ = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride)

W₂ = Weight of solid reactive flux

- (d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and
- (e) If a solid reactive flux other than magnesium chloride is used, the Permittee must derive the appropriate proportion factor subject to approval by the Department.

23. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test:

- (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and
- (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs.

40 CFR §63.1512(p)

	Regulations
24. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH5 stack in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 5, 8, 9, 11, 13, and 15 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)
(a) For the initial performance test, the Permittee may test <u>either</u> Sidewell Melting Furnace #2 (MC-06) <u>or</u> Sidewell Melting Furnace #1 (MC-07) <u>or</u> Sidewell Melting Furnace #3 (MC-08) to show compliance for all three sources, provided the following conditions are met:	
i. The feed materials and charge rates are comparable;	
ii. The sources use the same type of flux materials in the same proportions;	
iii. The sources are operated according to the same work practices;	
iv. The sources are of the same design;	

	Regulations
v. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and vi. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test. i. For each subsequent performance test, the Permittee may test <u>either</u> Sidewell Melting Furnace #2 (MC-06) <u>or</u> Sidewell Melting Furnace #1 (MC-07) <u>or</u> Sidewell Melting Furnace #3 (MC-08) to show compliance for all three sources, provided the conditions in Proviso Nos. 2(a)(i) through (vi) are met. (c) Each source must be tested at least once every 15 years (180 months) following the most recent performance test on that source.	
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH5 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall prepare and implement for each sidewell melting furnace, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:	40 CFR §63.1510(b)

Regulations

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.
- (e) Procedures for monitoring process and control device parameters, including lime injection rates, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including:
 - i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and
 - ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (h) Procedures to be followed when changing furnace classifications under the provisions of 40 CFR §63.1514.

	Regulations
(i) If the Permittee complies with the emission standards for a SAPU, the OM&M plan must include the following: i. The identification of each emission unit in the SAPU; ii. The specific control technology or pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application; iii. The emission limit calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR Part 63, Subpart RRR; and v. The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR §63.1510(t).	40 CFR §63.1510(s)(1)
(j) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: i. Any averaging among emissions of differing pollutants; ii. The inclusion of any affected sources other than emission units in a SAPU; iii. The inclusion of any emission unit while it is shutdown; or iv. The inclusion of any periods of startup or shutdown in emission calculations.	40 CFR §63.1510(s)(2)
(k) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee must submit a request to the Department containing the information required by Proviso No. 4(i) of this section of the Permit and obtain approval of the Department prior to implementing any revisions.	40 CFR §63.1510(s)(3)
5. The Permittee must inspect the labels for each sidewall melting furnace at least once per calendar month to confirm that posted	40 CFR §63.1510(c)

	Regulations
labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	
6. The Permittee must inspect HBH5's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii). (a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	40 CFR §63.1510(d)
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, each sidewall melting furnace over the same operating cycle or time period used in the most recent performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit. (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the sidewall melting furnaces will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule	40 CFR §63.1510(e)

	Regulations
specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.	
8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH5, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH5. (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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	40 CFR §63.1510(f)(1)

	Regulations
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.	
9. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH5 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
10. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH5. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period. (b) The Permittee must record the lime feeder setting once each day of operation. (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated,	40 CFR §63.1510(i)

Regulations

and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

11. The Permittee must comply with the following requirements for the total reactive flux injection rate: 40 CFR §63.1510(j)
- (a) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each sidewall melting furnace.
 - i. The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the most recent performance test.
 - ii. The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The Permittee may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards.
 - iii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
 - (b) Calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o).
 - (c) Record, for each 15-minute block period during each operating cycle or time period used in the most recent performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:

	Regulations
i. Gaseous or liquid reactive flux other than chlorine; and ii. Solid reactive flux. (d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the most recent performance test using the procedures in 40 CFR §63.1512(o). (e) The Permittee may apply for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the most recent performance test. An alternative monitoring method will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.	
12. For the sidewell melting furnaces, the Permittee must: (a) Record in an operating log for each tap of a sidewell furnace whether the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device. If visual inspection of the molten metal level is not possible, the molten metal level must be determined using physical measurement methods. (b) Submit a certification of compliance with the operational standards in 40 CFR §63.1506(m)(6) and Proviso No. 29 of the <i>Emission Standards</i> section of the Permit for each 6-month reporting period. Each certification must contain the information in 40 CFR §63.1516(b)(2)(iii).	40 CFR §63.1510(n)
13. Except as provided in Proviso No. 14 of this section of the Permit, the Permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee must: (a) Calculate and record the total weight of material charged to each emission unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in Proviso No. 7 of this section of the Permit. If the Permittee	40 CFR §63.1510(t)

Regulations

chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.

- (b) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the most recent performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.
 - i. If the Permittee has not conducted performance tests for HCl or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in Proviso No. 12(d) of this section of the Permit to determine SAPU-wide HCl emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl.
- (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
- (d) Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

Where:

E_{day} = The daily PM, HCl, and D/F emission rate for the SAPU for the 24-hour period

T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons)

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge)

n = The number of emission units in the secondary aluminum processing unit

	Regulations
(e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with Proviso Nos. 6, 16 and 17 of the <i>Emission Standards</i> section of the Permit.	
14. As an alternative to the procedures of Proviso No. 13 of this section of the Permit, the Permittee may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit.	40 CFR §63.1510(u)
15. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).	40 CFR §63.1510(w)
16. For the Sow Dryer (a) The permittee must install, calibrate, operate, and maintain a device to continuously measure and record the amount of natural gas combusted in the sow dryer.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO_{2e} emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the 12-month rolling total of natural gas combusted in the sow dryer.	Rule 335-3-1-.04(1)

	Regulations
5. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
6. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
7. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 10 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for each sidewell melting furnace. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests);	
(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system;	
(c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 22 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements;	
(d) The compliant operating parameter value or range established for each sidewell melting furnace with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive	

	Regulations
chlorine flux injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test;	
(e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 23 of the <i>Emission Standards</i> section of the Permit;	
(f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit; and	
(g) The OM&M plan.	
8. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including:	40 CFR §63.1517(b)
(a) All required maintenance performed on the air pollution control and monitoring equipment.	
9. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR:	
(a) The number of total operating hours for the sidewall melting furnaces during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)
(b) Records of 15-minute block average inlet temperatures for HBH5, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(c) For HBH5, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event	40 CFR §63.1517(b)(4)

	Regulations
where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(d) Records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.	40 CFR §63.1517(b)(5)
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) Records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Operating logs for each sidewall melting furnace documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewall and hearth during reactive flux injection and for adding reactive flux only to the sidewall or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.	40 CFR §63.1517(b)(10)
(h) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(i) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)

	Regulations
(j) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(k) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan and the site-specific SAPU emissions plan.	40 CFR §63.1517(b)(16)
(l) If the Permittee complies with the emission standard(s) for SAPUs, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.	40 CFR §63.1517(b)(17)
(m) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(n) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
10. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	

Regulations

ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, fabric filter inlet temperature, or other approved operating parameter). iii. The sidewall melting furnaces (or SAPU) were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. (b) Each report must include the following certification: "Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewall and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewall or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period." (c) 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) and Proviso No. 21 of the <i>Emission Standards</i> section of the Permit. (d) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13. 11. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X008	<u>CBS Line</u> Sidewell Melting Furnace #3 (MC-08), Holding Furnace #2 (MC-14), and In-Line Degasser #2 (MC-17) vented to Hot Baghouse #6 (HBH6) Dross Press #1 (MC-24) vented to Filtration Unit (DPBH2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X008)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X008

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

CBS LINE
**Sidewell Melting Furnaces #3 (MC-08), Holding Furnace #2 (MC-14), In-Line
 Degasser #2 (MC-17), and Dross Press #1 (MC-24)**

Provisos

	Regulations
Applicability - These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. - These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. - These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>. - The sidewell melting furnace, holding furnace, and in-line degasser (in-line fluxer) are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>“National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production”</i>. Dross Press #1 (MC-24) is not an affected source under 40 CFR Part 63, Subpart RRR. - The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i>, as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(8) Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards - These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). - Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). - Filterable PM emissions from the HBH6 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
4. Filterable PM emissions from Sidewell Melting Furnace #3 shall not exceed 0.046 lb/ton of feed/charge and 1.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from Holding Furnace #2 shall not exceed 0.012 lb/ton of feed/charge and 0.714 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM emissions from In-Line Degasser #2 shall not exceed 0.010 lb/ton of feed/charge and 1.09 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable PM emissions from Dross Press #1 shall not exceed 0.023 lb/ton of feed/charge and 0.17 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. A secondary aluminum process unit (SAPU) is defined as any combination of individual group 1 furnaces and in-line fluxers within the facility. Sidewell Furnace #3, Holding Furnace #2, and In-Line Degasser #2 comprise the SAPU vented to HBH6. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of filterable PM in excess of:	40 CFR §63.1505(i)(1) 40 CFR §63.1505(i)(2) 40 CFR §63.1505(j)(2) 40 CFR §63.1505(k)(1)
$L_{c\ PM} = \frac{\sum_{i=1}^n (L_{ti\ PM} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: L_{tiPM} = 0.4 lb/ton of feed charge for the sidewell melting furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.01 lb/ton of feed/charge for the in-line degasser T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i L_{cPM} = The daily PM emission limit for the SAPU which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of	40 CFR §63.1505(i)(7)

	Regulations
the passage between the sidewell and the hearth, then the Permittee must comply with the 0.4 lb of PM/ton of feed/charge emission limit for the sidewell melting furnace on the basis of the combined emissions from the sidewell and the hearth.	
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of PM/ton of feed/charge emission limit for the sidewell melting furnace, the 0.4 lb of PM/ton of feed/charge emission limit for the holding furnace, and the 0.01 lb of PM/ton of feed/charge emission limit for the in-line degasser, as applicable.	40 CFR §63.1505(k)(4)
9. Filterable and condensable PM ₁₀ emissions from Sidewell Melting Furnace #3 shall not exceed 0.158 lb/ton of feed/charge and 3.84 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Filterable and condensable PM _{2.5} emissions from Sidewell Melting Furnace #3 shall not exceed 0.142 lb/ton of feed/charge and 3.45 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Filterable and condensable PM ₁₀ emissions from Holding Furnace #2 shall not exceed 0.024 lb/ton of feed/charge and 1.43 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Filterable and condensable PM _{2.5} emissions from Holding Furnace #2 shall not exceed 0.023 lb/ton of feed/charge and 1.37 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. Filterable PM ₁₀ emissions from In-Line Degasser #2 shall not exceed 0.00532 lb/ton of feed/charge and 0.58 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Filterable and Condensable PM ₁₀ emissions from Dross Press #1 shall not exceed 0.022 lb/ton of feed/charge and 0.16 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15. Filterable PM _{2.5} emissions from In-Line Degasser #2 shall not exceed 0.00198 lb/ton of feed/charge and 0.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
16. Filterable and Condensable PM _{2.5} emissions from Dross Press #1 shall not exceed 0.018 lb/ton of feed/charge and 0.13 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
17. Nitrogen oxide (NO _x) emissions from Sidewell Melting Furnace #3 shall not exceed 0.35 lb/ton of feed/charge and 8.51 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
18. NO _x emissions from Holding Furnace #2 shall not exceed 0.034 lb/ton of feed/charge and 2.02 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
19. Carbon monoxide (CO) emissions from Sidewell Melting Furnace #3 shall not exceed 0.34 lb/ton of feed/charge and 8.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
20. CO emissions from Holding Furnace #2 shall not exceed 0.038 lb/ton of feed/charge and 2.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
21. Volatile organic compound (VOC) emissions from Sidewell Melting Furnace #3 shall not exceed 0.22 lb/ton of feed/charge and 5.35 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
22. VOC emissions from Holding Furnace #2 shall not exceed 0.031 lb/ton of feed/charge and 1.84 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
23. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of D/F in excess of:	40 CFR §63.1505(i)(3) 40 CFR §63.1505(k)(3)
$L_{c\ D/F} = \frac{\sum_{i=1}^n (L_{ti\ D/F} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti\ D/F}$ = 15 µg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge for the sidewell melting furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c\ D/F}$ = The daily D/F emission limit for the SAPU which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit for the sidewell melting	40 CFR §63.1505(i)(7)

	Regulations
furnace on the basis of the combined emissions from the sidewell and the hearth.	
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that the sidewell melting furnace within the SAPU is in compliance with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit.	40 CFR §63.1505(k)(4)
24. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of HCl in excess of:	40 CFR §63.1505(i)(4) 40 CFR §63.1505(j)(1) 40 CFR §63.1505(k)(2)
$L_{c\text{HCl}} = \frac{\sum_{i=1}^n (L_{ti\text{HCl}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti\text{HCl}}$ = 0.4 lb/ton of feed/charge for the sidewell melting furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.04 lb/ton of feed/charge for the in-line degasser T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c\text{HCl}}$ = The daily HCl emission limit for the SAPU which is used to calculate the 3-day, 24-hour HCl emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 0.4 lb of HCl/ton of feed/charge emission limit for the sidewell melting furnace on the basis of the combined emissions from the sidewell and the hearth.	40 CFR §63.1505(i)(7)

	Regulations
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of HCl/ton of feed/charge emission limit for the sidewall melting furnace and the holding furnace and the 0.04 lb of HCl/ton of feed/charge limit for the in-line degasser, as applicable.	40 CFR §63.1505(k)(4)
25. CO ₂ e emissions from the HBH6 stack shall not exceed 33,338 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
26. Holding Furnace #2 shall only process clean charge, as defined in 40 CFR Part 63, Subpart RRR.	Rule 335-3-14-.04 (PSD/BACT)
27. Sidewall Melting Furnace #3 and Holding Furnace #2 shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
28. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
29. At all times, the Permittee must operate and maintain the sidewall melting furnace, holding furnace, and in-line degasser, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
30. The Permittee must provide and maintain easily visible labels posted at the sidewall melting furnace, holding furnace, and in-line degasser that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)
(a) The type of affected source or emission unit (e.g., group 1 furnace, in-line fluxer).	
(b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
31. With regard to HBH6, the Permittee must:	40 CFR §63.1506(c)

	Regulations
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH6 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH6 according to the procedures and requirements in the OM&M plan.	
32. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements: (a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. (c) The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that: i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.	40 CFR §63.1506(d)
33. The Permittee shall operate a bag leak detection system concurrently with HBH6. (a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm.	40 CFR §63.1506(k)(1) 40 CFR §63.1506(m)(1)

	Regulations
(b) The Permittee shall operate HBH6 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
34. The Permittee shall maintain the 3-hour block average inlet temperature for HBH6 at or below the average temperature established during the most recent performance test, plus 14 °C (plus 25 °F).	40 CFR §63.1506(m)(3)
35. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(k)(3) 40 CFR §63.1506(m)(4)
36. The Permittee shall maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the most recent performance test at or below the average rate established during the performance test.	40 CFR §63.1506(k)(4) 40 CFR §63.1506(m)(5)
37. The Permittee shall operate each sidewall melting furnace such that the level of molten metal remains above the top of the passage between the sidewall and hearth during reactive flux injection, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits. Additionally, reactive flux is to be added only in the sidewall, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits.	40 CFR §63.1506(m)(6)
38. The operation of capture/collection systems and control devices associated with the sidewall melting furnace and holding furnace that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these capture/collection systems and control devices must be restarted before feed/charge, flux or alloying materials are added to the furnace.	40 CFR §63.1506(m)(7)
39. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the	40 CFR §63.1506(p)

	Regulations
OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, 6, 7, & 8.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 9, 10, 11, 12, 14 & 16.	Rule 335-3-1-.05
4. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 13 & 15.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 17 & 18.	Rule 335-3-1-.05
6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 19 & 20.	Rule 335-3-1-.05
7. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 21 & 22.	Rule 335-3-1-.05
8. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 23.	40 CFR §63.1511(c)(7)
9. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard Nos. 24.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the	

	Regulations
Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system. 10. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7. 11. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup. (a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested. (b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. (c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:	40 CFR §63.1511(a) 40 CFR §63.1511(b)

	Regulations
i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points); ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter. (e) Apply Proviso Nos. 11(a) through (d) above for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant. (f) The Permittee may not conduct performance tests during periods of malfunction.	
12. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d).	40 CFR §63.1511(c) 40 CFR §63.1511(d)
13. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 11 of this section of the Permit.	40 CFR §63.1511(e)
14. The Permittee 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	40 CFR §63.1511(g)

	Regulations
standard in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 14(a) through (d) above must be met.	
15. When group 1 furnaces and in-line fluxers are included in a single SAPU, and the emissions from more than one emission unit within that 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 40 CFR §63.1505(k).	40 CFR §63.1511(h)
16. With the prior approval of the Department, the Permittee may do combined performance testing of two or more individual affected sources or emission units under 40 CFR Part 63, Subpart RRR which are not included in a single SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: (a) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission	40 CFR §63.1511(i)

	Regulations
requirements applicable to that affected source or emission unit; (b) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; (c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; (d) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and (e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.	
17. The Permittee must conduct performance tests on the sidewell melting furnace and holding furnace to measure emissions of PM, HCl, and D/F (only sidewell melting furnace) at the outlet of the control device.	40 CFR §63.1512(d)(1)
18. The Permittee may choose to determine the rate of reactive flux addition to each furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the furnace is emitted. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	40 CFR §63.1512(d)(3)
19. For each sidewell group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, the Permittee must conduct the performance tests	40 CFR §63.1512(d)(4)

	Regulations
required by Proviso No. 17 of this section of the Permit, to measure emissions from both the sidewell and the hearth.	
20. The Permittee must conduct performance tests on the in-line degasser to measure emissions of PM and HCl at the outlet of the control device.	40 CFR §63.1512(h)
(a) The Permittee may choose to limit the rate at which reactive flux is added to the in-line degasser and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line degasser is emitted as HCl. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	
21. The Permittee must conduct performance tests as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, and HCl and µg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR §63.1510(t) and Proviso No. 12 of the <i>Emission Monitoring</i> section of the Permit. A performance test is required for:	40 CFR §63.1512(j)
(a) The sidewell melting furnace and the holding furnace to measure emissions of PM and D/F and either: i. Emissions of HCl (for determining the emission limit); or ii. The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). (b) The in-line degasser to measure emissions of PM and HCl.	
22. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the sidewell melting furnace, holding furnace, and in-line degassed for each of the three test runs and calculate and record the total weight. If the Permittee chooses to demonstrate compliance on the basis of the aluminum production weight, it must measure the weight of aluminum produced by the sidewell melting furnace, holding furnace, and in-line degasser instead of the feed/charge weight.	40 CFR §63.1512(k)

	Regulations
23. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature: (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.	40 CFR §63.1512(n)
24. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate: (a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15-minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs; (b) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs; (c) Determine the total reactive chlorine flux injection rate and by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the equation below: $W_t = F_1 W_1 + F_2 W_2$ Where: W_t = Total chlorine usage, by weight F₁ = Fraction of gaseous or liquid flux that is chlorine W₁ = Weight of reactive flux gas injected F₂ = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride) W₂ = Weight of solid reactive flux	40 CFR §63.1512(o)

	Regulations
(d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and (e) If a solid reactive flux other than magnesium chloride is used, the Permittee must derive the appropriate proportion factor subject to approval by the Department. 25. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test: (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs. 26. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1512(p) 40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH6 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present. 2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, and 22 within 60 days after achieving the maximum	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

Regulations

production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.

(a) For the initial performance test, the Permittee may test either Sidewell Melting Furnace #2 (MC-06) or Sidewell Melting Furnace #1 (MC-07) or Sidewell Melting Furnace #3 (MC-08) to show compliance for all three sources and may test either Holding Furnace #1 (MC-15) or Holding Furnace #2 (MC-14) to show compliance for both sources, provided the following conditions are met:

- i. The feed materials and charge rates are comparable;
- ii. The sources use the same type of flux materials in the same proportions;
- iii. The sources are operated according to the same work practices;
- iv. The sources are of the same design;
- v. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and
- vi. All 3 test runs are conducted on the same source.

(b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, and 22.

i. For each subsequent performance test, the Permittee may test either Sidewell Melting Furnace #2 (MC-06) or Sidewell Melting Furnace #1 (MC-07) or Sidewell Melting Furnace #3 (MC-08) to show compliance for all three sources and may test either Holding Furnace #1 (MC-15) or Holding Furnace #2 (MC-14) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (vi) are met.

(c) Each holding furnace must be tested at least once every 10 years (120 months) following the most recent performance test on that source.

(d) Each sidewell melting furnace must be tested at least once every 15 years (180 months) following the most recent performance test on that source.

	Regulations
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH6 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall prepare and implement for the sidewall melting furnace, holding furnace, and in-line degasser, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:	40 CFR §63.1510(b)
(a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.	
(b) A monitoring schedule for each affected source and emission unit.	
(c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.	
(d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:	

Regulations

i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A. (e) Procedures for monitoring process and control device parameters, including lime injection rates, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used. (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. (h) Procedures to be followed when changing furnace classifications under the provisions of 40 CFR §63.1514. (i) If the Permittee complies with the emission standards for a SAPU, the OM&M plan must include the following: i. The identification of each emission unit in the SAPU; ii. The specific control technology or pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application; iii. The emission limit calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment,	40 CFR §63.1510(s)(1)

	Regulations
work practice or operational standards of 40 CFR Part 63, Subpart RRR; and	
v. The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR §63.1510(t).	
(j) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: i. Any averaging among emissions of differing pollutants; ii. The inclusion of any affected sources other than emission units in a SAPU; iii. The inclusion of any emission unit while it is shutdown; or iv. The inclusion of any periods of startup or shutdown in emission calculations.	40 CFR §63.1510(s)(2)
(k) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee must submit a request to the Department containing the information required by Proviso No. 4(i) of this section of the Permit and obtain approval of the Department prior to implementing any revisions.	40 CFR §63.1510(s)(3)
5. The Permittee must inspect the labels for the sidewall melting furnace, holding furnace, and in-line degasser at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH6's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii).	40 CFR §63.1510(d)
(a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure	

	Regulations
verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the sidewall melting furnace, holding furnace, and in-line degasser over the same operating cycle or time period used in the most recent performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit. (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the sidewall melting furnace, holding furnace, and in-line degasser will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.	40 CFR §63.1510(e)
8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH6, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH6. (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions.	40 CFR §63.1510(f)(1)

	Regulations
(c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must 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. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH6 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications:	40 CFR §63.1510(h)

	Regulations
(a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	
10. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH6. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period. (b) The Permittee must record the lime feeder setting once each day of operation. (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.	40 CFR §63.1510(i)
11. The Permittee must comply with the following requirements for the total reactive flux injection rate:	40 CFR §63.1510(j)

Regulations

- (a) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to the sidewall melting furnace, holding furnace, and in-line degasser.
 - i. The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the most recent performance test.
 - ii. The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The Permittee may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards.
 - iii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
- (b) Calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o).
- (c) Record, for each 15-minute block period during each operating cycle or time period used in the most recent performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:
 - i. Gaseous or liquid reactive flux other than chlorine; and
 - ii. Solid reactive flux.
- (d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the

	Regulations
most recent performance test using the procedures in 40 CFR §63.1512(o). (e) The Permittee may apply for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the most recent performance test. An alternative monitoring method will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.	
12. For the sidewell melting furnace, the Permittee must: (a) Record in an operating log for each tap of a sidewell furnace whether the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device. If visual inspection of the molten metal level is not possible, the molten metal level must be determined using physical measurement methods. (b) Submit a certification of compliance with the operational standards in 40 CFR §63.1506(m)(6) and Proviso No. 34 of the <i>Emission Standards</i> section of the Permit for each 6-month reporting period. Each certification must contain the information in 40 CFR §63.1516(b)(2)(iii).	40 CFR §63.1510(n)
13. Except as provided in Proviso No. 14 of this section of the Permit, the Permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee must: (a) Calculate and record the total weight of material charged to each emission unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in Proviso No. 7 of this section of the Permit. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis. (b) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission	40 CFR §63.1510(t)

Regulations

rate (in lb/ton of feed/charge) for that emission unit (as determined during the most recent performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.

- i. If the Permittee has not conducted performance tests for HCl or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in Proviso No. 12(d) of this section of the Permit to determine SAPU-wide HCl emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl.
- (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
- (d) Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

Where:

E_{day} = The daily PM, HCl, and D/F emission rate for the SAPU for the 24-hour period

T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons)

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge)

n = The number of emission units in the secondary aluminum processing unit

- (e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with Proviso Nos. 7, 20 and 21 of the *Emission Standards* section of the Permit.

	Regulations
14. As an alternative to the procedures of Proviso No. 13 of this section of the Permit, the Permittee may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit.	40 CFR §63.1510(u)
15. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).	40 CFR §63.1510(w)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO _{2e} emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the daily pressure differential readings across HBH6. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	

	Regulations
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 11 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the sidewall melting furnace, holding furnace, and in-line degasser. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests);	
(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system;	
(c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 30 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements;	
(d) The compliant operating parameter value or range established for the sidewall melting furnace, holding furnace, and in-line degasser with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test;	
(e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 31 of the <i>Emission Standards</i> section of the Permit;	
(f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit; and	

	Regulations
(g) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including:	40 CFR §63.1517(b)
(a) All required maintenance performed on the air pollution control and monitoring equipment.	
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR:	
(a) The number of total operating hours for the sidewall melting furnace, holding furnace, and in-line degasser during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)
(b) Records of 15-minute block average inlet temperatures for HBH6, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(c) For HBH6, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	40 CFR §63.1517(b)(4)
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(d) For the sidewall melting furnace, holding furnace, and in-line degasser, records of 15-minute block average weights of	40 CFR §63.1517(b)(5)

	Regulations
gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.	
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) For the sidewall melting furnace, holding furnace, and in-line degasser, records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Operating logs for each sidewall melting furnace documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewall and hearth during reactive flux injection and for adding reactive flux only to the sidewall or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.	40 CFR §63.1517(b)(10)
(h) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(i) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(j) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(k) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan and the site-specific SAPU emissions plan.	40 CFR §63.1517(b)(16)
(l) If the Permittee complies with the emission standard(s) for SAPUs, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total	40 CFR §63.1517(b)(17)

	Regulations
aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.	
(m) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(n) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	
ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, fabric filter inlet temperature, or other approved operating parameter).	
iii. The sidewall melting furnace, holding furnace, and/or in-line degasser (or SAPU) were not operated according to the requirements of 40 CFR Part 63, Subpart RRR.	
iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU.	

	Regulations
(b) Each report must include the following certification: "Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewall and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewall or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period." (c) 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) and Proviso No. 29 of the <i>Emission Standards</i> section of the Permit. (d) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13.	
10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X009	<u>Flex Line</u> Novelis Dual Chamber (NDC) Recycle Furnace #1 (MC-09), Holding Furnace #3 (MC-13), and In-Line Degasser #3 (MC-33) vented to Hot Baghouse #7 (HBH7) Dross Press #2 (MC-22) vented to Filtration Unit (DPBH1)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X009)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

FLEX LINE
Novelis Dual Chamber (NDC) Recycle Furnace #1 (MC-09),
Holding Furnace #3 (MC-13), In-Line Degasser #3 (MC-33),
and Dross Press #2 (MC-22)

Provisos

	Regulations
Applicability 1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>. 4. The NDC recycle furnace, holding furnace, and in-line degasser (in-line fluxer) are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>“National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production”</i>. Dross Press #2 (MC-22) is not an affected source under 40 CFR Part 63, Subpart RRR. 5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i>, as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(8) Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards 1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1)

	Regulations
3. Filterable PM emissions from the HBH7 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM emissions from NDC Recycle Furnace #1 shall not exceed 0.076 lb/ton of feed/charge and 2.10 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from Holding Furnace #3 shall not exceed 0.013 lb/ton of feed/charge and 0.796 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM emissions from In-Line Degasser #3 shall not exceed 0.010 lb/ton of feed/charge and 1.09 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable PM emissions from Dross Press #2 shall not exceed 0.023 lb/ton of feed/charge and 0.17 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. A secondary aluminum process unit (SAPU) is defined as any combination of individual group 1 furnaces and in-line fluxers within the facility. NDC Recycle Furnace #1, Holding Furnace #3, and In-Line Degasser #3 comprise the SAPU vented to HBH7. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of filterable PM in excess of:	40 CFR §63.1505(i)(1) 40 CFR §63.1505(i)(2) 40 CFR §63.1505(j)(2) 40 CFR §63.1505(k)(1)
$L_{c_{PM}} = \frac{\sum_{i=1}^n (L_{ti_{PM}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti_{PM}}$ = 0.4 lb/ton of feed charge for the NDC recycle furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.01 lb/ton of feed/charge for the in-line degasser T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c_{PM}}$ = The daily PM emission limit for the SAPU which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)

	Regulations
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 0.4 lb of PM/ton of feed/charge emission limit for the NDC recycle furnace on the basis of the combined emissions from the sidewell and the hearth.	40 CFR §63.1505(i)(7)
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of PM/ton of feed/charge emission limit for the NDC recycle furnace, the 0.4 lb of PM/ton of feed/charge emission limit for the holding furnace, and the 0.01 lb of PM/ton of feed/charge emission limit for the in-line degasser, as applicable.	40 CFR §63.1505(k)(4)
9. Filterable and condensable PM ₁₀ emissions from NDC Recycle Furnace #1 shall not exceed 0.180 lb/ton of feed/charge and 4.97 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Filterable and condensable PM _{2.5} emissions from NDC Recycle Furnace #1 shall not exceed 0.153 lb/ton of feed/charge and 4.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Filterable and condensable PM ₁₀ emissions from Holding Furnace #3 shall not exceed 0.024 lb/ton of feed/charge and 1.47 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Filterable and condensable PM _{2.5} emissions from Holding Furnace #3 shall not exceed 0.024 lb/ton of feed/charge and 1.47 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. Filterable PM ₁₀ emissions from In-Line Degasser #3 shall not exceed 0.00532 lb/ton of feed/charge and 0.580 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Filterable and Condensable PM ₁₀ emissions from Dross Press #2 shall not exceed 0.022 lb/ton of feed/charge and 0.16 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15. Filterable PM _{2.5} emissions from In-Line Degasser #3 shall not exceed 0.00198 lb/ton of feed/charge and 0.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
16. Filterable and Condensable PM _{2.5} emissions from Dross Press #2 shall not exceed 0.018 lb/ton of feed/charge and 0.13 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
17. Nitrogen oxide (NO _x) emissions from NDC Recycle Furnace #1 shall not exceed 0.51 lb/ton of feed/charge and 14.1 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
18. NO _x emissions from Holding Furnace #3 shall not exceed 0.034 lb/ton of feed/charge and 2.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
19. Carbon monoxide (CO) emissions from NDC Recycle Furnace #1 shall not exceed 0.38 lb/ton of feed/charge and 10.5 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
20. CO emissions from Holding Furnace #3 shall not exceed 0.037 lb/ton of feed/charge and 2.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
21. Volatile organic compound (VOC) emissions from NDC Recycle Furnace #1 shall not exceed 0.23 lb/ton of feed/charge and 6.35 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
22. VOC emissions from Holding Furnace #3 shall not exceed 0.031 lb/ton of feed/charge and 1.90 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
23. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of D/F in excess of:	40 CFR §63.1505(i)(3) 40 CFR §63.1505(k)(3)
$L_{c\ D/F} = \frac{\sum_{i=1}^n (L_{ti\ D/F} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: L_{tiD/F} = 15 µg of D/F TEQ per Mg (2.1 × 10⁻⁴ gr of D/F TEQ per ton) of feed/charge for the NDC recycle furnace T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i L_{cD/F} = The daily D/F emission limit for the SAPU which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewall at times when the level of molten metal falls below the top of the passage between the sidewall and the hearth, then the Permittee must comply with the 2.1 × 10 ⁻⁴ gr of D/F TEQ per	40 CFR §63.1505(i)(7)

	Regulations
ton of feed/charge emission limit for the NDC recycle furnace on the basis of the combined emissions from the sidewell and the hearth.	
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that the NDC recycle furnace within the SAPU is in compliance with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit.	40 CFR §63.1505(k)(4)
24. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of HCl in excess of:	40 CFR §63.1505(i)(4) 40 CFR §63.1505(j)(1) 40 CFR §63.1505(k)(2)
$L_{c\text{HCl}} = \frac{\sum_{i=1}^n (L_{ti\text{HCl}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti\text{HCl}}$ = 0.4 lb/ton of feed/charge for the NDC recycle furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.04 lb/ton of feed/charge for the in-line degasser T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c\text{HCl}}$ = The daily HCl emission limit for the SAPU which is used to calculate the 3-day, 24-hour HCl emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)
(b) If the Permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the Permittee must comply with the 0.4 lb of HCl/ton of feed/charge emission limit for the NDC recycle furnace on the basis of the combined emissions from the sidewell and the hearth.	40 CFR §63.1505(i)(7)
(c) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit	40 CFR §63.1505(k)(4)

	Regulations
within the SAPU is in compliance with the 0.4 lb of HCl/ton of feed/charge emission limit for the NDC recycle furnace and the holding furnace and the 0.04 lb of HCl/ton of feed/charge limit for the in-line degasser, as applicable.	
25. CO ₂ e emissions from the HBH7 stack shall not exceed 81,063 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
26. Holding Furnace #3 shall only process clean charge.	Rule 335-3-14-.04 (PSD/BACT)
27. NDC Recycle Furnace #1 and Holding Furnace #3 shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
28. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
29. At all times, the Permittee must operate and maintain the NDC recycle furnace, holding furnace, and in-line degasser, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
30. The Permittee must provide and maintain easily visible labels posted at the NDC recycle furnace, holding furnace, and in-line degasser that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)
(a) The type of affected source or emission unit (e.g., group 1 furnace, in-line fluxer).	
(b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
31. With regard to HBH7, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated	

	Regulations
with HBH7 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH7 according to the procedures and requirements in the OM&M plan. 32. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements: (a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. (c) The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that: i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight. 33. The Permittee shall operate a bag leak detection system concurrently with HBH7. (a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm. (b) The Permittee shall operate HBH7 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In	40 CFR §63.1506(d) 40 CFR §63.1506(k)(1) 40 CFR §63.1506(m)(1)

	Regulations
calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
34. The Permittee shall maintain the 3-hour block average inlet temperature for HBH7 at or below the average temperature established during the most recent performance test, plus 14 °C (plus 25 °F).	40 CFR §63.1506(m)(3)
35. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(k)(3) 40 CFR §63.1506(m)(4)
36. The Permittee shall maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the most recent performance test at or below the average rate established during the performance test.	40 CFR §63.1506(k)(4) 40 CFR §63.1506(m)(5)
37. The Permittee shall operate the NDC recycle furnace such that the level of molten metal remains above the top of the passage between the sidewall and hearth during reactive flux injection, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits. Additionally, reactive flux is to be added only in the sidewall, unless emissions from both the sidewall and the hearth are included in demonstrating compliance with all applicable emission limits.	40 CFR §63.1506(m)(6)
38. The operation of capture/collection systems and control devices associated with the NDC recycle furnace and holding furnace that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these capture/collection systems and control devices must be restarted before feed/charge, flux or alloying materials are added to the furnace.	40 CFR §63.1506(m)(7)
39. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its	40 CFR §63.1506(p)

	Regulations
normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, 6, 7, & 8.	Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 9, 10, 11, 12, 14 & 16.	Rule 335-3-1-.05
4. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 13 & 15.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 17 & 18.	Rule 335-3-1-.05
6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 19 & 20.	Rule 335-3-1-.05
7. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 21 & 22.	Rule 335-3-1-.05
8. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 23.	40 CFR §63.1511(c)(7)
9. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard Nos. 24.	40 CFR §63.1511(c)(9)
(a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	

	Regulations
10. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
11. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup.	40 CFR §63.1511(b)
(a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested.	
(b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.	
(c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:	
i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of	

	Regulations
four hours and divide the sampling time evenly between the required number of traverse points); ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run; iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) (d) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter. (e) Apply Proviso Nos. 11(a) through (d) above for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant. (f) The Permittee may not conduct performance tests during periods of malfunction. 12. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d). 13. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 11 of this section of the Permit. 14. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests	40 CFR §63.1511(c) 40 CFR §63.1511(d) 40 CFR §63.1511(e) 40 CFR §63.1511(g)

	Regulations
to establish operating parameter values for compliance monitoring provided each of the following conditions are met: (a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 14(a) through (d) above must be met.	
15. When group 1 furnaces and in-line fluxers are included in a single SAPU, and the emissions from more than one emission unit within that 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 40 CFR §63.1505(k).	40 CFR §63.1511(h)
16. With the prior approval of the Department, the Permittee may do combined performance testing of two or more individual affected sources or emission units under 40 CFR Part 63, Subpart RRR which are not included in a single SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: (a) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission	40 CFR §63.1511(i)

	Regulations
requirements applicable to that affected source or emission unit; (b) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; (c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; (d) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and (e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.	
17. The Permittee must conduct performance tests on the NDC recycle furnace and holding furnace to measure emissions of PM, HCl, and D/F (only NDC furnace) at the outlet of the control device.	40 CFR §63.1512(d)(1)
18. The Permittee may choose to determine the rate of reactive flux addition to each furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the furnace is emitted. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	40 CFR §63.1512(d)(3)
19. For each sidewell group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, the Permittee must conduct the performance tests	40 CFR §63.1512(d)(4)

	Regulations
required by Proviso No. 17 of this section of the Permit, to measure emissions from both the sidewall and the hearth.	
20. The Permittee must conduct performance tests on the in-line degasser to measure emissions of PM and HCl at the outlet of the control device.	40 CFR §63.1512(h)
(a) The Permittee may choose to limit the rate at which reactive flux is added to the in-line degasser and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line degasser is emitted as HCl. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	
21. The Permittee must conduct performance tests as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, and HCl and µg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR §63.1510(t) and Proviso No. 12 of the <i>Emission Monitoring</i> section of the Permit. A performance test is required for:	
(a) The NDC recycle furnace and the holding furnace to measure emissions of PM and D/F and either: i. Emissions of HCl (for determining the emission limit); or ii. The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). (b) The in-line degasser to measure emissions of PM and HCl.	
22. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the NDC recycle furnace, holding furnace, and in-line degassed for each of the three test runs and calculate and record the total weight. If the Permittee chooses to demonstrate compliance on the basis of the aluminum production weight, it must measure the weight of aluminum produced by the NDC recycle furnace, holding furnace, and in-line degasser instead of the feed/charge weight.	40 CFR §63.1512(k)

	Regulations
23. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature: (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.	40 CFR §63.1512(n)
24. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate: (a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15-minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs; (b) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs; (c) Determine the total reactive chlorine flux injection rate and by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the equation below: $W_t = F_1 W_1 + F_2 W_2$ Where: W_t = Total chlorine usage, by weight F₁ = Fraction of gaseous or liquid flux that is chlorine W₁ = Weight of reactive flux gas injected F₂ = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride) W₂ = Weight of solid reactive flux	40 CFR §63.1512(o)

	Regulations
(d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and (e) If a solid reactive flux other than magnesium chloride is used, the Permittee must derive the appropriate proportion factor subject to approval by the Department. 25. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test: (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs. 26. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1512(p) 40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH7 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present. 2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, and 22 within 60 days after achieving the maximum production	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup. (a) For the initial performance test, the Permittee may test <u>either</u> Holding Furnace #3 (MC-13) <u>or</u> Holding Furnace #4 (MC-12) to show compliance for both sources, provided the following conditions are met: i. The feed materials and charge rates are comparable; ii. The sources use the same type of flux materials in the same proportions; iii. The sources are operated according to the same work practices; iv. The sources are of the same design; v. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and vi. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, and 22. i. For each subsequent performance test, the Permittee may test <u>either</u> Holding Furnace #3 (MC-13) <u>or</u> Holding Furnace #4 (MC-12) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (vi) are met. (c) Each holding furnace must be tested at least once every 10 years (120 months) following the most recent performance test on that source.	
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH7 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall prepare and implement for the NDC recycle furnace, holding furnace, and in-line degasser, a written operation, maintenance, and monitoring (OM&M) plan. The	40 CFR §63.1510(b)

Regulations

Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.
- (e) Procedures for monitoring process and control device parameters, including lime injection rates, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

	Regulations
(f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. (h) Procedures to be followed when changing furnace classifications under the provisions of 40 CFR §63.1514. (i) If the Permittee complies with the emission standards for a SAPU, the OM&M plan must include the following: i. The identification of each emission unit in the SAPU; ii. The specific control technology or pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application; iii. The emission limit calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR Part 63, Subpart RRR; and v. The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR §63.1510(t). (j) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: i. Any averaging among emissions of differing pollutants;	40 CFR §63.1510(s)(1) 40 CFR §63.1510(s)(2)

	Regulations
ii. The inclusion of any affected sources other than emission units in a SAPU; iii. The inclusion of any emission unit while it is shutdown; or iv. The inclusion of any periods of startup or shutdown in emission calculations.	
(k) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee must submit a request to the Department containing the information required by Proviso No. 4(i) of this section of the Permit and obtain approval of the Department prior to implementing any revisions.	40 CFR §63.1510(s)(3)
5. The Permittee must inspect the labels for the NDC recycle furnace, holding furnace, and in-line degasser at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH7's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii).	40 CFR §63.1510(d)
(a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the NDC recycle furnace, holding furnace, and in-line degasser over the same operating cycle or time period used in the most recent performance test.	40 CFR §63.1510(e)

	Regulations
Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit. (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the NDC recycle furnace, holding furnace, and in-line degasser will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. 8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH7, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH7. (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase	40 CFR §63.1510(f)(1)

	Regulations
in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH7 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
10. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH7. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods,	40 CFR §63.1510(i)

Regulations

the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period.

- (b) The Permittee must record the lime feeder setting once each day of operation.
- (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

11. The Permittee must comply with the following requirements for the total reactive flux injection rate:

- (a) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to the NDC recycle furnace, holding furnace, and in-line degasser.
 - i. The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the most recent performance test.
 - ii. The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The Permittee may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive

40 CFR §63.1510(j)

	Regulations
flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards. iii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. (b) Calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). (c) Record, for each 15-minute block period during each operating cycle or time period used in the most recent performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of: i. Gaseous or liquid reactive flux other than chlorine; and ii. Solid reactive flux. (d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the most recent performance test using the procedures in 40 CFR §63.1512(o). (e) The Permittee may apply for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the most recent performance test. An alternative monitoring method will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.	
12. For the NDC recycle furnace, the Permittee must: (a) Record in an operating log for each tap of a sidewall furnace whether the level of molten metal was above the top of the	40 CFR §63.1510(n)

Regulations

passage between the sidewall and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device. If visual inspection of the molten metal level is not possible, the molten metal level must be determined using physical measurement methods.

- (b) Submit a certification of compliance with the operational standards in 40 CFR §63.1506(m)(6) and Proviso No. 34 of the *Emission Standards* section of the Permit for each 6-month reporting period. Each certification must contain the information in 40 CFR §63.1516(b)(2)(iii).

- 13. Except as provided in Proviso No. 14 of this section of the Permit, the Permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee must:

- (a) Calculate and record the total weight of material charged to each emission unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in Proviso No. 7 of this section of the Permit. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.
- (b) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the most recent performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.
 - i. If the Permittee has not conducted performance tests for HCl or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in Proviso No. 12(d) of this section of the Permit to determine SAPU-wide HCl emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl.
- (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the

Regulations

weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.

- (d) Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

Where:

E_{day} = The daily PM, HCl, and D/F emission rate for the SAPU for the 24-hour period

T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons)

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge)

n = The number of emission units in the secondary aluminum processing unit

- (e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with Proviso Nos. 7, 20 and 21 of the *Emission Standards* section of the Permit.

14. As an alternative to the procedures of Proviso No. 13 of this section of the Permit, the Permittee may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit.

40 CFR §63.1510(u)

15. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6).

40 CFR §63.1510(w)

	Regulations
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO ₂ e emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the daily pressure differential readings across HBH7. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 11 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the NDC recycle furnace, holding furnace, and in-line degasser. A complete performance test report includes all data,	

	Regulations
associated measurements, and calculations (including visible emission and opacity tests); (b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system; (c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 30 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements; (d) The compliant operating parameter value or range established for the NDC recycle furnace, holding furnace, and in-line degasser with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test; (e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 31 of the <i>Emission Standards</i> section of the Permit; (f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit; and (g) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including: (a) All required maintenance performed on the air pollution control and monitoring equipment.	40 CFR §63.1517(b)
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR: (a) The number of total operating hours for the NDC recycle furnace, holding furnace, and in-line degasser during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.	40 CFR §63.1517(b)(1)

	Regulations
(b) Records of 15-minute block average inlet temperatures for HBH7, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.	40 CFR §63.1517(b)(3)
(c) For HBH7, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	40 CFR §63.1517(b)(4)
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(d) For the NDC recycle furnace, holding furnace, and in-line degasser, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.	40 CFR §63.1517(b)(5)
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) For the NDC recycle furnace, holding furnace, and in-line degasser, records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Operating logs for the NDC recycle furnace documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between	40 CFR §63.1517(b)(10)

	Regulations
the sidewell and hearth during reactive flux injection and for adding reactive flux only to the sidewell or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.	
(h) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(i) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(j) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)
(k) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan and the site-specific SAPU emissions plan.	40 CFR §63.1517(b)(16)
(l) If the Permittee complies with the emission standard(s) for SAPUs, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.	40 CFR §63.1517(b)(17)
(m) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	

	Regulations
(n) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	
ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, fabric filter inlet temperature, or other approved operating parameter).	
iii. The NDC recycle furnace, holding furnace, and/or in-line degasser (or SAPU) were not operated according to the requirements of 40 CFR Part 63, Subpart RRR.	
iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU.	
(b) Each report must include the following certification: "Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewall and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewall or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period."	
(c) 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	

	Regulations
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) and Proviso No. 29 of the <i>Emission Standards</i> section of the Permit. (d) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13. 10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X010	<u>Flex Line</u> Round Top Furnace #2 (MC-10), Holding Furnace #4 (MC-12), and In-Line Degasser #4 (MC-16) vented to Hot Baghouse #8 (HBH8)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X010)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X010

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

FLEX LINE
Round Top Furnace #2 (MC-10), Holding Furnace #4 (MC-12),
and In-Line Degasser #4 (MC-16)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>"Control of Particulate Emissions: Visible Emissions"</i> .	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>"Control of Particulate Emissions: Process Industries – General"</i> .	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>"National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production"</i> .	Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(8)
5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>"General Provisions"</i> , as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the HBH8 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM emissions from Round Top Furnace #2 shall not exceed 0.024 lb/ton of feed/charge and 1.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
5. Filterable PM emissions from Holding Furnace #4 shall not exceed 0.012 lb/ton of feed/charge and 0.734 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM emissions from In-Line Degasser #4 shall not exceed 0.010 lb/ton of feed/charge and 1.09 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. A secondary aluminum process unit (SAPU) is defined as any combination of individual group 1 furnaces and in-line fluxers within the facility. Round Top Furnace #2, Holding Furnace #4, and In-Line Degasser #4 comprise the SAPU vented to HBH8. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of filterable PM in excess of:	40 CFR §63.1505(i)(1) 40 CFR §63.1505(i)(2) 40 CFR §63.1505(j)(2) 40 CFR §63.1505(k)(1)
$L_{c_{PM}} = \frac{\sum_{i=1}^n (L_{ti_{PM}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti_{PM}}$ = 0.4 lb/ton of feed charge for the round top furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.01 lb/ton of feed/charge for the in-line degasser T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c_{PM}}$ = The daily PM emission limit for the SAPU which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)
(b) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of PM/ton of feed/charge emission limit for the round top furnace, the 0.4 lb of PM/ton of feed/charge emission limit for the holding furnace, and the 0.01 lb of PM/ton of feed/charge emission limit for the in-line degasser, as applicable.	40 CFR §63.1505(k)(4)

	Regulations
8. Filterable and condensable PM ₁₀ emissions from Round Top Furnace #2 shall not exceed 0.078 lb/ton of feed/charge and 3.60 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable and condensable PM _{2.5} emissions from Round Top Furnace #2 shall not exceed 0.076 lb/ton of feed/charge and 3.52 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Filterable and condensable PM ₁₀ emissions from Holding Furnace #4 shall not exceed 0.024 lb/ton of feed/charge and 1.47 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Filterable and condensable PM _{2.5} emissions from Holding Furnace #4 shall not exceed 0.023 lb/ton of feed/charge and 1.41 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Filterable PM ₁₀ emissions from In-Line Degasser #4 shall not exceed 0.00532 lb/ton of feed/charge and 0.580 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. Filterable PM _{2.5} emissions from In-Line Degasser #4 shall not exceed 0.00198 lb/ton of feed/charge and 0.216 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Nitrogen oxide (NO _x) emissions from Round Top Furnace #2 shall not exceed 0.30 lb/ton of feed/charge and 13.9 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15. NO _x emissions from Holding Furnace #4 shall not exceed 0.034 lb/ton of feed/charge and 2.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
16. Carbon monoxide (CO) emissions from Round Top Furnace #2 shall not exceed 0.20 lb/ton of feed/charge and 9.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
17. CO emissions from Holding Furnace #4 shall not exceed 0.037 lb/ton of feed/charge and 2.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
18. Volatile organic compound (VOC) emissions from Round Top Furnace #2 shall not exceed 0.071 lb/ton of feed/charge and 3.29 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
19. VOC emissions from Holding Furnace #4 shall not exceed 0.031 lb/ton of feed/charge and 1.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
20. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of D/F in excess of:	40 CFR §63.1505(i)(3) 40 CFR §63.1505(k)(3)

Regulations

$$L_{c_{D/F}} = \frac{\sum_{i=1}^n (L_{ti_{D/F}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$$

Where:

$L_{tiD/F}$ = 15 µg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge for the round top furnace

T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i

$L_{cD/F}$ = The daily D/F emission limit for the SAPU which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU

(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.

40 CFR §63.1505(i)(6)

(b) The Permittee may demonstrate compliance with this emission limit by demonstrating that the round top furnace within the SAPU is in compliance with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit.

40 CFR §63.1505(k)(4)

21. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of HCl in excess of:

40 CFR §63.1505(i)(4)

40 CFR §63.1505(j)(1)

40 CFR §63.1505(k)(2)

$$L_{c_{HCl}} = \frac{\sum_{i=1}^n (L_{ti_{HCl}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$$

Where:

L_{tiHCl} = 0.4 lb/ton of feed/charge for the round top furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.04 lb/ton of feed/charge for the in-line degasser

	Regulations
T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i L_{cHCl} = The daily HCl emission limit for the SAPU which is used to calculate the 3-day, 24-hour HCl emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)
(b) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of HCl/ton of feed/charge emission limit for the round top furnace and the holding furnace and the 0.04 lb of HCl/ton of feed/charge limit for the in-line degasser, as applicable.	40 CFR §63.1505(k)(4)
22. CO_{2e} emissions from the HBH8 stack shall not exceed 71,291 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
23. Holding Furnace #4 shall only process clean charge, as defined in 40 CFR Part 63, Subpart RRR.	Rule 335-3-14-.04 (PSD/BACT)
24. Round Top Furnace #2 and Holding Furnace #4 shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
25. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
26. At all times, the Permittee must operate and maintain the round top furnace, holding furnace, and in-line degasser, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
27. The Permittee must provide and maintain easily visible labels posted at the round top furnace, holding furnace, and in-line degasser that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)

	Regulations
(a) The type of affected source or emission unit (e.g., group 1 furnace, in-line fluxer). (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
28. With regard to HBH8, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH8 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH8 according to the procedures and requirements in the OM&M plan.	
29. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements:	40 CFR §63.1506(d)
(a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. (c) The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:	

	Regulations
i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.	
30. The Permittee shall operate a bag leak detection system concurrently with HBH8.	40 CFR §63.1506(k)(1) 40 CFR §63.1506(m)(1)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm. (b) The Permittee shall operate HBH8 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
31. The Permittee shall maintain the 3-hour block average inlet temperature for HBH8 at or below the average temperature established during the most recent performance test, plus 14 °C (plus 25 °F).	40 CFR §63.1506(m)(3)
32. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(k)(3) 40 CFR §63.1506(m)(4)
33. The Permittee shall maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the most recent performance test at or below the average rate established during the performance test.	40 CFR §63.1506(k)(4) 40 CFR §63.1506(m)(5)
34. The operation of capture/collection systems and control devices associated with the round top furnace and holding furnace that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these capture/collection systems and control devices must be restarted	40 CFR §63.1506(m)(7)

	Regulations
before feed/charge, flux or alloying materials are added to the furnace.	
35. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, 6, & 7.	Rule 335-3-4-.01(2)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 8, 9, 10, & 11.	Rule 335-3-1-.05
4. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 12 & 13.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 14 & 15.	Rule 335-3-1-.05
6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 16 & 17.	Rule 335-3-1-.05
7. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 18 & 19.	Rule 335-3-1-.05
8. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 20.	40 CFR §63.1511(c)(7)

	Regulations
9. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard Nos. 21. (a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	40 CFR §63.1511(c)(9)
10. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
11. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup. (a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested. (b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. (c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where	40 CFR §63.1511(b)

Regulations

isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:

- i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points);
 - ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run;
 - iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.)
- (d) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter.
- (e) Apply Proviso Nos. 11(a) through (d) above for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant.
- (f) The Permittee may not conduct performance tests during periods of malfunction.

12. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d).

40 CFR §63.1511(c)
40 CFR §63.1511(d)

	Regulations
13. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 11 of this section of the Permit.	40 CFR §63.1511(e)
14. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met:	40 CFR §63.1511(g)
(a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 14(a) through (d) above must be met.	
15. When group 1 furnaces and in-line fluxers are included in a single SAPU, and the emissions from more than one emission unit within that 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 40 CFR §63.1505(k).	40 CFR §63.1511(h)
16. With the prior approval of the Department, the Permittee may do combined performance testing of two or more individual affected	40 CFR §63.1511(i)

	Regulations
sources or emission units under 40 CFR Part 63, Subpart RRR which are not included in a single SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: (a) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; (b) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; (c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; (d) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and (e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.	
17. The Permittee must conduct performance tests on the round top furnace and holding furnace to measure emissions of PM, HCl, and D/F (only round top furnace) at the outlet of the control device.	40 CFR §63.1512(d)(1)
18. The Permittee may choose to determine the rate of reactive flux addition to each furnace, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the furnace is emitted. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	40 CFR §63.1512(d)(3)

	Regulations
19. The Permittee must conduct performance tests on the in-line degasser to measure emissions of PM and HCl at the outlet of the control device. (a) The Permittee may choose to limit the rate at which reactive flux is added to the in-line degasser and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line degasser is emitted as HCl. Under these circumstances, the Permittee is not required to conduct an emission test for HCl. 20. The Permittee must conduct performance tests as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, and HCl and μg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR §63.1510(t) and Proviso No. 12 of the <i>Emission Monitoring</i> section of the Permit. A performance test is required for: (a) The round top furnace and the holding furnace to measure emissions of PM and D/F and either: i. Emissions of HCl (for determining the emission limit); or ii. The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). (b) The in-line degasser to measure emissions of PM and HCl. 21. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the round top furnace, holding furnace, and in-line degassed for each of the three test runs and calculate and record the total weight. If the Permittee chooses to demonstrate compliance on the basis of the aluminum production weight, it must measure the weight of aluminum produced by the round top furnace, holding furnace, and in-line degasser instead of the feed/charge weight. 22. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature:	40 CFR §63.1512(h) 40 CFR §63.1512(k) 40 CFR §63.1512(n)

Regulations

- (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests;
- (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and
- (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.
23. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate:
- (a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
- (b) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
- (c) Determine the total reactive chlorine flux injection rate and by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the equation below:
- $$W_t = F_1 W_1 + F_2 W_2$$
- Where:
- W_t** = Total chlorine usage, by weight
- F₁** = Fraction of gaseous or liquid flux that is chlorine
- W₁** = Weight of reactive flux gas injected
- F₂** = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride)
- W₂** = Weight of solid reactive flux
- (d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and

	Regulations
(e) If a solid reactive flux other than magnesium chloride is used, the Permittee must derive the appropriate proportion factor subject to approval by the Department. 24. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test: (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs. 25. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1512(p) 40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH8 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present. 2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup..	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
(a) For the initial performance test, the Permittee may test <u>either</u> Holding Furnace #3 (MC-13) <u>or</u> Holding Furnace #4 (MC-12) to show compliance for both sources, provided the following conditions are met: i. The feed materials and charge rates are comparable; ii. The sources use the same type of flux materials in the same proportions; iii. The sources are operated according to the same work practices; iv. The sources are of the same design; v. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and vi. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 8, 9, 10, 11, 14, 15, 16, 17, 18, and 19. i. For each subsequent performance test, the Permittee may test <u>either</u> Holding Furnace #3 (MC-13) <u>or</u> Holding Furnace #4 (MC-12) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (vi) are met. (c) Each holding furnace must be tested at least once every 10 years (120 months) following the most recent performance test on that source.	
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH8 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall prepare and implement for the round top furnace, holding furnace, and in-line degasser, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written	40 CFR §63.1510(b)

Regulations

certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.
- (e) Procedures for monitoring process and control device parameters, including lime injection rates, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from

	Regulations
the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. (h) Procedures to be followed when changing furnace classifications under the provisions of 40 CFR §63.1514. (i) If the Permittee complies with the emission standards for a SAPU, the OM&M plan must include the following: i. The identification of each emission unit in the SAPU; ii. The specific control technology or pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application; iii. The emission limit calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR Part 63, Subpart RRR; and v. The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR §63.1510(t). (j) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: i. Any averaging among emissions of differing pollutants;	40 CFR §63.1510(s)(1) 40 CFR §63.1510(s)(2)

	Regulations
ii. The inclusion of any affected sources other than emission units in a SAPU; iii. The inclusion of any emission unit while it is shutdown; or iv. The inclusion of any periods of startup or shutdown in emission calculations.	
(k) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee must submit a request to the Department containing the information required by Proviso No. 4(i) of this section of the Permit and obtain approval of the Department prior to implementing any revisions.	40 CFR §63.1510(s)(3)
5. The Permittee must inspect the labels for the round top furnace, holding furnace, and in-line degasser at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH8's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii).	40 CFR §63.1510(d)
(a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the round top furnace, holding furnace, and in-line degasser over the same operating cycle or time period used in the most recent performance test.	40 CFR §63.1510(e)

Regulations

Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit.

- (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the round top furnace, holding furnace, and in-line degasser will meet the relevant emission standard.
- (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH8, as required below:

- (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH8.
- (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions.
- (c) The bag leak detection system must 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.
- (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings.
- (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.
- (f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase

40 CFR §63.1510(f)(1)

	Regulations
in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH8 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
10. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH8. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods,	40 CFR §63.1510(i)

Regulations

the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period.

- (b) The Permittee must record the lime feeder setting once each day of operation.
- (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

11. The Permittee must comply with the following requirements for the total reactive flux injection rate:

- (a) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to the round top furnace, holding furnace, and in-line degasser.
 - i. The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the most recent performance test.
 - ii. The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The Permittee may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive

40 CFR §63.1510(j)

Regulations

flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards.

iii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(b) Calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o).

(c) Record, for each 15-minute block period during each operating cycle or time period used in the most recent performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:

- i. Gaseous or liquid reactive flux other than chlorine; and
- ii. Solid reactive flux.

(d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the most recent performance test using the procedures in 40 CFR §63.1512(o).

(e) The Permittee may apply for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the most recent performance test. An alternative monitoring method will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

12. Except as provided in Proviso No. 13 of this section of the Permit, the Permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on 40 CFR §63.1510(t)

Regulations

a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee must:

- (a) Calculate and record the total weight of material charged to each emission unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in Proviso No. 7 of this section of the Permit. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.
- (b) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the most recent performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.
 - i. If the Permittee has not conducted performance tests for HCl or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in Proviso No. 12(d) of this section of the Permit to determine SAPU-wide HCl emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl.
- (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
- (d) Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

Where:

E_{day} = The daily PM, HCl, and D/F emission rate for the SAPU for the 24-hour period

	Regulations
T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons) ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge) n = The number of emission units in the secondary aluminum processing unit (e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with Proviso Nos. 7, 20 and 21 of the <i>Emission Standards</i> section of the Permit. 13. As an alternative to the procedures of Proviso No. 12 of this section of the Permit, the Permittee may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit. 14. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6). Recordkeeping and Reporting Requirements 1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation. 2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form. 3. The Permittee shall maintain a record of the 12-month rolling total CO_{2e} emissions from these sources.	40 CFR §63.1510(u) 40 CFR §63.1510(w) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
4. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 11 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the round top furnace, holding furnace, and in-line degasser. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests);	
(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system;	
(c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 27 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements;	
(d) The compliant operating parameter value or range established for the round top furnace, holding furnace, and in-line degasser with supporting documentation and a	

	Regulations
description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test; (e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 28 of the <i>Emission Standards</i> section of the Permit; (f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit; and (g) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including: (a) All required maintenance performed on the air pollution control and monitoring equipment.	40 CFR §63.1517(b)
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR: (a) The number of total operating hours for the round top furnace, holding furnace, and in-line degasser during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. (b) Records of 15-minute block average inlet temperatures for HBH8, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken. (c) For HBH8, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing,	40 CFR §63.1517(b)(1) 40 CFR §63.1517(b)(3) 40 CFR §63.1517(b)(4)

	Regulations
records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(d) For the round top furnace, holding furnace, and in-line degasser, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.	40 CFR §63.1517(b)(5)
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) For the round top furnace, holding furnace, and in-line degasser, records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(h) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(i) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)

	Regulations
(j) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan and the site-specific SAPU emissions plan.	40 CFR §63.1517(b)(16)
(k) If the Permittee complies with the emission standard(s) for SAPUs, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.	40 CFR §63.1517(b)(17)
(l) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(m) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	
ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection	

	Regulations
rate, fabric filter inlet temperature, or other approved operating parameter). iii. The round top furnace, holding furnace, and/or in-line degasser (or SAPU) were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. (b) 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) and Proviso No. 26 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13.	
10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X011	<u>CBS Line</u> Round Top Furnace #1 (MC-11), Holding Furnace #1 (MC-15), and In-Line Degasser #1 (MC-18) vented to Hot Baghouse #9 (HBH9)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X011)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X011

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

CBS LINE
Round Top Furnace #1 (MC-11), Holding Furnace #1 (MC-15),
and In-Line Degasser #1 (MC-18)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>"Control of Particulate Emissions: Visible Emissions"</i> .	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>"Control of Particulate Emissions: Process Industries – General"</i> .	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>"Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)"</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart RRR, <i>"National Emissions Standards for Hazardous Air Pollutants For Secondary Aluminum Production"</i> .	Rule 335-3-11-.06(69) 40 CFR §63.1500(b)(8)
5. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>"General Provisions"</i> , as listed in Appendix A of 40 CFR Part 63, Subpart RRR.	Rule 335-3-11-.06(1) 40 CFR §63.1518
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the HBH9 stack shall not exceed 0.002 gr/dscf.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM emissions from Round Top Furnace #1 shall not exceed 0.024 lb/ton of feed/charge and 1.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
5. Filterable PM emissions from Holding Furnace #1 shall not exceed 0.013 lb/ton of feed/charge and 0.774 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM emissions from In-Line Degasser #1 shall not exceed 0.010 lb/ton of feed/charge and 1.09 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. A secondary aluminum process unit (SAPU) is defined as any combination of individual group 1 furnaces and in-line fluxers within the facility. Round Top Furnace #1, Holding Furnace #1, and In-Line Degasser #1 comprise the SAPU vented to HBH9. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of filterable PM in excess of:	40 CFR §63.1505(i)(1) 40 CFR §63.1505(i)(2) 40 CFR §63.1505(j)(2) 40 CFR §63.1505(k)(1)
$L_{c_{PM}} = \frac{\sum_{i=1}^n (L_{ti_{PM}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$	
Where: $L_{ti_{PM}}$ = 0.4 lb/ton of feed charge for the round top furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.01 lb/ton of feed/charge for the in-line degasser T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i $L_{c_{PM}}$ = The daily PM emission limit for the SAPU which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU	
(a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5)
(b) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of PM/ton of feed/charge emission limit for the round top furnace, the 0.4 lb of PM/ton of feed/charge emission limit for the holding furnace, and the 0.01 lb of PM/ton of feed/charge emission limit for the in-line degasser, as applicable.	40 CFR §63.1505(k)(4)

	Regulations
8. Filterable and condensable PM ₁₀ emissions from Round Top Furnace #1 shall not exceed 0.078 lb/ton of feed/charge and 3.60 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable and condensable PM _{2.5} emissions from Round Top Furnace #1 shall not exceed 0.076 lb/ton of feed/charge and 3.52 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Filterable and condensable PM ₁₀ emissions from Holding Furnace #1 shall not exceed 0.024 lb/ton of feed/charge and 1.43 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Filterable and condensable PM _{2.5} emissions from Holding Furnace #1 shall not exceed 0.023 lb/ton of feed/charge and 1.37 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Filterable PM ₁₀ emissions from In-Line Degasser #1 shall not exceed 0.00532 lb/ton of feed/charge and 0.580 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. Filterable PM _{2.5} emissions from In-Line Degasser #1 shall not exceed 0.00198 lb/ton of feed/charge and 0.216 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Nitrogen oxide (NO _x) emissions from Round Top Furnace #1 shall not exceed 0.30 lb/ton of feed/charge and 13.9 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15. NO _x emissions from Holding Furnace #1 shall not exceed 0.034 lb/ton of feed/charge and 2.02 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
16. Carbon monoxide (CO) emissions from Round Top Furnace #1 shall not exceed 0.20 lb/ton of feed/charge and 9.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
17. CO emissions from Holding Furnace #1 shall not exceed 0.038 lb/ton of feed/charge and 2.26 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
18. Volatile organic compound (VOC) emissions from Round Top Furnace #1 shall not exceed 0.071 lb/ton of feed/charge and 3.29 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
19. VOC emissions from Holding Furnace #1 shall not exceed 0.031 lb/ton of feed/charge and 1.84 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
20. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of D/F in excess of:	40 CFR §63.1505(i)(3) 40 CFR §63.1505(k)(3)

Regulations

$$L_{c_{D/F}} = \frac{\sum_{i=1}^n (L_{ti_{D/F}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$$

Where:

$L_{tiD/F}$ = 15 µg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge for the round top furnace

T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i

$L_{cD/F}$ = The daily D/F emission limit for the SAPU which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU

- (a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.
- (b) The Permittee may demonstrate compliance with this emission limit by demonstrating that the round top furnace within the SAPU is in compliance with the 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge emission limit.

40 CFR §63.1505(i)(6)

40 CFR §63.1505(k)(4)

21. The Permittee shall not discharge to the atmosphere from the SAPU any 3-day, 24-hour rolling average emissions of HCl in excess of:

40 CFR §63.1505(i)(4)

40 CFR §63.1505(j)(1)

40 CFR §63.1505(k)(2)

$$L_{c_{HCl}} = \frac{\sum_{i=1}^n (L_{ti_{HCl}} \times T_{ti})}{\sum_{i=1}^n (T_{ti})}$$

Where:

L_{tiHCl} = 0.4 lb/ton of feed/charge for the round top furnace, 0.4 lb/ton of feed/charge for the holding furnace, and 0.04 lb/ton of feed/charge for the in-line degasser

T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i

	Regulations
L_{HCl} = The daily HCl emission limit for the SAPU which is used to calculate the 3-day, 24-hour HCl emission limit applicable to the SAPU (a) The Permittee may determine the emission standards for a SAPU by applying the group 1 furnace and in-line fluxer limits on the basis of the aluminum production weight in each group 1 furnace and in-line fluxer, rather than on the basis of feed/charge. (b) The Permittee may demonstrate compliance with this emission limit by demonstrating that each emission unit within the SAPU is in compliance with the 0.4 lb of HCl/ton of feed/charge emission limit for the round top furnace and the holding furnace and the 0.04 lb of HCl/ton of feed/charge limit for the in-line degasser, as applicable.	40 CFR §63.1505(i)(6) 40 CFR §63.1505(j)(5) 40 CFR §63.1505(k)(4)
22. CO _{2e} emissions from the HBH9 stack shall not exceed 71,291 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
23. Holding Furnace #1 shall only process clean charge, as defined in 40 CFR Part 63, Subpart RRR.	Rule 335-3-14-.04 (PSD/BACT)
24. Round Top Furnace #1 and Holding Furnace #1 shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
25. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
26. At all times, the Permittee must operate and maintain the round top furnace, holding furnace, and in-line degasser, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR §63.1506(a)(5)
27. The Permittee must provide and maintain easily visible labels posted at the round top furnace, holding furnace, and in-line degasser that identifies the applicable emission limits and means of compliance, including:	40 CFR §63.1506(b)

	Regulations
(a) The type of affected source or emission unit (e.g., group 1 furnace, in-line fluxer). (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.	
28. With regard to HBH9, the Permittee must:	40 CFR §63.1506(c)
(a) For each affected source or emission unit equipped with an add-on air pollution control device, design and install a system for the capture and collection of emissions associated with HBH9 to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR §63.14); (b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (c) Operate HBH9 according to the procedures and requirements in the OM&M plan.	
29. The Permittee shall install, operate, and maintain a weight measurement system/device in accordance with the following requirements:	40 CFR §63.1506(d)
(a) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and (b) The Permittee shall operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. (c) The Permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:	

	Regulations
i. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and ii. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.	
30. The Permittee shall operate a bag leak detection system concurrently with HBH9.	40 CFR §63.1506(k)(1) 40 CFR §63.1506(m)(1)
(a) The Permittee shall complete corrective action procedures in accordance with the OM&M plan within one (1) hour of a bag leak detection system alarm. (b) The Permittee shall operate HBH9 such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.	
31. The Permittee shall maintain the 3-hour block average inlet temperature for HBH9 at or below the average temperature established during the most recent performance test, plus 14 °C (plus 25 °F).	40 CFR §63.1506(m)(3)
32. For the continuous injection device, the Permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the most recent performance test.	40 CFR §63.1506(k)(3) 40 CFR §63.1506(m)(4)
33. The Permittee shall maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the most recent performance test at or below the average rate established during the performance test.	40 CFR §63.1506(k)(4) 40 CFR §63.1506(m)(5)
34. The operation of capture/collection systems and control devices associated with the round top furnace and holding furnace that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these capture/collection systems and control devices must be restarted	40 CFR §63.1506(m)(7)

	Regulations
before feed/charge, flux or alloying materials are added to the furnace.	
35. When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the most recent performance test and incorporated in the OM&M plan, the Permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.	40 CFR §63.1506(p)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4, 5, 6, & 7.	Rule 335-3-4-.01(2) Rule 335-3-1-.05 40 CFR §63.1511(c)(5)
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 8, 9, 10, & 11.	Rule 335-3-1-.05
4. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 12 & 13.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 14 & 15.	Rule 335-3-1-.05
6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard Nos. 16 & 17.	Rule 335-3-1-.05
7. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 18 & 19.	Rule 335-3-1-.05
8. Method 23 of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 20.	40 CFR §63.1511(c)(7)

	Regulations
9. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard Nos. 21. (a) Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the Permittee must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.	40 CFR §63.1511(c)(9)
10. Prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR §63.7.	40 CFR §63.1511(a)
11. Following approval of the site-specific test plan, the Permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard in 40 CFR Part 63, Subpart RRR for each source within 180 days of startup. (a) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Department. These new parametric settings shall be used to demonstrate compliance for the period being tested. (b) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. (c) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where	40 CFR §63.1511(b)

Regulations

isokinetic sampling must be conducted based on the procedures in Method 5 in Appendix A-3 to Part 60, the Permittee shall use the following procedure to ensure that sampling is conducted over the entire process operating cycle:

- i. Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points);
 - ii. After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of Appendix A-1 to Part 60, must be sampled at least once during each test run;
 - iii. In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.)
- (d) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter.
- (e) Apply Proviso Nos. 11(a) through (d) above for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant.
- (f) The Permittee may not conduct performance tests during periods of malfunction.

12. Each performance test required by 40 CFR Part 63, Subpart RRR shall be conducted in accordance with the methods in 40 CFR §63.1511(c) or the alternative methods in 40 CFR §63.1511(d).

40 CFR §63.1511(c)
40 CFR §63.1511(d)

	Regulations
13. The Permittee must conduct a performance test every 5 years following the initial performance test required by Proviso No. 11 of this section of the Permit.	40 CFR §63.1511(e)
14. The Permittee 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 in 40 CFR Part 63, Subpart RRR. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met:	40 CFR §63.1511(g)
(a) The complete emission test report(s) used as the basis of the parameter(s) is submitted. (b) The same test methods and procedures as required by this subpart were used in the test. (c) The Permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. (d) All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR Part 63, Subpart RRR and documented in the test report. (e) If the Permittee conducts a new performance test and establishes different operating parameter values, a revised site specific test plan must be submitted and approval must be received in accordance with 40 CFR §63.1511(a). In addition, if the Permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in Proviso Nos. 14(a) through (d) above must be met.	
15. When group 1 furnaces and in-line fluxers are included in a single SAPU, and the emissions from more than one emission unit within that 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 40 CFR §63.1505(k).	40 CFR §63.1511(h)
16. With the prior approval of the Department, the Permittee may do combined performance testing of two or more individual affected	40 CFR §63.1511(i)

	Regulations
sources or emission units under 40 CFR Part 63, Subpart RRR which are not included in a single SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: (a) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; (b) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; (c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; (d) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and (e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.	
17. The Permittee must conduct performance tests on the round top furnace and holding furnace to measure emissions of PM, HCl, and D/F (only round top furnace) at the outlet of the control device.	40 CFR §63.1512(d)(1)
18. The Permittee may choose to determine the rate of reactive flux addition to each furnace, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the furnace is emitted. Under these circumstances, the Permittee is not required to conduct an emission test for HCl.	40 CFR §63.1512(d)(3)

	Regulations
19. The Permittee must conduct performance tests on the in-line degasser to measure emissions of PM and HCl at the outlet of the control device. (a) The Permittee may choose to limit the rate at which reactive flux is added to the in-line degasser and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line degasser is emitted as HCl. Under these circumstances, the Permittee is not required to conduct an emission test for HCl. 20. The Permittee must conduct performance tests as described below. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, and HCl and μg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR §63.1510(t) and Proviso No. 12 of the <i>Emission Monitoring</i> section of the Permit. A performance test is required for: (a) The round top furnace and the holding furnace to measure emissions of PM and D/F and either: i. Emissions of HCl (for determining the emission limit); or ii. The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). (b) The in-line degasser to measure emissions of PM and HCl. 21. During each performance test, the Permittee must measure (or otherwise determine) and record the total weight of feed/charge to the round top furnace, holding furnace, and in-line degassed for each of the three test runs and calculate and record the total weight. If the Permittee chooses to demonstrate compliance on the basis of the aluminum production weight, it must measure the weight of aluminum produced by the round top furnace, holding furnace, and in-line degasser instead of the feed/charge weight. 22. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the inlet gas temperature:	40 CFR §63.1512(h) 40 CFR §63.1512(k) 40 CFR §63.1512(n)

Regulations

- (a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests;
- (b) Determine and record the 15-minute block average temperatures for the 3 test runs; and
- (c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.
23. During each performance test, the Permittee must use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate:
- (a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
- (b) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
- (c) Determine the total reactive chlorine flux injection rate and by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the equation below:
- $$W_t = F_1 W_1 + F_2 W_2$$
- Where:
- W_t** = Total chlorine usage, by weight
- F₁** = Fraction of gaseous or liquid flux that is chlorine
- W₁** = Weight of reactive flux gas injected
- F₂** = Fraction of solid reactive chloride flux that is chlorine (e.g., F = 0.75 for magnesium chloride)
- W₂** = Weight of solid reactive flux
- (d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and

	Regulations
(e) If a solid reactive flux other than magnesium chloride is used, the Permittee must derive the appropriate proportion factor subject to approval by the Department. 24. During each HCl and D/F performance test, the Permittee must use the following procedures to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test: (a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and (b) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs. 25. The Permittee shall use the equations in 40 CFR §63.1513 to determine compliance with the applicable 40 CFR Part 63, Subpart RRR limits.	40 CFR §63.1512(p) 40 CFR §63.1513
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the HBH9 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present. 2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
(a) For the initial performance test, the Permittee may test <u>either</u> Holding Furnace #1 (MC-15) <u>or</u> Holding Furnace #2 (MC-14) to show compliance for both sources, provided the following conditions are met: i. The feed materials and charge rates are comparable; ii. The sources use the same type of flux materials in the same proportions; iii. The sources are operated according to the same work practices; iv. The sources are of the same design; v. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and vi. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 3, 4, 5, 6, 8, 9, 10, 11, 14, 15, 16, 17, 18, and 19. i. For each subsequent performance test, the Permittee may test <u>either</u> Holding Furnace #1 (MC-15) <u>or</u> Holding Furnace #2 (MC-14) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (vi) are met. (c) Each holding furnace must be tested at least once every 10 years (120 months) following the most recent performance test on that source.	
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of HBH9 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall prepare and implement for the round top furnace, holding furnace, and in-line degasser, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee must submit the OM&M plan to the Department within 90 days after a successful initial performance test under 40 CFR §63.1511(b). The plan must be accompanied by a written	40 CFR §63.1510(b)

Regulations

certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR §63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee must comply with all of the provisions of the OM&M plan as submitted unless and until the plan is revised in accordance with the following procedures: If the Department determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the Department. The plan must contain the following information:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR §63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - ii. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by 40 CFR Part 63, Subpart A.
- (e) Procedures for monitoring process and control device parameters, including lime injection rates, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from

	Regulations
the value or range established in Proviso No. 4(a) of this section of the Permit, including: i. Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. (h) Procedures to be followed when changing furnace classifications under the provisions of 40 CFR §63.1514. (i) If the Permittee complies with the emission standards for a SAPU, the OM&M plan must include the following: i. The identification of each emission unit in the SAPU; ii. The specific control technology or pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application; iii. The emission limit calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR Part 63, Subpart RRR; and v. The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR §63.1510(t). (j) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: i. Any averaging among emissions of differing pollutants;	40 CFR §63.1510(s)(1) 40 CFR §63.1510(s)(2)

	Regulations
ii. The inclusion of any affected sources other than emission units in a SAPU; iii. The inclusion of any emission unit while it is shutdown; or iv. The inclusion of any periods of startup or shutdown in emission calculations.	
(k) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the Permittee must submit a request to the Department containing the information required by Proviso No. 4(i) of this section of the Permit and obtain approval of the Department prior to implementing any revisions.	40 CFR §63.1510(s)(3)
5. The Permittee must inspect the labels for the round top furnace, holding furnace, and in-line degasser at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR §63.1506(b) are intact and legible.	40 CFR §63.1510(c)
6. The Permittee must inspect HBH9's capture/collection and closed vent system at least once each calendar year to ensure that it is operating in accordance with the operating requirements in 40 CFR §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR §63.1510(d)(2)(i), (ii) or (iii).	40 CFR §63.1510(d)
(a) As an alternative to the flow rate measurement, the inspection may include permanent total enclosure verification in accordance with 40 CFR §63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR §63.1506(c) requirements are fully met.	
7. The Permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the round top furnace, holding furnace, and in-line degasser over the same operating cycle or time period used in the most recent performance test.	40 CFR §63.1510(e)

	Regulations
Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the Permittee may use a procedure approved by the Department to determine the total weight of feed/charge or aluminum production to the affected source or emission unit. (a) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The Permittee may apply to the Department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the round top furnace, holding furnace, and in-line degasser will meet the relevant emission standard. (b) The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. 8. The Permittee must install, calibrate, maintain, and continuously operate a bag leak detection system concurrently with HBH9, as required below: (a) The Permittee must install and operate a bag leak detection system for each exhaust stack of HBH9. (b) The bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. (c) The bag leak detection system must 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. (d) The bag leak detection system sensor must provide output of relative or absolute PM loadings. (e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. (f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase	40 CFR §63.1510(f)(1)

	Regulations
in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. (g) For positive pressure fabric filter systems, a bag leak detection system must 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. (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. (j) Following initial adjustment of the system, the Permittee must 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.	
9. The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the HBH9 inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A. The temperature monitoring device must meet each of the following performance and equipment specifications: (a) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. (b) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR §63.1512(n).	40 CFR §63.1510(h)
10. The Permittee shall install, operate, and maintain a continuous lime injection system for HBH9. (a) The Permittee must verify that lime is always free-flowing by inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods,	40 CFR §63.1510(i)

Regulations

the Permittee must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The Permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period.

- (b) The Permittee must record the lime feeder setting once each day of operation.
- (c) The Permittee must, at least once per month, verify that the lime injection rate lb/hr is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the Permittee must repair or adjust the lime injection system to restore normal operation within 45 days. The Permittee may request an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The Permittee may request an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR §63.1517.

11. The Permittee must comply with the following requirements for the total reactive flux injection rate:

- (a) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to the round top furnace, holding furnace, and in-line degasser.
 - i. The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the most recent performance test.
 - ii. The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The Permittee may apply to the Department for permission to use a weight measurement device of alternative accuracy in cases where the reactive

40 CFR §63.1510(j)

Regulations

flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards.

iii. The Permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(b) Calculate and record the gaseous or liquid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o).

(c) Record, for each 15-minute block period during each operating cycle or time period used in the most recent performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:

- i. Gaseous or liquid reactive flux other than chlorine; and
- ii. Solid reactive flux.

(d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the most recent performance test using the procedure in 40 CFR §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the most recent performance test using the procedures in 40 CFR §63.1512(o).

(e) The Permittee may apply for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the most recent performance test. An alternative monitoring method will not be approved unless the Permittee provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

12. Except as provided in Proviso No. 13 of this section of the Permit, the Permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on 40 CFR §63.1510(t)

Regulations

a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee must:

- (a) Calculate and record the total weight of material charged to each emission unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in Proviso No. 7 of this section of the Permit. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.
- (b) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the most recent performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.
 - i. If the Permittee has not conducted performance tests for HCl or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in Proviso No. 12(d) of this section of the Permit to determine SAPU-wide HCl emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl.
- (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
- (d) Compute the 24-hour daily emission rate using the following equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

Where:

E_{day} = The daily PM, HCl, and D/F emission rate for the SAPU for the 24-hour period

	Regulations
T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons) ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge) n = The number of emission units in the secondary aluminum processing unit (e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with Proviso Nos. 7, 20 and 21 of the <i>Emission Standards</i> section of the Permit. 13. As an alternative to the procedures of Proviso No. 12 of this section of the Permit, the Permittee may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit. 14. If the Permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR Part 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR §63.1510(j)(5) and 40 CFR §63.1510(v), the Permittee may submit an application to EPA Region IV through the Department. Any such application will be processed according to the criteria and procedures set forth in 40 CFR §63.1510(w)(1) through (6). Recordkeeping and Reporting Requirements 1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation. 2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form. 3. The Permittee shall maintain a record of the 12-month rolling total CO_{2e} emissions from these sources.	40 CFR §63.1510(u) 40 CFR §63.1510(w) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
4. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.1515(a) and 40 CFR §63.9, including:	40 CFR §63.1515(a)
(a) The Permittee shall provide notification of the following:	
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;	
ii. Anticipated date of startup; and	
iii. Actual date of startup.	
(b) The Permittee must notify the Department at least 60 days in advance of conducting any performance test to demonstrate compliance with standards in 40 CFR Part 63, Subpart RRR.	
6. The Permittee must submit a notification of compliance status report within 90 days after conducting the initial performance test required by Proviso No. 11 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the following information:	40 CFR §63.1515(b)
(a) All information required in 40 CFR §63.9(h). The Permittee must provide a complete performance test report for the round top furnace, holding furnace, and in-line degasser. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests);	
(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system;	
(c) Unit labeling as described in 40 CFR §63.1506(b) and Proviso No. 27 of the <i>Emission Standards</i> section of the Permit, including process type or furnace classification and operating requirements;	
(d) The compliant operating parameter value or range established for the round top furnace, holding furnace, and in-line degasser with supporting documentation and a	

	Regulations
description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test; (e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR §63.1506(c) and Proviso No. 28 of the <i>Emission Standards</i> section of the Permit; (f) Analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §63.1510(f) and Proviso No. 8 of the <i>Emission Monitoring</i> section of the Permit; and (g) The OM&M plan.	
7. The Permittee shall maintain the applicable records required by 40 CFR §63.10(b), including: (a) All required maintenance performed on the air pollution control and monitoring equipment.	40 CFR §63.1517(b)
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart RRR: (a) The number of total operating hours for the round top furnace, holding furnace, and in-line degasser during each 6-month reporting period, records of each bag leak detection system alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. (b) Records of 15-minute block average inlet temperatures for HBH9, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken. (c) For HBH9, records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing,	40 CFR §63.1517(b)(1) 40 CFR §63.1517(b)(3) 40 CFR §63.1517(b)(4)

	Regulations
records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.	
i. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit.	
(d) For the round top furnace, holding furnace, and in-line degasser, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.	40 CFR §63.1517(b)(5)
(e) For each continuous monitoring system, records required by 40 CFR §63.10(c).	40 CFR §63.1517(b)(6)
(f) For the round top furnace, holding furnace, and in-line degasser, records of feed/charge (or throughput) weights for each operating cycle or time period used in the most recent performance test.	40 CFR §63.1517(b)(7)
(g) Records of monthly inspections for proper unit labeling.	40 CFR §63.1517(b)(13)
(h) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.	40 CFR §63.1517(b)(14)
(i) Records for any approved alternative monitoring or test procedure.	40 CFR §63.1517(b)(15)

	Regulations
(j) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan and the site-specific SAPU emissions plan.	40 CFR §63.1517(b)(16)
(k) If the Permittee complies with the emission standard(s) for SAPUs, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.	40 CFR §63.1517(b)(17)
(l) For any failure to meet an applicable standard, the Permittee must maintain the following records:	40 CFR §63.1517(b)(18)
i. Records of 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.	
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	
(m) For each period of startup or shutdown for which the Permittee chooses to demonstrate compliance, the Permittee must comply with 40 CFR §63.1517(b)(19)(i) or (ii).	40 CFR §63.1517(b)(19)
9. An excess emissions/summary report must be submitted according to the requirements of 40 CFR §63.10(e)(3) within 60 days of the end of each semiannual calendar reporting period. When no deviations of parameters have occurred, the Permittee must submit a report stating that no excess emissions occurred during the reporting period.	40 CFR §63.1516(b)(1), (2), (4) 40 CFR §63.1516(d) 40 CFR §63.1516(e)
(a) A report must be submitted if any of the following conditions occur during a 6-month reporting period:	
i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.	
ii. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection	

	Regulations
rate, fabric filter inlet temperature, or other approved operating parameter). iii. The round top furnace, holding furnace, and/or in-line degasser (or SAPU) were not operated according to the requirements of 40 CFR Part 63, Subpart RRR. iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. (b) 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) and Proviso No. 26 of the <i>Emission Standards</i> section of the Permit. (c) Each report must be sent to the Department and to EPA Region IV at the appropriate address listed in 40 CFR §63.13.	
10. The results of each performance test required by 40 CFR Part 63, Subpart RRR shall be submitted within 60 days after the date the test was completed.	40 CFR §63.1516(b)(3)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X012	Melting & Casting Ingot Saw (MC-32) vented to Filtration Unit #1 (FLT1)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Draft

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X012)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Ingot Saw (MC-32)

Provisos

	Regulations
Applicability 1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)
Emission Standards 1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from this source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM/PM₁₀/PM_{2.5} emissions from MC-32 shall not exceed 0.000148 lb/ton of aluminum processed and 0.011 lb/hr. 4. Volatile organic compound (VOC) emissions from MC-32 shall not exceed 0.0356 lb/ton of aluminum processed and 2.65 lb/hr. 5. This source shall utilize good design and operating practices.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures 1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)

	Regulations
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, & 4.	Rule 335-3-1-.05
3. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 5 & 6.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of FLT1 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X013	Ingot Scalper #1 (HR-02) vented to Filtration Unit #4 (FLT4) Scalper Chip Handling System Pneumatic Conveyor (HR-03)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Draft

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X013)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X013

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Ingot Scalper #1 (HR-02) and Scalper Chip Handling System Pneumatic Conveyor (HR-03)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM/PM ₁₀ /PM _{2.5} emissions from Ingot Scalper #1 shall not exceed 0.0010 lb/ton of aluminum processed and 0.65 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM emissions from HR-03 shall not exceed 0.014 lb/ton of aluminum processed and 0.19 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM ₁₀ /PM _{2.5} emissions from HR-03 shall not exceed 0.0069 lb/ton of aluminum processed and 0.10 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Volatile organic compound (VOC) emissions from Ingot Scalper #1 shall not exceed 0.033 lb/ton of aluminum processed and 20.31 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Ingot Scalper #1 shall process no more than 2,118,414 tons of aluminum ingot per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
8. These sources shall utilize good design and operating practices.	Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, & 4.	Rule 335-3-1-.05
3. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard No. 5.	Rule 335-3-1-.05
4. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 6 & 7.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the FLT4 stack in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard No. 6 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of FLT4 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure	Rule 335-3-1-.04(1)

	Regulations
differential is outside of the range, maintenance and/or corrective action shall be initiated.	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the monthly and 12-month rolling totals of aluminum ingot processed in Ingot Scalper #1.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X014	Pusher Furnace #1 (HR-07) Pusher Furnace #2 (HR-08) Pusher Furnace #3 (HR-09)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X014)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X014

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Pusher Furnaces #1-3 (HR-07, HR-08, & HR-09)

Provisos

	Regulations
Applicability 1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)
Emission Standards 1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM emissions from each of these sources shall not exceed 0.39 lb/hr. 4. Filterable and condensable PM₁₀/PM_{2.5} emissions from each of these sources shall not exceed 0.48 lb/hr. 5. Nitrogen oxide (NO_x) emissions from each of these sources shall not exceed 0.137 lb/MMBtu and 14.3 lb/hr. 6. Carbon monoxide (CO) emissions from each of these sources shall not exceed 0.067 lb/MMBtu and 6.98 lb/hr. 7. Volatile organic compound (VOC) emissions from each of these sources shall not exceed 0.004 lb/MMBtu and 0.443 lb/hr.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
8. CO ₂ e emissions from each of these sources shall not exceed 25,012 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
10. Combined natural gas usage in the pusher furnaces shall not exceed 1,281.6 MMScf per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
11. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard No. 4.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 5.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 6.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard No. 7.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9	

	Regulations
shall be conducted in order to confirm that no visible emissions are present. 2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 6 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup. (a) For the initial performance test, the Permittee may test <u>either</u> Pusher Furnace #1 (HR-07) <u>or</u> Pusher Furnace #2 (HR-08) <u>or</u> Pusher Furnace #3 (HR-09) to show compliance for all three sources, provided the following conditions are met: i. The sources are operated according to the same work practices; ii. The sources are of the same design; iii. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; and iv. All 3 test runs are conducted on the same source. (b) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 5 & 6. i. For each subsequent performance test, the Permittee may test <u>either</u> Pusher Furnace #1 (HR-07) <u>or</u> Pusher Furnace #2 (HR-08) <u>or</u> Pusher Furnace #3 (HR-09) to show compliance for all three sources, provided the conditions in Proviso Nos. 2(a)(i) through (iv) are met. (c) Each source must be tested at least once every 15 years (180 months) following the most recent performance test on that source. 3. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications. Recordkeeping and Reporting Requirements 1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO ₂ e emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the monthly and 12-month rolling totals of natural gas combusted in the pusher furnaces.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the maintenance conducted on these sources.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X015	Hot Reversing Mill (HR-10) vented to Mist Eliminator #1 (ME1)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X015)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X015

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Hot Reversing Mill (HR-10)

Provisos

	Regulations
Applicability 1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)
Emission Standards 1. This source shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from this source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM emissions from the ME1 stack shall not exceed 3.20 lb/hr. 4. Filterable and condensable PM₁₀ emissions from the ME1 stack shall not exceed 7.07 lb/hr. 5. Filterable and condensable PM_{2.5} emissions from the ME1 stack shall not exceed 6.50 lb/hr. 6. Volatile organic compound (VOC) emissions from the ME1 stack shall not exceed 0.173 lb/ton of aluminum processed and 58.0 lb/hr. 7. VOC emissions from the ME1 stack shall not exceed 40.0 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
8. Bite-aid usage in HR-10 shall not exceed 4,800 liters per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. HR-10 shall process no more than 2,065,454 tons of aluminum per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
10. HR-10 and ME1 shall utilize good design and operating practices, including:	Rule 335-3-14-.04 (PSD/BACT)
(a) The HR-10 fume exhaust system shall be designed and operated so as to achieve a capture efficiency of at least 90%.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 4 & 5.	Rule 335-3-1-.05
4. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 6.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i>	Rule 335-3-1-.04(1)

	Regulations
section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 6 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup. (a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of HR-10 for the period being tested. (b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour. (c) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test. 3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of ME1 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the monthly and 12-month rolling totals of VOC emissions from the ME1 stack.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the monthly and 12-month rolling totals of aluminum processed in the hot reversing mill.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the monthly and 12-month rolling totals of bite-aid usage in the hot reversing mill.	Rule 335-3-1-.04(1)

Regulations

6. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

DRAFT

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X016	Hot Finishing Mill (HR-11) vented to Mist Eliminator #2 (ME2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X016)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X016

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Hot Finishing Mill (HR-11)

Provisos

	Regulations
Applicability 1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i>. 2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i>. 3. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i>.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT)
Emission Standards 1. This source shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%). 2. Filterable particulate matter (PM) emissions from this source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1). 3. Filterable PM emissions from the ME2 stack shall not exceed 6.36 lb/hr. 4. Filterable and condensable PM₁₀ emissions from the ME2 stack shall not exceed 14.4 lb/hr. 5. Filterable and condensable PM_{2.5} emissions from the ME2 stack shall not exceed 13.0 lb/hr. 6. Volatile organic compound (VOC) emissions from the ME2 stack shall not exceed 0.290 lb/ton of aluminum processed and 92.6 lb/hr. 7. VOC emissions from the ME2 stack shall not exceed 159.5 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-4-.01(1) Rule 335-3-4-.04(1) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT) Rule 335-3-14-.04 (PSD/BACT)

	Regulations
8. Bite-aid usage in HR-11 shall not exceed 16,800 liters per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. HR-11 shall process no more than 1,968,377 tons of aluminum per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
10. HR-11 and ME2 shall utilize good design and operating practices, including:	Rule 335-3-14-.04 (PSD/BACT)
(a) The HR-11 fume exhaust system shall be designed and operated so as to achieve a capture efficiency of at least 95%.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 4 & 5.	Rule 335-3-1-.05
4. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 6.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i>	Rule 335-3-1-.04(1)

	Regulations
section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 6 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup. (a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of HR-11 for the period being tested. (b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour. (c) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test. 3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of ME2 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the monthly and 12-month rolling totals of VOC emissions from the ME2 stack.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the monthly and 12-month rolling totals of aluminum processed in the hot finishing mill.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the monthly and 12-month rolling totals of bite-aid usage in the hot finishing mill.	Rule 335-3-1-.04(1)

	Regulations

6. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

DRAFT

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X017	Tandem Cold Mill #1 (CR-01) vented to Condenser #1 (CND1) and Mist Eliminator #3 (ME3)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X017)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X017

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Tandem Cold Mill #1 (CR-01)

Provisos

Applicability	Regulations
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	Rule 335-3-4-.04(1)
3. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. This source shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from this source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM emissions from the ME3 stack shall not exceed 2.34 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM ₁₀ emissions from the ME3 stack shall not exceed 2.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM _{2.5} emissions from the ME3 stack shall not exceed 1.98 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM emissions from the ME3 stack shall not exceed 8.15 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable PM ₁₀ emissions from the ME3 stack shall not exceed 7.72 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
8. Filterable PM _{2.5} emissions from the ME3 stack shall not exceed 6.90 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. Volatile organic compound (VOC) emissions from the ME3 stack shall not exceed 0.074 lb/ton of aluminum processed and 22.9 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. VOC emissions from the ME3 stack shall not exceed 79.6 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
11. CR-01 shall process no more than 1,099,680 tons of aluminum per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
12. CR-01, CND1, and ME3 shall utilize good design and operating practices, including:	Rule 335-3-14-.04 (PSD/BACT)
(a) The CR-01 fume exhaust system shall be designed and operated so as to achieve a capture efficiency of at least 95%.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2 & 3.	Rule 335-3-4-.01(2)
3. Method 5 of 40 CFR Part 60, Appendix A-3 and Method 201A of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 4 & 5.	Rule 335-3-1-.05
4. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 6.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the ME3 stack in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	

	Regulations
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present. 2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 9 within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup. (a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of CR-01 for the period being tested. (b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour. (c) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard No. 6. 3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of ME3 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated. 4. The Permittee shall continuously measure and, once per day, record the condenser cooling fluid temperature to determine if the temperature falls within the range specified by the manufacturer. Whenever the temperature is outside of the range, maintenance and/or corrective action shall be initiated. Recordkeeping and Reporting Requirements 1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation. 2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

	Regulations
observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	
3. The Permittee shall maintain a record of the monthly and 12-month rolling totals of PM, PM ₁₀ , & PM _{2.5} emissions from the ME3 stack.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the monthly and 12-month rolling totals of VOC emissions from the ME3 stack.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the monthly and 12-month rolling totals of aluminum processed in the tandem cold mill.	Rule 335-3-1-.04(1)
6. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
7. The Permittee shall maintain a record of the daily condenser cooling fluid temperature readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X018	<u>Can Coating Line</u> Tension Leveler (CF-01) Alkaline Cleaning Line #1 (CF-02) vented to Scrubber #1 (SC1) Coating Line #1 (CF-03) vented to Regenerative Thermal Oxidizer #1 (RTO1) <u>Edge Trimmer</u> Electrostatic Oiler (CF-04) Scrap Baller (CF-05) vented to Scrubber #2 (SC2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X018)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X018

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

**Can Coating Line
Tension Leveler (CF-01), Alkaline Cleaning Line #1 (CF-02),
Coating Line #1 (CF-03), Electrostatic Oiler (CF-04),
and Scrap Baller (CF-05)**

Provisos

Applicability	Regulations
1. The cleaning line and coating line are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. The cleaning line and coating line are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
4. The Coating Line #1 (CF-03) is subject to the applicable requirements of 40 CFR Part 60, Subpart TT, <i>“Standards of Performance for Metal Coil Surface Coating”</i> . The Tension Leveler (CF-01) Alkaline Cleaning Line #1 (CF-02), Electrostatic Oiler (CF-04) and Scrap Baller (CF-05) are not affected sources under 40 CFR Part 60, Subpart TT.	Rule 335-3-10-.02(46) 40 CFR §60.460
5. The facility is subject to the applicable requirements of 40 CFR Part 60, Subpart A, <i>“General Provisions”</i> .	Rule 335-3-10-.02(1) 40 CFR §60.1(a)
6. The Coating Line #1 (CF-03) is subject to the applicable requirements of 40 CFR Part 63, Subpart SSSS, <i>“National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil”</i> . The Tension Leveler (CF-01), Alkaline Cleaning Line #1 (CF-02), Electrostatic Oiler (CF-04) and Scrap Baller (CF-05), are not affected sources under 40 CFR Part 63, Subpart SSSS.	Rule 335-3-11-.06(96) 40 CFR §63.5090(a)
7. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i> , as listed in Table 2 of 40 CFR Part 63, Subpart SSSS.	Rule 335-3-11-.06(1) 40 CFR §63.5140(c)

	Regulations
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from the cleaning line, coating line, and scrap baller, shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM/PM ₁₀ /PM _{2.5} emissions from the Alkaline Cleaning Line (SC1) stack shall not exceed 0.14 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable PM/PM ₁₀ /PM _{2.5} emissions from the Scrap Baller (SC2) stack shall not exceed 0.27 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from the RTO1 stack shall not exceed 2.73 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable and condensable PM ₁₀ emissions from the RTO1 stack shall not exceed 2.64 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable and condensable PM _{2.5} emissions from the RTO1 stack shall not exceed 2.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Nitrogen oxide (NO _x) emissions from the RTO1 stack shall not exceed 0.150 lb/MMBtu and 6.61 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Carbon monoxide (CO) emissions from the RTO1 stack shall not exceed 13.23 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Volatile organic compound (VOC) emissions from the Alkaline Cleaning Line (SC1) stack shall not exceed 0.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. VOC emissions from the RTO1 stack shall not exceed 2.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. The Permittee shall not cause to be discharged into the atmosphere from the coating line more than 10 percent of the VOC's applied for each calendar month (90 percent emission reduction).	40 CFR §60.462(a)(3)
13. VOC emissions from the tension leveler (CF-01) shall not exceed 12.6 TPY based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
14. VOC emissions from the electrostatic oiler (CF-04) shall not exceed 8.4 TPY based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
15. The Permittee shall limit organic hazardous air pollutant (HAP) emissions from the coating line to:	40 CFR §63.5120(a)
(a) No more than 2 percent of the organic HAP applied for each month during each 12-month compliance period (98 percent reduction); or	
(b) No more than 0.046 kilogram (kg) of organic HAP per liter of solids applied during each 12-month compliance period; or	
(c) An outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis. The efficiency of the capture system must be 100 percent.	
16. CO ₂ e emissions from the RTO1 stack shall not exceed 22,598 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
17. Tension Leveler (CF-01) shall use no more than 3,664 gallons per year of lubricant based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
18. The Permittee shall not process through the Electrostatic Oiler (CF-04) more than 341,092 gallons of lubricant per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
19. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
20. The average RTO combustion temperature in any 3-hour period must not fall below the combustion temperature limit established during the most recent performance test according to the requirements of 40 CFR §63.5160(d)(3)(i).	40 CFR §63.5121(a)
21. At all times, the Permittee must operate and maintain the coating line, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR §63.5140(b)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2, 3, 4 & 5.	Rule 335-3-1-.05

	Regulations
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 6 & 7.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 8.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 9.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with Emission Standard Nos. 10, & 11	Rule 335-3-1-.05
7. To demonstrate compliance with Emission Standard No. 12, the Permittee shall determine the overall reduction efficiency (R) for the capture system and RTO as prescribed below:	40 CFR §60.463(c)(2)(i) 40 CFR §60.466
(a) Determine the fraction (F) of total VOC's emitted by the coating line that enters the RTO using the following equation: $F = \frac{\sum_{i=1}^I C_{bi} Q_{bi}}{\sum_{i=1}^I C_{bi} Q_{bi} + \sum_{n=1}^P C_{fn} Q_{fn}}$ Where: C_{bi} = The VOC concentration in each gas stream entering the RTO (parts per million by volume, as carbon) Q_{bi} = The volumetric flow rate of each gas stream entering the RTO (dry standard cubic meters per hour) C_{fn} = The VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon) Q_{fn} = The volumetric flow rate of each gas stream emitted directly to the atmosphere (dry standard cubic meters per hour) I = The number of gas streams entering the RTO p = The number of gas streams emitted directly to the atmosphere (b) Determine the destruction efficiency of the RTO (E) using values of the volumetric flow rate of each of the gas streams	

Regulations

and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^n Q_{bi}C_{bi} - \sum_{j=1}^m Q_{aj}C_{aj}}{\sum_{i=1}^n Q_{bi}C_{bi}}$$

Where:

C_{bi} = The VOC concentration in each gas stream entering the RTO (parts per million by volume, as carbon)

Q_{bi} = The volumetric flow rate of each gas stream entering the RTO (dry standard cubic meters per hour)

C_{aj} = The VOC concentration in each gas stream leaving the RTO and entering the atmosphere (parts per million by volume, as carbon)

Q_{aj} = The volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour)

n = The number of gas streams entering the RTO

m = The number of gas streams leaving the RTO and entering the atmosphere

- (c) Determine overall reduction efficiency (**R**) using the following equation:

$$R = E \text{ (destruction efficiency)} \times F \text{ (fraction of total VOC's emitted by the coating line that enters the RTO)}$$

- (d) The Permittee shall construct the VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in 40 CFR §60.466 and Proviso Nos. 7(e) and (f) of this section of the Permit. The Permittee shall construct a temporary enclosure around the coating applicator and flashoff area during performance tests for the purpose of evaluating the capture efficiency of the system, if necessary. The enclosure must be maintained at a negative pressure to ensure that all VOC emissions are measurable.
- (e) Method 24 of 40 CFR Part 60, Appendix A-7, or data provided by the formulator of the coating, shall be used for determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method

Regulations

24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance, the results of the Method 24 analysis shall be adjusted as described in Section 12.6 of Method 24.

i. For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil.

(f) Method 25 of 40 CFR Part 60, Appendix A-7 shall be used both for measuring the VOC concentration in each gas stream entering and leaving the RTO and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere.

i. For Method 25, the sampling time for each of three runs is to be at least 60 minutes, and the minimum sampling volume is to be at least 0.003 dscm (0.11 dscf); however, shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved.

8. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by limiting HAP or volatile matter content of the coatings, the Permittee shall determine the HAP or volatile matter and solids content of coating materials according to the procedures below:

40 CFR §63.5160(b)

40 CFR §63.5160(c)

(a) The Permittee must determine the organic HAP weight fraction of each coating material applied by following one of the procedures below:

i. The Permittee may test the material in accordance with Method 311 of 40 CFR Part 63, Appendix. The Method 311 determination may be performed by the manufacturer of the material. The Permittee shall:

(A) Count only those organic HAP in Table 3 of 40 CFR Part 63, Subpart SSSS that are measured to be present at greater than or equal to 0.1 weight percent and greater than or equal to 1.0 weight percent for other organic HAP compounds;

(B) Express the weight fraction of each organic HAP counted according to Proviso 8(a)i.(A) of this section

Regulations

- of the Permit as a value truncated to four places after the decimal point; and
- (C) Calculate the total weight fraction of organic HAP in the tested material by summing the counted individual organic HAP weight fractions and truncating the result to three places after the decimal point.
- ii. For coatings, the Permittee may determine the total volatile matter content as weight fraction of nonaqueous volatile matter and use it as a substitute for organic HAP, using Method 24 of 40 CFR Part 60, Appendix A-7. As an alternative to using Method 24, the Permittee may use ASTM D2369-10 (2015), "Test Method for Volatile Content of Coatings" (see 40 CFR §63.14). The determination of total volatile matter content may be performed by the manufacturer of the coating.
- iii. The Permittee may use formulation data provided that the information represents each organic HAP in Table 3 of 40 CFR Part 63, Subpart SSSS that is present at a level equal to or greater than 0.1 percent and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used, weighted by the mass fraction of each raw material used in the material. Formulation data may be provided by the manufacturer of the coating material.
- (b) The Permittee must determine the solids content and the density of each coating material applied. The Permittee may determine the volume solids content using ASTM D2697-03(2014) Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings or ASTM D6093-97 (2016) Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, or an EPA approved alternative method. The Permittee must determine the density of each coating using ASTM D1475-13 "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" or ASTM D2111-10 (2015) "Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures". The solids determination using ASTM D2697-03(2014) or ASTM D6093-97 (2016) and the density determination using ASTM D1475-13 or ASTM 2111-10 (2015) may be performed by the manufacturer of the material. Alternatively, the Permittee may rely on formulation

Regulations

data provided by material providers to determine the volume solids.

9. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by using a capture system and the RTO, the Permittee shall conduct performance testing to determine the destruction or removal efficiency of the RTO, the capture efficiency of the capture system, and confirm or re-establish the operating limits according to the procedures below:

40 CFR §63.5160(d)

40 CFR §63.5160(e)

- (a) Performance tests conducted to determine the destruction or removal efficiency of the RTO must be performed such that RTO inlet and outlet testing is conducted simultaneously. To determine the outlet organic HAP concentration achieved by the RTO, only RTO outlet testing must be conducted. The data must be reduced in accordance with the test methods and procedures in 40 CFR §63.5160(d)(1)(i) through (ix).

- i. Each performance test must consist of three separate runs, except as provided by 40 CFR §63.7(e)(3); each run must be conducted for at least 1 hour under the conditions that exist when the coating line is operating under normal operating conditions. For the purpose of determining volatile organic matter concentrations and mass flow rates, the average of the results of all runs will apply. If the Permittee is demonstrating compliance with the outlet organic HAP concentration limit in Proviso No. 12(c) of the *Emission Standards* section of this permit, only the average outlet volatile organic matter concentration must be determined.

- ii. For each performance test run, the Permittee shall determine the volatile organic matter mass flow rates using the equation below:

$$M_f = Q_{sd} C_C (12)(0.0416)(10^{-6})$$

Where:

M_f = Total organic volatile matter mass flow rate, kg/hour

C_c = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis

Q_{sd} = Volumetric flow rate of gases entering or exiting the RTO, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters (dscm)/hour

Regulations

0.0416 = Conversion factor for molar volume

- iii. For each performance test run, the Permittee shall determine the control device destruction or removal efficiency using the equation below:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent

M_{fi} = Organic volatile matter mass flow rate at the inlet to the control device, kg/h

M_{fo} = Organic volatile matter mass flow rate at the outlet of the control device, kg/h

- iv. The RTO destruction or removal efficiency is determined as the average of the efficiencies determined in the three test runs.
- (b) During performance tests, the Permittee must monitor and record the RTO combustion temperature at least once every 15 minutes during each of the three test runs. The Permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.
- (c) The Permittee shall use the data collected during the performance test to calculate and record the average RTO combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for the RTO.
- (d) The Permittee shall determine capture efficiency according to one of the following procedures:
- i. For an enclosure that meets the criteria for a permanent total enclosure (PTE), the Permittee may assume it achieves 100 percent capture efficiency. The Permittee must confirm that the capture system is a PTE by demonstrating that it meets the requirements of section 6 of Method 204 of 40 CFR Part 51, Appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

	Regulations
ii. The Permittee may determine capture efficiency, CE, according to the protocols for testing with temporary total enclosures that are specified in Method 204A through F of 40 CFR Part 51, Appendix M.	
10. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by using “as purchased” compliant coatings, then the Permittee must demonstrate that each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter solids, as purchased, according to 40 CFR §63.5170(a).	40 CFR §63.5170(a)
11. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by using “as applied” compliant coatings, then the Permittee must demonstrate that: (a) Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(b)(1); or (b) The average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(b)(2).	40 CFR §63.5170(b)
12. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by using a capture system and the RTO, then the Permittee must demonstrate that: (a) The overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of coil coating lines according to 40 CFR §63.5170(c); or (b) The overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Proviso No. 9 of this section of the Permit and operating limits are achieved continuously for individual coil coating lines according to 40 CFR §63.5170(c); or (c) The RTO outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests conducted according to Proviso No. 9 of this section of the Permit and operating limits are achieved continuously for individual coil coating lines according to 40 CFR §63.5170(c).	40 CFR §63.5170(c)

	Regulations
13. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by using a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate, then the Permittee must demonstrate that the average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(d).	40 CFR §63.5170(d)
14. To demonstrate compliance with Emission Standard No. 13, the Permittee must calculate monthly and 12-month rolling total VOC emissions based on the assumption that 100% VOC in lubricant and 100% loss of lubricant applied. E_{month} = The density of lubricant applied (lbs/gal) × gallons of lubricant applied per month (gal/month).	Rule 335-3-1-.04(1)
15. To demonstrate compliance with Emission Standard No. 14, the Permittee must calculate monthly and 12-month rolling total VOC emissions based on the assumption that 100% VOC in lubricant and loss of lubricant applied.	Rule 335-3-1-.04(1)
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the RTO1 stack in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 5, 6, 7, 8, 9, 10, & 11, within 60 days after achieving the maximum production rate at which the unit(s) will be operated, but not later than eighteen (18) months after initial startup.	Rule 335-3-1-.04(1)

	Regulations
(a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 5, 6, 7, 8, & 11.	
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of SC1 and SC2 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
4. The Permittee shall continuously measure and record the scrubbing liquid flow rate in SC1 and SC2 to determine if the flow rates fall within the range specified by the manufacturer. Whenever the flow rate is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)
5. The Permittee shall conduct an initial performance test as required under 40 CFR §60.8(a) to demonstrate compliance with Emission Standard No. 12 and thereafter a performance test for each calendar month according to the procedures in Proviso No. 7 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit.	40 CFR §60.463(b) 40 CFR §60.463(c)(2)(i)
(a) The Permittee is not required to conduct a performance test each month provided that the RTO and capture system operating conditions have not changed. If the Permittee elects to operate the RTO or capture system at conditions different from the initial performance test, the Permittee must retest according to the requirements above.	
6. The Permittee shall install, calibrate, operate, and maintain a device that continuously records the RTO combustion temperature of any effluent gases incinerated to achieve compliance with Emission Standard No. 12.	40 CFR §60.464(c)
(a) The device shall have an accuracy of $\pm 2.5^{\circ}\text{C}$. or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater.	
(b) The Permittee shall record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in the RTO remains more than 28°C (50°F) below the temperature at which compliance with Emission Standard No. 12 was demonstrated during the most recent	

	Regulations
measurement of incinerator efficiency required by Proviso No. 5 of this section of the Permit.	
7. The Permittee shall conduct an initial performance test according to the requirements of Proviso Nos. 9 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard No. 16 within 180 days of start-up, if applicable.	40 CFR §63.5160
(a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test, unless the conditions of 40 CFR §63.5160(a) are met.	
8. To demonstrate continuous compliance with the operating limit established according to Proviso Nos. 9(b) and (c) of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit, the Permittee must install a thermocouple or temperature sensor in the RTO combustion chamber at a location in the combustion zone.	40 CFR §63.5150(a)(3)
(a) The thermocouple or temperature sensor shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications.	
(b) The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months; or the chart recorder, data logger, or temperature indicator must be replaced. The Permittee must replace the equipment either if the calibration is not performed, or if the equipment cannot be calibrated properly.	
(c) Each temperature monitoring device must be equipped with a continuous recorder. The device must have an accuracy of ± 1 percent of the temperature being monitored in degrees Celsius, or ± 1 °Celsius, whichever is greater.	
9. If the Permittee chooses to demonstrate compliance with Emission Standard No. 15 by using a capture system and the RTO, the Permittee must develop a capture system monitoring plan and must monitor the capture system according to the requirements below:	40 CFR §63.5150(a)(4)
(a) The monitoring plan must identify the operating parameter to be monitored to ensure that the capture efficiency measured during compliance tests is maintained, explain why this parameter is appropriate for demonstrating ongoing compliance, and identify the specific monitoring procedures.	

	Regulations
(b) The plan must specify operating limits at the capture system operating parameter value, or range of values, that demonstrates compliance with Emission Standard No. 16. The operating limits must represent the conditions indicative of proper operation and maintenance of the capture system.	
(c) The Permittee must conduct monitoring in accordance with the plan.	
10. The Permittee shall continuously record the lubricant usage of CF-01 to achieve compliance with Emission Standard No. 17.	Rule 335-3-1-.04(1)
11. The Permittee shall continuously record the lubricant usage of CF-04 to achieve compliance with Emission Standard No. 18.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the scrubbing liquid flow rate readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the 12-month rolling total CO _{2e} emissions from the RTO stack.	Rule 335-3-1-.04(1)
6. The Permittee shall maintain a record of the monthly and 12-month rolling totals (in gallons) of lubricant usage in the tension leveler.	Rule 335-3-1-.04(1)
7. The Permittee shall maintain a record of the density of each lubricant used in the tension leveler which are necessary to demonstrate compliance with Proviso No. 13 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit.	Rule 335-3-1-.04(1)
8. The Permittee shall maintain a record of the volume of lubricant applied in the tension leveler which is necessary to demonstrate	Rule 335-3-1-.04(1)

	Regulations
compliance with Proviso No. 13 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit.	
9. The Permittee shall maintain a record of the monthly and 12-month rolling totals (in gallons) of lubricant usage in the Electrostatic Oiler.	Rule 335-3-1-.04(1)
10. The Permittee shall maintain a record of the volume of lubricant applied in the Electrostatic Oiler which is necessary to demonstrate compliance with Proviso No. 15 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit.	Rule 335-3-1-.04(1)
11. The Permittee shall maintain daily records of the RTO combustion temperature.	40 CFR §60.465(e)
12. For the performance test required by Proviso No. 5 of the <i>Emission Monitoring</i> section of the Permit, the initial compliance report shall include the following data:	40 CFR §60.465(b)
(a) The overall VOC destruction rate and the RTO combustion temperature used to attain compliance with Emission Standard No. 12.	
13. The Permittee shall submit a semiannual report to the Department, postmarked by the 30th day following the end of each six-month period, identifying the periods when the RTO temperature dropped as defined under Proviso No. 6 of the <i>Emission Monitoring</i> section of the Permit.	40 CFR §60.465(d)
14. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart SSSS:	40 CFR §63.5190
(a) Records of the coating lines on which each compliance option was used and the time periods (beginning and ending dates and times) each option was used.	
(b) Records specified in 40 CFR §63.10(b)(2) of all measurements needed to demonstrate compliance with 40 CFR Part 63, Subpart SSSS, including:	
i. Control device and capture system operating parameter data in accordance with 40 CFR §63.5150(a)(3) and (4) and Proviso Nos. 8 & 9 of the <i>Emission Monitoring</i> section of the Permit.	
ii. Organic HAP content and volatile matter and solids content data for the purpose of demonstrating compliance in accordance with 40 CFR §63.5160(b) and	

Regulations

(c) and Proviso No. 8 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. iii. Overall control efficiency determination or alternative outlet HAP concentration using capture efficiency tests and control device destruction or removal efficiency tests in accordance with 40 CFR §63.5160(d) and (e) and Proviso No. 9 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. iv. Material usage, HAP usage, volatile matter usage, and solids usage and compliance demonstrations using these data in accordance with 40 CFR §63.5170(a), (b), and (d) and Proviso Nos. 10, 11, & 13 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit. (c) Records specified in 40 CFR §63.10(b)(3). (d) For each deviation from an emission limitation, a record of the following information: i. The date, time, and duration of the deviation; ii. A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation; iii. An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit or any applicable operating limit, and a description of the method used to calculate the estimate. iv. A record of actions taken to minimize emissions and any corrective actions taken to return the affected unit to its normal or usual manner of operation. (e) Maintain records of all liquid-liquid material balances that are performed in accordance with the requirements of 40 CFR §63.5170.	
15. The Permittee must submit an initial notification as required by 40 CFR §63.9(b) within 120 days of start-up.	40 CFR §63.5180(b)
16. The Permittee must submit a Notification of Performance Test as specified in 40 CFR §§63.7 and 63.9(e) if the Permittee chooses to comply with Emission Standard No. 15 using a control device. This notification and the site-specific test plan required under 40 CFR §63.7(c)(2) must identify the operating parameter to be monitored to ensure that the capture efficiency measured during	40 CFR §63.5180(c)

	Regulations
the performance test is maintained. The Permittee may consider the operating parameter identified in the site-specific test plan to be approved unless explicitly disapproved.	
17. The Permittee must submit a Notification of Compliance Status as specified in 40 CFR §63.9(h). The Permittee must submit the Notification of Compliance Status no later than 30 calendar days following the end of the initial 12-month compliance period after start-up.	40 CFR §63.5180(d)
18. For the performance tests required by Proviso No. 7 of the <i>Emission Monitoring</i> section of the Permit, the Permittee must submit performance test reports as specified in 40 CFR §63.10(d)(2).	40 CFR §63.5180(e)
19. The Permittee shall submit semiannual compliance reports to comply with 40 CFR Part 63, Subpart SSSS according to the following requirements:	40 CFR §63.5180(g) 40 CFR §63.5180(h)
(a) The first semiannual reporting period begins one day after the end of the initial compliance period (12 months after startup) and ends 6 months later.	
(b) The first semiannual compliance report must cover the first semiannual reporting period and be postmarked or delivered no later than 30 days after the reporting period ends.	
(c) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.	
(d) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.	
(e) The report must contain the following information:	
i. Company name and address.	
ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.	
iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the	

Regulations

- reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.
- iv. Identification of the compliance option or options specified in Table 1 to 40 CFR §63.5170 that were used on each coating operation during the reporting period. If multiple compliance options were used during the reporting period, the Permittee must report the beginning dates each option was used.
 - v. A statement that there were no deviations from Emission Standard No. 12 or the applicable operating limit(s) during the reporting period.
- (f) For each deviation that occurred during the reporting period, the following information must be submitted:
- i. The total operating time of each affected source during the reporting period.
 - ii. For each deviation from Emission Standard No. 12 or any applicable operating limit, the Permittee must provide a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over Emission Standard No. 12, a description of the method used to estimate the emissions, and the actions taken to minimize emissions.

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X020	Caster Cooling Tower #1 (AS-04) Hot Mill Cooling Tower (AS-05) Cold Mill Cooling Tower (AS-26) Finishing Cooling Tower (AS-27) Round Tops/Pushers Cooling Tower (AS-28)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Draft

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X020)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X020

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Cooling Towers (AS-04, AS-05, AS-26, AS-27, and AS-28)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. These sources have enforceable standards in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. The cooling towers shall be equipped with drift eliminators and have a maximum drift of 0.001% of recirculated water.	Rule 335-3-14-.04 (PSD/BACT)
3. The cooling towers shall utilize good design and operating practices.	Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
Emission Monitoring	
1. The Permittee shall continuously measure and, once per day, record the circulating water flow rate to determine if the flow rate is below 10,580 gallons per minute (GPM) for the Caster Cooling Tower #1 (AS-04), 18,000 GPM for the Hot Mill Cooling Tower (AS-05), 12,000 GPM for the Cold Mill Cooling Tower (AS-26), 980 GPM for the Finishing Cooling Tower (AS-27), and 1,400 GPM for the Round Tops/Pushers Cooling Tower (AS-28). Whenever the flow rate is outside of the range, maintenance and/or corrective action shall be initiated.	Rule 335-3-1-.04(1)

	Regulations
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of the daily circulating water flow rate readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X021	<u>NSPS IIII (Diesel)</u> • One (1) 700 BHP Fire Pump Engine (AS-15) • Two (2) 510 BHP Fire Pump Engines (AS-17 & AS-18) <u>NSPS JJJJ (Natural Gas)</u> • Three (3) 304 BHP Emergency Generator Engines (AS-06, AS-07, & AS-29) • One (1) 160.9 BHP Emergency Generator Engine (AS-10) • Two (2) 261.5 BHP Emergency Generator Engines (AS-11 & AS-12) • Three (3) 63.9 BHP Emergency Generator Engines (AS-30 – AS-32)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Draft

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X021)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X021

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

**Emergency Generator Engines (AS-06, AS-07, AS-10 - AS-12, & AS-29 - AS 32)
and Fire Pump Engines (AS-15, AS-17 & AS-18)**

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
3. The diesel-fired fire pump engines are subject to the applicable requirements of 40 CFR Part 60, Subpart IIII, <i>“Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”</i> .	Rule 335-3-10-.02(87) 40 CFR §60.4200(a)(2)(ii)
4. The natural gas-fired emergency generator engines are subject to the applicable requirements of 40 CFR Part 60, Subpart JJJJ, <i>“Standards of Performance for Stationary Spark Ignition Internal Combustion Engines”</i> .	Rule 335-3-10-.02(88) 40 CFR §60.4230(a)(4)(iv)
5. The facility is subject to the applicable requirements of 40 CFR Part 60, Subpart A, <i>“General Provisions”</i> as specified in Table 8 of 40 CFR Part 60, Subpart IIII and Table 3 of 40 CFR Part 60, Subpart JJJJ.	Rule 335-3-10-.02(1) 40 CFR §60.4218 40 CFR §60.4246
6. These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, <i>“National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”</i> . Excepting the three (3) fire pump engines, by meeting the requirements of 40 CFR Part 60, Subpart IIII and 40 CFR Part 60, Subpart JJJJ, these sources have no further requirements under 40 CFR Part 63.	Rule 335-3-11-.06(103) 40 CFR §63.6590(c)(6)
7. The three (3) fire pump engines are subject to the initial notification requirements in §63.6645(f) of 40 CFR Part 63, Subpart ZZZZ.	Rule 335-3-11-.06(103) 40 CFR §63.6590(b)(1)(i)

	Regulations
8. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, "General Provisions", as listed in §63.6645(f) of 40 CFR Part 63, Subpart ZZZZ.	Rule 335-3-11-.06(1) 40 CFR §63.6645(f)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. Each engine shall operate no more than 500 hours per calendar year.	Rule 335-3-14-.04 (PSD/BACT)
3. The diesel-fired fire pump engines (SA-15, AS-17 & AS-18) shall comply with the following emission standards:	40 CFR §60.4205(c)
(a) Nonmethane hydrocarbon (NMHC) + Nitrogen oxide (NO _x) emissions shall not exceed 3.0 g/HP-hr.	
(b) Carbon monoxide (CO) emissions shall not exceed 2.6 g/HP-hr.	
(c) Filterable particulate matter (PM) emissions shall not exceed 0.15 g/HP-hr.	
4. The natural gas-fired emergency generator engines (AS-30, AS-31, & AS32) shall comply with the following emission standards:	40 CFR §60.4233(d)
(a) NO _x emissions shall not exceed 10 g/HP-hr.	
(b) CO emissions shall not exceed 387 g/HP-hr.	
5. The natural gas-fired emergency generator engines (AS-06, AS-07, AS-10 – AS-12, & AS-29) shall comply with the following emission standards:	40 CFR §60.4233(e)
(a) NO _x emissions shall not exceed 2.0 g/HP-hr.	
(b) CO emissions shall not exceed 4.0 g/HP-hr.	
(c) Volatile organic compound (VOC) emissions shall not exceed 1.0 g/HP-hr.	
i. Formaldehyde emissions should not be included when calculating VOC emissions.	

	Regulations
6. The Permittee must operate and maintain each engine over the entire life of the engine.	40 CFR §60.4206 40 CFR §60.4234
7. The Permittee must use diesel fuel that meets the requirements of 40 CFR §1090.305.	40 CFR §60.4207(b)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. The Permittee shall demonstrate compliance with Emission Standard No. 3 by purchasing engines certified to the emission standards. Each engine must be installed and configured according to the manufacturer's emission-related specifications.	40 CFR §60.4211(c)
3. The Permittee shall demonstrate compliance with Emission Standard Nos. 4 & 5 by purchasing engines certified to the emission standards. Each engine must be installed and configured according to the manufacturer's emission-related specifications.	40 CFR §60.4243(b)(1)
Emission Monitoring	
1. The Permittee must install a non-resettable hour meter on each engine prior to startup.	40 CFR §60.4209(a) 40 CFR §60.4237(b)
2. The Permittee shall comply with the following requirements for each engine:	40 CFR §60.4211(a) 40 CFR §60.4243(b)(1)
(a) Operate and maintain the engines according to the manufacturer's emission-related written instructions;	
(b) Change only those emission-related settings that are permitted by the manufacturer; and	
(c) Meet the requirements of 40 CFR Part 1068, as they apply.	
3. The Permittee must operate the engines according to the requirements below. In order for the engines to be considered emergency stationary ICE under 40 CFR Part 60, Subparts IIII and JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. If the facility does not operate the engines according to the requirements below, the engines will not be considered an emergency engine under 40 CFR Part 60, Subpart IIII and JJJJ and must meet all requirements for non-emergency engines.	40 CFR §60.4211(f) 40 CFR §60.4243(d)

Regulations

- (a) There is no time limit on the use of the engines in emergency situations up to 500 hours per calendar year.
- (b) The Permittee may operate the engines for any combination of the purposes specified below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Proviso 3(c) of this section of the Permit counts as part of the 100 hours per calendar year allowed by this proviso.
 - i. The engines may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the EPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the facility maintains records indicating that federal, state, or local standards require maintenance and testing of the engines beyond 100 hours per calendar year.
- (c) The engines may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Proviso 3(b) of this section of the Permit. Except as provided below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
 - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
 - (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that

	Regulations
could lead to the interruption of power supply in a local area or region. (C) The dispatch follows reliability, emergency operation, or similar protocols that follow specific NERC, regional, state, public utility commission, or local standards or guidelines. (D) The power is provided only to the facility itself or to support the local transmission and distribution system. (E) The Permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission, or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the Permittee.	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 60, Subpart JJJJ:	40 CFR §60.4245(a)
(a) All notifications submitted to comply with this subpart and all documentation supporting any notification.	
(b) Maintenance conducted on each engine.	
(c) Documentation from the manufacturer that the engine is certified to meet the emission standards.	
3. The Permittee shall maintain a record of the hours of operation of each engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.	40 CFR §60.4214(b) 40 CFR §60.4245(b)
4. For the three (3) fire pump engines, the Permittee shall submit an Initial Notification, to include:	40 CFR §63.6645(f)
(a) The information in 40 CFR §63.9(b)(2)(i) through (v); and	

	Regulations
(b) A statement that each engine has no additional requirements and explain the basis of the exclusion (e.g., that it operates exclusively as an emergency stationary RICE, has a site rating of more than 500 brake HP, and is located at a major source of HAP emissions).	

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X022	Facility-Wide Fugitive Dust Plan

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Draft

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X022)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X022

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st or the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Facility-Wide Fugitive Dust Plan

Provisos

	Regulations
Applicability 1. Fugitive emission sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02, “<i>Control of Particulate Emissions: Fugitive Dust and Fugitive Emissions</i>”.	Rule 335-3-4-.02
Emission Standards 1. The Permittee shall take reasonable precautions as directed in Proviso No. 1 of the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to prevent fugitive dust at the facility from travelling beyond the facility property line and causing a nuisance.	Rule 335-3-4-.02
Compliance and Performance Test Methods and Procedures 1. The Permittee shall develop, and submit to the Department for approval, a Facility-Wide Fugitive Dust Plan within 12 months of startup. The plan shall identify each source of fugitive dust emissions at the facility and the measures that will be taken to minimize and address fugitive dust emissions.	Rule 335-3-1-.04(1)
Emission Monitoring 1. The Permittee shall conduct weekly, considering factors such as naturally wet conditions, visual observations for fugitive dust in the areas listed in the Facility-Wide Fugitive Dust Plan. If visible emissions travelling beyond the facility property line are observed, corrective action(s) shall be initiated within two (2) hours of the observation.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements 1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation. 2. The Permittee shall maintain a record of the weekly visual observations. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1) Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: NOVELIS CORPORATION
FACILITY NAME: BAY MINETTE FACILITY
LOCATION: BAY MINETTE, BALDWIN COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
501-0052-X023	<u>Building Heating Systems</u> <u>Main Production Buildings</u> MAU #1- #30 11.55 MMBtu/hr, each (AS-19a) MAU #31- #34 7.50 MMBtu/hr, each (AS-19b) MAU #35 - #37 Less than 7.50 MMBtu/hr, each (AS-19c & AS-19d) <u>Central Maintenance Buildings</u> MAU #38 - #66 Less than 7.50 MMBtu/hr, each (AS-19e through AS-19h)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

**Novelis Corporation
BAY MINETTE, ALABAMA
(PERMIT NO. 501-0052-X023)
PROVISOS**

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.
18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

PERMIT NO. 501-0052-X023

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.
 - (a) The compliance certification shall include the following:
 - a. The identification of each term or condition of this permit that is the basis of the certification;
 - b. The compliance status;
 - c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);
 - d. Whether compliance has been continuous or intermittent; and
 - e. Such other facts as the Department may require in order to determine the compliance status of the source.
 - (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Building Heating Systems #1 - #66 (AS-19a through AS-19h)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
3. Combined natural gas usage in the Building Heating Systems MAUs shall not exceed 486.7 MMscf per year based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
4. Combined natural gas usage in the Building Heating Systems MAUs shall not exceed 0.168 MMsScf per hour on daily average basis.	Rule 335-3-14-.04 (PSD/BACT)
5. Combined natural gas usage in the Building Heating Systems MAUs shall not exceed 0.39 MMsScf per hour.	Rule 335-3-14-.04 (PSD/BACT)
6. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)

	Regulations
Emission Monitoring	
1. The Permittee shall implement good combustion operating practices in accordance the manufacturer operations and maintenance procedures.	
2. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications.	Rule 335-3-1-.04(1)
3. The Permittee shall accurately estimate the natural gas usage of the Building Heating Systems utilizing good engineering practices and utilizing a methodology acceptable to the Department.	Rule 335-3-1-.04(1)
4. The Permittee shall accurately determine the annual natural gas usage of the Building Heating Systems, on a rolling 12-month basis, utilizing good engineering practices and utilizing a methodology acceptable to the Department."	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of the average daily and 12-month rolling totals of natural gas combusted in the Building Heating Systems MAUs.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the maintenance conducted on these sources.	Rule 335-3-1-.04(1)