Facility Name: **Novelis Inc.**
City: Greensboro
County: Greene
AIRS #: 04-13-133-00001

Application #: TV-358299
Date Application Received: November 25, 2019
Permit No: 3341-133-0001-V-05-0

Program	Review Engineers	Review Managers
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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name: Novelis Incorporated.

2. Parent/Holding Company Name

Novelis Incorporated.

3. Previous and/or Other Name(s)

Keystone Resources- Aluminum Division
ALCAN Ingot & Recycling
ALCAN Rolled Products Company- Recycling.
ALCAN Aluminum Corporation

4. Facility Location

1261 Willow Run Road
Greensboro, Georgia 30642

5. Attainment, Non-attainment Area Location, or Contributing Area

This facility is located in Greene County, an attainment area for all criteria pollutants.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
3341-133-0001-V-04-0	5/26/2015	Title V Renewal
3341-133-0001-V-04-1	3/12/2020	Replacement of aluminum shredder line

D. Process Description

1. SIC Codes(s) 3341

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

Novelis, Inc. operates a secondary aluminum production facility in Greensboro, Georgia. The facility recycles used beverage cans (UBC) and scrap aluminum into large stock ingots that are shipped to rolling mills where the ingots are rolled into coils for manufacturing new aluminum products. Aluminum (UBC and scrap) is shredded, decoated (hot air removal of coating), melted, and then cast into ingots.

3. Overall Facility Process Description

The facility recycles used beverage cans and other scrap aluminum into large stock ingots for shipment to other facilities, where the ingots are transformed into coils. At the Greensboro plant scrap inputs are received at the facility by truck and rail and are held in storage until needed. This material is then either size-reduced in the shred department (source code SHRD or SHRD2) and then conveyed through the decoater to one of the three melt furnaces (source codes FCE1, FCE2, FCE3), or it is charged directly into one of the melt furnaces. The decoater (source code DCTR) uses hot air to remove paint and lacquer from the material. At the melt furnaces salt is added to the molten bath to separate impurities as dross. The dross is removed periodically. Molten metal is gravity fed to a holding furnace ("Holder," source code HOLD). At the holder a rotary flux injector injects and mixes salt flux into the molten aluminum to further clean the metal. Some primary aluminum is at times added to the furnaces. Molten metal is gravity-transferred from the holder, through a compact degasser (source code ACD), to the direct chill caster. In the ACD a mixture of chlorine and argon gas is injected into the molten aluminum to separate impurities. Those impurities are filtered out and removed. Emissions from the degasser are exhausted through the holder. The caster forms aluminum ingots weighing 30,000 to 60,000 pounds each. Alloy adjustments can be made to the molten metal at the melters and at the holder. Natural gas or propane is used to heat the decoater, the melt furnaces, and the holder. Several baghouses and an incinerator control particulate and other emissions from the manufacturing process.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

This facility is classified as major source under PSD it has potential to emit (PTE) of PSD regulated criteria pollutants over 100 tpy. Because it is one of the 28 named source categories, the major source threshold is 100 tpy for regulated pollutant as opposed to 250 tpy per year for regulated criteria pollutants.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Y	✓		
PM_{10}	Y	✓		
$PM_{2.5}$	Y	✓		
SO_2	Y			✓
VOC	Y			✓
NO_x	Y			✓
CO	Y			✓
TRS	N/A			
H_2S	N/A			
Individual HAP	Y	✓		
Total HAPs	Y	✓		

3. MACT Standards

The facility is subject to federal rule 40 CFR 63 Subpart RRR "National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production".

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	no
Program Code 8 – Part 61 NESHAP	no
Program Code 9 - NSPS	no
Program Code M – Part 63 NESHAP	yes
Program Code V – Title V	yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

There were no compliance issues outlined in the application.

D. Permit Conditions

None applicable.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
SHRD	Shredders (Including Associated Conveyance Equipment)	40 CFR 63 Subpart RRR, Rule 391-3-1-.02(2)(b)1, Rule 391-3-1-.02(2)(e)1(ii)	BAG6	Baghouse
SHRD2	Aluminum Shredding Line	40 CFR 63 Subpart RRR, Rule 391-3-1-.02(2)(b)1, Rule 391-3-1-.02(2)(e)1(ii)	BAG11	Baghouse
DCTR	Decoater	40 CFR 63 Subpart RRR, Rule 391-3-1-.02(2)(b)1, Rule 391-3-1-.02(2)(e)1(ii), Rule 391-3-1-.02(2)(g)2	INR1 BAG10	Decoater Incinerator Baghouse
FCE1	Furnace #1	40 CFR 63 Subpart RRR Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii) Rule 391-3-1-.02(2)(g)2	BAG1 & BAG2	Baghouse
FCE2	Furnace #2	40 CFR 63 Subpart RRR Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii) Rule 391-3-1-.02(2)(g)2	BAG1 & BAG2	Baghouse
FCE3	Furnace #3	40 CFR 63 Subpart RRR Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii) Rule 391-3-1-.02(2)(g)2	BAG5	Baghouse
HOLD	Holder	40 CFR 63 Subpart RRR Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii) Rule 391-3-1-.02(2)(g)2	None	None
ACD	Compact Degasser	40 CFR 63 Subpart RRR Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii)	None	None

B. Equipment & Rule Applicability

40 CFR 63 Subpart RRR, "National Emissions Standards for Hazardous Air Pollutants (NESHAP) from Secondary Aluminum Production", applies to any facility participating in the processing and manufacture of parts from secondary aluminum. Novelis is subject to this standard as a major source of HCl.

Georgia Rule 391-3-1-.02(2)(b), "Visible Emissions", applies to any emission unit subject to any other emission rule as listed in Georgia Rules 391-3-1-.02(2). Therefore, all the equipment listed in the table in III.B. are subject to Rule (b).

Georgia Rule 391-3-1-.02(2)(e), "Particulate Emission from Manufacturing Processes", applies to any equipment involved in any manufacturing process. All of the equipment listed in the table in III.B are classified as one process. Because the equipment was constructed after July 2, 1968, the "new equipment" standard in paragraph 1.(i) applies.

Georgia Rule 391-3-1-.02(2)(g), "Sulfur Dioxide", applies to any equipment that burns fuel. The three melting furnaces (source codes FCE1, FCE2, FCE3), the holding furnace (source code HOLD), and the decoater (source code DCTR) all burn fuel and are therefore subject to Rule (g).

Emission and Operating Caps:

The facility is limited to 18,166 tons per month of aluminum scrap through the decoater (source code DCTR) to ensure the facility avoids PSD thresholds.

The Permittee shall not discharge or cause the discharge into the atmosphere particulate matter (PM) emissions in excess of 0.065 lb/ton through the decoater (source code DCTR) to ensure that the facility avoids PSD thresholds. The limit was established based upon a 50% margin of compliance added to stack test results and this would ensure that the facility maintains their equipment to keep PM emissions as low as possible.

The decoater is required to maintain a temperature at or above the average temperature established during the last-approved performance test and documented in the OM&M for the decoater incinerator (source code INR1) in compliance with the current MACT standard requirements.

The Permittee shall not discharge or cause the discharge into the atmosphere hydrochloric acid (HCl) emissions in excess of 0.47 lb/ton through the decoater (source code DCTR) based on existing equipment design and reasonable operation and maintenance practices. The limit was established based upon a 50% margin of compliance added to the most recent stack tests and this would ensure that the facility maintains their equipment to keep HCl emissions as low as possible.

Multiunit shredding system (source code SHRD) was constructed prior to 1978 and is used for shredding aluminum scrap. SHRD is equipped with a baghouse (source code BAG6) to control particulate matter. The shredder is subject to a PSD avoidance limit for PM of 0.0425 lb/ton of aluminum. The rotogrinder associated with the SHRD line and its accompanied baghouse (source code BAG4 have been removed from the facility and the permit.

In Permit Amendment V-04-1, the actual PM emission rate associated with the proposed shredder (Source Code SHRD2) is 0.140 lb/ton. This rate is based upon the preliminary vendor's estimate of 0.002 gr/dscf. NESHAP Subpart RRR has a PM emissions limit for shredders of 0.01 gr/dscf, therefore the vendor's guarantee and the limit used in the permit are less than the Secondary Aluminum MACT limit. Proposed SHRD2 is equipped with a baghouse (source code BAG11) to control particulate matter. The proposed shredder (SHRD2) is subject to a PSD avoidance limit of 0.225 lb/ton of aluminum.

Furnace #1 (source code FCE1) has a heat input capacity of 26 MMBtu/hr, was constructed in 1996, and is used for melting aluminum and aluminum solids. FCE1 is capable of firing on natural gas and propane. Furnace #2 (source code FCE2), has a heat input capacity of 20 MMBtu/hr, was constructed in 1997, and is used for melting aluminum and aluminum solids. FCE2 is capable of firing on natural gas and propane. The FCE1 and FCE2 exhausts are combined and controlled by two baghouses (source codes BAG1 & BAG2) to control particulate matter. Furnace #1 and Furnace #2, combined, are subject to a PSD avoidance limit for PM of 6 lb/hr. Novelis proposed practically enforceable limits for Furnace #3, of 6.71 lb/hr which is in line with avoidance of triggering PSD. Furnace #3 exhausts are controlled

by a baghouse (source codes BAG5) and has a total heat input of approximately 30 MMBtu/hr, with a normal firing rate capacity of 23 MMBtu/hr.

Holder (source code HOLD) has a heat input capacity of 17 MMBtu/hr, was constructed in 1992, and is used for processing molten metal prior to casting, maintain temperature of metal, and capable of melting aluminum solids. HOLD is capable of firing on natural gas and propane. The holder is subject to a PSD avoidance limit for PM of 0.044 lb/ton.

40 CFR 63, Subpart RRR establishes emission standards for particulate matter (PM), hydrochloric acid (HCl), and dioxins and furans (D/F). The emission standards for the shredder (source code SHRD), decoater (source code DCTR), Inline Fluxer (ACD), melting furnaces and holding furnace (source codes FCE1, FCE2, FCE3, HOLD) are found in 40 CFR 63.1505. Subpart RRR establishes operating requirements for the affected sources as well. The operating requirements are found in 40 CFR 63.1506.

Georgia Rule (e) establishes emission limits for particulate emissions from the production of aluminum at Novelis. As discussed above, all of the equipment listed in the table in III.B operates as one process.

The allowable PM emission rate is determined using the following equation:

$E = 4.1 \times P^{0.67}$,

Where E is the emission rate in pounds per hour and
P is the process input weight rate in tons per hour.

Georgia Rule (b) limits visible emissions from all the emission units at Novelis listed in the table in III.B. to 40% opacity.

Georgia Rule (g) limits the sulfur content of the fuel burned in all the fuel burning sources at Novelis to 2.5%. The fuel burning sources are the three melting furnaces (source codes FCE1, FCE2, FCE3), the holding furnace (source code HOLD), and the decoater (source code DCTR). These sources burn only natural gas and propane, which contain much less than 2.5% sulfur.

C. Permit Conditions

Changes: Section 3.1 Emission Units table has been updated to remove rotogrinder and baghouse BAG4. Permit Conditions 3.3.14 and 3.3.15 from Amendment were merged into Conditions 3.3.7 and 3.3.1 of Permit. Condition 3.3.7 was modified to remove reference to baghouse BAG4 and its bag leack detection system.

Permit Condition 3.2.1 establishes the PM PSD Avoidance limits for the shredder(s), decoater, holding furnace and Furnace #1, Furnace #2 and Furnace #3.

Permit Condition 3.2.2 establishes the NOx PSD Avoidance limit for Furnace #3.

Permit Condition 3.2.3 establishes the PM_{10} PSD Avoidance limit for Furnace #3.

Permit Condition 3.2.4 establishes the $PM_{2.5}$ PSD Avoidance limit for Furnace #3.

Permit Condition 3.2.5 limits the input of aluminum scrap to the Decoater.

Permit Condition 3.2.6 limits the input of coated aluminum in all three melting furnaces.

Permit Condition 3.2.7 prohibits the combustion of fuel other than natural gas or propane in Furnace #1, Furnace #2, Furnace #3, the Holding Furnace and the Decoater.

Permit Condition 3.2.8 requires the Permittee to operate the decoater only to remove paints, oils and finishes from aluminum scrap.

Permit Condition 3.2.9 requires the Permittee to maintain a temperature in the decoater at or above the temperature established during the last approved performance test documented in the OM&M Plan.

Permit Condition 3.2.10 requires the Permittee to operate the emission units in Table 3.1 with the associated air pollution control devices. Permit Condition 3.2.11 limits HCl emissions from the decoater to 0.47 lb/ton.

Permit Conditions 3.3.1 through 3.3.11 list the requirements for 40 CFR 63 Subpart RRR.

Permit Conditions 3.3.12 and 3.3.13 incorporate the Secondary Aluminum NESHAP emission limits for Group 1 furnaces (from 40 CFR 63.1505(i)) and in-line fluxers (from 40 CFR 63.1505(j)) at the request of the facility because they currently operate as a SAPU.

Deleted Permit Condition 3.3.14 requiring the Permittee to operate a bag leak detection system for BAG11 on SHRD2 was combined with Permit Condition 3.3.7 requiring a bag leak detection system for the baghouse controlling emissions from aluminum shredder SHRD.

Deleted Permit Condition 3.3.15 was merged with Permit Condition 3.3.1.

Permit Condition 3.4.1 requires the Permittee to comply with the requirements of Georgia Rule (b) for FCE1, FCE2, FCE3, HOLD, DCTR, ACD, SHRD and SHRD2.

Permit Condition 3.4.2 requires the Permittee to comply with Georgia Rule (e) for FCE1, FCE2, FCE3, HOLD, DCTR, ACD, SHRD, and SHRD2.

Permit Condition 3.4.3 requires the Permittee to comply with Georgia Rule (g) for FCE1, FCE2, FCE3, HOLD and DCTR.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

Condition 4.1.4 updated for test results submittal.

B. Specific Testing Requirements

No Changes from Permit and Amendment.

Permit Condition Nos. 4.2.1–4.2.4 and 4.2.6-4.2.9 are included in the permit according to the Subpart RRR MACT standard. The conditions require the development of a site-specific test plan, specify the production status while the performance tests are administered, performance test report contents, and the equations used to determine compliance with the emission limits specified in Section 3.3 of the Permit.

Permit Condition 4.2.5 enforces PSD avoidance limits associated with Furnace #3.

Permit Condition 4.2.10 requires an initial performance test for the new shred line SHRD2 no later than 180 days after initial startup and submit the results to the Division and notify the Division no later than 90 days after the initial performance test.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Only change from Permit and Amendment is to remove reference of baghouse BAG4 from Condition 5.2.2 regarding bag leak detection system.

Permit Condition 5.2.1 requires the Permittee to install, calibrate, maintain and operate a system to continuously monitor and record the temperature of the decoater incinerator (Source Code: INR1).

Permit Condition 5.2.2 requires the installation of a continuous bag leak detection system as required in 40 CFR 63.1510(f) for all baghouses associated with equipment subject to Subpart RRR.

Permit Condition 5.2.3 requires the Permittee to develop and maintain and Preventative Maintenance Program for the baghouses specified in Table 3.1.

Permit Conditions 5.2.4-5.2.13 are included in the permit according to the RRR MACT standard. The conditions outline the preparation and implementation of an OM&M plan, label inspections for the group 1 furnaces (melting and holding furnaces), the use of a monitoring device to record the feed/charge weight rate to or production weight from the melting and holding furnaces, monitoring requirements for reactive flux injection rates, lists the requirements for the section of the OM&M plan dealing with the furnaces, a scrap quality inspection plan, the equations used to determine compliance with emission limits specified in Section 3.3 of the Permit, and alternative compliance options.

C. Compliance Assurance Monitoring (CAM)

Not Applicable

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

B. Specific Record Keeping and Reporting Requirements

No changes from Permit and Amendment.

Permit Conditions 6.2.1 through 6.2.6 are added in accordance with 40 CFR 63, Subpart RRR. These conditions outline the procedures for the submittal of compliance reports, the drafting of a written operation plan in times of startup, shutdown, or malfunction, the submittal of semiannual reports, and record keeping.

Permit Conditions 6.2.7 and 6.2.8 contain record keeping and reporting requirements that come from the old SIP permit. Records for the amount of aluminum scrap processed through DCTR and the amount of aluminum coils processed in the melting furnaces are required. These records are required to be submitted with the semiannual reports.

VII. Specific Requirements

A. Operational Flexibility

No alternative operating scenarios have been requested by the facility for any equipment in use.

B. Alternative Requirements

None Applicable.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

None Applicable.

E. Short-Term Activities

None Applicable.

F. Compliance Schedule/Progress Reports

There was no indication of a compliance schedule or progress report in the application.

G. Emissions Trading

None Applicable.

H. Acid Rain Requirements

None Applicable.

I. Stratospheric Ozone Protection Requirements

None Applicable.

J. Pollution Prevention

None Applicable.

K. Specific Conditions

None Applicable.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//