Facility Name: **Hydro Extruder, LLC**
City: Gainesville
County: Hall
AIRS #: 04-13-139-00075

Application #: TV-42304 & 26451
Date Application Received: February 10, 2017
Permit No: 3354-139-0075-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:Hydro Extruder, LLC

2. Parent/Holding Company Name

Norsk Hydro ASA

3. Previous and/or Other Name(s)

Sapa Extruder, Inc.
Caradon Indalex;
Caradon America, Inc., Indalex Division; and
Indalex America, Inc.

4. Facility Location

2905 Old Oakwood Road
Gainesville, Georgia 30504

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

The Hydro Extruder facility is located in Hall County, which is a county contributing to non-attainment for the 1-hour ozone standard.

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
3354-139-0075-V-04-0	August 13, 2012	Title V Renewal

D. Process Description

1. SIC Codes(s)

3354

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)

Coated aluminum building products

3. Overall Facility Process Description

Aluminum billets are heated then extruded into aluminum shapes. The extruded shapes are age-hardened in ageing ovens. The aluminum shapes are then pre-treated for corrosion resistance and coated with solvent-borne coatings or powder coatings. The finished aluminum building products are packaged for shipment.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

Previously, the Hydro Extruder facility was considered a major source with respect to Non-Attainment Area New Source Review (NAA-NSR) due to potential VOC emissions in excess of 100 tons per year (TPY) in Hall County. Potential emissions of all other NSR-subject pollutants, including NOx, were considered “minor” with respect to NSR.

However, Paint Line 1 was decommissioned in February 2012 making the entire Hydro Extruder facility a minor source with respect to NSR. In August 2012 Hydro Extruder requested to replace the equipment-specific 40 TPY VOC emission limit with a facility-wide 100 TPY VOC limit to ensure the facility’s status as a minor NSR source and allow the operational flexibility to use all compliance options in MACT MMMM.

The facility remains an NSR minor source for all NSR- regulated 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	Yes			✓
PM_{10}	Yes			✓
$PM_{2.5}$	Yes			✓
SO_2	Yes			✓
VOC	Yes		✓	
NO_x	Yes			✓
CO	Yes			✓
TRS	No			
H_2S	No			
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		

3. MACT Standards

The facility is considered a major source for hazardous air pollutants (HAP) emissions. The facility's coating operations and associated coating support activities are subject to 40 CFR 63, Subpart MMMM – Surface Coating of Miscellaneous Metal Parts and Products (MACT MMMM).

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:

The facility has a 100 TPY VOC emission limit. The 100 TPY VOC limit makes the Hydro Extruder facility: (1) a minor NSR minor source, (2) a synthetic minor source for VOC, and (3) not subject to Georgia Rule (ii).

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

No compliance issues exist at this time.

D. Permit Conditions

Condition 2.1.1 establishes a facility wide, 100 TPY VOC emission limit.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
LFN1	Log Furnace 1	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5	N/A	None
LFN2	Log Furnace 2	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5	N/A	None
LFN3	Log Furnace 3	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5	N/A	None
LFN4	Log Furnace 4	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5	N/A	None
LFN5	Log Furnace 5	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5	N/A	None
PNT2	Paint Line 2	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g), 40 CFR 63, Subpart MMMM	3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.6, 3.3.7, 3.4.1, 3.4.2, 3.4.3, 3.5.1, 4.2.1, 4.2.2, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 6.1.7, 6.2.2, 6.2.6 through 6.2.25	RTO2 Blue Box	Regenerative Thermal Oxidizer, Paint Booth Filters
MIX2	Coating Support Activities	391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 40 CFR 63, Subpart MMMM	3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.4.1, 3.4.2, 6.1.7, 6.2.6 through 6.2.25	RTO2	Regenerative Thermal Oxidizer,

B. Equipment & Rule Applicability

Emission and Operating Caps:

None applicable.

Rules and Regulations Assessment:

Georgia Rule (b) - Rule (b) provides a 40 percent opacity limit for all point sources of particulate matter emissions, specifically the five extrusion lines (Emission Units LFN1 – LFN5), and the solvent-based paint line (Emission Unit PNT2). Proper combustion of only gaseous fuels in the log furnaces and paint drying ovens and use of filter media in paint booths should provide routine compliance with opacity limits.

Georgia Rule (d) – Rule (d) is not applicable to any significant emission unit and is therefore not included in Section 3.4. All significant combustion equipment are considered "direct contact process heaters" which are exempt from consideration as fuel burning equipment.

Georgia Rule (e) - Rule (e) provides general particulate matter emission limits for particulate-generating sources, based on input weight rate. The solvent-based paint line (Emission Unit PNT2) is subject, and routinely complies through the use of serviceable filter media. Particulate matter emissions from the Log Furnaces (Emission Units LFN1 - LFN5) are subject and routinely comply due to the processing of billets and combustion of gaseous fuels only.

Georgia Rule (g) - Rule (g) limits sulfur content in fossil fuels combusted in fuel burning sources, specifically the log furnaces and paint drying oven. Combustion of only gaseous fuels (maximum sulfur <0.01%S) indicates routine compliance with the 2.5% sulfur limit.

Georgia Rule (ii) – Rule (ii) is not applicable. Rule (ii) applies to miscellaneous metal coating operations in Hall County that have the potential to emit greater than 100 tons of VOC per year (See 391-3-1-.02(2)(a)6.). The 100 TPY VOC limit in Condition 2.1.1 makes Rule (ii) not applicable to metal coating operations at the Hydro Extrusions facility.

Georgia Rule (tt) – Rule (tt) is not applicable. Although Hall County is one of the regulated counties, VOC emissions from sources not regulated by a specific VOC-limiting Georgia Rule are less than 100 TPY. Georgia Rule (ii) regulates VOC emissions associated with coating operations.

Georgia Rule (vv) – Rule (vv) is not applicable. The facility does not maintain regulated tanks with capacity greater than 4,000 gallons.

Georgia Rule (yy) – Rule (yy) is not applicable. Although Hall County is one of the regulated counties, current, potential NOx emissions are less than 64 TPY, which is less than the rule applicability threshold of 100 TPY.

Georgia Rule (ccc) - Rule (ccc) is not applicable. Hydro Extruder does not "manufacture" coatings (See 391-3-1-.02(2)(ccc)1.(i)) and mixers do not produce a "product or product blend." (See definition of "Mixing Tanks" at 391-3-1-.02(2)(ccc)2.(i)).

Georgia Rule (lll) – Rule (lll) is not applicable. Hydro Extruder does not operate "fuel burning equipment" with design heat input capacity greater than 10 MMBTU/hr. Although each of the five Log Furnaces is rated at 16.2 MMBTU/hr, the Log Furnaces are direct-contact heaters and are not considered fuel burning equipment.

Georgia Rule (rrr) - Rule (rrr) is not applicable. Although Hall County is one of the regulated counties, potential NOx emissions are less than 64 TPY, which is less than the rule applicability threshold of 100 TPY.

40 CFR 63 Subpart MMMM – MACT MMMM applies to major HAP sources that conduct surface coating of miscellaneous metal parts. This Rule limits HAP content in coatings, thinners, additives and cleaners or requires an add-on control device. Coating operations that use an add-on control device not only must meet the emission limit, but also must follow operating limits and work practices. Coating operations on Paint Line 2 (Emission Unit PNT2) are subject to MACT MMMM. Paint Line 2 may comply with MACT MMMM by using the Compliant Material Option, the Emission Rate Without Add-on Control Option, or the Emission Rate With Add-on Control Option.

40 CFR 63 Subpart DDDDD – Although the facility operates combustion units, MACT 5D is not applicable. MACT 5D is not applicable to the log furnaces, aging ovens or coating bake ovens where materials are heated via direct contact with the combustion gases. "Process heaters" are defined in 40 CFR 63.7575 as "devices in which the combustion gases do not directly come into contact with process materials." The only other combustion units that are potentially affected are the natural gas-fired washers that precede coating. The Division has determined that the washers at Hydro Extruder are "hot water heaters" for the purposes of MACT 5D and are therefore exempt in accordance with the exemption at 40 CFR 63.7491(d).

C. Permit Conditions

Condition 3.3.1 – MACT MMMM and MACT General Provisions applicability condition.

Condition 3.3.2 – HAP emission limit for emission units PNT2 and MIX2.

Condition 3.3.3 – Compliance options for emission limit in Condition 3.3.2.

Condition 3.3.4 – Allows compliance with the emission limit for the predominant activity, in lieu of Condition 3.3.2.

Condition 3.3.5 – Requires a work practice plan if following emission rate with add on controls option.

Condition 3.3.6 – Requires a written startup, shutdown, and malfunction plan if following emission rate with add on controls option.

Condition 3.3.7 – Requires operating equipment at operating limits established during the most recent performance testing that demonstrates compliance with 40 CFR 63 Subpart MMMM.

Condition 3.4.1 – Georgia Rule (e) limits PM emissions to:

$E = 4.1\ P^{0.67}$; for process input weight rate up to and including 30 tons per hour;
$E = 55\ P^{0.11} - 40$; for process input weight rate above 30 tons per hour;

Where,
E = The emission rate in pounds per hour, and
P = The process input weight rate in tons per hour.

Condition 3.4.2 – Georgia Rule (b) limits emission opacity to 40 percent.

Condition 3.4.3 – Georgia Rule (g) limits fuel to 2.5 percent sulfur, by weight.

Condition 3.5.1 – Standard filter condition for emission unit PNT2.

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.

B. Specific Testing Requirements

Condition 4.2.1 requires performance testing of the enclosure for PNT2. The last performance test was completed on 9/27/2016; the next test will be repeated on or before 9/27/2021. This condition has been modified to require a minimum average air velocity through the PTE of 200 feet per minute.

Condition 4.2.2 requires performance testing of RTO2. The last performance test was completed on 4/7/2017. During this test the average combustion temperature was 1506 degrees Fahrenheit, and the destruction efficiency was 96.3%. The next test will be repeated on or before 4/7/2022.

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

Condition 5.2.1 – Requires continuous monitoring of the RTO temperature and gas flow through the PTE.

Condition 5.2.2 – Requires continuous monitoring of the filter pressure drop for PNT2.

Condition 5.2.3 – Specifies requirements related to the CPMS if following emission rate with add on controls option.

Condition 5.2.4 – PSEU subject to CAM

Condition 5.2.5 – Performance criteria for PM emissions from PNT2.

C. Compliance Assurance Monitoring (CAM)

Hydro Extruder has submitted a CAM plan for PM emissions from Paint Line 2. The PM CAM for paint line 2 is a daily check of the pressure drop across the Blue Box filter system.

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

Condition 6.2.1 – Requires retention of monthly VOC records for 5 years.

Condition 6.2.2 – Requires the Permittee to maintain a log of pressure drop and filter changes.

Condition 6.2.3 – Requires the Permittee to perform monthly VOC Calculations.

Condition 6.2.4 – Requires the Permittee to notify the Division in writing if VOC emissions exceed 8.33 during any calendar month.

Condition 6.2.5 – Requires the Permittee to calculate a 12 month rolling total for VOC emissions.

Condition 6.2.6 – Requires the Permittee to submit a semiannual compliance to the Division.

Condition 6.2.7– Requires the Permittee to submit a notification to the Division in writing of startup, shutdown, or malfunction if following emission rate with add on controls option.

Condition 6.2.8– Requires the Permittee to maintain documentation verifying HAP content, coating solids, and density for each coating, thinner, additive, and cleaning material.

Condition 6.2.9 – Requires the Permittee to maintain records of the compliance option being used for each operation.

Condition 6.2.10 – Requires the Permittee to maintain a record of the calculation of the HAP content for each coating using Equation 2 of 40 CFR 63.3941 if following the compliant material option.

Condition 6.2.11 – Requires the Permittee shall maintain a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners, additives, and cleaning materials used each month if following emission rate without add on controls option.

Condition 6.2.12 – Requires the Permittee to maintain specific HAP records if following emission rate with add on control option.

Condition 6.2.13 – Requires the Permittee to maintain usage records for each coating, thinner, additive, and cleaning material used.

Condition 6.2.14 – Requires the Permittee to maintain records of mass fraction of HAP in each coating, thinner, or additive used during each compliance period.

Condition 6.2.15 – Requires the Permittee to maintain records of volume fraction of coating solids for each coating used during each compliance period.

Condition 6.2.16 – Requires the Permittee to maintain records of the density of each coating, thinner or additive used by the facility.

Condition 6.2.17 – Requires the Permittee to keep a record of the name and address of the treatment, storage, or disposal facility (TSDF) if using the allowance for HAP contained in waste and if follow emission rate without add on controls.

Condition 6.2.18 – Explains procedures for calculating mass of HAP in waste material sent or designated for shipment to a hazardous waste TSDF.

Condition 6.2.19 – Requires the Permittee to maintain deviation records and add on control device records if following emission rate with add on controls.

Condition 6.2.20 – Requires the Permittee shall maintain a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners, additives, and cleaning materials used each month if following emission rate with add on controls option.

Condition 6.2.21 – Requires the Permittee to maintain records of the calculations of total mass of HAP before add on controls if following emission rate with add on controls.

Condition 6.2.22 – Requires the Permittee to maintain records of the calculations of HAP emission reductions if following emission rate with add on controls.

Condition 6.2.23 – Requires the Permittee to maintain records of the calculations of total volume of coating solids used if following emission rate with add on controls.

Condition 6.2.24 – Requires the Permittee to maintain records of the calculations of total monthly HAP emissions if following emission rate with add on controls.

Condition 6.2.25 – Requires the Permittee to maintain records of the determination of the HAP emission rate for the compliance period.

VII. Specific Requirements

A. Operational Flexibility

The facility has the operational flexibility to use all compliance options in MACT MMMM.

B. Alternative Requirements

None Applicable

C. Insignificant Activities

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

D. Temporary Sources

Not Applicable.

E. Short-Term Activities

Not Applicable.

F. Compliance Schedule/Progress Reports

Not Applicable.

G. Emissions Trading

Not Applicable.

H. Acid Rain Requirements

Not Applicable.

I. Stratospheric Ozone Protection Requirements

Not Applicable.

J. Pollution Prevention

Not Applicable.

K. Specific Conditions

Not 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