NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Mooresville Regional Office
County: Rowan
NC Facility ID: 8000057
Inspector's Name: Jim Vanwormer
Date of Last Inspection: 12/15/2020
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Gränges Americas, Inc.

Facility Address:
Gränges Americas, Inc.
1709 Jake Alexander Boulevard South
Salisbury, NC 28146

SIC: 3353 / Aluminum Sheet Plate & Foil
NAICS: 331315 / Aluminum Sheet, Plate, and Foil Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02D .0503, .0515, .0516, .0521, .0614, .0902, .0958, .1806;
NSPS: NA
NESHAP: 02Q .0317 (for 02D .1111)
PSD: 02D .0530 (BACT for VOC)
PSD Avoidance: 02D .0531, 02Q .0317
NC Toxics: 02Q .0711 and 02D .1100
112(r): NA
Other: 02Q .0317 (Avoidance for 02D .1402(d))

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Jessica Moggridge EHS Manager (704) 637-4548 1709 Jake Alexander Boulevard South Salisbury, NC 28146	Necmi Dogan Site Manager (704) 637-4514 1709 Jake Alexander Boulevard South Salisbury, NC 28146	Thomas Lents Director EHS (731) 986-2791 1709 Jake Alexander Boulevard South Salisbury, NC 28146

Application Data

Application Number: 8000057.21A
Date Received: 04/14/2021
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 02397/T25
Existing Permit Issue Date: 07/12/2019
Existing Permit Expiration Date: 11/30/2021

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2019	0.2500	41.34	681.20	34.71	3.13	2.48	1.61 [Hydrogen chloride (hydrochlori]
2018	0.3100	51.70	559.57	43.42	3.96	3.21	2.12 [Hydrogen chloride (hydrochlori]
2017	0.2200	37.28	365.11	31.33	2.86	3.03	2.21 [Hydrogen chloride (hydrochlori]
2016	0.1400	25.23	173.11	21.20	1.92	2.22	1.66 [Hydrogen chloride (hydrochlori]
2015	0.1400	21.94	372.65	18.44	1.27	2.55	2.03 [Hydrogen chloride (hydrochlori]

Review Engineer: Eric L. Crump, P.E.

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 02397/T26
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Application

Gränges Americas, Inc (hereinafter referred to as "Gränges") is an aluminum sheet, plate, and foil manufacturing plant located in Salisbury, Rowan County, North Carolina. The facility operates under Title V Permit No. 02397T25 with an expiration date of November 30, 2021. Gränges has applied for renewal of their facility's air quality permit. Their renewal application (No. 8000057.21A) was received on April 14, 2021, or at least six months prior to the expiration date as required by 15A NCAC 02Q .0513(b). Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

2. Facility Process Description

The Gränges facility manufactures foil, light gauge sheets, and coils from 1100 and 1145 aluminum alloys. End uses of their product are automobile heat shields, insulation backing, lithographic printing medium, pharmaceutical and food packaging, and cigarette foil. The facility is currently operating three shifts per day, seven days per week, fifty-one weeks per year. Presently the company has approximately 181 employees.

Virgin aluminum from sources throughout the world in ingot form is fed into the melting furnaces, along with internally generated scrap aluminum and alloying material (typically copper with some iron and silicon). These materials are melted, and a flux (typically nitrogen, argon, and/or chlorine) is added to remove impurities. The flux forms the slag or dross (inorganic salts), which is scraped off the top of the molten aluminum. The molten aluminum is sent to holding furnaces from where it is then fed to the casters to form sheets of aluminum.

Six rolling mills roll the aluminum sheets into thinner sheets and foils. Typically, the aluminum is fed into the breakdown mill first for the major size reduction. Rolling oils and additives are applied to the aluminum during rolling to dissipate heat and for other reasons. The oil is a Food and Drug Administration-approved "refined petroleum distillate" with the characteristics of kerosene. The exhaust from the mills is vented to a mechanical collector to collect the oil mist, which is processed and disposed of as waste oil.

After rolling, the rolled aluminum is heated in an inert atmosphere (nitrogen) or air to improve its hardness, strength, and flexibility. Nitrogen is prepared on the site in a nitrogen separator.

The Gränges facility is a synthetic minor source for hazardous air pollutants, having accepted avoidance conditions in their Title V permit to avoid applicability of maximum achievable control technology (MACT) standards. It is a major source for Prevention of Significant Deterioration (PSD) due to its potential to emit volatile organic compounds (VOC).

3. Permit History Since Last Title V Renewal and Permit Application Chronology

December 7, 2016	DAQ issues Permit No. 02397T23 to Norandal USA, Inc. as a Title V renewal.
December 12, 2016	DAQ deems Permit Application No. 8000057.16A, initially received from Norandal USA, Inc. on August 31, 2016 as complete. The application is for an ownership and name change to Gränges Americas, Inc.

December 13, 2016	DAQ issues Permit No. 02397T24 to Gränges, documenting the ownership and name change to Gränges Americas, Inc.
December 4, 2017	DAQ receives Permit Applicability Determination Application No. 3190 from Gränges, requesting to increase maximum usage of offsite scrap material (a.k.a. "clean charge", as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR Part 63, Subpart RRR) in aluminum product production from 5% to 15% of total usage, or up to 1.5 million pounds per month.
December 4, 2017	DAQ issues Permit Applicability Determination No. 3190 letter to Gränges, determining that no permit modification is required for increasing maximum usage of clean charge, as long as Gränges continues to comply with all requirements under 40 CFR Part 63, Subpart RRR.
April 3, 2019	DAQ receives Permit Modification Application No. 8000057.19A from Gränges to remove unnecessary monitoring, recordkeeping, and reporting requirements for natural gas-fired units under visible emissions regulation 15A NCAC 02D .0521.
July 12, 2019	DAQ issues Permit No. 02397T25 to Gränges as a permit modification, removing unnecessary monitoring, recordkeeping, and reporting requirements for natural gas-fired units under visible emissions regulation 15A NCAC 02D .0521.
December 19, 2019	DAQ receives Permit Applicability Determination Application No. 3527 from Gränges, asking whether an air quality permit is necessary to replace two of the four in-line degassers. The replacements are needed because the existing degassers are inefficient and troublesome for product quality and will reduce chlorine gas usage.
March 13, 2020	DAQ issues Permit Applicability Determination No. 3527 letter to Gränges, concluding that a permit modification for Granges Americas, Inc. is not required for the in-line degassers replacement project.
April 14, 2021	DAQ receives Permit Renewal Application No. 8000057.21A from Gränges.
September 8, 2021	Permits Section sends draft permit and application review to Stationary Sources Compliance Branch (SSCB) for review and comment.
September 13, 2021	Permits Section receives comments on draft permit and application review from SSCB.
September 17, 2021	DAQ sends draft permit and application review to Gränges and MRO for review and comment.
September 22, 2021	DAQ receives comments on draft permit and application review from MRO.
October 1, 2021	DAQ receives comments on draft permit and application review from Gränges.
xxx	Permit renewal notice published, 30-day public notice and comment period begins, and 45-day EPA comment period begins.

xxx 30-day public notice and comment period ends.

xxx 45-day EPA comment period ends.

4. Permit Modifications and Title V Equipment Editor (TVEE) Discussion

The following table summarizes changes to the current Gränges permit (02397T25) resulting from this permit renewal:

Page No.	Section	Description of Changes
Cover and throughout	---	Updated all dates and permit revision numbers
3-4	1	• Changed "tons" to ton in emission source descriptions for furnaces (ID Nos. FR-1- through FR-14) • Deleted "**CAM**" from Emission Source ID No. column for cold rolling mills (Nos. RM-1 through RM-5) • Changed "**PSD**" in Emission Source ID No. column for cold rolling mills (Nos. RM-4 and RM-5)to "**BACT**"
5-6	2.1 A	• Changed "afterburner" to "afterburners" in list of emission sources and control devices • Deleted extra "Visible Emissions" in Regulated Pollutant column of summary of limits and standards table • Changed "RACT for VOC" to "VOC RACT" in Applicable Regulation column of summary of limits and standards table • In Applicable Regulation column of summary of limits and standards table: o Changed "Avoidance for NAA NSR" to "NAA NSR Avoidance" o Changed "Avoidance for MACT" to "MACT Avoidance" o Changed "Avoidance for RACT" to "RACT Avoidance"
6	2.1 A.1. 2.1 A.1.e 2.1 A.2.a 2.1 A.2.b	Inserted "the coil" before each incidence of "anneal furnace"; changed "pound per million" to "pounds per million" Deleted excess periods from section citation • Replaced "these sources" with ID numbers of melt and holding furnaces • Included both equations from 02D .0515 for calculating allowable emission rate Deleted excess period from section citation

Page No.	Section	Description of Changes
7	2.1 A.2.c	Added "from the firing of . . . **through FR-8**)" to the end of this clause.
	2.1 A.3.a	Changed "the combustion sources" to "these combustion sources"
	2.1 A.3.b, e	Deleted excess period from section citations
	2.1 A.3.g	Changed "contaminated kerosene" to "spent rolling oil"
	2.1 A.4.d	Included No. 2 fuel oil as one of the fuels fired
	2.1 A 4.e	• Updated to most current version stipulation for 02D .0521, Control of Visible Emissions. • Added "when firing spent rolling oil after "To ensure compliance"
8	2.1 A.4.f	• Added ID number for afterburners (ID No. IN-2). • Added list of fuels burned when FR-4 is controlled by afterburners
	2.1 A.4.j	Updated to reflect most current stipulation for 15A NCAC 02 .0521, Control of Visible Emissions
9	2.1 B	In Applicable Regulation column of summary of limits and standards table: • Removed letters and numbers in parentheses from all citations of 15A NCAC • Removed "[40 CFR 64]" • Changed "RACT for VOC" to "VOC RACT" • Changed "Avoidance for NAA NSR" to "NAA NSR Avoidance"
	2.1 B.1.d	• Added source ID Nos. (RM-1 through RM-5) • Updated to reflect most current stipulation for 15A NCAC 02 .0521, Control of Visible Emissions
10	2.1 B.1.e	Added source ID numbers for mist eliminators (RM-1ME, RM-2ME, RM-3MEN, RM-3MES, RM-4ME, and RM-5ME), and included stack skimmers (RM-4SS and RM-5SS)
	2.1 B.1.h	Updated to reflect most current stipulation for 15A NCAC 02 .0521, Control of Visible Emissions
	2.1 B.2	• Updated to reflect most current stipulation for 15A NCAC 02 .0530, Prevention of Significant Deterioration • Deleted testing paragraph (former paragraph b) and changed lettering of remaining paragraphs in this section from c-f to b-e
10-13	2.1 B.3	Updated to most current stipulations for 02D .0614, Compliance Assurance Monitoring
13	2.1 C.1	Updated to reflect most current stipulation for 15A NCAC 02 .0521, Control of Visible Emissions

Page No.	Section	Description of Changes
15	2.2 A	In Applicable Regulation column of summary of limits and standards table: • Changed "Avoidance for NAA NSR" to "NAA NSR Avoidance" • Changed "Avoidance for MACT" to "MACT Avoidance" • Changed "Avoidance for RACT" to "RACT Avoidance" • Changed "RACT for VOC" to "VOC RACT" • Removed unnecessary letters and numbers in parentheses from all citations of 15A NCAC
16	2.2 A.1.b-d, f, g 2.2 A.2.a.vi	Deleted excess period from section citations Changed "close" to "closing"
17	2.2 A.3 2.2 A.3.a	Updated section to reflect most current stipulation for 02D .1100, Control of Toxic Air Pollutants (including references to air dispersion modeling analyses and permit applications) Inserted requirements from former paragraph b in Section 2.2 A.8 (spent rolling oil requirements) Deleted excess period from section citations
18-19	2.2 A.5	• Updated section to reflect most current stipulation for 0317, Avoidance Conditions for 15A NCAC 02D .0531: Sources in Nonattainment Areas • Reformatted equations with math editor and defined additional variables
20-21	2.2 A.7.a 2.2 A.7.c.i, ii	Changed 15A NCAC citation in brackets from 02D .1402(h)(5) to 02D .1402(d) Reformatted equations with math editor and defined additional variables, and created new paragraph iii from existing text in paragraph ii
21-22	2.2 A.8	• Updated section to reflect the most current stipulations for 15A NCAC 02Q .0711, Emission Rates Requiring a Permit (replacing former paragraph a with new paragraphs a-d) • Relocated former paragraph b (spent rolling oil requirements) to Section 2.2 A.3
23-33	3	Updated General Conditions to Version 5.5 dated August 25, 2020

The following changes were made to the Title V Equipment Editor (TVEE):

Source ID No.	Former Description	Revised Description
FR-1	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 1 (20 tons design capacity and 16million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 1 (20-ton design capacity and 16-million Btu per hour heat input capacity)
FR-2	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 1 (10 tons design capacity and 4 million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 1 (10-ton design capacity and 4-million Btu per hour heat input capacity)

FR-4	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 2 (40 tons design capacity and 25.5 million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 2 (40-ton design capacity and 25.5-million Btu per hour heat input capacity)
FR-5	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 2 (15.2 tons design capacity and 4 million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 2(15.2-ton design capacity and 4-million Btu per hour heat input capacity)
FR-6	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 3 (30 tons design capacity and 16 million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 3 (30-ton design capacity and 16-million Btu per hour heat input capacity)
FR-7	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 3 (10 tons design capacity and 4 million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 3 (10-ton design capacity and 4-million Btu per hour heat input capacity)
FR-8	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnace No. 4 (10 tons design capacity and 4 million Btu per hour heat input capacity)	one natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnace No. 4 (10-ton design capacity and 4-million Btu per hour heat input capacity)
FR-9	one natural gas-fired melt furnace equipped with low-NOx burners (50 tons design capacity and 30 million Btu per hour heat input capacity)	one natural gas-fired melt furnace equipped with low-NOx burners (50-ton design capacity and 30-million Btu per hour heat input capacity)
FR-10	one natural gas-fired aluminum holding furnace equipped with low-NOx burners (40 tons design capacity and 12 million Btu per hour heat input capacity)	one natural gas-fired aluminum holding furnace equipped with low-NOx burners (40-ton design capacity and 12-million Btu per hour heat input capacity)
FR-11	one natural gas-fired aluminum melt furnace equipped with low-NOx burners (50 tons design capacity and 30 million Btu per hour heat input capacity)	one natural gas-fired aluminum melt furnace equipped with low-NOx burners (50-ton design capacity and 30-million Btu per hour heat input capacity)
FR-12	one natural gas-fired aluminum holding furnace equipped with low-NOx burners (40 tons design capacity and 12 million Btu per hour heat input capacity)	one natural gas-fired aluminum holding furnace equipped with low-NOx burners (40-ton design capacity and 12-million Btu per hour heat input capacity)
FR-13	one natural gas-fired aluminum melt furnace equipped with low-NOx burners (50 tons design capacity and 30 million Btu per hour heat input capacity)	one natural gas-fired aluminum melt furnace equipped with low-NOx burners (50-ton design capacity and 30-million Btu per hour heat input capacity)
FR-14	one natural gas-fired aluminum holding furnace equipped with low-NOx burners (40 tons design capacity and 12 million Btu per hour heat input capacity)	one natural gas-fired aluminum holding furnace equipped with low-NOx burners (40-ton design capacity and 12-million Btu per hour heat input capacity)
FF-24, FF-25, and FF-26	one natural gas-fired coil anneal furnace (process rate equal to 6000 pounds per hour and 18 million Btu per hour heat input capacity)	one natural gas-fired coil anneal furnace (18 million Btu per hour heat input capacity)

5. Description of Changes and Estimated Emissions

No changes (i.e., new sources, removal of sources, increases or decreases in capacity) have occurred since the last permit modification that would impact potential emissions at the Gränges facility. Actual

emissions for criteria pollutants and hazardous air pollutants (HAP) for the years 2015 through 2019 are provided in the first page of this permit review.

6. Regulatory Review

The Gränges facility is subject to the following regulations.

02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers: This rule applies to particulate matter emissions from the combustion of fuel in indirect heat exchangers, such as boilers, that are discharged from any stack or chimney into the atmosphere. The regulation provides the following equation for determining the allowable emissions limit as a function of maximum heat input:

$$E = 1.090 \times Q^{-0.2594}$$

Where:

E = allowable emissions limit for particulate matter in pounds per million Btu (lb/MMBtu); and

Q = maximum heat input in million Btu per hour (MMBtu/hr). The maximum heat input is the total heat content of all fuels and is the sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted when determining the allowable emission limit for each fuel burning indirect heat exchanger.

The fourteen natural gas-fired coil anneal furnaces at the facility (Nos. FF-1 through FF-6, FF-10, FF-11, FF-20, and FF-22 through FF-26) are subject to this standard. In these furnaces, the rolled aluminum is not exposed to direct firing; it is heated in an inert atmosphere (nitrogen) or air to improve its hardness, strength, and flexibility.

Because these furnaces became operational at the plant at different times, the basis for calculating the limit for newer furnaces is based on the heat input of all existing and new furnaces onsite at the time the newer furnaces are installed, which results in different limits for different furnaces. Once the PM emission limit is established for a furnace, the limit remains in effect, regardless of whether additional furnaces are added to the facility or taken out of service. As a result, the PM emission limit for older furnaces may be based in part on the heat input of furnaces that once were in operation at the facility, but no longer exist.

The operation dates and established emission limits for the anneal furnaces currently active at the Gränges facility are shown below.

Coil Anneal Furnace (ID No.)	Initial Year of Operation	Furnace Heat Input (MMBtu/hr)	PM Emission Limit (lb/million Btu)
FF-1 through FF-6	1964	3.3	0.36
FF-10 and FF-11	1980	3.0	0.36
FF-20	1965	13.5	0.36
FF-22	1980	18.0	0.36
FF-23	1987	18.0	0.34
FF-24	1998	18.0	0.33
FF-25 and FF-26	2008	18	0.30

Since the anneal furnaces fire natural gas, no monitoring, recordkeeping, or reporting is required as particulate emissions should be minimal.

02D .0515, Particulates from Miscellaneous Industrial Processes: As indicated by the title, this regulation applies to any industrial process for which no other particulate emission control standards are applicable. Under this rule, the allowable emission rates for particulate matter from any stack, vent, or outlet are a function of the process rate—the amount of product throughput for the industrial process being regulated. The maximum allowable emission rate shall not exceed the level calculated using the following equations:

For process rates less than or equal to 30 tons per hour: $E = 4.10(P)^{0.67}$
For process rates greater than 30 tons per hour: $E = 55.0(P)^{0.11} - 40$

Where

E = maximum allowable emission rate for particulate matter in pounds/hr, calculated to three significant figures
P = furnace process rate in tons/ per hour

The following six melt and seven holding furnaces are subject to this regulation:

- Three natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum melt furnaces Nos. 1, 2 and 3 (ID Nos. FR-1, FR-4, and FR-6) with associated afterburners (ID No. IN-2) installed on FR-4
- Three natural gas-fired aluminum melt furnaces equipped with low-nitrogen oxide (NO_X) burners (ID Nos. FR-9, FR-11, and FR-13)
- Four natural gas/No. 2 fuel oil/spent rolling oil-fired aluminum holding furnaces Nos. 1, 2, 3, and 4 (ID Nos. FR-2, FR-5, FR-7, and FR-8)
- Three natural gas-fired aluminum holding furnaces equipped with low-NOx burners (ID Nos. FR-10, FR-12, and FR-14)

No monitoring, recordkeeping, or reporting for particulate matter emissions is required, due to the inherent low particulate emissions resulting from the combustion of natural gas and No. 2 fuel oil.

02D .0516, Sulfur Dioxide Emissions from Combustion Sources. The melt and holding furnaces listed above under 02D .0515 are subject to this regulation, as well as the fourteen coil anneal furnaces listed above under 02D .0503. SO_2 emissions from these sources shall not exceed 2.3 lb/MBtu heat input. In addition, Gränges disposes of spent rolling oil by burning it in the furnaces. Because rolling oil is an uncommon fuel, additional precaution to further ensure SO_2 emission limits are met seemed reasonable. As a result, a requirement that the maximum sulfur content of any spent rolling oil received and burned in furnaces Nos. FR-1, FR-2, and FR-4 through FR-8 not exceed 1.0% by weight was included in the permit. While monitoring, recordkeeping, and reporting are not required for SO_2 emissions from combustion of natural gas or No. 2 fuel oil, Gränges is required to record in a log the amount of spent rolling oil used and combusted each year, and to collect and analyze a sample of spent rolling oil to ensure permit limits are not exceeded. The test results must be included in an annual summary report. Prior to this permit revision, the summary report was also required to include the total gallons of contaminated kerosene combusted at the facility for the previous 12 months. It is believed that since rolling oil has characteristics similar to kerosene, the terms “kerosene” and “rolling oil” were used interchangeably in the past. For the sake of clarity, the words “contaminated kerosene” in this requirement were changed to “spent rolling oil” in this permit renewal. Actual SO2 emissions from the furnaces are expected to be much lower than the

emission limit due to the low sulfur content in natural gas and No. 2 fuel oil. Continued compliance is expected.

02D .0521, Control of Visible Emissions: The intent of this regulation is to prevent, abate, and control emissions generated from fuel burning operations and industrial processes where an emission can be expected to occur, except during startups, shutdowns, and malfunctions approved according to procedures in 15A NCAC 02D .0535. The regulation establishes opacity limits for visible emissions from sources based on the date the sources were manufactured. The following table lists the sources at the Gränges facility subject to this regulation and their respective opacity limits.

Date of Manufacture	Sources	Opacity Limit	Additional limitations
As of July 1, 1971	• Natural gas-fired coil anneal furnaces (ID Nos. FF-1 through FF-6, FF-20, FR-1, and FR-2) • Three cold rolling mills (ID Nos. RM-1, RM-2, and RM-3)	40 percent opacity averaged over a six-minute period	Six-minute averaging periods may exceed 20 percent not more than: • once in any hour, and • four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.
After July 1, 1971	• Eighteen furnaces (ID Nos. FF-10, FF-11, and FF-22 through FF-26, and FR-4 through FR-14) • Two cold rolling mills (ID Nos. RM-4 and RM-5) • Two in-line degassers/filters (ID Nos. MD-1 through MD-4) • Three rotary in-line degassers (ID Nos. MD-5 through MD-7)	20 percent opacity averaged over a six-minute period	Six-minute averaging periods may exceed 20 percent not more than: • once in any hour, and • four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

For furnaces Nos. FR-1, FR-2, and FR-4 through FR-8, daily observations to identify any visible emissions above normal are required (three days of missed observations per semiannual period are allowed). Visible emissions from aluminum melt furnace No. 2 (ID No. FR-4) are to be controlled with afterburners. Gränges must inspect and maintain the afterburners in accordance with manufacture's recommendations, and at minimum, conduct a monthly external inspection of the ductwork and afterburners. Because the potential for violating visible emission limits from the firing of natural gas is limited, no monitoring, recordkeeping, reporting is required for visible emissions from the firing of natural gas in any of the sources listed in the table above. Continued compliance is expected.

02D .0530, Prevention of Significant Deterioration: see Section 9 of this review.

02D .0614: Compliance Assurance Monitoring [40 CFR 64] - see Section 11 of this review.

02D .0902(f), Reasonably Available Control Technology for VOC: see Section 9 of this review.

02D .0958, Work Practices for Sources of Volatile Organic Compounds: This rule applies to all facilities that use VOCs as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture VOCs, or emit VOCs as a product of chemical reactions. 15A NCAC 02D .0902 limits the applicability of these work practice standards to the maintenance area for the 1997 8-hour ozone standard. Rowan County, where the Gränges facility is located, is one of the maintenance area counties for the 1997 8-hour ozone standard. Therefore, all sources that use VOCs at the Gränges facility are subject to these work practice standards. The required work practices include storing material containing VOCs in tightly-covered containers, prompt cleanup of spills, and other precautions spelled out in the regulation to prevent or minimize VOC emissions.

02D .1100, Control of Toxic Air Pollutants: see Section 12 of this review.

02D .1111, Maximum Achievable Control Technology: see Section 7 of this review.

02D .1402(d), Reasonably Available Control Technology for Nitrogen Oxides: see Section 9 of this review.

02D .1806, Control and Prohibition of Odorous Emissions: This regulation provides for the control and prohibition of objectionable odorous emissions. applies facility-wide and is state-enforceable only. It requires Gränges to implement management practices or install and operate odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable odors beyond the facility's boundary.

02Q .0317, Avoidance Conditions (for 02D .0531, Sources in Nonattainment Areas): see Section 9 of this review.

02Q .0711, Emission Rates Requiring a Permit: see Section 11 of this review.

This permit renewal does not affect the status of the facility with regard to the above regulations. The permit has been updated to reflect the most current stipulations for all applicable regulations. Continued compliance is expected.

7. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Maximum and/or Generally Achievable Control Technology (MACT/GACT)

At one time, the Gränges facility was subject to 40 CFR 63 Subpart RRR, National Emissions Standards for Hazardous Air Pollutants: Secondary Aluminum Production, as a facility that produces aluminum from scrap aluminum material, along with virgin aluminum in ingot form produced by sources throughout the world. Because the facility does not electrolytically reduce refined bauxite to form aluminum, it cannot be classified as a primary aluminum reduction plant, and is not subject to the NESHAP for Primary Aluminum Reduction Plants (40 CFR 63 Subpart LL). The numerous melt, anneal, and holding furnaces at the facility are direct fired combustion units, and are therefore not

subject to the NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR 63 Subpart JJJJJJ), or the NESHAP for Industrial, Commercial and Institutional Boilers and Process heaters (40 CFR63 Subpart DDDDD).

As discussed in the application review for the preceding Gränges permit renewal (B. Gatano, Permit No. 02397T23, December 7, 2016), Gränges submitted a permit application on March 7, 2003, requesting an exemption from Subpart RRR because it only processed "clean charges" in its furnaces, as defined under 40 CFR 63.1503. At that time, because the compliance date for Subpart RRR had not passed, the "Once-In-Always-In" policy in force for MACT at that time did not apply to this facility. Thus, the exemption from MACT was allowed, and the avoidance condition for Subpart RRR was added under Air Permit No. 02397T17.

For the exemption to apply, the permit required the Gränges facility to be an area source (i.e., one that emits less than 10 tons per year (tpy) of a single HAP, and less than 25 tpy of a combination of HAPs), in addition to processing only clean charges or materials generated within the facility. The permit includes monitoring, recordkeeping, and reporting requirements for tracking the raw materials processed in the melt furnace to ensure that the "clean charge" requirement is met. Gränges must also submit a semiannual statement signed by its responsible official that only clean charge, customer return, and internal scrap are used as aluminum raw materials for the melt furnaces (ID Nos. FR-1, FR-4, FR-6, FR-9, FR-11, and FR-13). While the permit does not require tracking HAPs, as the review for the preceding Gränges permit renewal explains, the facility's potential emissions of total HAPs are estimated to be less than 4 tpy. The facility is inherently a minor HAP source, and monitoring, recordkeeping or reporting is not required to ensure compliance. This exemption from Subpart RRR should be re-evaluated if the potential emissions of HAPs increase in the future.

The Gränges facility is permitted to burn spent rolling oil in several of its melting and holding furnaces, which could raise concerns regarding waste disposal regulatory requirements. 40 CFR 241 (Solid Wastes Used as Fuels or Ingredients in Combustion Units) identifies requirements and procedures for identifying solid wastes used as fuels or ingredients in combustion units under Section 1004 of the Resource Conservation and Recovery Act and Section 129 of the Clean Air Act. 40 CFR Part 241.2 is clear in that undiscarded "traditional fuels" are not considered solid waste. To further clarify the issue, 40 CFR 279, Standards for the Management of Used Oil, identifies those materials which are subject to regulation as used oil, and indicates whether some materials not subject to regulation as used oil may be subject to regulation as hazardous waste. According to 40 CFR 279.10, the definition of "traditional fuels" includes oils that meet the used oil specifications in 40 CFR 279.11, Used Oil Specifications. As shown in the table below, the spent rolling oil from Gränges meets these specifications—it is therefore not considered a solid waste and is not subject to requirements under the Commercial and Industrial Solid Waste Incinerator rules.

Constituent/Property	Maximum limit under 40 CFR 279.11	Permitted Limit*
Arsenic	5 ppm** maximum	1 ppm maximum
Cadmium	2 ppm maximum	2 ppm maximum
Chromium	10 ppm maximum	5 ppm maximum
Lead	100 ppm maximum	100 ppm maximum
Total Halogens	4,000 ppm maximum	1,000 ppm maximum
Flash Point	100 °F minimum	100 °F minimum
Ash	--	1.0 % maximum
* The Gränges facility must meet these requirements for the spent rolling oil to ensure compliance with NC air toxics requirements. **ppm = parts per million		

8. New Source Performance Standards (NSPS)

The Gränges facility has not been subject to any NSPS. As discussed earlier, the facility is not a primary aluminum reduction facility, so it is not subject to Standards of Performance for New Stationary Sources Primary Aluminum Industry (40 CFR 60 Subpart S). In addition, the facility has no boilers that would be subject to the NSPS for industrial-commercial-institutional steam generating units (40 CFR 60 Db and Dc. This permit renewal does not affect this status.

9. New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

The basis for the following discussion is the application review for the previous Gränges permit renewal (B. Gatano, Permit No. 02397T23, December 7, 2016).

NSR/PSD

02D .0530: Prevention of Significant Deterioration: On September 19, 2006, the DAQ issued a Notice of Violation (NOV) to Gränges for a 1980 expansion—the facility had constructed two aluminum rolling mills (ID Nos. RM-4 and RM-5) without obtaining a preconstruction permit under PSD. At the time of the 1980 expansion, Rowan County, where Gränges is located, was in attainment for ozone. Gränges was an existing PSD major stationary source with the potential to emit 250 tons per year of VOC.

The facility submitted a BACT analysis and permit application on November 13, 2006, following up with a revised version on May 31, 2007 to address the NOV. The DAQ determined that the existing oil mist eliminators (ID Nos. RM-4ME and RM-5ME) and stack skimmers (ID Nos. RM-4SS and RM-5SS), in combination with use of rolling oil consisting of 98% saturated aliphatic hydrocarbons, were considered BACT for these sources. The BACT limits were incorporated into the permit with the issuance of Air Permit No. 02397T18. Under these requirements, Gränges is required to perform inspection and maintenance on the mist eliminators, and keep records on the inspection and maintenance. They must also keep records for each shipment of rolling oil received documenting the amount of saturated aliphatic hydrocarbons.

Because BACT is defined in the permit as a specific control technology without a specific emissions limit, the standard testing requirement usually included in permit requirements to confirm compliance with a permit limit is not applicable here. The testing requirement for BACT has therefore been removed in this permit revision. For the same reason, the first clause in Section 2.1 B.2.a—which

originally read "The following Best Available Control Technology (BACT) shall not be exceeded"—has been changed in this permit revision to "The following Best Available Control Technology (BACT) shall be implemented".

*02Q .0317: Avoidance Conditions for 02D .0531: Sources in Nonattainment Areas***:** In 2006, Gränges submitted a permit application to add new casting lines, anneal furnaces, and the SMS mill to the facility. By this time, Rowan County was in nonattainment for ozone and the facility was an existing major source of VOC under NSR. To avoid applicability of NSR, the facility accepted a limit under to restrict VOC emissions from this second expansion to less than 40 tons—the NSR significance threshold. The facility-wide avoidance limit for VOC emissions—1,486 tpy, on a rolling basis—was added to the permit with the issuance of Air Permit No. 02397T19. The avoidance limit was determined by adding the project avoidance limit with the average baseline actual emissions. Gränges selected the years 2001 and 2002 for its baseline period, with VOC emissions of 1,385 and 1,509 tons per year, respectively. Therefore, the PSD avoidance limit was calculated as follows:

VOC limit = Average Baseline Actual Emissions + Project Avoidance limit

$$\text{VOC limit} = \left(\frac{1{,}385+1{,}509}{2}\right) + 39 \text{ tons} = 1{,}486 \text{ tpy}$$

To ensure compliance, the facility is required to make the following calculations:

1. Calculate the VOC emissions from the melt, holding, and anneal furnaces on a monthly basis according to the following formula:

$$VOC = \sum_{i=1}^{n} 0.34A_i + \sum_{j=1}^{m} 5.5B_j$$

Where,

VOC = Total VOC emissions from the melt, holding, and anneal furnaces for a given month, in tons per month.

A_i = No. 2 fuel oil usage in gallons per month for each melt or holding furnace *i*, if it burned this fuel in a given month.

B_j = natural gas usage in standard cubic feet (scf) per month for each melt, holding, or anneal furnace *j*, if it burned this fuel in a given month.

n = total number of melt or holding furnaces burning No. 2 fuel oil in a given month.

m = total number of melt, holding, and anneal furnaces burning natural gas in a given month.

0.34 = VOC emission factor for the melt and anneal furnaces, in pounds VOC per thousand gallons of No. 2 fuel oil

5.5 = VOC emission factor for the melt, holding, and anneal furnaces, in pounds VOC per million scf

2. Calculate the VOC emissions (due to volatilization of rolling oil) for each aluminum rolling mill for each month using the mass balance approach as prescribed here: total quantity of rolling oil entering the given rolling mill - total waste oil transferred off-site from a given rolling mill.

3. Calculate the VOC emissions (due to volatilization of rolling oil) for each anneal furnace for each month on a monthly basis according to the following formula:

$$VOC = \left(\frac{\sum_{i=1}^{n} 0.0007 C_i}{2000}\right)$$

Where,

VOC = total VOC emissions due to volatilization of rolling oil from all anneal furnaces, in tons per month
C_i = amount of aluminum annealed in a given month for each anneal furnace *i*, in pounds.
n = total number of anneal furnaces in use for a given month.
0.0007 = VOC emission factor for rolling oil volatilization (7 pounds of VOC per 10,000 pounds of annealed aluminum)
2000 = Conversion factor (2000 lbs per ton)

RACT

02Q .0317: Avoidance Conditions for 15A NCAC 02D .1400: Nitrogen Oxides: At the time of the previous renewal, Gränges was subject to RACT because Rowan County was designated as a nonattainment area for the 1997 8-hour ozone standard, and it has the potential to emit more than 100 tons per year of VOC and/or 100 tons of NO_X per year or 560 pounds of NO_X per calendar day beginning May 1 through September 30. Gränges elected to take an avoidance condition for NO_X RACT: NO_x emissions from the facility-wide sources shall be less than 100 tons per consecutive 12-month period and less than 560 lbs per calendar day beginning May 1 through September 30 of any year. For the aluminum rolling mills (RM-1 through RM-5), RACT for VOC was determined to be oil mist eliminators and stack skimmers, in combination with use of rolling oil consisting of 98% saturated aliphatic hydrocarbons. For the anneal furnaces, RACT was determined to be the use of rolling oil consisting of 98% saturated aliphatic hydrocarbons, and the following VOC emission limits for the anneal furnaces were established:

Anneal Furnace ID No.	VOC Emission Limit, (tons/yr)
FF-1 through FF-6, FF-10, and FF-11	1.66 (each)
FF-20	6.93

RACT for VOCs and the RACT avoidance conditions for NO_X were incorporated into Air Permit No. 02397T19.

In addition to the above limits and requirements, records of the required inspection and maintenance of mist eliminators and stack skimmers must be maintained. In addition, rolling oil consisting of 98% saturated aliphatic hydrocarbons must be used in the mills, with semi-annual reporting required.

These BACT, NSR avoidance, and RACT requirements have not changed as a result of this permit renewal. They remain the same even though as of December 2, 2013, Rowan County was designated as an attainment area for the 1997 8-hour ozone standard. Under 15 NCAC 02D .0902(g), sources in areas that are redesignated to attainment for the 1997 8-hour ambient air quality standard for ozone shall continue to comply with requirements established under Section .0900 of 15 NCAC 02D – Volatile Organic Compounds, which include the RACT conditions established under 02D .0902(f). Continued compliance is expected.

10. Risk Management Plan (RMP) Requirements

40 CFR Part 68 requires stationary sources storing more than threshold quantities of regulated substances to develop a RMP in accordance with Section 112(r) of the Clean Air Act. The RMP lists the potential effects of a chemical accident at the facility, steps the facility is taking to prevent an accident, and emergency response procedures to be followed if an accident should occur.

Gränges is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect the 112(r) status of the facility.

11. Compliance Assurance Monitoring (CAM)

An emission unit is subject to CAM, under 40 CFR Part 64, if all of the following three conditions are met:

- The unit is subject to any (non-exempt, e.g., pre-November 15, 1990, Section 111 or 112 standard) emission limitation or standard for the applicable regulated pollutant.
- The unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit's pre-control potential emission rate exceeds 100 percent of the amount required for a source to be classified as a major source; i.e., either 100 tpy (for criteria pollutants) or 10 tpy of any individual/25 tpy of any combination of HAP.

The following emissions limitations or standards (Exempt Emission Standards) are not subject to CAM:

- Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act (e.g., MACT or NSPS).
- Stratospheric ozone protection requirements under title VI of the Act.
- Acid Rain Program requirements pursuant to Sections 404, 405, 406, 407(a), 407(b), or 410 of the Act.
- Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions within a source or between sources.
- An emissions cap that meets the requirements specified in §70.4(b)(12) or §71.6(a)(13)(iii) of this chapter.
- Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in § 64.1

The aluminum rolling mills at the Gränges facility (ID Nos. RM-1, RM-2, RM-3, RM-4, and RM-5) meet these conditions and are therefore subject to CAM. They are the only sources at the Gränges facility that have control devices. All five rolling mills are subject to RACT, two of the mills (RM-4 and RM-5) are subject to BACT for VOC, and all five require control devices to meet the requirements of RACT and/or BACT.

Gränges submitted a CAM plan for the rolling mills in 2007. The permit condition was updated to add standard reporting language under the previous permit renewal in 2016. As required by the permit, mist eliminators (ID Nos. RM-1ME, RM-2ME, RM-3MEN, RM-3MES, RM-4ME, and RM-5ME) shall be properly operated and maintained to control VOC emissions from the aluminum rolling mills. The indicator to be monitored is the amperage load on the drive motors of each mist eliminator, which are required to be within the following ranges:

- RM-1ME: 74.8 to171.3 amperes
- RM-2ME: 35.6 to 102.3 amperes
- RM-3MEN: 15.9 to 36.6 amperes
- RM-3MES: 15 to 34.5 amperes
- RM-4ME: 47.2 to 135.7 amperes
- RM-5ME: 36.8 to 105.8 amperes

With this permit renewal, the CAM section of the permit has been revised to include the newer DAQ format for CAM permit requirements displaying the monitoring approach, which is shown below. Language specifying the quality improvement plan threshold was added, along with specifying that the amperage load for the drive motors are measured with. In addition, the applicable regulation for CAM—02D .0530—has a monitoring requirement of opacity/visible emissions for demonstrating compliance with VOC. For this reason, visible emissions have been added to the permit as an indicator for CAM purposes.

Measure	**Indicator**	**Indicator**
I. Indicator	Visible emissions	Amperage load on drive motors of each mist eliminator
Measurement Approach	Visible emissions from the mist eliminator system will be observed daily using EPA Reference Method 22-like procedures.	The amperage is measured weekly by opening-up the monitoring device and clamping directly to the electrical line..
II. Indicator Range	An excursion is defined as the presence of visible emissions. Excursion triggers an inspection, corrective action, and a reporting requirement.	The amperage load on drive motors of each mist eliminator shall be within the following operating ranges: RM-1ME: 74.8 to171.3 amperes RM-2ME: 35.6 to 102.3 amperes RM-3MEN: 15.9 to 36.6 amperes RM-3MES: 15 to 34.5 amperes RM-4ME: 47.2 to 135.7 amperes RM-5ME: 36.8 to 105.8 amperes An excursion occurs when the amperage load for any drive motor falls outside the indicated range above. The excursion triggers corrective action and reporting requirement.
Quality Improvement Plan (QIP) Threshold	The QIP threshold is five excursions in a six-month reporting period.	The QIP threshold is five excursions in a six-month reporting period.

Measure	Indicator	Indicator
III. Performance Criteria		
A. Data Representativeness	Visible emissions shall be observed at the emissions point (mist eliminator system exhaust).	Measurements are being made on the drive motor for each mist eliminator.
B. Verification of Operational Status	Not applicable.	Not applicable.
C. Quality Assurance/Quality Control Practices	The observer shall be familiar with EPA Reference Method 22 and follow Method 22-like procedures.	The amperage monitors shall be operated amd maintained as per manufacture's recommendation. If the amperage load on the drive motor is outside the above normal operating range, the Permittee shall ensure that the interlock mechanism of the mist eliminator automatically (without manual input) shuts down the associated aluminum rolling mill.
D. Monitoring Frequency	A six-minute Method 22-like observation is performed daily, when operating.	The amperage load is measured weekly by clamping directly to the electrical line.
E. Data Collection Procedures	The visible emissions observation is recorded by the observer.	The amperage load is manually recorded.
F. Averaging Periods	Not applicable.	Not applicable..

Continued compliance with the CAM requirements is expected.

12. Facility-wide Air Toxics Review

Gränges is subject to emission limits for the air toxics listed in the following table, in accordance with 15A NCAC 02D .1100, "Control of Toxic Air Pollutants". These emission limits were established with facility-wide worst-case single stack modeling demonstrations dated November 27, 2007 (permit application No. 8000057.06A) and July 15, 2014 (permit application No. 8000057.14A).

Sources	Toxic Air Pollutants	Emission Limits
Melt and Holding Furnaces **(ID Nos. FR-1, FR-2, and FR-4 through FR-14)**	Arsenic and inorganic arsenic compounds	1.84 lbs/yr
	Benzene	11.19 lbs/yr
	Beryllium	1.4 lbs/yr
	Cadmium	1.4 lbs/yr
	Bioavailable chromate pigments as chromium (VI) equivalent	1.4 lbs/yr
	Formaldehyde	0.0444 lb/hr
Melt and Holding Furnaces, and Degassers **(ID Nos. FR-1, FR-2, FR-4 through FR-14, and MD-1 through MD-7)**	Chlorine	0.11 lb/hr 2.67 lb/day
	Hydrogen Chloride	2.01 lb/hr

To ensure compliance with these limits, Gränges is required to record the emission rates of bioavailable chromate pigments as chromium (VI) equivalent each month, since chromium compounds had been found to exceed 100% of the AAL using worst case assumptions (R. Thaker, application review No. 8000057.06A, 02/26/2008). Gränges is also required to submit a summary report of and monthly emission rates to DAQ in quarterly reports. This is a change from the previous permit, which required a report on the emission rates of bioavailable chromate pigments as chromium (VI) equivalent within 30 days of a written request from DAQ.

The permit also lists several NC toxic air pollutants (TAPs) and their respective toxic permit emission rates (TPERs) as established in 15A NCAC 02Q .0711, "Emission Rates Requiring a Permit", shown in the following table. Gränges has made a demonstration that its facility-wide actual emissions do not exceed the TPERs for these pollutants.

Pollutant (CAS Number)	TPERs Limitations			
	Carcinogens (lbs/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
benzo(a)pyrene (50-32-8)	2.2			
n-hexane (110-54-3)		23		
manganese and compounds		0.63		
mercury, aryl and inorganic compounds		0.013		
toluene (108-88-3)		98		14.4
xylene (1330-20-7)		57		16.4

The permit requires that Gränges operate and maintain the facility so that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed the TPERs; and to maintain records that demonstrate compliance with each TPER. In addition, TAP emissions are limited by establishing criteria for the spent rolling oil Gränges may burn in these sources (ID Nos. FR-1, FR-2, and FR-4 through FR-8). Gränges is required to sample and analyze the spent rolling oil annually to confirm the oil meets the following criteria:

Constituent/Property	Allowable Level
Arsenic	1 ppm maximum
Cadmium	2 ppm maximum
Chromium	5 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	100 F minimum
Ash	1.0 % maximum

Records of the rolling oil samples, along with the quantities of rolling oil fired, must be maintained onsite for five years. Based on the most recent inspection, Gränges has been complying with this regulation. Continued compliance will be determined during subsequent inspections.

13. Facility Emissions Review

There are no changes in Title V potential emissions for this renewal. The potential emissions in the table below were taken from the facility-wide emissions provided in permit application No. 8000057.06A. Actual emissions for 2018-2020 as reported in the emission inventories are also presented in the table. Continued compliance is expected.

Pollutant	2020 Actual Emissions (tpy)	2019 Actual Emissions (tpy)	2018 Actual Emissions (tpy)	TV Potential Emissions (tpy)
Total Suspended Particulate	1.98	3.13	3.96	138.64
PM_{10}	1.98	3.13	3.96	105.37
$PM_{2.5}$	1.98	3.13	3.96	34.78
Carbon Monoxide (CO)	21.42	34.71	43.42	63.54
Nitrogen Oxides	25.51	41.34	51.70	137.48
Sulfur Dioxide (SO_2)	0.12	0.25	0.31	191.69
Volatile Organic Compounds (VOC)	367.89	681.20	559.57	909.38
Carbon Dioxide (CO_2)	30,738.10	49,813.50	62,300.50	Not reported
CO_2 equivalent* (metric tons)	27,911	45,233	56,572	Not reported
Single largest HAP (HCl)	0.93	1.61	2.12	2.57
Total HAP	1.45	2.48	3.21	3.92
*CO_2 equivalent is defined as the sum of individual greenhouse gas (GHG) pollutant emissions times their respective Global Warming Potentials, converted to metric tons. CO_2, methane, and nitrous oxide are the only GHGs reported in the emission inventory for the Gränges facility.				

14. Compliance History and Status

The compliance history of the Gränges facility since the last permit renewal on December 7, 2016 is summarized below.

February 3, 2017	Bob Caudle, Mooresville Regional Office (MRO) conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
August 8, 2017	MRO issues Notice of Deficiency (NOD) to Gränges for failure to submit required report(s) within the required timeframe (i.e., by July 30, 2017) in violation of their air permit. The required reports were received on August 7, 2017.
December 8, 2017	Bob Caudle, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
October 5, 2018	Bob Caudle, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
September 17, 2019	MRO issues Notice of Violation (NOV) to Gränges for failure to submit required semi-annual reports by the required deadline (i.e., by July 30, 2019) in violation of their air permit.

October 7, 2019	Jim Vanwormer, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
October 25, 2019	Robin Tolliver, Gränges EHS Manager, responds to NOV, apologizing for missing the semi-annual report deadline, and stating Gränges has made necessary arrangements to submit these reports on time in the future.
December 15, 2020	Jim Vanwormer, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.

In summary, since the last permit renewal on December7, 2016, Gränges has received an NOD and NOV respectively, and has responded appropriately. During each inspection, the facility has appeared to be operating in compliance with all permit requirements. Continued compliance is expected.

15. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above.

South Carolina is an affected state within 50 miles of the facility, and Mecklenburg County Department of Environmental Protection is an affected local program.

Notice of the DRAFT Title V Permit to Affected States ran from XXXX YY, 2021, to XXXX YY, 2021. ***Add comments received from Affected States or Local Programs.***

Public Notice of the DRAFT Title V Permit ran from XXXX YY, 2021, to XXXX YY, 2021. ***Add public comments received.***

EPA's 45-day review period ran concurrent with the 30-day Public Notice, from XXXX YY, 2021, to XXXX YY, 2021. ***Add comments received from EPA and U.S. EPA Region 4 regarding the DRAFT Title V Permit.***

16. Other Regulatory Considerations

The following items were not required in Permit Application No. 8000057.21A:

- Professional Engineer's seal
- Zoning consistency determination
- Permit fee.

17. Recommendations

DAQ has reviewed the permit application for Gränges Americas, Inc located in Salisbury, Rowan County to determine compliance with all procedures and requirements. DAQ has determined that this facility is

complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 02397T26.