



**New York State Department of Environmental Conservation
Permit Review Report**

Permit ID: 6-4058-00003/00365

Renewal Number: 2

01/02/2013

Facility Identification Data

Name: ALCOA MASSENA OPERATIONS (WEST PLANT)

Address: PARK AVE E

MASSENA, NY 13662

Owner/Firm

Name: ALCOA INC

Address: 201 ISABELLA ST

PITTSBURGH, PA 15212-5858, USA

Owner Classification: Corporation/Partnership

Permit Contacts

Division of Environmental Permits:

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Permit Description

Introduction

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

Summary Description of Proposed Project

Application for renewal of Air Title V Facility permit which includes a project to build a new potline at the Alcoa Massena East Plant (Reynolds). The project includes changes at both plants and has been capped out of PSD applicability.



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Attainment Status

ALCOA MASSENA OPERATIONS (WEST PLANT) is located in the town of MASSENA in the county of ST LAWRENCE.

The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

Criteria Pollutant	Attainment Status
Particulate Matter (PM)	ATTAINMENT
Particulate Matter < 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	TRANSPORT REGION (NON-ATTAINMENT)
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.

** NOx has a separate ambient air quality standard in addition to being an ozone precursor.

Facility Description:

Alcoa, Inc. owns and operates a primary aluminum producing and fabricating facility in Massena, New York (Massena operations). Massena operations is comprised of three production areas: smelting plant (area III), ingot-extrusion area (area II), and fabricating plant (area I). Products include aluminum metal, ingot, wire, rod and bar. Facility also produces steam in an on-site boilerhouse.

Permit Structure and Description of Operations

The Title V permit for ALCOA MASSENA OPERATIONS (WEST PLANT)

is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices



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process - any device or contrivance which may emit air contaminants that is not included in the above categories.

ALCOA MASSENA OPERATIONS (WEST PLANT) is defined by the following emission unit(s):

Emission unit A00001 - Process heaters treat solid aluminum and emit small quantities of process emissions due to residuals on the aluminum. Emissions co-mingle with products of combustion (poc) from natural gas burners.

Emission unit A00001 is associated with the following emission points (EP):

F0014, F0015, F001A, F001C, F001D, F002A, F002B, F0075, F074A, F074B, F078A, F078B, FC01A, FC01C, FC01D, I0014, I0043, I0046, I015A, I015B

Process: EPH TWO (2) 6500 TON PRESS PRE-HEATS AND ONE (1) 5300 TON PRESS PRE-HEAT FURNACE. EACH USES MULTIPLE DIRECT FIRE NATURAL GAS BURNERS.

Process: HMO TWO (2) HOMOGENIZING HEAT TREAT FURNACES. EACH USES MULTIPLE DIRECT FIRE NATURAL GAS BURNERS. CHEMICAL ADDITIVE PREVENTS OXIDATION OF SURFACE OF METAL AND PRODUCES INCIDENTAL HYDROGEN FLUORIDE EMISSIONS AS A BY-PRODUCT.

Process: HT1 #30, 31, 32, 34, 35, 38 HEAT TREAT FURNACES PROCESS EXHAUST. EACH FURNACE EXHAUSTS THROUGH THEIR OWN EMISSION POINT. #32, 34 AND 35 FURNACES ARE INDIRECTLY FIRED AND HAVE SEPARATE COMBUSTION EXHAUSTS. RESIDUAL OIL ON ALUMINUM PRODUCES SLIGHT VOC EMISSION. CHEMICAL ADDITIVE PREVENTS OXIDATION OF SURFACE OF METAL AND PRODUCES INCIDENTAL HYDROGEN FLUORIDE EMISSION AS A BY-PRODUCT.

Process: HT2 HEAT TREAT FURNACES #13, #14 AND #15 ARE INDIRECT FIRED NATURAL GAS FURNACES WHERE THE PRODUCTS OF COMBUSTION EXHAUST THROUGH EMISSION POINT (EP) F078A. THE FURNACE IS EXHAUSTED THROUGH EP F0014. HEAT TREAT FURNACES #16, #17 AND #18 HAVE A SIMILAR ARRANGEMENT WHERE THE PRODUCTS OF COMBUSTION EXHAUST THROUGH EP F078B AND THE FURNACE EXHAUST THROUGH EP F0015. FURNACE PROCESS EMISSIONS CONSIST OF RESIDUAL DRAWING LUBE FROM THE BARS WHICH ARE COMBUSTED AND VAPORIZED DURING THE BEGINNING OF THE HEAT TREAT PROCESS, NATURAL GAS AND RESIDUAL OIL ON THE ALUMINUM PRODUCES SLIGHT VOC EMISSIONS.

Emission unit B00001 - Four virtually identical package boilers firing either natural gas or #6 fuel oil.

Emission unit B00001 is associated with the following emission points (EP):

00001, 00002

Process: GAS FOUR VIRTUALLY IDENTICAL BOILERS CAPABLE OF BURNING NATURAL GAS.

Process: OIL FOUR VIRTUALLY IDENTICAL BOILERS CAPABLE OF BURNING No. 6 OIL.

Emission unit C00001 - Chip dryer #1 with associated control equipment (cyclone and afterburner) and chip melter #1.



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Emission unit C00001 is associated with the following emission points (EP):

I0029, I0030

Process: CD1 CHIP DRYER #1 DRIES ALUMINUM MACHINING CHIPS WITH HEATED AIR.

Process: CM1 CHIP MELTER #1 MELTS CLEAN ALUMINUM MACHINING CHIPS.

Emission unit C00002 - Chip dryer #2 with associated control equipment (cyclone and afterburner) and chip melter #2.

Emission unit C00002 is associated with the following emission points (EP):

I0044, I0045

Process: CD2 CHIP DRYER #2 DRIES ALUMINUM MACHINING CHIPS HEATED WITH AIR.

Process: CM2 CHIP MELTER #2 MELTS CLEAN ALUMINUM MACHINING CHIPS.

Emission unit D00001 - Miscellaneous point sources.

Emission unit D00001 is associated with the following emission points (EP):

F0042, I0042

Process: ALB ALUMINUM BURNISHER

Process: CCT is located at AREA II, Building 222 - EMULSIFIED OIL AND WATER SYSTEM FOR THE CONTINUOUS CASTER.

Process: SKD is located at AREA II, Building 220 - FUGITIVES FROM SKIM AND DROSS AREA USED FOR PASSIVE COOLING OF SKIM AND DROSS.

Emission unit F00001 - Alcoa Fabricating and Extrusion (AFE) fugitives.

Process: FB1 FUGITIVES FROM THE BULL BLOCK PROCESS APPLIES HIGH BOILING POINT (GREATER THAN 300F) SOLVENT TO SLIGHTLY HOT METAL TO ADHERE METAL TO BLOCK. VOC EMISSIONS ARE INCLUDED ON THE ANNUAL EMISSIONS STATEMENT.

Process: FB2 FUGITIVES FROM THE INK JET PRINTER. METHYL ETHYL KETONE (MEK) USED AS A CARRIER SOLVENT. MEK EMISSIONS ARE INCLUDED ON THE ANNUAL EMISSIONS STATEMENT.

Process: FB3 FUGITIVES FROM WAX DIPPING AND AIR DRYING COILS. WAX IS MIXED WITH WATER AND HEATED, THUS DOES NOT HAVE A HIGH, VOC CONTENT. VOC EMISSIONS INCLUDED ON ANNUAL EMISSIONS STATEMENT.

Process: FC1 FUGITIVES FROM THE ROD OILER ASSOCIATED WITH THE CONTINUOUS CASTER. VOC EMISSIONS WILL BE INCLUDED ON THE ANNUAL EMISSIONS STATEMENT.



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Process: FC3 TWO (2) MOLD SHOP BAKE OVENS. SMALL OVEN IS USED TO VOLATILIZE OIL IMPREGNATED IN GHRAPHITE RINGS. EMISSIONS VENT INTO THE MILL AND ESTIMATED TO BE INSIGNIFICANT.

Emission unit M00001 - Aluminum melting and holding furnaces. All furnaces are reverberatory, center charged. Furnaces charge molten aluminum, uniform, non-uniform and clean scrap, alloying ingredients and salt. No gas fluxing is done in any furnace.

Emission unit M00001 is associated with the following emission points (EP):

I001A, I001B, I001C, I001D, I0031, I0034, I0035, I003A, I003C, I024D, I024F

Process: MHS Molten aluminum melting and holding furnaces which are permitted to use salt fluxes. All furnaces are reverberatory, center charged. No gas fluxing is done in any furnace.

Emission unit M00002 - In-line filterbox fluxing units use a mixture of argon and chlorine gas to purify molten aluminum as it is being cast into ingots or rod. Typically there is one filterbox per furnace, and multiple furnaces/filterboxes serve a single casting complex. Within a casting complex, these filterboxes can be exhausted together, individually or not at all in the case of an inerted filterbox, however, only one filter box is fluxing at any time since there is only one casting apparatus per complex.

Emission unit M00002 is associated with the following emission points (EP):

I001E, I003E, I024E

Process: FBA IN-LINE FILTERBOX FLUXING UNITS USE A MIXTURE OF ARGON AND CHLORINE GAS TO PURIFY MOULTEN ALUMINUM AS IT IS BEING CAST INTO INGOTS OR ROD. TYPICALLY THERE IS ONE FILTERBOX PER FURNACE, AND MULTIPLE FURNACES/FILTERBOXES SERVE AS A SINGLE CASTING COMPLEX. WITHIN A CASTING COMPLEX, THESE FILTERBOXES CAN BE EXHAUSTED TOGETHER, INDIVIDUALLY OR NOT AT ALL IN THE CASE OF AN INERTED FILTERBOX. HOWEVER, ONLY ONE FILTERBOX IS FLUXING AT ANY TIME SINCE THERE IS ONLY ONE CASTING APPARATUS PER COMPLEX.

Emission unit P00001 - This emission unit consists of all the parts washers in the facility.

Process: PWS THIS PROCESS CONSISTS OF ALL THE COLD CLEANING PARTS WASHERS.

Emission unit S00001 - One potline of electrolytic cells and associated control equipment. This potline is categorized as a center work prebake-1 (CWPB-1) as described in the definitions section of EPA's Primary Aluminum NESHAP regulations.

Emission unit S00001 is associated with the following emission points (EP):

PRV01, SA398

Process: POT ELECTROLYTIC REDUCTION OF ALUMINA INTO ALUMINUM. THIS POTLINE IS CATEGORIZED AS A CENTER WORK PREBAKE-1 (CWPB-1) AS DESCRIBED IN THE DEFINITIONS SECTION OF EPA'S PRIMARY ALUMINUM MACT REGULATIONS.



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Emission unit S00002 - Anode baking furnace and associated alumina injection dry scrubber.

Emission unit S00002 is associated with the following emission points (EP):

S0078

Process: BAK is located at Building 351 - ANODE BAKING FURNACE AND ASSOCIATED ALUMINA INJECTION DRY SCRUBBER.

Emission unit S00003 - Paste production plant and associated coke injection scrubber.

Emission unit S00003 is associated with the following emission points (EP):

S0100, S0101

Process: ANC W354 Anode cooling tower

Process: GMS PASTE PRODUCTION PLANT AND ASSOCIATED COKE INJECTION SCRUBBER.

Emission unit S00004 - Material handling operations for alumina, carbon, and other miscellaneous solid materials. Each are controlled by a fabric filter to limit particulate emissions to the environment.

Emission unit S00004 is associated with the following emission points (EP):

S0015, S0016, S0038, S0041, S0043, S0046, S0047, S0048, S0049, S0050, S0051, S0052, S0053, S0060, S0061, S0086, S0090, S0092, S0093, S0095, S0102, S023B, S23AA, S23AC

Process: M01 BUILDING 332 DUST COLLECTION EQUIPMENT INCLUDES A STUB HOLE CLEANER WHICH USES AIR TO BLOW COKE DUST OUT OF STUB HOLES. PROCESS M01 ALSO INCLUDES TWO SMALL INDUCTION FURNACES USED FOR MELTING IRON.

Process: M03 PACKED COKE DRILLED OUT OF ANODE STUB HOLES.

Process: M04 DRY SCRUBBER ALUMINUM LOADING AND UNLOADING AREA.

Process: M05 ROUGH CLEANING OF SPENT ANODES.

Process: M06 BATH HANDLING, CRUSHING AND CRICIBLE DIGGING OPERATIONS.

Process: M07 TRANSFER POINT IN BUILDING 441 FOR TWO ALUMINA BELT CONVEYORS.

Process: M08 BUTT CRUSHING.

Process: M09 ANODE BUTT STORAGE, STORAGE FILLING, AGGREGATE BLENDING, COKE CRUSHING, STORAGE DISCHARGE, BALL MILL CLASSIFYING, AND INTERMEDIATE CLASSIFYING.

Process: M10 STORAGE TANK 440A AND 440B FLUIDIZER FOR ALUMINA.

Process: M11 TRACK HOPPER DUST COLLECTOR FOR ALUMINA UNLOADING AND ALUMINA



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AIRLIFT TOWER DUST COLLECTOR.

Process: M12 TRANSFER POINT 441C SERVES ST441C AND THE TRANSFER OF ALUMINA TO ST441B.

Process: M13 ALUMINA TRANSFER POINT 446A FROM REACTORS TO STORAGE TANKS.

Process: M14 ALUMINA TRANSFER POINT 446B FROM REACTORS TO STORAGE TANKS.

Process: M15 ALUMINA TRANSFER POINT 446C FROM REACTORS TO STORAGE TANKS.

Process: M16 POT DIGGING AND SPENT POTLINING HANDLING OPERATIONS CONTROLLED BY A FABRIC FILTER TO LIMIT PARTICULATE EMISSIONS TO THE ENVIRONMENT.

Emission unit S00005 - Coal tar pitch unloading and storage. Includes fugitives from the pitch unloading pumps and pitch recirculating pumps.

Emission unit S00005 is associated with the following emission points (EP):

S0073, S0077, S0088, S0089, S073A

Process: PST COAL TAR PITCH INCLUDES A SINGLE EMISSION POINT (EP) SERVING EACH OF TWO COAL TAR PITCH STORAGE TANKS, AND FUGITIVES INCLUDING BUT NOT LIMITED TO THOSE ASSOCIATED WITH THE PITCH RECIRCULATING PUMPS LOCATED IN BUILDING 352F.

Process: PUN COAL TAR PITCH UNLOADING INCLUDES A SINGLE EMISSION POINT (EP) SERVING EACH OF TWO RAILCAR UNLOADING STATIONS, AND FUGITIVES INCLUDING BUT NOT LIMITED TO THOSE ASSOCIATED WITH THE PITCH UNLOADING PUMPS. SOME OF THESE FUGITIVES ARE EXHAUSTED THROUGH THE BU

Emission unit S00006 - Smelting and anode plant fugitives excepting potline fugitives (the potline fugitives are regulated under Primary Aluminum NESHAP regulations).

Process: FA1 TOTAL SUSPENDED SOLID (I.E. PARTICULATE) FUGITIVES FROM COKE UNLOADING.

Process: FA2 TOTAL SUSPENDED SOLID (I.E. PARTICULATE) FUGITIVES FROM COKE AND HANDLING.

Process: FA3 TOTAL SUSPENDED SOLID (I.E. PARTICULATE) FUGITIVES FROM CLAMSHELL BUCKET OPERATIONS IN THE ANODE BAKING FURNACE ROOM.

Process: FAC WHEN SPENT ANODES ARE PLACED IN BUILDING 380 AND 376 TO COOL, THERE ARE FUGITIVE EMISSIONS FROM PASSIVE ANODE COOLING. SOME HYDROGEN FLUORIDE IS EMITTED AS A RESULT OF THE RESIDUAL BATH ON THE ANODES. EMISSIONS ARE INCLUDED ON THE ANNUAL EMISSIONS STATEMENT



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Emission unit W00001 is associated with the following emission points (EP):
F0069, F0070, F0071
Process: WWT WASTEWATER TREATMENT CONSISTS OF CHEMICAL PRE-TREATMENT, AND BIOLOGICAL TREATMENT.

Emission unit A00003 - This emission unit contains three processes: HM1, FBB and MH2.
Process HM1: Process heaters treat solid aluminum and emit small quantities of process emissions due to residuals on the aluminum. Emissions co-mingle with products-of-combustion (poc) from natural gas burners.

Process MH2: Molten aluminum melting and holding furnaces which are permitted to use salt fluxes. All furnaces are reverberatory, center charged. No gas fluxing is done in any furnace.

Process FBB: In-line filter box fluxing units use a mixture of argon and chlorine gas to purify molten aluminum as it is being cast into ingots or rod.

Emission unit A00003 is associated with the following emission points (EP):
I0047, I004A

Process: FBB is located at Building 221 - In-line filterbox fluxing units use a mixture of argon and chlorine gas to purify molten aluminum as it is being cast into ingots or rod.

Process: HM1 is located at Building 222 - One (1) homogenizer heat treat furnace. It uses multiple direct fire natural gas burners. Chemical additive prevents oxidation of surface of metal and produces incidental hydrogen fluoride emissions as a by-product.

Process: MH2 is located at Building 221 - Molten aluminum melting and holding furnaces which are permitted to use salt fluxes. All furnaces are reverberatory, center charged. No gas fluxing is done in any furnace.

Title V/Major Source Status

ALCOA MASSENA OPERATIONS (WEST PLANT) is subject to Title V requirements. This determination is based on the following information:
This facility has air emissions above major source thresholds for Particulates, PM-10, Sulfur Dioxide, Oxides of Nitrogen (NOx), Carbon Monoxide, Volatile Organic Compounds (VOCs), and collective Hazardous Air Pollutants HAPs). Specific HAP emissions above 10 tons per year include Benzene, Carbonyl Sulfide, Hydrogen Chloride, Hydrogen Fluoride, Total Fluorides and Polycyclic Organic Matter.

Program Applicability

The following chart summarizes the applicability of ALCOA MASSENA OPERATIONS (WEST PLANT) with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability



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PSD	YES
NSR (non-attainment)	YES
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	YES
NSPS	NO
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NSR New Source Review (6 NYCRR Part 231) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NESHAP National Emission Standards for Hazardous Air Pollutants (40 CFR 61) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

MACT Maximum Achievable Control Technology (40 CFR 63) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

NSPS New Source Performance Standards (40 CFR 60) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

Title IV Acid Rain Control Program (40 CFR 72 thru 78) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subparts A thru G) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.



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RACT Reasonably Available Control Technology (6 NYCRR Parts 212.10, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

SIP State Implementation Plan (40 CFR 52, Subpart HH) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

Compliance Status

Facility is in compliance with all requirements.

SIC Codes

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis

of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

SIC Code

Description

3334	PRIMARY ALUMINUM
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING & DRAWING NEC

SCC Codes

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information.Each SCC represents

a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code

Description

1-02-004-01	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - RESIDUAL OIL Grade 6 Oil
1-02-006-01	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - NATURAL GAS Over 100 MBtu/Hr
2-88-888-01	INTERNAL COMBUSTION ENGINES - FUGITIVE EMISSIONS INTERNAL COMBUSTION ENGINE: FUGITIVE EMISSIONS, OTHER/NOT CLASSIFIED Specify in Comments
3-01-820-03	CHEMICAL MANUFACTURING CHEMICAL MANUFACTURING - WASTEWATER AGGREGATE

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3-03-001-01	WASTEWATER TREATMENT PRIMARY METAL PRODUCTION PRIMARY METAL PRODUCTION - ALUMINUM ORE (ELECTRO-REDUCTION)
3-03-001-04	Prebaked Reduction Cell PRIMARY METAL PRODUCTION PRIMARY METAL PRODUCTION - ALUMINUM ORE (ELECTRO-REDUCTION)
3-03-001-05	Materials Handling PRIMARY METAL PRODUCTION PRIMARY METAL PRODUCTION - ALUMINUM ORE (ELECTRO-REDUCTION)
3-03-001-99	Anode Baking Furnace PRIMARY METAL PRODUCTION PRIMARY METAL PRODUCTION - ALUMINUM ORE (ELECTRO-REDUCTION)
3-03-003-12	NOT CLASSIFIED ** PRIMARY METAL PRODUCTION PRIMARY METAL PRODUCTION (BY-PRODUCT COKE MANUFACTURING)
3-04-001-03	Coke: Crushing/Screening/Handling SECONDARY METAL PRODUCTION SECONDARY METAL PRODUCTION - ALUMINUM
3-04-001-04	Smelting Furnace/Reverberatory SECONDARY METAL PRODUCTION SECONDARY METAL PRODUCTION - ALUMINUM
3-04-001-09	Fluxing: Chlorination SECONDARY METAL PRODUCTION SECONDARY METAL PRODUCTION - ALUMINUM
3-04-001-12	Burning/Drying SECONDARY METAL PRODUCTION SECONDARY METAL PRODUCTION - ALUMINUM
3-04-001-99	Annealing Furnace SECONDARY METAL PRODUCTION SECONDARY METAL PRODUCTION - ALUMINUM
3-04-022-01	Other Not Classified SECONDARY METAL PRODUCTION SECONDARY METAL PRODUCTION - METAL HEAT TREATING
3-85-001-01	Furnace: General COOLING TOWER COOLING TOWER - PROCESS COOLING
3-90-006-99	MECHANICAL DRAFT IN-PROCESS FUEL USE INDUSTRIAL PROCESSES - IN-PROCESS FUEL USE
4-01-002-95	General ORGANIC SOLVENT EVAPORATION ORGANIC SOLVENT EVAPORATION - DEGREASING OTHER NOT CLASSIFIED - GENERAL DEGREASING UNITS

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution

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control equipment and/or restrictions on the hours of operation, or on the type or amount of material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
003268-87-9	1,2,3,4,6,7,8,9-OCTACHLORODIBENZODIOXIN	> 0	but < 2.5 tpy
035822-46-9	1,2,3,4,6,7,8-HEPTACHLORODIBENZODIOXIN	> 0	but < 2.5 tpy
067562-39-4	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
055673-89-7	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
039227-28-6	1,2,3,4,7,8-HEXACHLORODIBENZO [B, E] [1,4] DIOXIN	> 0	but < 2.5 tpy
070648-26-9	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
057117-44-9	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
057653-85-7	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	> 0	but < 2.5 tpy
072918-21-9	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
019408-74-3	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	> 0	but < 2.5 tpy
057117-41-6	1,2,3,7,8-PENTACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
040321-76-4	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	> 0	but < 2.5 tpy
000107-21-1	1,2-ETHANEDIOL	> 0	but < 10 tpy
060851-34-5	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
057117-31-4	2,3,4,7,8-PENTACHLORODIBENZOFURAN	> 0	but < 2.5 tpy
051207-31-9	2,3,7,8-TETRACHLORODIBENZOFURAN	> 0	but < 10 tpy
001746-01-6	2,3,7,8-TETRACHLORODIBENZO-P-	> 0	but < 10 tpy

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000108-10-1	DIOXIN	> 0 but < 10 tpy
000108-10-1	2-PENTANONE, 4-METHYL	> 0 but < 10 tpy
000108-10-1	40 CFR 63 SUBPART LL	> 0 but < 10 tpy
000108-10-1	- POM	> 0 but < 10 tpy
000075-07-0	ACETALDEHYDE	> 0 but < 10 tpy
000107-02-8	ACROLEIN	> 0 but < 10 tpy
007664-41-7	AMMONIA	> 0 but < 2.5 tpy
007440-36-0	ANTIMONY	> 0 but < 10 tpy
000071-43-2	BENZENE	> 0 but < 10 tpy
000098-82-8	BENZENE, (1-METHYLETHYL)	> 0 but < 10 tpy
007440-41-7	BERYLLIUM	> 0 but < 10 tpy
007440-43-9	CADMIUM	> 0 but < 10 tpy
000630-08-0	CARBON MONOXIDE	> 0 but < 10 tpy
000463-58-1	CARBONYL SULFIDE	> 0 but < 10 tpy
007782-50-5	CHLORINE	> 0 but < 10 tpy
007440-47-3	CHROMIUM	> 0 but < 10 tpy
007440-48-4	COBALT	> 0 but < 10 tpy
000057-12-5	CYANIDE	> 0 but < 10 tpy
000067-64-1	DIMETHYL KETONE	> 0 but < 2.5 tpy
000111-42-2	ETHANOL, 2,2'-IMINOBIS-	> 0 but < 10 tpy
000100-41-4	ETHYLBENZENE	> 0 but < 10 tpy
016984-48-8	FLUORIDE	> 0 but < 10 tpy
068188-85-2	FLUORIDES	> 0 but < 10 tpy
000050-00-0	FORMALDEHYDE	> 0 but < 10 tpy
000100-00-0	HAP	> 0 but < 10 tpy
000110-54-3	HEXANE	> 0 but < 10 tpy
000074-90-8	HYDROCYANIC ACID	> 0 but < 10 tpy
007647-01-0	HYDROGEN CHLORIDE	> 0 but < 10 tpy
007664-39-3	HYDROGEN FLUORIDE	> 0 but < 10 tpy
007439-92-1	LEAD	> 0 but < 10 tpy
007439-96-5	MANGANESE	> 0 but < 10 tpy
000067-56-1	METHYL ALCOHOL	> 0 but < 10 tpy
000078-93-3	METHYL ETHYL KETONE	> 0 but < 10 tpy
000059-28-0	NICKEL (NI 059)	> 0 but < 10 tpy
039001-02-0	OCTACHLORODIBENZOFURANS, TOTAL	> 0 but < 2.5 tpy
000090-00-0	OIL MIST	> 0 but < 10 tpy
000210-00-0	OXIDES OF NITROGEN	> 0 but < 10 tpy
000075-00-0	PARTICULATES	> 0 but < 10 tpy
000108-95-2	PHENOL	> 0 but < 10 tpy
000075-00-5	PM-10	> 0 but < 10 tpy
130498-29-2	POLYCYCLIC AROMATIC HYDROCARBONS	> 0 but < 10 tpy
007446-09-5	SULFUR DIOXIDE	> 0 but < 10 tpy
000108-88-3	TOLUENE	> 0 but < 10 tpy
000099-00-0	VOC	> 0 but < 10 tpy
001330-20-7	XYLENE, M, O & P MIXT.	> 0 but < 10 tpy

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS



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Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency constitutes an affirmative defense to an action brought for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner and/or operator can identify the cause(s) of the emergency;

(2) The equipment at the permitted facility causing the emergency was at the time being properly operated;

(3) During the period of the emergency the facility owner and/or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) The facility owner and/or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner and/or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

Item B: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b)

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

Item C: Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.3(a)(4)

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Item D: Certification by a Responsible Official - 6 NYCRR Part 201-6.3(d)(12)

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Item E: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.5(a)(2)

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Item F: Permit Revocation, Modification, Reopening, Reissuance or Termination, and



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Associated Information Submission Requirements - 6 NYCRR Part 201-6.5(a)(3)

This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Item G: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.5(a)(5)

It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

Item H: Property Rights - 6 NYCRR 201-6.5(a)(6)

This permit does not convey any property rights of any sort or any exclusive privilege.

Item I: Severability - 6 NYCRR Part 201-6.5(a)(9)

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

Item J: Permit Shield - 6 NYCRR Part 201-6.5(g)

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;
- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item K: Reopening for Cause - 6 NYCRR Part 201-6.5(i)

This Title V permit shall be reopened and revised under any of the following circumstances:



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- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 2 01-6.7 and Part 621.
- ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.
- iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

Item L: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

Item M: Federally Enforceable Requirements - 40 CFR 70.6(b)

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

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**Item A: General Provisions for State Enforceable Permit Terms and Condition - 6
 NYCRR Part 201-5**

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
-- FACILITY	ECL 19-0301	189	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 52-A.21	40, 41, 42	Prevention of Significant Deterioration
S-00004/-/M16	40CFR 52-A.21	183	Prevention of Significant Deterioration
C-00001	40CFR 52-A.21(i)(1)	98	Review of Major Stationary Sources and Major Modifications - Source Applicability
C-00002	40CFR 52-A.21(i)(1)	106	Review of Major Stationary Sources and Major Modifications - Source Applicability
FACILITY	40CFR 63-A	43	Subpart A - General Provisions apply to all NESHAP affected sources
FACILITY	40CFR 63-LL.841	44	Subpart LL - Incorporation by Reference
S-00001/-/POT	40CFR 63-LL.843(a)(1)(i)	132	Emission Limits for Existing Sources - Total Fluoride Limit for Center-Worked Prebake One (CWPB1) Potlines
S-00003/-/GMS	40CFR 63-LL.843(b)	178	Emission Limits for

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S-00002/-/BAK	40CFR 63-LL.843 (c) (1)	159	Existing Sources - Paste Production Plants Emissions Limits for Existing Sources - Total Fluoride (TF) Limit for Anode Bake Furnaces
S-00002/-/BAK	40CFR 63-LL.843 (c) (2)	160	Emission Limits for Existing Sources - POM Limit for Anode Bake Furnaces
FACILITY	40CFR 63-LL.847 (b)	45	Compliance Provisions - Test Plan
S-00001/-/POT	40CFR 63-LL.847 (d) (1)	133	Performance Test Requirements - TF Emissions from Potlines
S-00001/-/POT	40CFR 63-LL.847 (d) (3)	134	Performance Test Requirements - Previous Control Device Tests
S-00002/-/BAK	40CFR 63-LL.847 (d) (4)	161, 162	Performance Test Requirements - TF and POM Emissions from Anode Bake Furnaces
S-00001/-/POT	40CFR 63-LL.847 (e) (1)	135	Compliance Provisions - Potline TF Equation
S-00002/-/BAK	40CFR 63-LL.847 (e) (3)	163	Compliance Provisions - Anode Bake Furnace TF Equation
S-00002/-/BAK	40CFR 63-LL.847 (e) (4)	164	Compliance Provisions - Anode Bake Furnace POM Equation
S-00001/-/POT	40CFR 63-LL.847 (e) (5)	136	Compliance Provisions - Calculation of Emission Rates
S-00001/-/POT	40CFR 63-LL.847 (e) (6)	137	Compliance Provisions - Calculation of Emission Rates
S-00002/-/BAK	40CFR 63-LL.847 (e) (7)	165	Compliance Provisions - Emission rate calculations
S-00003/-/GMS	40CFR 63-LL.847 (f)	179	Compliance Provisions - Paste Production Plants
S-00001/-/POT	40CFR 63-LL.847 (h) (1)	138, 139	Compliance provisions - selection of monitoring parameters
S-00002/-/BAK/SS78S	40CFR 63-LL.847 (h) (1)	172	Compliance provisions - selection of monitoring parameters
S-00003/-/GMS/SS100	40CFR 63-LL.847 (h) (2)	181, 182	Compliance provisions - selection of monitoring parameters
S-00001/-/POT	40CFR 63-LL.847 (h) (3)	140	Compliance provisions - selection of monitoring parameters
S-00002/-/BAK	40CFR 63-LL.847 (h) (3)	166	Compliance provisions - selection of monitoring parameters
S-00003	40CFR 63-LL.847 (h) (3)	175	Compliance provisions - selection of monitoring parameters



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S-00001/-/POT	40CFR 63-LL.848 (a)	141	Emission Monitoring Requirements - TF emissions from potlines
S-00002/-/BAK	40CFR 63-LL.848 (c)	167, 168	Emission Monitoring Requirements - TF and POM emissions from anode bake furnaces
S-00001/-/POT	40CFR 63-LL.848 (e) (1)	142	Emission Monitoring Requirements - reduced sampling frequency
S-00001/-/POT	40CFR 63-LL.848 (e) (2)	143	Emission Monitoring Requirements - reduced sampling frequency
S-00001/-/POT	40CFR 63-LL.848 (f) (1)	144	Emission Monitoring Requirements - monitoring parameters for emission control devices
S-00002/-/BAK	40CFR 63-LL.848 (f) (1)	169	Emission Monitoring Requirements - monitoring parameters for emission control devices
S-00003	40CFR 63-LL.848 (f) (2)	176, 177	Emission Monitoring Requirements - monitoring parameters for emission control devices
S-00001/-/POT	40CFR 63-LL.848 (g)	145	Emission Monitoring Requirements - visible emissions
S-00001/-/POT	40CFR 63-LL.848 (h)	146	Emission Monitoring Requirements - corrective action
S-00001/-/POT	40CFR 63-LL.848 (i)	147	Emission Monitoring Requirements - exceedances
S-00001/-/POT	40CFR 63-LL.848 (j)	148	Emission Monitoring Requirements - weight of aluminum and green anodes
S-00002/-/BAK	40CFR 63-LL.848 (j)	170	Emission Monitoring Requirements - weight of aluminum and green anodes
S-00001/-/POT	40CFR 63-LL.848 (k)	149	Emission Monitoring Requirements - accuracy and calibration
S-00001/-/POT	40CFR 63-LL.848 (l)	150	Emission Monitoring Requirements - alternative operating parameters
FACILITY	40CFR 63-LL.849 (a)	46	Test Methods and Procedures - listing of reference methods
S-00001/-/POT	40CFR 63-LL.849 (c)	151	Test Methods and Procedures - definition of potline
S-00001/-/POT	40CFR 63-LL.849 (d)	152	Test Methods and Procedures - potline

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FACILITY	40CFR 63-LL.849 (e)	47	manifolds for Method 14
S-00001/-/POT	40CFR 63-LL.850 (b)	153	Test Methods and Procedures - alternative test methods for TF or POM emissions
S-00001/-/POT	40CFR 63-LL.850 (c) (1)	154	Notification, Reporting, and Recordkeeping Requirements - performance test reports
S-00001/-/POT	40CFR 63-LL.850 (c) (2)	155	Notification, Reporting, and Recordkeeping Requirements - startup, shutdown, and malfunction plan and reports
FACILITY	40CFR 63-LL.850 (d)	48	Notification, Reporting, and Recordkeeping Requirements - excess emissions report
FACILITY	40CFR 63-LL.850 (e) (1)	49	Notification, Reporting, and Recordkeeping Requirements - recordkeeping
FACILITY	40CFR 63-LL.850 (e) (2)	50	Notification, Reporting, and Recordkeeping Requirements - recordkeeping
FACILITY	40CFR 63-LL.850 (e) (3)	51	Notification, Reporting, and Recordkeeping Requirements - recordkeeping
S-00001/-/POT	40CFR 63-LL.850 (e) (4)	156	Notification, Reporting, and Recordkeeping Requirements - recordkeeping
S-00002/-/BAK	40CFR 63-LL.850 (e) (4)	171	Notification, Reporting, and Recordkeeping Requirements - recordkeeping
S-00003/-/GMS	40CFR 63-LL.850 (e) (4)	180	Notification, Reporting, and Recordkeeping Requirements - recordkeeping
FACILITY	40CFR 63-RRR.1500 (b)	52	Applicability
FACILITY	40CFR 63-RRR.1501 (b)	53	Secondary Aluminum

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			NESHAP - Compliance dates for new/reconstructed sources
FACILITY	40CFR 63-RRR.1505 (c) (1)	54	Thermal Chip Dryer Emission Standards - THC
FACILITY	40CFR 63-RRR.1505 (c) (2)	55	Thermal Chip Dryer Emission Standards - D/F
FACILITY	40CFR 63-RRR.1505 (i)	56	Group 1 Furnace Emission Standards
M-00001/-/MHS/M0031	40CFR 63-RRR.1505 (i)	120, 121, 122	Group 1 Furnace Emission Standards
FACILITY	40CFR 63-RRR.1505 (j) (1)	57	Emission Standards - In-line Fluxer
FACILITY	40CFR 63-RRR.1505 (j) (2)	58	Emission Standards - In-line Fluxer
FACILITY	40CFR 63-RRR.1505 (k) (1)	59	Secondary Aluminum NESHAP - SAPU Emission Standards for PM
FACILITY	40CFR 63-RRR.1505 (k) (2)	60	Secondary Aluminum NESHAP - SAPU emission limit for HCl
FACILITY	40CFR 63-RRR.1505 (k) (3)	61	Secondary Aluminum NESHAP - SAPU emission limits for dioxin/furan (D/F)
M-00002	40CFR 63-RRR.1505 (k) (4)	125	Secondary Aluminum NESHAP - SAPU emission limits
FACILITY	40CFR 63-RRR.1510 (b)	62	Monitoring and Compliance Requirements - OM&M Plan
FACILITY	40CFR 63-RRR.1510 (s)	63	Site-specific requirements for secondary aluminum processing units
FACILITY	40CFR 63-RRR.1511 (a)	64	Site-specific test plan
A-00003/-/FBB	40CFR 63-RRR.1511 (b)	79	Initial Performance Test
FACILITY	40CFR 63-RRR.1511 (c)	65	Test Methods
FACILITY	40CFR 63-RRR.1511 (e)	66	Repeat Tests
M-00001	40CFR 63-RRR.1511 (f)	114	Testing of Representative Emission Units
A-00003/-/MH2	40CFR 63-RRR.1511 (g)	82	Establishment of Monitoring and Operating Parameter Values
FACILITY	40CFR 63-RRR.1512 (b)	67	Secondary Aluminum NESHAP - Performance Testing for Thermal Chip Dryers
M-00001/-/MHS	40CFR 63-RRR.1512 (e)	118	Performance Test and compliance demonstration requirements and procedures for Group 1 furnaces w/out



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FACILITY	40CFR 63- RRR.1512 (h) (2)	68	control devices In-line Fluxer emission of HCl based on flux injection rate.
FACILITY	40CFR 63-RRR.1512 (j)	69	Performance Test/Compliance Demonstration Requirements and Procedures - Secondary Aluminum Processing Unit
M-00001	40CFR 63-RRR.1512 (k)	115	Performance Test/Compliance Demonstration Requirements and Procedures - Feed/Charge Weight Measurement.
M-00002	40CFR 63-RRR.1512 (o)	126	Performance test/compliance demonstration requirements and procedures - Flux injection rate
M-00002	40CFR 63-RRR.1512 (r)	127	Performance test/continuous compliance requirements - labeling requirements
A-00003/-/FBB	40CFR 63-RRR.1513 (b)	80	Equations for Determining Compliance
C-00001/-/CM1	40CFR 63-RRR.1513 (d)	100	Equations for determining compliance - conversion of D/F measurements to TEQ units
M-00001	40CFR 63-RRR.1513 (e)	116, 117	Equations for Determining Compliance - Secondary Aluminum Processing Unit
FACILITY	40CFR 63-RRR.1515	70	Notifications
A-00001/-/HMO	40CFR 63-RRR.1515 (b)	78	Notifications - Notification of Compliance Status Report
FACILITY	40CFR 63-RRR.1516	71	Secondary Aluminum MACT Reports
FACILITY	40CFR 63-RRR.1517	72	Secondary Aluminum MACT Records
FACILITY	40CFR 63-ZZZZ	73	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 64	74	COMPLIANCE ASSURANCE MONITORING
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction



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FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	9	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	190	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	10	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	11	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2 (a)	12	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.2 (c) (17)	21	Surface Coating Exemption
FACILITY	6NYCRR 201-3.3 (a)	13	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	22, 75, 76	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.5 (a) (4)	14	General conditions
FACILITY	6NYCRR 201-6.5 (a) (7)	2	General conditions Fees
FACILITY	6NYCRR 201-6.5 (a) (8)	15	General conditions
FACILITY	6NYCRR 201-6.5 (c)	3	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.5 (c) (2)	4	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.5 (c) (3) (ii)	5	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.5 (d) (5)	16	Compliance schedules
FACILITY	6NYCRR 201-6.5 (e)	23	Compliance Certification
FACILITY	6NYCRR 201-6.5 (f) (6)	17	Off Permit Changes
FACILITY	6NYCRR 201-6.5 (g)	24	Permit shield
FACILITY	6NYCRR 201-7	77	Federally Enforceable Emissions Caps
S-00004/-/M16	6NYCRR 201-7	183	Federally Enforceable Emissions Caps
FACILITY	6NYCRR 202-1.1	18	Required emissions tests.
FACILITY	6NYCRR 202-2.1	6	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	7	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 209	191	Primary Aluminum Reduction Plants
FACILITY	6NYCRR 209.4	192	Emissions other than total fluorides.
FACILITY	6NYCRR 211.1	25	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	193	General Prohibitions - visible emissions limited.



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FACILITY	6NYCRR 212.10(c)(1)	32, 33, 34	NOx and VOC RACT required at major facilities
F-00001	6NYCRR 212.10(c)(1)	110, 111	NOx and VOC RACT required at major facilities
S-00005/-/PST	6NYCRR 212.10(c)(1)	184	NOx and VOC RACT required at major facilities
S-00005/-/PUN	6NYCRR 212.10(c)(1)	185	NOx and VOC RACT required at major facilities
W-00001/-/WWT	6NYCRR 212.10(c)(1)	188	NOx and VOC RACT required at major facilities
FACILITY	6NYCRR 212.10(c)(3)	35	NOx and VOC RACT required at major facilities
C-00001/I0030/CM1/C0030	6NYCRR 212.10(c)(3)	103	NOx and VOC RACT required at major facilities
S-00002/S0078/BAK/SS078	6NYCRR 212.10(c)(3)	173, 174	NOx and VOC RACT required at major facilities
FACILITY	6NYCRR 212.4(a)	26, 27, 194, 195	General Process Emission Sources - emissions from new sources and/or modifications
C-00001/I0029/CD1	6NYCRR 212.4(a)	101, 102	General Process Emission Sources - emissions from new sources and/or modifications
C-00002/-/CD2	6NYCRR 212.4(a)	107, 108, 109	General Process Emission Sources - emissions from new sources and/or modifications
M-00001	6NYCRR 212.4(a)	112	General Process Emission Sources - emissions from new sources and/or modifications
M-00002	6NYCRR 212.4(a)	123	General Process Emission Sources - emissions from new sources and/or modifications
W-00001/-/WWT	6NYCRR 212.4(a)	186, 187	General Process Emission Sources - emissions from new sources and/or modifications
FACILITY	6NYCRR 212.4(c)	28, 29	General Process Emission Sources - emissions from new processes and/or modifications
FACILITY	6NYCRR 212.5(d)	30	Applicable emission standards
A-00003/-/MH2	6NYCRR 212.5(d)	81	Applicable emission standards
M-00001	6NYCRR 212.5(d)	113	Applicable emission standards



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S-00002/-/BAK	6NYCRR 249.3 (a)	157, 158	BART Emission Limitation Requirements for Sources Each BART determination established by the Department will be submitted to the EPA for approval as a SIP revision. Air Quality Standards - Fluorides
FACILITY	6NYCRR 249.3 (f)	197	
FACILITY	6NYCRR 257-8	39	

Applicability Discussion:

Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

ECL 19-0301

This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

6 NYCRR 200.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6 NYCRR 200.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6 NYCRR 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.

6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR 201-3.3 (a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for



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a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-6

This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.5 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.5 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.5 (a) (8)

This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.5 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.5 (c) (2)

This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.5 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.



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6 NYCRR 201-6.5 (d) (5)

This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6 NYCRR 201-6.5 (e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 201-6.5 (f) (6)

This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

6 NYCRR 201-6.5 (g)

Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the federally enforceable portion of the permit, unless they are specifically addressed by it.

6 NYCRR 202-1.1

This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

6 NYCRR 202-2.1

Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calENDar year.

6 NYCRR 202-2.5

This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

6 NYCRR 211.2

This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

40 CFR Part 68

This Part lists the regulated substances and there applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances.

40 CFR Part 82, Subpart F

Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act AmENDments of 1990. This subpart applies to any person servicing, maintaining, or



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repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

Facility Specific Requirements

In addition to Title V, ALCOA MASSENA OPERATIONS (WEST PLANT) has been determined to be subject to the following regulations:

40 CFR 52.21

This citation applies to facilities that are subject to Prevention of Significant Deterioration provisions;

ie: facilities that are located in an attainment area and that emit pollutants which are listed in

40 CFR 52.21(b)(23)(i) .

40 CFR 52.21 (i) (1)

Any stationary source or modification to which the requirements of this regulation apply cannot begin construction without a valid permit.

40 CFR 63.1500 (b)

This condition lists the pieces of equipment that will have requirements within this regulation for facilities that emit more than 25 tons per year of hazardous air pollutants (HAPs) or 10 tons per year of a single HAP.

40 CFR 63.1501 (b)

This condition sets the compliance timelines for new and/or reconstructed sources.

40 CFR 63.1505 (c) (1)

This condition limit the Total Hydrocarbon emissions from Chip Dryers.

40 CFR 63.1505 (c) (2)

This condition sets the limits for Dioxin and Furan emissions from the chip dryers.

40 CFR 63.1505 (i)

This sets the emission limits from a group 1 furnace . These limits are the standard against which the calculated emissions emitted from the Secondary Aluminum Processing Unit (SAPU) are held to.



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40 CFR 63.1505 (j) (1)

This condition states a facility, with an in-line fluxer using a flux that produces hazardous air pollutant emissions, shall not emit more than 0.04 pounds of Hydrogen Chloride (HCl) per ton of aluminum fed to the furnace.

40 CFR 63.1505 (j) (2)

This condition states a facility with an in-line fluxer using a flux that produces hazardous air pollutants, shall not emit more than 0.01 pounds of Particulate Matter (PM) per ton of aluminum fed to the furnace.

40 CFR 63.1505 (k) (1)

This condition sets the emission limit of Particulates from a secondary aluminum processing unit (SAPU). The calculation allows the emissions to be averaged across the equipment included in the SAPU.

40 CFR 63.1505 (k) (2)

This condition sets the emission limit of Hydrogen Chloride (HCl) from a secondary aluminum processing unit (SAPU). The calculation allows the emissions to be averaged across the equipment included in the SAPU.

40 CFR 63.1505 (k) (3)

This condition sets the emission limit of Dioxins and Furans (D/F) from a secondary aluminum processing unit (SAPU). The calculation allows the emissions to be averaged across the equipment included in the SAPU.

40 CFR 63.1505 (k) (4)

This allows the facility to show the SAPU is in compliance by showing each unit is in compliance with the individual unit emission limits.

40 CFR 63.1510 (b)

This condition states a facility must have a written plan to operate and maintain all the equipment properly and it must be approved by the department.

40 CFR 63.1510 (s)

This condition lists some of the information that can, and cannot, be included in the operation and maintenance plan for a Secondary Aluminum Processing Unit (SAPU).

40 CFR 63.1511 (a)

This conditions states the facility must show the Department how they are going to test the equipment before they do it.

40 CFR 63.1511 (b)



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This condition tells how the facility must do the initial pollutant testing on the exhaust from the equipment.

40 CFR 63.1511 (c)

This condition states which test method must be used for each pollutant being tested.

40 CFR 63.1511 (e)

This condition states every facility emitting more than 25 tons per year of hazardous air pollutants (HAPs) or 10 tons per year of a single HAP must test its equipment every 5 years.

40 CFR 63.1511 (f)

This condition states if a facility has identical equipment that is operated the same way, then only one has to be tested. That data can be used to represent the emissions from each similar unit.

40 CFR 63.1511 (g)

This condition states minimum and/or maximum operation parameters must be established using information from the performance stack tests.

40 CFR 63.1512 (b)

This condition requires performance testing of the control device.

40 CFR 63.1512 (e)

This condition outlines the requirements for testing to show compliance with emission limits.

40 CFR 63.1512 (h) (2)

This condition allows the facility to assume all reactive flux is emitted as HCl. That way, emission testing for HCl is not required.

40 CFR 63.1512 (j)

This condition states each furnace that melts scrap aluminum mixed with foreign materials, or clean aluminum with reactive fluxing, must test for Particulate Matter (PM) and Hydrogen Chloride (HCl), and Dioxins and Furans (D/F). A furnace that melts only clean aluminum and in-line fluxers, must test for PM and HCl.

40 CFR 63.1512 (k)

This condition states the weight measurement of the amount of aluminum melted in the furnace or the amount of aluminum produced per fluxer can be used to show compliance with emission limits.

40 CFR 63.1512 (o)

This section states the procedures to establish an operating parameter value or range for the total reactive



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chlorine flux injection rate.

40 CFR 63.1512 (r)

The condition requires the facility report the compliance status of the effected sources for compliance with the labeling procedures.

40 CFR 63.1513 (b)

This condition states the equation shown must be used to show compliance with the emission limits for Particulate Matter, Hydrogen Chloride, and Dioxins/Furans.

40 CFR 63.1513 (d)

This condition refers to the material referenced in 1502(a) of this regulation. The referenced materials gives the owner/operator the procedures and equation to determine TEQ units from direct Dioxin and Furan Measurements.

40 CFR 63.1513 (e)

This condition states the facility must use these equations to determine if a secondary aluminum processing unit (SAPU) is in compliance with the emission limits for Particulate Matter, Hydrogen Chloride, and Dioxins/Furans. Or, a facility can show the SAPU is in compliance with the emission limits for new units.

40 CFR 63.1515

Conditions under this regulation incorporate the requirements for various notifications to be submitted by the permittee for the Secondary Aluminum Production MACT.

40 CFR 63.1515 (b)

This condition requires the owner/operator to submit a compliance status report to the Department. It outlines all the information to be submitted in the report to show compliance.

40 CFR 63.1516

Conditions under this section of the Secondary Aluminum MACT outline the reports required from subject facilities.

40 CFR 63.1517

Conditions under this section of the secondary aluminum MACT outline the records that must be kept by subject facilities.

40 CFR 63.841

This condition lists the material used in the regulation that has been incorporated by reference.



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40 CFR 63.843 (a) (1) (i)

This condition states a Center Worked Pre-Bake (CWPB1) potline cannot release more than 1.9 pounds of fluorides per ton of aluminum produced.

40 CFR 63.843 (b)

This condition establishes that a dry coke scrubber must be used for paste production plants to control Polycyclic Organic Matter emissions and to what standards the control system should be designed and operated to.

40 CFR 63.843 (c) (1)

This condition states the total fluoride emissions from an anode bake furnace cannot be more than 0.20 pounds per ton of unbaked anode going into the furnace.

40 CFR 63.843 (c) (2)

This condition states the release of polycyclic organic matter (POM) cannot be more than 0.18 pounds per ton of unbaked anode going into the bake furnace.

40 CFR 63.847 (b)

This condition requires a test plan specific to this facility for emission testing of the primary aluminum production facility.

40 CFR 63.847 (d) (1)

This condition establishes how a facility will measure and calculate Total Fluoride (TF) emissions from the potline(s).

40 CFR 63.847 (d) (3)

This condition says the facility must use the average of all performance test runs conducted on the primary control device for a potline or bake furnace if more than one test has been done within a 12 month period.

40 CFR 63.847 (d) (4)

This condition states the facility must test the exhaust gas coming out of the device used to reduce pollutant emissions from the anode bake furnace(s) for polycyclic organic matter (POM) and for Total Fluorides (TF). There must be three or more tests per year, and the results will be averaged together.

40 CFR 63.847 (e) (1)

This condition lists the equations to be used to determine the emission rate of Total Fluorides from each potline.

40 CFR 63.847 (e) (3)



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This condition states that after testing the exhaust gas of the anode bake furnace, this equation must be used to compute the amount of Total Fluoride emitted per amount of unbaked anode.

40 CFR 63.847 (e) (4)

This condition states that after testing the exhaust gas of the anode bake furnace, this equation must be used to compute the amount of Polycyclic Organic Matter (POM) emitted per amount of unbaked anode.

40 CFR 63.847 (e) (5)

This condition states the facility shall install scales to measure weight of the aluminum produced and the weight of the green (unbaked) anode material placed in the furnace. These scales must be calibrated and properly operated according to the manufacturer's specifications.

40 CFR 63.847 (e) (6)

This condition states the facility must determine the aluminum production rate in pounds per hour for the calendar month that includes the 3 runs of the performance test. This information will be used along with the three runs of the performance test to determine if they are in compliance with the emission limits for Total Fluorides (TF) and Polycyclic Organic Matter (POM)

40 CFR 63.847 (e) (7)

This condition states the facility must determine the rate, in pounds per hour, the unbaked (green) anode is put into the bake furnace during the calendar month the performance tests were done. This information will be used along with the tests of the exhaust gas to determine if the facility is in compliance with the emission limits for Total Fluorides (TF) and Polycyclic Organic Matter (POM).

40 CFR 63.847 (f)

This condition establishes how initial compliance will be determined on new and existing paste production plants.

40 CFR 63.847 (h) (1)

This condition says the facility shall determine monitoring parameters that will ensure proper operation of the control devices for the potlines and anode bake furnaces.

40 CFR 63.847 (h) (2)

This condition requires the facility to determine the proper operating parameters on the control device for the paste production plant to ensure proper control of Polycyclic Organic Matter.

40 CFR 63.847 (h) (3)

This condition says the facility has the option of re-determining the operating limits on the control devices and to submit them to the Department for approval. The new limits become effective upon approval of the Department.



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40 CFR 63.848 (a)

This condition describes the monitoring frequency the facility shall use to show compliance with the Total Fluoride emission limits from the potlines.

40 CFR 63.848 (c)

This condition states the facility must test the exhaust gas of each anode bake furnace for Polycyclic Organic Matter and Total Fluorides at least three times per year to show compliance with the emission limit. The average of all tests shall be used to determine compliance.

40 CFR 63.848 (e) (1)

This condition states a facility can reduce the frequency of testing for Total Fluorides (TF) from the roof vents above the potlines if they can show they are always well below the emission limits.

40 CFR 63.848 (e) (2)

This condition states a facility can request to have the Total Fluoride testing frequency reduced only if the request includes a test plan, to be approved by the DEC, for the alternate test schedule.

40 CFR 63.848 (f) (1)

This condition sets forth what parameters of each control device shall be monitored to ensure compliance with the emission limits of Fluorides and POMs.

40 CFR 63.848 (f) (2)

This condition states a device to measure the air flow and coke flow on the coke scrubbers shall be installed to show that the scrubber is operating properly to control Polycyclic Organic Matter emissions.

40 CFR 63.848 (g)

This condition says the facility shall visually inspect the emissions from the stacks of the primary control devices daily for emissions that may indicate a problem.

40 CFR 63.848 (h)

This condition says that the facility must take corrective action according to the start up, shutdown, malfunction plan when a problem is found

40 CFR 63.848 (i)

This condition says that there is an allowance of six exceedances of monitoring parameters associated with a given control device per 6 month reporting period. Any exceedance beyond six is considered a violation.

40 CFR 63.848 (j)

This condition states scales must be installed to accurately measure aluminum produced and unbaked (green) anode introduced to the bake furnace. The weights will be used to determine compliance with



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the emission limits.

40 CFR 63.848 (k)

This condition ensures the measuring devices used to show compliance are accurate.

40 CFR 63.848 (l)

This condition states a facility can submit a written request to monitor different operating parameters of a device that reduces pollutant emissions than those listed in the regulation.

40 CFR 63.849 (a)

This condition lists the test methods the facility is allowed to use to measure emissions.

40 CFR 63.849 (c)

This condition clarifies the use of the word "potroom" and "potroom group" in reference method 14 means "potline" for the purposes of this regulation.

40 CFR 63.849 (d)

This condition tells how to properly install the ductwork for method 14 testing on the potlines.

40 CFR 63.849 (e)

This condition outlines the way a facility can show an alternative test method is equivalent to the reference methods.

40 CFR 63.850 (b)

This condition explains how the facility shall report the initial and subsequent performance tests.

40 CFR 63.850 (c) (1)

This condition says the facility must outline the procedures in a plan to correct any problems with the operation and control of the control devices.

40 CFR 63.850 (c) (2)

This condition says the facility must keep records of the steps taken within the Startup, Shutdown, and Malfunction plan to correct any problems with the equipment and report any actions taken outside the plan.

40 CFR 63.850 (d)

This condition says the facility must report emissions in excess of the established limits every six months or every 3 months if excess emissions require the increased reporting.



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40 CFR 63.850 (e) (1)

This condition says all records must be maintained for 5 years.

40 CFR 63.850 (e) (2)

This condition establishes the choices of record keeping medium that can be used to keep records.

40 CFR 63.850 (e) (3)

This condition says reports can be submitted on paper or computer disk.

40 CFR 63.850 (e) (4)

This condition lists what records must be kept by the facility.

40 CFR Part 63, Subpart A

The General Provisions in 40CFR63, Subpart A apply to facilities subject to other National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) regulations in 40 CFR 63. These rules are also known as MACT rules since they are based on attaining Maximum Achievable Control Technology. Each MACT rule has a table or section that describe which portions of the General Provisions apply to facilities covered by that particular rule and which portions are overridden or do not apply. Note that NESHAP regulations found in 40CFR61 do **not** trigger the general provisions of 40CFR63.

40 CFR Part 63, Subpart ZZZZ

40 CFR Part 64

The federal Compliance Assurance Monitoring (CAM) rule, 40 CFR Part 64, requires monitoring of control device, capture system, and/or process parameters to provide a reasonable assurance of compliance with emission limitations or standards. It applies to emission units that use a control device to comply with certain standards and limitations and that have potential pre-control device emissions equal to or greater than a major source threshold.

Acid Rain program requirements; stratospheric ozone protection requirements; post-1990 New Source Performance Standards, Emission Guidelines, and National Emission Standards for Hazardous Air Pollutants; and some other limitations are exempt from CAM. However, many of the exempt requirements are subject to less stringent periodic monitoring under 40 CFR Part 70 and 6NYCRR Subpart 201-6.

6 NYCRR 201-3.2 (c) (17)

This condition lists the exemption from surface coating requirements when less than 25 gallons per month are used at the facility.



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6 NYCRR 209.4

This condition says the primary aluminum production is subject to this regulation. However, the primary aluminum MACT is more restrictive.

6 NYCRR 211.1

This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

6 NYCRR 212.10 (c) (1)

Reasonably available control technology compliance plans for major facilities. The compliance plan must identify reasonably available control technology (RACT) for each emission point which emits nitrogen oxides for major nitrogen oxide facilities or volatile organic compounds for major volatile organic compound facilities. The compliance plan must identify the emission points which do not employ reasonably available control technology (RACT), and a schedule for implementation of RACT must be included in the plan.

6 NYCRR 212.10 (c) (3)

Acceptable NOx RACT compliance plans submitted to the Department will become part of the State SIP.

6 NYCRR 212.4 (a)

This rule requires compliance with the degree of control specified in Tables 2, 3 and 4 for new (after July 1, 1973) process emission sources.

6 NYCRR 212.4 (c)

This rule requires existing sources (in operation after July 1, 1973) of solid particulates with environmental rating of B or C which are not subject to Table 5 "Processes for which Permissible Emission Rate is Based on Process Weight, to be limited to an particulate emission rate not to exceed 0.05 grains per dry standard cubic foot.

6 NYCRR 212.5 (d)

This section specifies that if best available control technologies (BACT) are implemented the commissioner may specify, under certain situations, a less restrictive emission rate.

6 NYCRR 212.6 (a)

This rule specifies an opacity limitation of less than 20% for any six consecutive minute period for all process emission sources.

6 NYCRR 212.9 (b)

This section refers to Table 2 which specifies the degree of control required for Gases and Liquid



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Particulate Emissions (Environmental Rating of A, B, C or D) and Solid Particulate Emissions (Environmental Rating A or D) but excluding Volatile Organic Compound Emissions in the New York City Metropolitan Area.

6 NYCRR 212.9 (d)

6 NYCRR 225-1.2 (d)

The sulfur-in-fuel limitations for residual and distillate oil and for solid fuel are listed in Tables 1,2 and 3 or 6 NYCRR Part 225-1.2(c), (d) and (e)

6 NYCRR 225-1.7 (c)

This regulation requires that measurements be made daily of the rate of each fuel burned, the gross heat content and ash content of each fuel burned (determined at least once per week), and the average electrical output (daily) and hourly generation rate.

6 NYCRR 225-1.7 (d)

This regulation requires that data collected pursuant to 6 NYCRR Part 225-1.7 be tabulated and summarized in a form acceptable to the commissioner, and must be retained for at least three years.

6 NYCRR 225-1.7 (e)

This regulation requires source owners subject to 6 NYCRR Part 225-1 to submit a written report of the fuel sulfur content exceeding the applicable sulfur-in-fuel limitation, or of measured emissions exceeding the applicable equivalent emission rate, and the nature and cause of such excesses if known, for the calendar quarter

6 NYCRR 225-1.8 (a)

Upon request the owner or operator of a facility which purchases and fires coal or oil shall submit reports to the commissioner containing a fuel analysis, information on the quantity of the fuel received, burned, and results of any stack sampling, stack monitoring and any other procedures to ensure compliance with the provisions of 6 NYCRR Part 225-1. All records shall be available for a minimum of three years

6 NYCRR 225-1.8 (d)

This requires that sampling, compositing and analysis of fuel samples must be done in accordance with methods acceptable to the commissioner.

6 NYCRR 227.2 (b) (1)

This regulation is from the 1972 version of Part 227 and still remains as part of New York's SIP. The rule establishes a particulate limit of 0.10 lbs/mmBtu based on a 2 hour average emission for any oil fired stationary combustion installation.



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6 NYCRR 227-1.3 (a)

This regulation prohibits any person from operating a stationary combustion installation which emits smoke equal to or greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.

6 NYCRR 227-1.4 (a)

Subdivisions (a) and (f) of this section (227-1.4) have not been approved by EPA and have not been included in the NYS SIP.

6 NYCRR 227-1.4 (b)

This regulation requires the specific contents of excess emissions reports for opacity from facilities that employ continuous opacity monitors (COMs).

6 NYCRR 227-1.6

This condition allows the Department to shut down and seal a facility from operating when the unit is out of compliance.

6 NYCRR 227-1.7

This condition requires emission data be given to the Department when requested.

6 NYCRR 227-2.4 (b) (1)

NOx emission limits for large boilers.

6 NYCRR 231-11.2 (b)

This subdivision is referred to as the "Reasonable Possibility" provisions. This citation lists the record keeping requirements for insignificant modifications that are less than 50% of the applicable significant project threshold including excluded emissions as defined in Part 231-4.1(b)(40)(i)(c).

6 NYCRR 231-2.2 (d) (3)

The provisions of Subpart 231-2 apply to new or modified major facilities. The contaminants of concern state-wide are nitrogen oxides and volatile organic compounds since New York State is located in the ozone transport region and because there are ozone non-attainment areas within the state. In the New York City metropolitan area, carbon monoxide is also a non-attainment contaminant. In addition, particulate matter less than 10 microns in size (PM-10) is a non-attainment contaminant in Manhattan County.

The purpose of Section 231-2.2 is to define what new or modified facilities are subject to the



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requirements set forth in the other sections of the rule. The specific applicability exemptions to Subpart 231-2 are set forth in subsection (d).

6 NYCRR 249.3 (a)

This condition requires the use of Best Available Retrofit Technology to control emissions of visibility reducing contaminants.

6 NYCRR 249.3 (f)

This condition set the compliance date for State and Federal enforceability for the BART program.

6 NYCRR Part 209

This condition acknowledges the more stringent requirements of 40 CFR 63 subpart LL apply to this facility.

6 NYCRR Part 226

This regulation specifies the general requirements, equipment specifications and operating requirements for open-top vapor, conveyORIZED and cold cleaning degreasers.

6 NYCRR Subpart 201-7

This regulation sets forth an emission cap that cannot be exceeded by the facility.

6 NYCRR Subpart 257-8

This regulation sets limits on the amount of fluoride that is found in forage for consumption.

Non Applicability Analysis

List of non-applicable rules and regulations:

Location Facility/EU/EP/Process/ES	Regulation	Short Description
FACILITY	40 CFR Part 52, Subpart A	Prevention of Significant Deterioration

Reason: The net emissions increases for the Alcoa Modernization project are outlined below:



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- NOx = -10.0 tpy
- SO2 = -0.5 tpy
- Total Fluoride = -4.2 tpy
- PM = -669.2 tpy
- PM-10 = -181.6 tpy
- PM-2.5 = -370.2 tpy
- CO = -8,049.8 tpy

Since all net emissions increases are less than the significant project threshold the Prevention of Significant Deterioration (PSD) requirements of 40 CFR 52.21 do not apply to this project.

FACILITY	40 CFR 52.21	Significant Deterioration
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S-00003/S0100/GMS/SS100	6 NYCRR 212.10 (f)	NOx and VOC RACT required at major facilities
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Reason: The emissions of volatile organic compounds (VOC) from the Greenmill Petroleum Coke Dry Scrubber (Emission Unit - S-00003; Emission Source - SS100) are less than 3.0 lb/hr. Therefore the reasonably available control technology (RACT) requirements for VOC contained in 6 NYCRR Part 212.10(f) do not apply to this emission source. Emissions of polycyclic organic matter (POM) are not considered VOC for the purposes of this RACT determination.

M-00001	6 NYCRR 212.4 (c)	General Process Emission Sources - emissions from new processes and/or modifications
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Reason: This emission unit will be complying with the particulate matter (PM) emission limits contained in the Secondary Aluminum Production NESHAP (40 CFR 63 Subpart RRR) and thus is exempt from the PM limits codified at 6 NYCRR Part 212.4(c) as allowed for at 6 NYCRR Part 212.5(d).

M-00002	6 NYCRR 212.4 (c)	General Process Emission Sources - emissions from new processes and/or modifications
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Reason: This emission unit will be complying with the particulate matter (PM) emission limits contained in the Secondary Aluminum Production NESHAP (40 CFR 63 Subpart RRR) and thus is exempt from the PM limits codified at 6 NYCRR Part 212.4(c) as allowed for at 6 NYCRR Part 212.5(d).

B-00001/-/OIL	6 NYCRR 225-1.7 (b)	Emission and fuel
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S-00002/-/BAK/SS78S	172	record keeping/maintenance procedures
S-00003/-/GMS/SS100	181	record keeping/maintenance procedures
S-00003/-/GMS/SS100	182	record keeping/maintenance procedures
S-00001/-/POT	140	record keeping/maintenance procedures
S-00002/-/BAK	166	record keeping/maintenance procedures
S-00003	175	record keeping/maintenance procedures
S-00001/-/POT	141	intermittent emission testing
S-00002/-/BAK	167	intermittent emission testing
S-00002/-/BAK	168	intermittent emission testing
S-00001/-/POT	144	record keeping/maintenance procedures
S-00002/-/BAK	169	record keeping/maintenance procedures
S-00003	176	record keeping/maintenance procedures
S-00003	177	record keeping/maintenance procedures
S-00001/-/POT	145	record keeping/maintenance procedures
S-00001/-/POT	148	record keeping/maintenance procedures
S-00002/-/BAK	170	record keeping/maintenance procedures
FACILITY	48	record keeping/maintenance procedures
FACILITY	49	record keeping/maintenance procedures
FACILITY	50	record keeping/maintenance procedures
FACILITY	51	record keeping/maintenance procedures
S-00001/-/POT	156	record keeping/maintenance procedures
S-00002/-/BAK	171	record keeping/maintenance procedures
S-00003/-/GMS	180	record keeping/maintenance procedures
FACILITY	54	intermittent emission testing
FACILITY	55	intermittent emission testing
FACILITY	56	intermittent emission testing
M-00001/-/MHS/M0031	120	intermittent emission testing
M-00001/-/MHS/M0031	121	intermittent emission testing
M-00001/-/MHS/M0031	122	intermittent emission testing
FACILITY	57	intermittent emission testing
FACILITY	58	intermittent emission testing
FACILITY	66	record keeping/maintenance procedures
FACILITY	67	record keeping/maintenance procedures
FACILITY	68	record keeping/maintenance procedures
FACILITY	69	record keeping/maintenance procedures
M-00002	127	record keeping/maintenance procedures
A-00001/-/HMO	78	record keeping/maintenance procedures
FACILITY	71	record keeping/maintenance procedures
FACILITY	74	record keeping/maintenance procedures
FACILITY	5	record keeping/maintenance procedures
FACILITY	23	record keeping/maintenance procedures
S-00004/-/M16	183	intermittent emission testing
FACILITY	6	record keeping/maintenance procedures
FACILITY	191	record keeping/maintenance procedures
FACILITY	32	intermittent emission testing
FACILITY	33	intermittent emission testing
FACILITY	34	intermittent emission testing
F-00001	111	record keeping/maintenance procedures
S-00005/-/PST	184	monitoring of process or control device parameters as surrogate
S-00005/-/PUN	185	intermittent emission testing
W-00001/-/WWT	188	record keeping/maintenance procedures
FACILITY	35	record keeping/maintenance procedures
C-00001/I0030/CM1/C0030	103	record keeping/maintenance procedures
S-00002/S0078/BAK/SS078	173	record keeping/maintenance procedures
S-00002/S0078/BAK/SS078	174	record keeping/maintenance procedures
FACILITY	26	record keeping/maintenance procedures
FACILITY	27	intermittent emission testing
FACILITY	194	intermittent emission testing
FACILITY	195	intermittent emission testing
C-00001/I0029/CD1	101	intermittent emission testing
C-00001/I0029/CD1	102	monitoring of process or control device parameters as surrogate
C-00002/-/CD2	107	intermittent emission testing



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C-00002/-/CD2	108	intermittent emission testing
C-00002/-/CD2	109	intermittent emission testing
M-00001	112	intermittent emission testing
M-00002	123	intermittent emission testing
W-00001/-/WWT	186	intermittent emission testing
W-00001/-/WWT	187	intermittent emission testing
FACILITY	28	record keeping/maintenance procedures
FACILITY	29	intermittent emission testing
FACILITY	30	work practice involving specific operations
A-00003/-/MH2	81	record keeping/maintenance procedures
M-00001	113	record keeping/maintenance procedures
M-00002	124	record keeping/maintenance procedures
FACILITY	31	monitoring of process or control device parameters as surrogate
C-00001/-/CD1	99	record keeping/maintenance procedures
S-00001/-/POT	129	record keeping/maintenance procedures
B-00001/-/OIL	87	monitoring of process or control device parameters as surrogate
B-00001/-/OIL	88	record keeping/maintenance procedures
B-00001/-/OIL	90	record keeping/maintenance procedures
B-00001/-/OIL	91	record keeping/maintenance procedures
P-00001/-/PWS	128	record keeping/maintenance procedures
FACILITY	37	intermittent emission testing
FACILITY	36	monitoring of process or control device parameters as surrogate
B-00001/-/OIL	93	monitoring of process or control device parameters as surrogate
B-00001/-/OIL	198	monitoring of process or control device parameters as surrogate
B-00001/-/OIL	94	record keeping/maintenance procedures
FACILITY	196	intermittent emission testing
M-00001/-/MHS/M0031	119	record keeping/maintenance procedures
C-00001	96	intermittent emission testing
C-00001	97	intermittent emission testing
C-00002	104	intermittent emission testing
C-00002	105	intermittent emission testing
FACILITY	38	monitoring of process or control device parameters as surrogate
B-00001	85	intermittent emission testing
B-00001	86	intermittent emission testing
B-00001/-/OIL	95	monitoring of process or control device parameters as surrogate
S-00001/-/POT	130	intermittent emission testing
S-00001/-/POT	131	intermittent emission testing
S-00002/-/BAK	157	intermittent emission testing
S-00002/-/BAK	158	intermittent emission testing
FACILITY	197	record keeping/maintenance procedures
FACILITY	39	record keeping/maintenance procedures

Basis for Monitoring

Many of the conditions in this permit just lists the applicable emission limit as set forth in the regulations. The potential to emit as many of the processes would normally operate would not emit above thresholds that would require controls be put on. The following conditions were written in case there was an operational or process change that would increase the emissions of regulated contaminants above the thresholds that would require control: Conditions; 12 - 14, 29- 33, 39, 51, 53, 61, 67- 69, 71, 75, 116, 195, 196, 198, 199, 200, 206, 207, and 210-213.

Condition 21: In order for the surface coating operation to remain exempt, total usage must remain below 25 gallons per month.



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Condition #28: In order to show compliance with the particulate limit in 6 NYCRR part 212, all sources that employ particulate control devices shall be operated and maintained according to the Operation and Maintenance plan submitted to the Department.

Condition #29: The listed sources, under normal operating procedures, are in compliance with the particulate limit in 6 NYCRR part 212.

Condition #31: The listed sources are subject to the opacity limit and are able to meet it under normal operationing procedures.

Condition #39: In order to show compliance with the Total Fluoride limit in and on forage as set forth in 6 NYCRR 257-8, Alcoa shall do testing and reporting in accordance with the "Work/Quality Assurance Project Plan- Sampling and Analysis for Fluoride in Vegetation" dated May 5, 1999.

40 CFR 63, Subpart LL Primary Aluminum Reduction: This regulation outlines the ways the facility must show compliance with the emission limits for Fluorides and Polycyclic Organic Matter (POMs).

40 CFR 63, subpart RRR Secondary Aluminum Production: This regulations outlines the ways the facility must show compliance with the emission limits of HCl, D/F, particulates and THC in the secondary Aluminum production units.

Condition #36, 83, 84, 87-94, 198 : When firing oil, these sources must comply with these conditions to ensure compliance with the particulate emission limits and the sulfur in fuel limits.

Condition 37: Under the current configuration and with proper operation, the facility is able to meet the 0.10 lbs of particulates per mmBtu on a 2 hour average.

Conditions 38, 85, 86, 95, 130, 131, 157, 158- 6 NYCRR Part 249-BART-The listed sources were found to have BART level control for the listed contaminants.

Condition #74- 40 CFR 64 Compliance Assurance Monitoring- The listed sources are subject to CAM and will show compliance using the approved CAM plan.

Condition #97: The facility will test at the request of the Department to show emission unit C-00001 will not emit more than 9.1 pounds per hour of oxides of nitrogen under normal operating conditions which will eliminate the applicability of 6 NYCRR Part 231.

Condition #96: The facility will test at the request of the Department to show emission unit C-00001 will not emit more than 9.1 pounds per hour of Volatile Organic Compounds under normal operating conditions which will eliminate the applicability of 6 NYCRR Part 231.

Condition #98: The facility will test at the request of the Department to show emission unit C-00001 will not emit more than 9.1 pounds per hour of oxides of nitrogen under normal operating conditions which will eliminate the applicability of 40 CFR 52.21(i)(1), subpart A.

Condition #102: The facility must submit a Best Available Control Technology (BACT) analysis for the emissions of Carbon Monoxide from emission process CD1 in order to show compliance with 6 NYCRR part 212.5(d). Otherwise, it must apply control or reduce emissions below 10 pounds per



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hour.

Condition #103: The current equipment configuration was found to be "RACT" for NO_x emissions from emission source C0030. When new technology becomes available, or if current technology becomes cheaper, another NO_x RACT analysis should be done.

Condition #105-6 NYCRR Part 231-2.2(d)(3): Testing shall be completed at the request of the Department to show the emission rate of VOC is less than 9.1 pounds per hour from emission unit C-00002 under normal operating conditions in order to avoid applicability of 6 NYCRR 231 New Source Review (NSR).

Condition #104- 6 NYCRR Part 231-2.2(d)(3): Testing shall be completed at the request of the Department to show the emission rate of NO_x is less than 9.1 pounds per hour from emission unit C-00002 under normal operating conditions in order to avoid applicability of 6 NYCRR 231 New Source Review (NSR).

Condition #106: Testing shall be completed at the request of the Department to show the emission rate of Particulates is less than 3.4 pounds per hour from emission unit C-00002 under normal operating conditions in order to avoid applicability of 40 CFR 52.21(i)(1).

Condition #35- 6 NYCRR 212.10(c)(3): The listed emission units all employ low NO_x burners which is considered RACT for the emission of NO_x.

Condition #128- 6 NYCRR 226.3(a): Small cold cleaning degreasers are subject to the provisions of Part 226 unless they qualify as exempt under the 226.7.

Condition 119: The installation of the new furnace requires tracking of the emission in order to ensure the numbers used for the NSR review are correct and will not require further permitting.

Condition #173 & #174- 6 NYCRR Part 212.10(c)(3): A RACT analysis was completed in 1998 and it was shown that additional VOC or NO_x controls were technically infeasible. The alumina dry scrubber is considered RACT for VOC control and will be operated and reported under the guidelines of 40 CFR 63 subpart LL for primary aluminum production.

Condition 183: This condition caps the particulates emissions on source M16, in order to keep it out of PSD applicability.

Condition #183- 6 NYCRR 201-7: The particulate emissions from Process M16 (spent potliner Handling) are limited to less than 15 tons per year to avoid 40 CFR 52.21 applicability. The stack test data, number of hours it is operated, and the baghouse hourly use and parameters are enough to ensure compliance with the limit.

Condition #191: 6 NYCRR Part 209 is less stringent than 40 CFR 63, subpart LL for primary aluminum reduction facilities. As long as the facility is in compliance with subpart LL, it is in compliance with part 209.

Condition 196: This condition requires the combustion installation at the facility to limit emissions of NO_x to 0.30 lbs/mmBtu. The current configuration with low NO_x burners and Flue Gas recirculation is considered RACT and BART.

Condition #30- 6 NYCRR 212.5(d): The Department has approved a BACT analysis for the emission of



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Carbon Monoxide, Carbonyl Sulfide, and Sulfur Dioxide. The facility shall not use coke in the anode production with a sulfur content greater than 2.5 % by weight. The % sulfur shall be an annual average rolled monthly based on supplier test data. This will result in a significant reduction in the PTE of COS and SO₂. The control of Carbon Monoxide was found to be infeasible technologically and financially.