

**Iowa Department of Natural Resources
Title V Operating Permit**

Name of Permitted Facility: Nichols Aluminum – Casting LLC

**Facility Location: 2101 J.M. Morris Blvd
Davenport, IA 52802**

Air Quality Operating Permit Number: 03-TV-017R1

Expiration Date: June 28, 2014

Permit Renewal Application Deadline: December 23, 2013

EIQ Number: 92-4290

Facility File Number: 82-01-089

Responsible Official

Name: Bill Hebert

Title: Plant Manager

Mailing Address: 2101 J.M. Morris Blvd, Davenport, IA 52802

Phone #: 563-336-4830

Permit Contact Person for the Facility

Name: Gary Stimpson

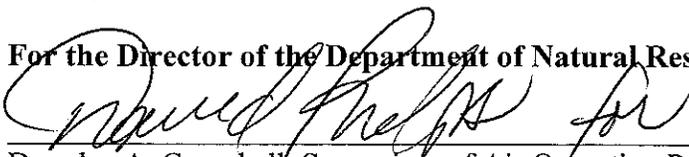
Title: Division Environmental Manager

Mailing Address: 2101 J.M. Morris Blvd, Davenport, IA 52802

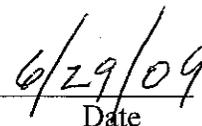
Phone #: 563-324-2121 x5260

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit. Two Title V permits are being issued for the Nichols Aluminum – Casting (Plant No. 82-01-089) and Nichols Aluminum – Davenport facilities. These two facilities are considered one stationary source by the IDNR. This permit is for Nichols Aluminum – Casting, and another permit is being issued for Nichols Aluminum – Davenport.

For the Director of the Department of Natural Resources



Douglas A. Campbell, Supervisor of Air Operating Permits Section



Date

Table of Contents

I. Facility Description and Equipment List.....	4
II. Plant - Wide Conditions	6
III. Emission Point Specific Conditions.....	9
IV. General Conditions	80
G1. Duty to Comply	
G2. Permit Expiration	
G3. Certification Requirement for Title V Related Documents	
G4. Annual Compliance Certification	
G5. Semi-Annual Monitoring Report	
G6. Annual Fee	
G7. Inspection of Premises, Records, Equipment, Methods and Discharges	
G8. Duty to Provide Information	
G9. General Maintenance and Repair Duties	
G10. Recordkeeping Requirements for Compliance Monitoring	
G11. Evidence used in establishing that a violation has or is occurring.	
G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification	
G13. Hazardous Release	
G14. Excess Emissions and Excess Emissions Reporting Requirements	
G15. Permit Deviation Reporting Requirements	
G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations	
G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification	
G18. Duty to Modify a Title V Permit	
G19. Duty to Obtain Construction Permits	
G20. Asbestos	
G21. Open Burning	
G22. Acid Rain (Title IV) Emissions Allowances	
G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements	
G24. Permit Reopenings	
G25. Permit Shield	
G26. Severability	
G27. Property Rights	
G28. Transferability	
G29. Disclaimer	
G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification	
G31. Prevention of Air Pollution Emergency Episodes	
G32. Contacts List	
V. Appendix A: 40 CFR 63 Subparts A, RRR.....	93
VI. Appendix B: Health and Safety Documents.....	94

Abbreviations

acfm	actual cubic feet per minute
CFR	Code of Federal Regulation
CE	control equipment
CEM	continuous emission monitor
°F	degrees Fahrenheit
EIQ	emissions inventory questionnaire
EP	emission point
EU	emission unit
gr./dscf	grains per dry standard cubic foot
gr./100 cf	grains per one hundred cubic feet
IAC	Iowa Administrative Code
IDNR	Iowa Department of Natural Resources
MMCF	million cubic feet
NAICS	North American Industry Classification System
NSPS	new source performance standard
ppmv	parts per million by volume
lb./hr	pounds per hour
lb./MMBtu	pounds per million British thermal units
SCC	Source Classification Codes
scfm	standard cubic feet per minute
SIC	Standard Industrial Classification
TPY	tons per year
USEPA	United States Environmental Protection Agency

Pollutants

PM	particulate matter
PM ₁₀	particulate matter ten microns or less in diameter
SO ₂	sulfur dioxide
NO _x	nitrogen oxides
VOC	volatile organic compound
CO	carbon monoxide
HAP	hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: Nichols Aluminum - Casting

Permit Number: 03-TV-017R1

Facility Description: Aluminum Sheet, Plate, and Foil (SIC 3353)
Secondary Nonferrous Metals (SIC 3341)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
01	01	Aluminum Shredder	92-A-218-S1
03	03	Delaquering System	90-A-386-S6
	03a	Delaquering System (Natural Gas)	
	09	Melting Furnace #3	
	19	Hot Gas Generator	
04	04a	Melting Furnace #1 (Natural Gas)	02-A-008
05	05a	Melting Furnace #2 (Natural Gas)	02-A-009
08	08	Three Stand Hot Mill	90-A-389-S1
09	09a	Melting Furnace #3 (Natural Gas)	02-A-010
13	13	Two (2) Rotary Barrel Furnaces / Associated Processes	98A-468-P2
	23	Two (2) Tardis Presses	
14F	14	Burner Ball Shaker (Vented Internally) (Shut down)	
15a	15	Refractory Curing Oven	96-A-287
15b			
16F	16	Direct Fired Heaters > 1.8 MMBtu/hr (Vented Internally)	
18F	18	Two (2) Dross Presses (Vented Internally)	
20	20	Caster Water Pump Backup Engine	
21	21	Fire System Engine Combustion	
23	04	Melting Furnace #1	02-A-491-S2
	05	Melting Furnace #2	
	06	Holding Furnace #1	
	07	Holding Furnace #2	
	14	Burner Ball Shaker	
	24	Caster Belt Brush	
	06a	Holding Furnace #1 (Natural Gas)	
07a	Holding Furnace #2 (Natural Gas)		
Fugitives	Fug Melt	Fugitives from Melters	
	LGT	Fugitive Losses from Volatile Liquids	
	Nat Gas	Fugitives from Misc. Natural Gas Usage	

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
17a	Direct Fired Heaters < 1.8 MMBtu/hr
17b	Indirect Fired Heaters and Boiler < 10 MMBtu/hr
Anodizing	Anodizing Station
HVY	Fugitive Losses from Heavy Liquids
MW	Maintenance Welding
DFT	Two (2) 1,000 Gallon Diesel Storage Tank

II. Plant-Wide Conditions

Facility Name: Nichols Aluminum - Casting
Permit Number: 03-TV-017R1

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: 5 years from permit issuance
Commencing on: June 29, 2009
Ending on: June 28, 2014

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits

Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO₂): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).

Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

Compliance Plan

The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in Section III of this permit, Nichols Aluminum - Casting is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Nichols Aluminum - Casting shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

Other NESHAP

40 CFR 63 Subpart A – General Provisions

40 CFR 63 Subpart RRR –Secondary Aluminum Production

This facility includes emission units that are subject to 40 CFR 63 Subpart RRR - National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.

- The Permittee shall comply with all applicable requirements of 40 CFR 63 Subpart A - General Provisions, and Subpart RRR – Secondary Aluminum Production.
- The following sources are subject to Subpart RRR requirements:

EP	EU	EU Description	Regulated As
EP 01	EU 01	Aluminum Shredder	Aluminum Scrap Shredder
EP 03	EU 03	Delaquering System	Scalp Dryer/Delaquering Kiln/Decorating Kiln
	EU 03a	Delaquering System (Natural Gas)	Scalp Dryer/Delaquering Kiln/Decorating Kiln
	EU 09	Melting furnace #3	Main Hearth – Group 2 Furnace Charge Wells – Group 1 Furnace
EP 04	EU 04a	Melting Furnace #1 (Natural Gas)	Main Hearth – Group 2 Furnace Charge Wells – Group 1 Furnace
EP 05	EU 05a	Melting Furnace #2 (Natural Gas)	Main Hearth – Group 2 Furnace Charge Wells – Group 1 Furnace
EP 09	EU 09a	Melting Furnace #3 (Natural Gas)	Main Hearth – Group 2 Furnace Charge Wells – Group 1 Furnace
EP 13	EU 13	Rotary Barrel Furnace / Assoc. Process	Group 1 Furnace
EP 23 ⁽¹⁾	EU 04	Melting Furnace #1	Main Hearth – Group 2 Furnace Charge Wells – Group 1 Furnace
	EU 05	Melting Furnace #2	Main Hearth – Group 2 Furnace Charge Wells – Group 1 Furnace
	EU 06	Holding Furnace #1	Group 1 Furnace
	EU 06a	Holding Furnace #1 (Natural Gas)	Group 1 Furnace
	EU 07	Holding Furnace #2	Group 1 Furnace
	EU 07a	Holding Furnace #2 (Natural Gas)	Group 1 Furnace

- RRR Compliance Date: 3/24/2004. RRR Initial Notification received 8/24/2002.
- Notification of Compliance Status Report received 12/23/2003 (did not include Delaquering kiln). Kiln retested 11/9/03. Report addendum for Delaquering kiln received 3/23/2004.
- OM&M plans updated following October 2007 MACT/TV testing. Plans received on 12/12/2008 for inclusion in permit.

⁽¹⁾EU22 (Holding Furnace Degasser; In-Line Fluxor) had been subject to RRR, but the process uses no chlorine or reactive flux. Nitrogen is used to remove natural gas bubbles from the metal, and the connection to EP23 was removed. Unit 22 removed from Title V Permit.

See Appendix A for web hyperlinks to 40 CFR 63 Subpart A and Subpart RRR.

Authority for Requirement: 567 IAC 23.1(4)"br"

III. Emission Point-Specific Conditions

Facility Name: Nichols Aluminum - Casting
Permit Number: **03-TV-017R1**

Emission Point ID Number: 01

Associated Equipment

Associated Emission Unit ID Number: 01
Emissions Control Equipment ID Number: CE 01
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: 01
Emission Unit Description: Aluminum Shredder
Raw Material/Fuel: Aluminum Scrap Metal
Rated Capacity: 95,300 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%⁽¹⁾
Authority for Requirement: IDNR Construction Permit 92-A-218-S1
567 IAC 23.3(2)"d"

⁽¹⁾ An exceedance of the indicator opacity of (10%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Opacity
Emission Limit(s): 10%⁽²⁾
Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

⁽²⁾ 10 percent opacity from any PM add-on APCD if a COM or VE monitoring is chosen as monitoring option.

Pollutant: Particulate Matter <10 microns (PM₁₀)
Emission Limit(s): 10.2 lb/hr, 44.7 ton/yr, 0.02 gr/dscf
Authority for Requirement: IDNR Construction Permit 92-A-218-S1

Pollutant: Particulate Matter (PM)
Emission Limit(s): 10.2 lb/hr, 44.7 ton/yr, 0.02 gr/dscf
Authority for Requirement: IDNR Construction Permit 92-A-218-S1

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.01 gr/dscf
Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- A. This aluminum shredder is limited to a maximum throughput of 95,300 pounds per hour, averaged over the hours the shredder is operated in a single day.
- B. The baghouse on this unit shall be operated whenever the shredder is in use.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. Record the number of hours the aluminum shredder is operated per day. Calculate the hourly average processing rate over the time period that the shredder operates in that day.
- B. Record the amount of aluminum processed in this shredder, in pounds per hour. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: IDNR Construction Permit 92-A-218-S1

NESHAP

- The above listed emission source is subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. This unit is regulated under Subpart RRR as an Aluminum Scrap Shredder. An Operation, Maintenance and Monitoring Plan is required for this source.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 55
Stack Opening, (inches, dia.): 42
Exhaust Flow Rate (acfm): 60,000
Exhaust Temperature (°F): Ambient
Discharge Style: Vertical, Unobstructed
Authority for Requirement: IDNR Construction Permit 92-A-218-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

- Pollutant(s) – Particulate Matter (PM), Opacity
- Performance Testing Completed - 8/9/2007
- Stack Test to be Completed by – Every 5 years
- Test Method – EPA Method 5, EPA Method 9
- Authority for Requirement - 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

The owner of this equipment or the owner’s authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Authority for Requirement: 567 IAC 22.108(3)

SHREDDING UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan Secondary Aluminum MACT Standard

FORM 020603.DOC JLH REV 12-15-03 .

Definitions of acronyms as used in this plan:

CAAA = Clean Air Act Amendments

CE = Control Equipment

CFR = Code of Federal Regulations

PMS = Parameter Monitoring System

CMMS = Computerized Maintenance Management System

EU = Emission Unit (defined by MACT as a group 1 furnace or an in-line fluxer; all others are affected sources)

OM&M = Operation, Maintenance, & Monitoring

P.M. = Preventative Maintenance

SAPU = Secondary Aluminum Processing Unit

SECAL MACT = SECondary ALuminum Maximum Achievable Control Technology

SSM = Startup, Shutdown, Malfunction

Floating Interval = An approximate period of time where the end point is variable; the subsequent approximate period of time begins anew at the end point of the previous time period

General Procedures:

Only one item, the baghouse, is needed to prevent excess emissions of hazardous air pollutants from the production of aluminum shreds in the Shredding Unit. Defining the pollution control equipment as the affected source in this OM&M plan is consistent with the terms outlined in the Preambles of the SECAL MACT standard and Section 112 of the CAAA, and in guidance from the EPA Websites.

This facility is committed to making timely corrective actions to this unit in times of excursion where the indicators are out of range. Corrective actions may involve an investigation as to the reason, evaluation of the situation, and an appropriate chronological range of actions to remedy the situation. A baghouse bag leak detector system alarm may be an excursion. An excursion does not necessarily indicate a violation of an applicable requirement.

If an excursion occurs, one of three levels of action will be taken: (Level 1) the control equipment causing the excursion shall be repaired in an expeditious manner, or if that cannot be accomplished in a reasonable period of time, (Level 2) the process generating the emissions shall be changed to minimize excess emissions of hazardous air pollutants, or if that cannot be accomplished in a reasonable period of time, (Level 3) commencement of a total orderly shutdown of all production processes that cause excess hazardous air pollutant emissions. A timely or expeditious manner is the time necessary to determine the cause of the excursion and to correct it in a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to change or shut down the process without jeopardizing employee safety or damaging the process or control equipment.

SHREDDING UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan Secondary Aluminum MACT Standard

FORM 020603.DOC JLH REV 12-15-03 .

Emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Run-time conditions will be monitored by the PMS. Monitoring is not required during periods of time greater than one day when the source does not operate. PMS detected excursions or malfunctions, including the date, time, and duration, will be recorded as outlined in the SSM Plan. Excess emissions will be reported as required by 40 CFR 63.1516(b) of the SECAL MACT standard.

Shredding Unit OM&M Plan Specifics:

Note: The layout convention below follows the OM&M outline sequence listed in 40 CFR 63.1510(b)

- (1) The following process and control device parameters are monitored to determine compliance with the applicable emission limits for the Shredding unit:
 - (a) Baghouse leak detector alarm system – automated system to assure that the baghouse bags are in good working condition.

The operating levels or ranges for the above parameter is established as follows:

- (a) Baghouse leak detector alarm system – 10 times the reference level.
- (2) The monitoring schedule for each affected source (control device) is as follows:
 - (a) Baghouse leak detector alarm system – automated system
 - (3) Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits are as follows:
 - (a) Baghouse system – Addendum 3(a)

Note: the proper operation and maintenance of the baghouse leak detector alarm system is incorporated in item (4) below.
 - (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: Calibration and Certification of accuracy of each monitoring device, according to the manufacturer's instructions are as follows:
 - (a) General Operation, Maintenance, and Quality Control of Parameter Monitoring Systems:
 - (i) This facility will endeavor to maintain and operate each PMS in a manner consistent with good air pollution practices.
 - (ii) Every attempt will be made to repair PMS detected malfunctions as outlined in the SSM (Startup, Shutdown, Malfunction) Plan, and reported in the semiannual startup, shutdown, and malfunction report required by the SECAL MACT standard. Any actions not consistent with the SSM Plan will be recorded and reported in the semiannual excess emissions/summary report as required by the SECAL MACT standard (records kept by the Engineering Secretary).
 - (b) Baghouse leak detector alarm system – Addendum 4(b)

SHREDDING UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020603.DOC JLH REV 12-15-03 .

- (5) Procedures for monitoring control device parameters are as follows:
- (a) Control device parameter monitoring is done by automation. Should the monitoring system detect a malfunction, it automatically sends an alarm signal to plant operations personnel who will respond and initiate corrective action as outlined in the unit SSM Plan.
 - (b) Additionally, preventative maintenance procedures are performed that monitor control device parameters as outlined and incorporated in item (4) above.
- (6) Corrective actions to be taken when add-on control device parameters deviate from the specified limit or range, including:
- A. Procedures to determine and record the cause of the deviation or excursion
 - B. The time the deviation or excursion began and ended
 - C. Procedures for recording the corrective action taken
 - D. The corrective action initiation and completion times/dates
- (a) When a monitored parameter malfunction alarm occurs, Operations Personnel will, as soon as practicable, initiate corrective action. Note that SECAL MACT requires initiation of corrective action within one hour of the alarm.
 - (b) Operations Personnel will then perform appropriate diagnostic and troubleshooting functions on the equipment to determine the cause of the malfunction, and the proper corrective action will be taken as outlined in the unit SSM Plan.
 - (c) All monitored parameter malfunctions will be detailed and recorded (records kept by the Engineering Secretary) on the “Startup-Shutdown-Malfunction Log”, including:
 - (i) The date of the malfunction.
 - (ii) The time of the alarm.
 - (iii) The time that corrective action was initiated.
 - (iv) Cause of the malfunction.
 - (v) Corrective action taken, including steps to minimize excess stack emissions if necessary.
 - (vi) Date and time that the corrective action was completed .
 - (vii) Total duration, in minutes or hours, of the malfunction.
- (7) Maintenance Schedule for each control device consistent with manufacturer’s instructions and recommendations for routine and long-term maintenance:
- (a) Baghouse leak detector alarm system – yearly floating intervals
- (8) Documentation of work instructions and pollution prevention measures used to achieve compliance for *group 1* furnaces *without* an add-on pollution control device:
- (a) Not Applicable – No Group 1 furnaces in the Shredding Unit.
- (9) - (10) - (11) SAPU site-specific information:
- (a) Not applicable - The Shredder Unit is not a SAPU

SHREDDING UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan Secondary Aluminum MACT Standard

FORM 020603.DOC JLH REV 12-15-03 .

Addendum 3(A) - Baghouse System

Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits:

The Secondary Aluminum MACT Standard requires inspection of each capture/collection and closed vent system at least once each calendar year. Although the Company frequently conducts Baghouse Preventative Maintenance (P.M.) at floating intervals, only the yearly inspection is included in this plan, which satisfies the standard and does not overly burden the company with unnecessary record keeping in the spirit of the Paperwork Reduction Act. The Baghouse Yearly Preventative Maintenance Guide Form has been compiled using both the appropriate manufacturers specifications and general historical experience. Because the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The guide form is generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(b) - Baghouse Leak Detector System

Bag Leak Detector System specific Operation, Maintenance, and Quality Control:

The bag leak detector system Preventative Maintenance (P.M.) is conducted at floating intervals of monthly and yearly. The Preventative Maintenance Forms have been compiled using the appropriate manufacturers specifications. Because bag leak detectors have not been previously required or necessary, the company has no experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P. M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Emission Point ID Number: 03

Associated Equipment

Associated Emission Unit ID Numbers: 03, 03a, 09, 19

Emissions Control Equipment ID Number: CE03

Emissions Control Equipment Description: Lime Coated Baghouse

Applicable Requirements

EU ID	EU Description	Raw Material	Rated Capacity	Control ID
03	Delacquering System	Metal	27.50 tons/hr	CE03
03a	Delacquering System (Natural Gas)	Natural Gas	0.018 MMcf/hr	CE03
09	Melting Furnace #3	Metal	360 tons/day	CE03
19	Hot Gas Generator	Natural Gas	0.010 MMcf/hr	CE03

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant	Emission Limit	Authority for Requirement
Opacity	40% ⁽¹⁾	IDNR Construction Permit 90-A-386-S6 567 IAC 23.3(2)"d"
Particulate Matter <10 microns (PM ₁₀)	7.34 lb/hr 31.7 ton/yr	IDNR Construction Permit 90-A-386-S6
Particulate Matter (PM)	0.1 gr/dscf 7.34 lb/hr 31.7 ton/yr	IDNR Construction Permit 90-A-386-S6 567 IAC 23.3(2)"a"
Sulfur Dioxide (SO ₂)	500 ppmv	IDNR Construction Permit 90-A-386-S6 567 IAC 23.3(3)"e"
Nitrogen Oxides (NO _x)	3.59 lb/hr 15.5 ton/yr	IDNR Construction Permit 90-A-386-S6
Volatile Organic Compounds (VOC)	9.03 lb/hr 39.0 ton/yr	IDNR Construction Permit 90-A-386-S6

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant	Emission Limit
Particulate Matter (PM)	0.30 lb/ton feed/charge
Total Hydrocarbons, as Propane (THC)	0.20 lb/ton feed/charge
Dioxins/Furans in Toxicity Equivalents (D/F TEQ)	7.0 x 10 ⁻⁵ gr/ton feed/charge
Hydrochloric Acid (HCl)	1.50 lb/ton feed/charge
Opacity (if a COM is chosen as the monitoring option)	10%

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- Melter 3 (EU 09) is limited to a maximum throughput of 415 tons per day and 151,475 tons per year.

Control equipment parameters:

- A. The exhaust from the Melter (EU 09) and the Delacquering System (EU 03) shall be vented to the baghouse (CE 03).
- B. The pressure drop across the baghouse (CE 03) shall not exceed 8 inches of water.
- C. The operator shall inspect the baghouse (CE 03) at least once a week for problems that could affect the pollution control efficiency. Corrective action shall be taken promptly.

Work practice standards:

- The exhaust temperature booster on the Delacquering System (EU 03) shall be fired by natural gas and maintained at or above 1,400 degrees F. whenever the Delacquering System is in operation. The residence time in the combustion chamber shall be at least one second.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. Record the amount of material processed in Melter 3 (EU 09), in tons per day. Calculate and record monthly and 12-month rolling totals.
- B. Monitor and continuously record the temperature of the exhaust temperature booster on the Delacquering System when the Delacquering System is in operation.
- C. Monitor the pressure drop across the baghouse (CE 03) on a regular basis.
- D. Maintain a record of inspections and maintenance on the baghouse (CE 03).

Authority for Requirement: Iowa DNR Construction Permit 90-A-386-S6

NESHAP

- The above listed emission sources (excluding EU 19) are subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. An Operation, Maintenance and Monitoring Plan is required for EU 03 and EU 09. These units are regulated under Subpart RRR as the following:

EP	EU	EU Description	Regulated As
03	03	Delacquering/Melting Baghouse	Scrap Dryer/Delacquering Kiln/Decorating Kiln
03	03a	Delacquering System (Nat. Gas)	Scrap Dryer/Delacquering Kiln/Decorating Kiln
03	09	Melting Furnace #3	Main Hearth - Group 2 Furnace Charge Wells – Group 1 Furnace

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70

Stack Opening, (inches, dia.): 60

Exhaust Flow Rate (scfm): 107,270

Exhaust Temperature (°F): 375

Discharge Style: Vertical, Unobstructed

Authority for Requirement: IDNR construction Permit 90-A-386-S6

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

Pollutant(s) – Particulate Matter (PM), Opacity, HAPs
Performance Testing Completed - 8/7/2007
Stack Test to be Completed by – Every 5 years
Test Method – See 40 CFR 63 Subpart RRR §63.1511(c)
Authority for Requirement - 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

Definitions of acronyms as used in this plan:

CAAA = Clean Air Act Amendments

CE = Control Equipment

CFR = Code of Federal Regulations

CPMS = Continuous Parameter Monitoring System

CMMS = Computerized Maintenance Management System

EU = Emission Unit (defined by MACT as a group 1 furnace or an in-line fluxer; all others are affected sources)

OM&M = Operation, Maintenance, & Monitoring

P.M. = Preventative Maintenance

SAPU = Secondary Aluminum Processing Unit

SECAL MACT = SECONDary ALuminum Maximum Achievable Control Technology

Floating Interval = an approximate period of time where the end point is variable; the subsequent approximate period of time begins anew at the end point of the previous time period

Group 1 Furnace = a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing

General Procedures:

Only two items, the baghouse and the Delaq Exhaust Temperature Booster, are needed to prevent excess emissions of hazardous air pollutants from the production of aluminum in the Melter 3-Delaq Unit. Defining the pollution control equipment as the affected sources in this OM&M plan is consistent with the terms outlined in the Preambles of the SECAL MACT standard and Section 112 of the CAAA, and in guidance from the EPA Websites.

This facility is committed to making timely corrective actions to this Unit in times of excursion where the indicators are out of range. Corrective actions may involve an investigation as to the reason, evaluation of the situation, and an appropriate chronological range of actions to remedy the situation. Baghouse bag leak detector system alarms, baghouse lime injection system alarms, baghouse inlet temperature system alarms, and Delaq Exhaust Temperature Booster system alarms are considered by the facility as excursions. An excursion does not necessarily indicate a violation of an applicable requirement.

If an excursion occurs, one of three levels of action will be taken: (Level 1) the control equipment causing the excursion shall be repaired in an expeditious manner, or if that cannot be accomplished in a reasonable period of time, (Level 2) the process generating the emissions shall be changed to minimize excess emissions of hazardous air pollutants, or if that cannot be accomplished in a reasonable period of time, (Level 3) commencement of a total orderly shutdown of all production processes that could cause excess hazardous air pollutant emissions. A timely or expeditious manner is the time necessary to determine the cause of the excursion and to correct it in a reasonable period of time. A reasonable period of time is less than 24-hours plus the period of time required to change or, shut down the process without jeopardizing employee safety or damaging the process or control equipment.

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

Emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Run-time conditions will be monitored by the CPMS. Monitoring is not required during periods of time greater than one day when the source does not operate. CPMS detected excursions or malfunctions, including the date, time, and duration, will be recorded as outlined in the SSM Plan. Excess emissions will be reported as required by 40 CFR 63.1516(b) of the SECAL MACT standard.

MELTER 3-DELAQ Unit OM&M Plan Specifics:

Note: The layout convention below follows the OM&M outline sequence listed in 40 CFR 63.1510(b)

- (1) The following process and control device parameters are monitored to determine compliance with the applicable emission limits for the Melter 3-Delaq Unit:
 - (a) Baghouse leak detector alarm system – automated system to assure that the baghouse bags are in good working condition.
 - (b) Baghouse lime injection alarm system – automated system to assure that the baghouse lime system is functioning properly.
 - (c) Baghouse inlet temperature alarm system – automated system to assure that the baghouse inlet temperature is within allowable parameter range.
 - (d) Delaq Exhaust Temperature Booster alarm system – automated system to assure that the temperature is within allowable parameter range.

The operating levels or ranges for the above parameters are established as follows:

- (b) Baghouse leak detector alarm system – 10 times the reference level.
 - (c) Baghouse lime injection alarm system – 500 lbs. Per day
 - (d) Baghouse inlet temperature alarm system – Less than 257° F 25° F
 - (e) Delaq Exhaust Temperature Booster alarm system – At or above 1400 deg F.
- (2) The monitoring schedule for each affected source (control device) is as follows:
 - (a) Baghouse leak detector alarm system – automated system
 - (b) Baghouse lime injection alarm system – automated system
 - (c) Baghouse inlet temperature alarm system – automated system
 - (d) Delaq Exhaust Temperature Booster alarm system – automated system
 - (3) Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits are as follows:
 - (a) Baghouse system – Addendum 3(a)
 - (b) Delaq Exhaust Temperature Booster – Addendum 3(b)
Note: the proper operation and maintenance of the baghouse leak detector alarm system, the baghouse lime injection alarm system, the baghouse inlet temperature alarm system, and the Delaq Exhaust Temperature Booster alarm system are incorporated in item (4) below.
 - (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: Calibration and Certification of accuracy of each monitoring device, shall be as follows:

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

- (a) General Operation, Maintenance, and Quality Control of Continuous Parameter Monitoring Systems:
 - (i) This facility will endeavor to maintain and operate each CPMS in a manner consistent with good air pollution practices.
 - (ii) Every attempt will be made to repair CPMS detected malfunctions as outlined in the SSM (Startup, Shutdown, Malfunction) Plan, and reported in the semiannual startup, shutdown, and malfunction report required by the SECAL MACT standard. Any actions not consistent with the SSM Plan will be recorded and reported in the semiannual excess emissions/summary report as required by the SECAL MACT standard (records kept by the Engineering Secretary).
 - (b) Baghouse leak detector alarm system – Addendum 4(b)
 - (c) Baghouse lime injection alarm system – Addendum 4(c)
 - (d) Baghouse inlet temperature alarm system – Addendum 4(d)
 - (e) Delaq Exhaust Temperature Booster alarm system – Addendum 4(e)
- (5) Procedures for monitoring control device parameters are as follows:
- (a) Control device parameter monitoring is done by automation. Should the monitoring system detect a malfunction, it automatically sends an alarm signal to plant operations personnel who will respond and initiate corrective action as outlined in the Unit SSM Plan.
 - (b) Additionally, preventative maintenance procedures are performed that monitor control device parameters as outlined and incorporated in item (4) above.
- (6) Corrective actions to be taken when add-on control device parameters deviate from the specified limit or range, including:
- E. Procedures to determine and record the cause of the deviation or excursion
 - F. The time the deviation or excursion began and ended
 - G. Procedures for recording the corrective action taken
 - H. The corrective action initiation and completion times/dates
- (d) When a monitored parameter malfunction alarm occurs, Operations Personnel will, as soon as practicable, initiate corrective action. Note that SECAL MACT requires initiation of corrective action within one hour of the alarm.
 - (e) Operations Personnel will then perform appropriate diagnostic and troubleshooting functions on the equipment to determine the cause of the malfunction, and the proper corrective action will be taken as outlined in the Unit SSM Plan.
 - (f) All monitored parameter malfunctions will be detailed and recorded (records kept by the Engineering Secretary) on the “Startup-Shutdown-Malfunction Log”, including:
 - (i) The date of the malfunction.
 - (ii) The time of the alarm.
 - (iii) The time that corrective action was initiated.
 - (iv) Cause of the malfunction.
 - (v) Corrective action taken, including steps to minimize excess stack emissions if necessary.
 - (vi) Date and time that the corrective action was completed.
 - (vii) Total duration, in minutes or hours, of the malfunction.
- (7) Maintenance Schedule for each control device shall be conducted as follows.
- (a) Baghouse leak detector alarm system – yearly floating intervals

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

- (b) Baghouse lime injection alarm system – yearly floating intervals
 - (c) Baghouse inlet temperature alarm system – yearly floating intervals
 - (d) Delaq Exhaust Temperature Booster alarm system – yearly floating intervals
- (8) Documentation of work instructions and pollution prevention measures used to achieve compliance for *group 1* furnaces *without* an add-on pollution control device:
- (a) Not Applicable – All group 1 furnaces in this Unit have an add-on pollution control device
- (9) The following SAPU site-specific information is listed below:
- (a) Identification of each EU (emission unit) in the SAPU:
 - (i) Emission unit 04 = Melter 1 charge wells
 - (ii) Emission unit 05 = Melter 2 charge wells
 - (iii) Emission unit 06 = Holder 1
 - (iv) Emission unit 07 = Holder 2
 - (v) Emission unit 09 = Melter 3 charge wells
 - (vi) Emission unit 13a = Rotary Barrel Furnace 1
 - (vii) Emission unit 13b = Rotary Barrel Furnace 2
 - (viii) Emission unit 22 = Hazlett emission box
 - (ix) Note: The media (Burner Ball Shaker) cleaning system is common ducted to the M-1&2/ H-1&2/ Hazlett emission box but is not an emission unit as defined in the SECAL MACT standard.
 - (x) Note: The Delacquering system is common ducted to the Melter 3 - Delaq baghouse but is not an emission unit as defined in the SECAL MACT standard.
 - (xi) Note: The Tardis Presses and the RBF material bins are common ducted to the RBF baghouse but are not Emission Units as defined in the SECAL MACT standard.
 - (b) The specific control technology or pollution prevention measure to be used on each EU and the date of its installation or application:
 - (i) All M-1 & 2 / H-1 & 2 / Hazlett emission box Unit EU's (EU04, EU05, EU06, EU07, EU22) are common ducted to EP23 lime injected baghouse, which, along with a bag leak detection system, a lime injection detection system, and an inlet temperature monitoring system, were installed/approved on December 31, 2002.
 - (ii) EU 09 was installed/approved on 8-5-94 and is common ducted to EP03 lime injected baghouse, which was installed/approved on 11-5-90. A bag leak detection system and an inlet temperature monitoring system were added to the baghouse (installed /approved) on December 31, 2002.
 - (iii) EU 13a & EU 13b are common ducted to EP13 lime injected baghouse installed/approved Oct. 1998. A bag leak detection system, an updated lime injection system, and an inlet temperature monitoring system were added to the baghouse (installed /approved) on March 23, 2003.
 - (c) Calculated SAPU emission limit and performance test results and supporting calculations demonstrating initial compliance for each EU:
 - (i) Listed in Addendum 9(c)
- (10) The SAPU compliance procedures within this OM&M plan do not contain any of the following provisions:
- (a) Any averaging among emissions of differing pollutants

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

- (b) The inclusion of any affected sources other than EU's in this SAPU, except common ducted sources as allowed by and approved by the permitting authority with the acceptance of this plan.
 - (c) The inclusion of any EU while it is shutdown
 - (d) The inclusion of any periods of startup, shutdown, or malfunction in emission calculations
- (11) To revise the SAPU compliance provisions within this OM&M plan prior to the end of the permit term, the owner or operator will submit a request to the applicable permitting authority containing the information required by paragraph (9) of this plan and obtain approval of the applicable permitting authority prior to implementing any revisions.

Addendum 3(a) - Baghouse System

Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits:

The Secondary Aluminum MACT Standard requires inspection of each capture/collection and closed vent system at least once each calendar year. Although the Company frequently conducts Baghouse Preventative Maintenance (P.M.) at floating intervals, only the yearly inspection is included in this plan, which satisfies the standard and does not overly burden the company with unnecessary record keeping in the spirit of the Paperwork Reduction Act. The Baghouse Yearly Preventative Maintenance Guide Form has been compiled using both the appropriate manufacturers specifications and general historical experience. Because the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The guide form is generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 3(b) - Delaq Exhaust Temperature Booster System

Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits:

The Secondary Aluminum MACT Standard may require inspection of each Delaq Exhaust Temperature Booster at least once each calendar year. Although the Company frequently conducts Delaq Exhaust Temperature Booster Maintenance (P.M.) at floating intervals, only the yearly inspection is included in this plan, which satisfies the standard and does not overly burden the company with unnecessary record keeping in the spirit of the Paperwork Reduction Act. The yearly Preventative Maintenance Guide Form has been compiled using both the appropriate manufacturers specifications and general historical

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

experience. Because the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The guide form is generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Delaq Exhaust Temperature Booster yearly inspection form.

Addendum 4(b) - Baghouse Leak Detector System

Bag Leak Detector System specific Operation, Maintenance, and Quality Control:

The bag leak detector system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Forms have been compiled using the appropriate manufacturers specifications. Because bag leak detectors have not been previously required or necessary, the company has no experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P. M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(c) - Baghouse Lime Injection System

Baghouse Lime Injection System specific Operation, Maintenance, and Quality Control:

The baghouse lime injection system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Guide Forms have been compiled using the appropriate manufacturers specifications. Because baghouse lime injection systems of this type have not been previously required or necessary, the company has little experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P. M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(d) - Baghouse Inlet Temperature System

Baghouse Inlet Temperature System specific Operation, Maintenance, and Quality Control:

The baghouse inlet temperature system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Guide Forms have been compiled using the appropriate manufacturers specifications. Because baghouse inlet temperature systems of this type have not been previously required or necessary, the company has little experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P. M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(e) - Delaq Exhaust Temperature Booster System

Delaq Exhaust Temperature Booster system specific Operation, Maintenance, and Quality Control:

The Delacquer Exhaust Temperature Booster system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Guide Forms have been compiled using the appropriate manufacturers specifications. Because Exhaust Temperature Booster systems of this type have not been previously required or necessary, the company has little experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P. M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

MELTER 3 - DELAQ UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV10/23/2007

Addendum 9(c)

Calculated SAPU emission limit and performance test results and supporting calculations demonstrating initial compliance for each EU.

The SAPU emission limit calculations, performance test results, and supporting calculations for demonstrating initial compliance for each EU are presented in Tables 1-12 taken from the October 2003 *Notification of Compliance Status Report*, dated October 2003, and the *Report on Fuller Baghouse Air Emission Test Program*, dated October 21, 2003.

CERTIFICATE:

Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Revisions:

- ⁽¹⁾ 11/19/2004, changed lime feed rate from indicated setting to engineering units. Mass flow rate is recalibrated to new indicated units periodically. Reference "Notification of Compliance Status Report Addendum for Delacquering Kiln Emission Unit" March 2004
- September 19, 2006, Added +25°
- September 19, 2006, Added Certification Statement
- September 20, 2007, deleted reference to the degasser at the Hazlett caster and Rotary Dross Cooler. Added the Tardis Presses in place of the Rotary Dross Cooler.
- Changed the baghouse inlet temperature from 263.9° F to 257° F based on August 2007 MACT Test data.

MELTER HEARTHS OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 030211.DOC JLH REV 12-15-03 .

Definitions of acronyms as used in this plan:

CAAA = Clean Air Act Amendments

CE = Control Equipment

CFR = Code of Federal Regulations

CMMS = Computerized Maintenance Management System

EU = Emission Unit (defined by MACT as a group 1 furnace or an in-line fluxer; all others are affected sources)

OM&M = Operation, Maintenance, & Monitoring

P.M. = Preventative Maintenance

SAPU = Secondary Aluminum Processing Unit

SECAL MACT = SECondary ALuminum Maximum Achievable Control Technology

TPD = Tons per Day

HCP = Hearth Charging Practice

Floating Interval = an approximate period of time where the end point is variable; the subsequent approximate period of time begins anew at the end point of the previous time period

Group 2 Furnace = a furnace of any design that melts, holds, or processes only clean charge and that performs no *fluxing* or performs *fluxing* using only nonreactive, non-HAP generating gasses or agents.

General Procedures:

Only two HCP's are needed to prevent excess emissions of hazardous air pollutants from the production of aluminum in the Melter Hearths. Defining the Melter Hearths as group 2 furnaces (the affected sources) in this OM&M plan is consistent with the terms outlined in the Preambles of the SECAL MACT standard and Section 112 of the CAAA, and in guidance from the EPA Websites.

This facility is committed to making timely corrective actions to the Melter Hearths in times of excursion. Corrective actions may involve an investigation as to the reason, evaluation of the situation, and an appropriate chronological range of actions to remedy the situation. An excursion does not necessarily indicate a violation of an applicable requirement.

If an excursion occurs, one of three levels of action will be taken: (Level 1) the equipment/ Hearth Charging Practice causing the excursion shall be repaired/remedied in an expeditious manner, or if that cannot be accomplished in a reasonable period of time, (Level 2) the process generating the emissions shall be changed to minimize excess emissions of hazardous air pollutants, or if that cannot be accomplished in a reasonable period of time, (Level 3) commencement of a total orderly shutdown of all production processes that could cause excess hazardous air pollutant emissions. A timely or expeditious manner is the time necessary to determine the cause of the excursion and to correct it in a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to change or shut down the process without jeopardizing employee safety or damaging the process or control equipment.

MELTER HEARTHES OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 030211.DOC JLH REV 12-15-03 .

Emission during a period of startup, shutdown, or cleaning of the affected source is not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Note that start-up of a hearth is a slow process that normally takes up to 12 hours to complete. Run-time conditions will be monitored by the HCP's. Monitoring is not required during periods of time greater than one day when the source does not operate. HCP detected excursions or Malfunctions, including the date, time, and duration, will be recorded as outlined in the SSM Plan. Excess emissions will be reported as required by 40 CFR 63.1516(b) of the SECAL MACT standard.

Melter Hearths OM&M Plan Specifics:

Note: The layout convention below follows the OM&M outline sequence listed in 40 CFR 63.1510(b)

- (2) The following HCP's are used to determine compliance with the applicable emission limits for the Melter Hearths:
- (a) Clean charge only.
 - (b) No reactive fluxing (except cover flux).

The operating levels or ranges for the above HCP's are established as follows:

- (f) Clean charge only – No more than 360 TPD in M-1 hearth or 408 TPD in M-2 or M-3 hearth.
 - (g) No reactive fluxing (except cover flux) – Zero reactive fluxing materials (except cover flux).
- (4) The monitoring schedule for each affected source HCP is as follows:
- (a) Clean charge only – Each charge.
 - (b) No reactive fluxing (except cover flux) – Each fluxing operation.
- (5) Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits are as follows:
- (a) Not applicable - Per 40CFR63.1505, there are no MACT emission limits for group 2 furnaces.
- (10) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: Calibration and Certification of accuracy of each monitoring device, according to the manufacturer's instructions are as follows:
- (f) Not applicable. HCP's are themselves procedures. There are no electrical/mechanical devices or systems to maintain and no manufacturers instructions to follow.
- (11) Procedures for monitoring control device parameters are as follows:
- (a) Not applicable. HCP's are themselves procedures. There are no control device parameters to monitor.

MELTER HEARTH'S OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 030211.DOC JLH REV 12-15-03 .

- (12) Corrective actions to be taken when HCP's deviate from the specified limit or range, including:
- I. Procedures to determine and record the cause of the deviation or excursion
 - J. The time the deviation or excursion began and ended
 - K. Procedures for recording the corrective action taken
 - L. The corrective action initiation and completion times/dates
- (g) When a HCP malfunction occurs, Operations Personnel will, as soon as practicable, initiate corrective action.
- (h) Operations Personnel will then perform appropriate diagnostic and troubleshooting functions on the equipment/hearth charging practice to determine the cause of the malfunction, and the proper corrective action will be taken as outlined in the Melter Hearth SSM Plan.
- (i) All HCP malfunctions will be detailed and recorded (records kept by the Engineering Secretary) on the "Startup-Shutdown-Malfunction Log", including:
- (i) The date of the malfunction.
 - (ii) The time of the alarm.
 - (iii) The time that corrective action was initiated.
 - (iv) Cause of the malfunction.
 - (v) Corrective action taken, including steps to minimize excess stack emissions if necessary.
 - (vi) Date and time that the corrective action was completed.
 - (vii) Total duration, in minutes or hours, of the malfunction.
- (13) Maintenance Schedule for each control device consistent with manufacturer's instructions and recommendations for routine and long-term maintenance:
- (a) Not applicable. HCP's are procedures. There are no manufacturers instructions/recommendations.
- (14) Documentation of work instructions and pollution prevention measures used to achieve compliance for *group 1* furnaces *without* an add-on pollution control device:
- (a) Not Applicable –The Melter Hearths are group 2 furnaces.
- (15) - (10) - (11) SAPU site-specific information:
- (a) Not applicable - the Melter Hearths are not a part of any SAPU.

Emission Point ID Number: 04

Associated Equipment

Associated Emission Unit ID Number: 04a
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 04a
Emission Unit Description: Melting Furnace #1 (Natural Gas)
Raw Material/Fuel: Natural Gas
Rated Capacity: 34 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%⁽¹⁾

Authority for Requirement: IDNR Construction Permit 02-A-008

⁽¹⁾An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu

Authority for Requirement: IDNR Construction Permit 02-A-008
567 IAC 23.3(2)"b"(2)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: IDNR Construction Permit 02-A-008
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 6.5 lb/hr, 28.5 ton/yr

Authority for Requirement: IDNR Construction Permit 02-A-008

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- This burner shall be fired by natural gas only.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

Authority for Requirement: IDNR Construction Permit 02-A-008

NESHAP

- The above listed emission source is subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. Under Subpart RRR, the main hearth of this unit is regulated as a Group 2 Furnace, and the charge wells of this unit are regulated as Group 1 Furnaces.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70

Stack Opening, (inches, dia.): 78

Exhaust Flow Rate (acfm): 16,444

Exhaust Temperature (°F): 520

Discharge Style: Vertical, Obstructed

Authority for Requirement: IDNR Construction Permit 02-A-008

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 05

Associated Equipment

Associated Emission Unit ID Number: 05a
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 05a
Emission Unit Description: Melting Furnace #2 (Natural Gas)
Raw Material/Fuel: Natural Gas
Rated Capacity: 34 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%⁽¹⁾

Authority for Requirement: IDNR Construction Permit 02-A-009

⁽¹⁾An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu

Authority for Requirement: IDNR Construction Permit 02-A-009
567 IAC 23.3(2)"b"(2)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: IDNR Construction Permit 02-A-009
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 6.5 lb/hr, 28.5 ton/yr

Authority for Requirement: IDNR Construction Permit 02-A-009

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- This burner shall be fired by natural gas only.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

Authority for Requirement: IDNR Construction Permit 02-A-009

NESHAP

- The above listed emission source is subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. Under Subpart RRR, the main hearth of this unit is regulated as a Group 2 Furnace, and the charge wells of this unit are regulated as Group 1 Furnaces.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70

Stack Opening, (inches, dia.): 78

Exhaust Flow Rate (acfm): 16,444

Exhaust Temperature (°F): 520

Discharge Style: Vertical, Obstructed

Authority for Requirement: IDNR Construction Permit 02-A-009

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)
Nichols Aluminum – Casting
03-TV-017R1

Emission Point ID Number: 08

Associated Equipment

Associated Emission Unit ID: 08
Emissions Control Equipment ID Number: 08
Emissions Control Equipment Description: Mechanical Collector

Emission Unit vented through this Emission Point: 08
Emission Unit Description: Three Stand Hot Mill
Raw Material/Fuel: Metal
Rated Capacity: 49.0 ton/hr (limit of 429,200 tons per 12-month rolling period)

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%⁽¹⁾
Authority for Requirement: IDNR Construction Permit 90-A-389-S1
567 IAC 23.3(2)"d"

⁽¹⁾ An exceedance of the indicator opacity of (10%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter <10 Microns (PM₁₀)
Emission Limit(s): 0.021 gr/dscf, 10.65 lb/hr, 46.65 ton/year
Authority for Requirement: Construction Permit 90-A-389-S1

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.021 gr/dscf, 10.65 lb/hr, 46.65 ton/year
Authority for Requirement: Construction Permit 90-A-389-S1

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- This rolling mill is limited to a maximum throughput of 429,200 tons per 12-month rolling period.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- Record the amount of aluminum processed in this rolling mill, in tons. Calculate and record monthly and 12-month rolling totals.

Authority for Requirement: Construction Permit 90-A-389-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70

Stack Opening, (inches, dia.): 96

Exhaust Flow Rate (acfm): 63,500

Exhaust Temperature (°F): 90

Discharge Style: Vertical, Unobstructed

Authority for Requirement: IDNR Construction Permit 90-A-389-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

DRAFT
OPERATION & MAINTENANCE PLAN
NAC THREE STAND HOT MILL

Facility: Nichols Aluminum Casting
Name of Unit: Three Stand Hot Mill
Control Technology: Control Equipment No. CE08
Busch Mechanical Collector No. Y-1459
Particulate Control: Mechanical Collector

A. Monitoring Guidelines

This facility is committed to making timely corrective actions to this unit in times of excursion where the indicators are out of range. Corrective actions may involve an investigation as to the reason, evaluation of situation, and appropriate actions to remedy the situation.

Although emissions from this source are highly unlikely, if emissions occur, either the control equipment causing the excess shall be repaired in an expeditious manner or the process generating the emissions shall be shut down within a reasonable amount of time. An expeditious manner is the time necessary to determine the cause of the emissions and to correct it in a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process or control equipment.

Emission during a period of startup, shut down, or cleaning of control equipment is not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. On-going emissions shall be monitored by one of the certified smoker readers at the facility.

If emissions continue, the certified smoker reader must notify the Division Environmental Manager as soon as possible. If needed, the Division Environmental Manager will notify the IDNR (Iowa Department of Natural Resources) within 8 hours, (or by 8:00 AM of the next business day if emissions occurred during the night/weekend). Notification in writing will be no later than seven days after the incident occurred.

B. Monitoring Methods and Corrective Actions

This source includes all emissions from the Three Stand Hot Mill stack.

C. Monitoring and Operating Limits

See the Addendum for BUSCH SYSTEM Preventative Maintenance (P.M.) conducted quarterly. Quarterly cleaning flushes any material collected to the dirty side of the mill coolant tank for subsequent filtration and handling.

D. Quality Control

- 1) Operation and Preventative Maintenance implementation will be available upon request and will include the Preventative Maintenance (P.M.) List (see Addendum.)
- 2) Maintenance records will be audited periodically.

Addendum: Task Instructions List

- HM16 BUSCH SYSTEM QUARTERLY P.M.

Emission Point ID Number: 09

Associated Equipment

Associated Emission Unit ID: 09a
Emissions Control Equipment ID Number: CE09a
Emissions Control Equipment Description: Low NOx Burner

Emission Unit vented through this Emission Point: 09a
Emission Unit Description: Melting Furnace #3 (Natural Gas)
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.033 MMCF/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%⁽¹⁾

Authority for Requirement: IDNR Construction Permit 02-A-010

⁽¹⁾An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.6 lb/MMBtu

Authority for Requirement: IDNR Construction Permit 02-A-010
567 IAC 23.3(2)"b"(2)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: IDNR Construction Permit 02-A-010
567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 7.2 lb/hr, 31.4 ton/yr

Authority for Requirement: IDNR Construction Permit 02-A-010

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- This burner shall be fired by natural gas only.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

Authority for Requirement: IDNR Construction Permit 02-A-010

NESHAP

- The above listed emission source is subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. Under Subpart RRR, the main hearth of this unit is regulated as a Group 2 Furnace, and the charge wells of this unit are regulated as Group 1 Furnaces.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70

Stack Opening, (inches, dia.): 78

Exhaust Flow Rate (acfm): 16,444

Exhaust Temperature (°F): 520

Discharge Style: Vertical, Obstructed

Authority for Requirement: IDNR Construction Permit 02-A-010

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)
Nichols Aluminum – Casting
03-TV-017R1

Emission Point ID Number: 13

Associated Equipment

Associated Emission Unit ID Numbers: 13, 23

Emissions Control Equipment ID Number: CE13

Emissions Control Equipment Description: Rotary Barrel Furnace Building Lime Coated Baghouse
(Wheelabrator Model 171, Size 1642D (12 Modules))

Emission Unit vented through this Emission Point: 13

Emission Unit Description: Two (2) Rotary Barrel Furnaces / Associated Processes

Raw Material/Fuel: Metal

Rated Capacity: 10 MMBtu/hr each (12.5 ton/hr)

Emission Unit vented through this Emission Point: 23

Emission Unit Description: Two (2) Tardis Dross Presses

Raw Material/Fuel: Metal

Rated Capacity: 8.82 ton/hr (5 ton/hour each)

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant	lb/hr	tons/yr	Additional	Authority for Requirement
Particulate Matter (PM)	NA	NA	0.1 gr/dscf	567 IAC 23.3(2)"a" IDNR PSD Permit 98-A-468-P2
	5.57 ⁽¹⁾	24.4 ⁽¹⁾	0.004 gr/dscf ⁽²⁾	IDNR PSD Permit 98-A-468-P2
Particulate Matter <10 Microns (PM ₁₀)	8.6 ⁽³⁾	NA	NA	NAAQS
	3.28 ⁽¹⁾	14.4 ⁽¹⁾	0.004 gr/dscf ⁽²⁾	IDNR PSD Permit 98-A-468-P2
Opacity	NA	NA	40% ⁽⁴⁾	567 IAC 23.3(2)"d"
Volatile Organic Compounds	NA	39.4 ⁽⁵⁾	2.1 lb/ton of charge ⁽⁶⁾	IDNR PSD Permit 98-A-468-P2

⁽¹⁾ These pound per hour and ton per year emission limits apply only to the combined emissions of the two Tardis Dross Presses, EU 23, after the control device. The emission limits are established to keep Project 07-393 minor for PSD purposes.

⁽²⁾ The grain loading limit for PM and PM10 applies to the outlet of the baghouse and includes all emission units that vent through this emission point. This emission limit was requested by the facility.

⁽³⁾ The limit for PM10 emissions is established to limit emissions below levels that predict exceedances of the PM10 NAAQS from the stack.

⁽⁴⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

⁽⁵⁾ PSD synthetic minor limit established in Project 98-187.

⁽⁶⁾ Emission limit is expressed as the average of three (3) test runs and shall be used to calculate VOC emissions from EP-13 in conjunction with actual production data to determine compliance with the VOC PSD synthetic minor ton per year limit.

PSD (BACT) Emission Limits

Pollutant	Limit ⁽¹⁾	Reference
Particulate Matter (PM)	0.004 gr/dscf ⁽²⁾	BACT
Particulate Matter <10 Microns (PM ₁₀)	0.004 gr/dscf ⁽²⁾	BACT
Opacity	0% ⁽³⁾	BACT

⁽¹⁾ BACT emission limits only apply to the emissions from the two rotary barrel furnaces and the ventilation system of the process building.

⁽²⁾ Standard is expressed as the average of 3 test runs.

⁽³⁾ Standard is expressed as a six-minute average or the lowest possible opacity that can be determined by the Method 9 test during initial compliance testing.

Authority for Requirement: IDNR PSD Permit 98-A-468-P2

NESHAP Emission Limits

Two (2) Rotary Barrel Furnaces (EU 13)

Pollutant	Emission Limit
Particulate Matter (PM)	0.40 lb/ton of feed ⁽¹⁾
Hydrochloric Acid (HCl)	0.40 lb/ton of feed ⁽¹⁾ or 10% of the HCl upstream of the add-on control device ⁽¹⁾
Dioxins/Furans in Toxicity Equivalents (D/F TEQ)	15.0 µg TEQ/Mg of feed ⁽¹⁾

⁽¹⁾Per §63.1505(i)(6), the owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of the feed/charge.

Secondary Aluminum Processing Unit

Pollutant	Limit ⁽¹⁾
Particulate Matter (PM) ⁽²⁾	$L_{CPM} = \frac{\sum_{i=1}^n C_{tiPM} x T_{ti}}{\sum_{i=1}^n C_{ti}}$
Hydrogen Chloride (HCl) ⁽³⁾	$L_{CHCl} = \frac{\sum_{i=1}^n C_{tiHCl} x T_{ti}}{\sum_{i=1}^n C_{ti}}$
Dioxins and Furans (D/F) ⁽⁴⁾	$L_{CD/F} = \frac{\sum_{i=1}^n C_{tiD/F} x T_{ti}}{\sum_{i=1}^n C_{ti}}$

⁽¹⁾ The owner or operator of a SAPU at a secondary aluminum production facility that is a major source may demonstrate compliance with the emission limit if §63.1505(k)(1) through (3) by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits of §63.1505(i) and §63.1505(j).

⁽²⁾ Where,

L_{CPM} = The PM emission limit for the secondary aluminum processing unit.

L_{tiPM} = The PM emission limit for individual emission unit i in §63.1505(i)(1) and (2) for a group 1 furnace or

§63.1505(j)(2) for an in-line fluxer. NOTE: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.

T_{ii} = The feed/charge rate for individual emission unit i.

(3) Where,

L_{HCl} = The HCl emission limit for the secondary aluminum processing unit.

$L_{\text{HCl}i}$ = The HCl emission limit for individual emission unit i in §63.1505(i)(4) for a group 1 furnace or §63.1505(j)(1) for an in-line fluxer. NOTE: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl limit.

T_{ii} = The feed/charge rate for individual emission unit i.

(4) Where,

$L_{\text{D/F}}$ = The D/F emission limit for the secondary aluminum processing unit.

$L_{\text{D/F}i}$ = The D/F emission limit for individual emission unit i in §63.1505(i)(3) for a group 1 furnace.

T_{ii} = The feed/charge rate for individual emission unit i.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

- A. Only natural gas shall be used as fuel in an enriched oxygen combustion atmosphere for the two Rotary Barrel Furnaces.
- B. Only dross and inspected clean aluminum scrap shall be melted in the two Rotary Barrel Furnaces.
- C. The owner or operator of the facility shall comply with all applicable operating limits and requirements contained in NESHAP Subpart RRR, 40 CFR 63.1506.
- D. The owner or operator shall provide and maintain easily visible labels posted at each of the Rotary Barrel Furnaces that identifies the applicable emission limits and means of compliance per 40 CFR 63.1506(b) including:
 - a. The type of affected source or emission unit
 - b. The applicable operational standard(s) and control method(s). This includes but is not limited to, the type of charge to be used for a furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.
- E. The owner or operator shall operate each capture/collection system according to the procedures and requirements in the OM&M plan per 40 CFR 63.1506(c).
- F. The owner or operator shall install and operate a device to measure and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test per 40 CFR 63.1506(d). The weight measurement system or other weight determination procedure shall be operated in accordance with the OM&M plan. The owner or operator may chose to measure and record aluminum production weight from an affect source or emission unit rather than fee/charge weight to an affect source or unit provided:

- a. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and
 - b. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.
- G. The owner or operator of group 1 furnaces (i.e. Rotary Barrel Furnaces) with emissions controlled by a lime-injected fabric filter must, for a bag leak detection system:
- a. Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan
 - b. Operate the fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period per 40 CFR 63.1506(k)(ii) and 40 CFR 63.1506(m)(iii).
 - c. Maintain the 3-hour block average inlet temperature for the fabric filter at or below the average temperature established during the performance test plus 25°F.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. Inspections shall be conducted for every truckload on the loading docks. All inspections must be recorded and the record shall include, at a minimum, aluminum scrap source, type, Nichols' rating, to ensure aluminum scrap quality.
- B. All events of the baghouse malfunction shall be recorded. All opacity observation data recorded shall be kept for a minimum of three (3) years from the date of the recording and shall be available at the plant during normal business hours.
- C. The owner or operator of the facility shall comply with all applicable operating monitoring requirements contained in NESHAP Subpart RRR, 40 CFR 63.1510.
- D. The owner or operator shall prepare and implement a written operation, maintenance, and monitoring (OM&M) plan per the monitoring requirements of 40 CFR 63.1510. The OM&M plan shall include the required information for secondary aluminum processing units as described in 40 CFR 63.1510(s).
- E. The owner or operator must inspect the labels for the Rotary Barrel Furnaces at least once per calendar month to confirm that posted labels are intact and legible.
- F. The owner or operator shall install, operate, and maintain a capture/collection system for the Rotary Barrel Furnaces and inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection per 40 CFR 63.1510(d).
- G. The owner or operator of the Rotary Barrel Furnaces must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the Rotary Barrel Furnaces over the same operating cycle or time period used in the performance test per 40 CFR 63.1510(e). The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by

the manufacturer, or if no calibration schedule is specified, at least once every 6 months. The device shall conform to the specifications of 40 CFR 63.1510(e)(1).

- H. The owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as required in 40 CFR 63.1510(f)(1). The bag leak detection system shall conform to the requirements of 40 CFR 63.1510(f)(1)(i) through 40 CFR 63.1510(f)(1)(x).
- I. The owner or operator shall install, calibrate, maintain and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases per 40 CFR 63.1510(h). The device shall conform to the specifications in 40 CFR 63.1510(h)(2)(i) through 40 CFR 63.1510(h)(2)(iii).
- J. The owner or operator shall install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to the Rotary Barrel Furnaces per 40 CFR 63.1510(j). The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
- K. Calculate and record the gaseous or liquid reactive flux injection rate in kg/Mg or lb/ton for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
- L. Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of gaseous or liquid reactive flux, other than chlorine; and solid reactive flux per 40 CFR 63.1510(j).
- M. Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
- N. The owner or operator shall follow all applicable notification requirements of 40 CFR 63.1515.
- O. The owner or operator shall follow all applicable reporting requirements of 40 CFR 63.1516.
- P. The owner or operator shall follow all applicable recordkeeping requirements of 40 CFR 63.1517.
- Q. The permit holder, owner and operator of the facility shall maintain a record of maintenance performed on baghouse, CE-13.

Authority for Requirement: IDNR PSD Permit 98-A-468-P2
567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

NESHAP

- The Rotary Barrel Furnaces are subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. Under Subpart RRR, the Rotary Barrel Furnaces are regulated as Group 1 Furnaces.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 75
Stack Opening, (inches, dia.): 94
Exhaust Flow Rate (acfm): 237,500
Exhaust Temperature (°F): 116
Discharge Style: Vertical, Unobstructed
Authority for Requirement: IDNR PSD Permit 98-A-468-P2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

Pollutant – Volatile Organic Compounds (VOC)

Performance Testing Completed – 8/15-16/2007

Stack Test to be Completed by – Two (2) tests during every 5 year period. (Each test shall be at least 24 months apart. One test may occur during the required MACT compliance testing for PM, Hydrochloric Acid (HCl) and Dioxins and Furans (D/F)).

Test Method - See 40 CFR 63 Subpart RRR §63.1511(c)

Authority for Requirement - IDNR PSD Permit 98-A-468-P2

567 IAC 23.1(4)"br"

40 CFR 63 Subpart RRR

Pollutant(s) – Particulate Matter (PM), Opacity, HAPs

Performance Testing Completed – 7/1/2008

Stack Test to be Completed by – Every 5 years

Test Method – See 40 CFR 63 Subpart RRR §63.1511(c)

Authority for Requirement - 567 IAC 23.1(4)"br"

40 CFR 63 Subpart RRR

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

RBF UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

Definitions of acronyms as used in this plan:

CAAA = Clean Air Act Amendments

CE = Control Equipment

CFR = Code of Federal Regulations

CPMS = Continuous Parameter Monitoring System

CMMS = Computerized Maintenance Management System

EU = Emission Unit (defined by MACT as a group 1 furnace or an in-line fluxer; all others are affected sources)

OM&M = Operation, Maintenance, & Monitoring

P.M. = Preventative Maintenance

RBF = Rotary Barrel Furnace

RBF Unit = (2) RBF's, a Rotary Dross Cooler, & material bins all common ducted to a CE Baghouse

SAPU = Secondary Aluminum Processing Unit

SECAL MACT = SECondary ALuminum Maximum Achievable Control Technology

SSM = Startup, Shutdown, Malfunction

Floating Interval = an approximate period of time where the end point is variable; the subsequent approximate period of time begins anew at the end point of the previous time period

Group 1 Furnace = a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing

General Procedures:

Only one item, the baghouse, is needed to prevent excess emissions of hazardous air pollutants from the production of aluminum in the RBF Unit. Defining the pollution control equipment as the affected source in this OM&M plan is consistent with the terms outlined in the Preambles of the SECAL MACT standard and Section 112 of the CAAA, and in guidance from the EPA Websites.

This facility is committed to making timely corrective actions to this unit in times of excursion where the indicators are out of range. Corrective actions may involve an investigation as to the reason, evaluation of the situation, and an appropriate chronological range of actions to remedy the situation. Baghouse bag leak detector system alarms, baghouse lime injection system alarms, and baghouse inlet temperature system alarms may be excursions. An excursion does not necessarily indicate a violation of an applicable requirement.

If an excursion occurs, one of three levels of action will be taken: (Level 1) the control equipment causing the excursion shall be repaired in an expeditious manner, or if that cannot be accomplished in a reasonable period of time, (Level 2) the process generating the emissions shall be changed to minimize excess emissions of hazardous air pollutants, or if that cannot be accomplished in a reasonable period of time, (Level 3) commencement of a total orderly shutdown of all production processes that cause excess hazardous air pollutant emissions. A timely or expeditious manner is the time necessary to determine the cause of the excursion and to correct it in a reasonable period of time. A reasonable period of time is

RBF UNIT OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

eight hours plus the period of time required to change or shut down the process without jeopardizing employee safety or damaging the process or control equipment.

Emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Run-time conditions will be monitored by the CPMS. Monitoring is not required during periods of time greater than one day when the source does not operate. CPMS detected excursions or malfunctions, including the date, time, and duration, will be recorded as outlined in the SSM Plan. Excess emissions will be reported as required by 40 CFR 63.1516(b) of the SECAL MACT standard.

RBF OM&M Plan Specifics:

Note: The layout convention below follows the OM&M outline sequence listed in 40 CFR 63.1510(b)

- (1) The following process and control device parameters are monitored to determine compliance with the applicable emission limits for the RBF unit:
 - (a) Baghouse leak detector alarm system – automated system to assure that the baghouse bags are in good working condition.
 - (b) Baghouse lime injection alarm system – automated system to assure that the baghouse lime system is functioning properly.
 - (c) Baghouse inlet temperature alarm system – automated system to assure that the baghouse inlet temperature is within allowable parameter range.

The operating levels or ranges for the above parameters are established as follows:

- (d) Baghouse leak detector alarm system – 10 times the reference level.
 - (e) Baghouse lime injection alarm system – At or greater than 0.00.
 - (f) Baghouse inlet temperature alarm system – Less than $155^{\circ}\text{F} + 25^{\circ}\text{F}$.*
- (2) The monitoring schedule for each affected source (control device) is as follows:
 - (a) Baghouse leak detector alarm system – automated system
 - (b) Baghouse lime injection alarm system – automated system
 - (c) Baghouse inlet temperature alarm system – automated system
- (3) Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits are as follows:
 - (a) Baghouse system – Addendum 3(a)
Note: the proper operation and maintenance of the baghouse leak detector alarm system, the baghouse lime injection alarm system, and the baghouse inlet temperature alarm system are incorporated in item (4) below.

RBF UNIT OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

- (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: Calibration and Certification of accuracy of each monitoring device, according to the manufacturer's instructions are as follows:
- (a) General Operation, Maintenance, and Quality Control of Continuous Parameter Monitoring Systems:
 - (i) This facility will endeavor to maintain and operate each CPMS in a manner consistent with good air pollution practices.
 - (ii) Every attempt will be made to repair CPMS detected malfunctions as outlined in the SSM (Startup, Shutdown, Malfunction) Plan, and reported in the semiannual startup, shutdown, and malfunction report required by the SECAL MACT standard. Any actions not consistent with the SSM Plan will be recorded and reported in the semiannual excess emissions/summary report as required by the SECAL MACT standard (records kept by the Engineering Secretary).
 - (b) Baghouse leak detector alarm system – Addendum 4(b)
 - (c) Baghouse lime injection alarm system – Addendum 4(c)
 - (d) Baghouse inlet temperature alarm system – Addendum 4(d)
- (5) Procedures for monitoring control device parameters are as follows:
- (a) Control device parameter monitoring is done by automation. Should the monitoring system detect a malfunction, it automatically sends an alarm signal to plant operations personnel who will respond and initiate corrective action as outlined in the unit SSM Plan.
 - (b) Additionally, preventative maintenance procedures are performed that monitor control device parameters as outlined and incorporated in item (4) above.
- (6) Corrective actions to be taken when add-on control device parameters deviate from the specified limit or range, including:
- A. Procedures to determine and record the cause of the deviation or excursion
 - B. The time the deviation or excursion began and ended
 - C. The time the deviation or excursion began and ended
 - D. The corrective action initiation and completion times/dates
 - (a) When a monitored parameter malfunction alarm occurs, Operations Personnel will, as soon as practicable, initiate corrective action. Note that SECAL MACT requires initiation of corrective action within one hour of the alarm.
 - (b) Operations Personnel will then perform appropriate diagnostic and troubleshooting functions on the equipment to determine the cause of the malfunction, and the proper corrective action will be taken as outlined in the unit SSM Plan.
 - (c) All monitored parameter malfunctions will be detailed and recorded (records kept by the Engineering Secretary) on the "Startup-Shutdown-Malfunction Log", including:
 - (i) The date of the malfunction.
 - (ii) The time of the alarm.
 - (iii) The time that corrective action was initiated.
 - (iv) Cause of the malfunction.
 - (v) Corrective action taken, including steps to minimize excess stack emissions if necessary.

RBF UNIT OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

- (vi) Date and time that the corrective action was completed .
- (vii) Total duration, in minutes or hours, of the malfunction.
- (7) Maintenance Schedule for each control device consistent with manufacturer's instructions and recommendations for routine and long-term maintenance:
 - (a) Baghouse leak detector alarm system – Monthly and yearly floating intervals
 - (b) Baghouse lime injection alarm system – Monthly and yearly floating intervals
 - (c) Baghouse inlet temperature alarm system – Monthly and yearly floating intervals
- (8) Documentation of work instructions and pollution prevention measures used to achieve compliance for *group 1* furnaces *without* an add-on pollution control device:
 - (a) Not Applicable – All RBF group 1 furnaces have an add-on pollution control device
- (9) The following SAPU site-specific information is listed below:
 - (a) Identification of each EU (emission unit) in the SAPU:
 - (i) Emission unit 04 = Melter 1 charge wells
 - (ii) Emission unit 05 = Melter 2 charge wells
 - (iii) Emission unit 06 = Holder 1
 - (iv) Emission unit 07 = Holder 2
 - (v) Emission unit 09 = Melter 3 charge wells
 - (vi) Emission unit 13a = Rotary Barrel Furnace 1
 - (vii) Emission unit 13b = Rotary Barrel Furnace 2
 - (viii) Emission unit 22 = Degasser
 - (ix) Note: The media (Burner Ball Shaker) cleaning system is common ducted to the M-1&2/ H-1&2/ Degasser baghouse but is not an emission unit as defined in the SECAL MACT standard.
 - (x) Note: The Delacquering system is common ducted to the Melter 3 - Delaq baghouse but is not an emission unit as defined in the SECAL MACT standard.
 - (xi) Note: The Rotary Dross Cooler and the RBF material bins are common ducted to the RBF baghouse but are not Emission Units as defined in the SECAL MACT standard.
 - (b) The specific control technology or pollution prevention measure to be used on each EU and the date of its installation or application:
 - (i) All M-1 & 2 / H-1 & 2 / Degasser Unit EU's (EU04, EU05, EU06, EU07, EU22) are common ducted to EP23 lime injected baghouse, along with a bag leak detection system, a lime injection detection system, and an inlet temperature monitoring system. Installed/approved on December 31, 2002.
 - (ii) EU 09 was installed/approved on 8-5-94 and is common ducted to EP03 lime injected baghouse which was installed/approved on 11-5-90. A bag leak detection system and an inlet temperature monitoring system were added to the baghouse (installed /approved) on December 31, 2002.
 - (iii) EU 13a & EU 13b are common ducted to EP13 lime injected baghouse installed/approved Oct. 1998. A bag leak detection system, an updated lime injection system, and an inlet temperature monitoring system were added to the baghouse (installed /approved) on March 23, 2003.

RBF UNIT OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

- (c) Calculated SAPU emission limit and performance test results and supporting calculations demonstrating initial compliance for each EU:

- (10) The SAPU compliance procedures within this OM&M plan do not contain any of the following provisions:
 - (a) Any averaging among emissions of differing pollutants
 - (b) The inclusion of any affected sources other than EU's in this SAPU, except common ducted sources as allowed by and approved by the permitting authority with the acceptance of this plan.
 - (c) The inclusion of any EU while it is shutdown
 - (d) The inclusion of any periods of startup, shutdown, or malfunction in emission calculations

- (11) To revise the SAPU compliance provisions within this OM&M plan prior to the end of the permit term, the owner or operator will submit a request to the applicable permitting authority containing the information required by paragraph (9) of this plan and obtain approval of the applicable permitting authority prior to implementing any revisions.

Addendum 3(a) - Baghouse System

Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits:

The Secondary Aluminum MACT Standard requires inspection of each capture/collection and closed vent system at least once each calendar year. Although the Company frequently conducts Baghouse Preventative Maintenance (P.M.) at floating intervals, only the yearly inspection is included in this plan, which satisfies the standard and does not overly burden the company with unnecessary record keeping in the spirit of the Paperwork Reduction Act. The Baghouse Yearly Preventative Maintenance Form has been compiled using both the appropriate manufacturers specifications and general historical experience. Because the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The form is generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

RBF UNIT OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

Addendum 4(b) - Baghouse Leak Detector System

Bag Leak Detector System specific Operation, Maintenance, and Quality Control:

The bag leak detector system Preventative Maintenance (P.M.) is conducted at floating intervals of monthly and yearly. The Preventative Maintenance Forms have been compiled using the appropriate manufacturers specifications. Because bag leak detectors have not been previously required or necessary, the company has no experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The guide forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(c) - Baghouse Lime Injection System

Baghouse Lime Injection System specific Operation, Maintenance, and Quality Control:

The baghouse lime injection system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. Zero lime addition is permissible for the lime injection baghouse. Maintenance of lime is not necessary since lime wasn't added during testing and lime is not required for compliance.

Addendum 4(d) - Baghouse Inlet Temperature System

Baghouse Inlet Temperature System specific Operation, Maintenance, and Quality Control:

The baghouse inlet temperature system Preventative Maintenance (P.M.) is conducted at floating intervals of monthly and yearly. The Preventative Maintenance Forms have been compiled using the appropriate manufacturers specifications. Because baghouse inlet temperature systems of this type have not been previously required or necessary, the company has little experience with them. Since the manufacturers' specifications are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The guide forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL

RBF UNIT OM&M PLAN
Operation, Maintenance, & Monitoring Plan
Secondary Aluminum MACT Standard

FORM 010815.DOC SA REV 10/23/2007

MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 9(c)

Calculated SAPU emission limit and performance test results and supporting calculations demonstrating initial compliance for each EU:

The SAPU emission limit calculations, performance test results, and supporting calculations for demonstrating initial compliance for each EU are presented in Tables 1-12 taken from the October 2003 *Notification of Compliance Status Report*, dated October 2003, and the *Report on Wheelabrator Baghouse Air Emission Test Program*, dated October 21, 2003.

Revisions:

- * 10/29/2004, increased the inlet temperature fm. 112° F to 144° F due to calculation error during the performance test.
- 10/23/2007, increased the inlet temperature from 144° F to 155° F based on August 2007 MACT Test data.

Emission Point ID Number: 14F (Vented Internally)

Associated Equipment

Associated Emission Unit ID Number: 14
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 14
Emission Unit Description: Burner Ball Shaker
Raw Material/Fuel: Burner Balls
Rated Capacity: 1.00 ton/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 15a

Associated Equipment

Associated Emission Unit ID Number: 15
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 15
Emission Unit Description: Refractory Curing Oven
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.002 MMCF/hour

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter <10 Microns (PM₁₀)
Emission Limit(s): 0.308 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 96-A-287

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/scf, 0.308 lb./hr, 1.35 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 96-A-287
567 IAC 23.3(2)"a"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 0.20 lb./hr, 0.88 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 96-A-287

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 19.33
- Stack Opening, (inches, dia.): 12
- Exhaust Flow Rate (scfm): 354
- Exhaust Temperature (°F): 1000
- Discharge Style: Vertical, Unobstructed
- Authority for Requirement: IDNR Construction Permit 96-A-287

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 15b

Associated Equipment

Associated Emission Unit ID Number: 15
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 15
Emission Unit Description: Refractory Curing Oven
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.002 MMCF/hour

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter <10 Microns (PM₁₀)
Emission Limit(s): 0.308 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 96-A-287

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/scf, 0.308 lb./hr, 1.35 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 96-A-287
567 IAC 23.3(2)"a"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 0.20 lb./hr, 0.88 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 96-A-287

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 19.33
- Stack Opening, (inches, dia.): 12
- Exhaust Flow Rate (scfm): 354
- Exhaust Temperature (°F): 1000
- Discharge Style: Vertical, Unobstructed
- Authority for Requirement: IDNR Construction Permit 96-A-287

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 16F (Vented Internally)

Associated Equipment

Associated Emission Unit ID Number: 16
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 16
Emission Unit Description: Direct Fired Heaters > 1.8MMBtu/hr
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.048515 MMCF/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)
Emission Limit: 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit: 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 18F (Vented Internally)

Associated Equipment

Associated Emission Unit ID Number: 18
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 18
Emission Unit Description: Two (2) Dross Presses
Raw Material/Fuel: Metal Melted
Rated Capacity: 20 tons/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)
Emission Limit: 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit: 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 20

Associated Equipment

Associated Emission Unit ID Number: 20
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 20
Emission Unit Description: Caster Water Pump Backup Engine
Raw Material/Fuel: Diesel
Rated Capacity: 270 HP-hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 2.5 lb./MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"(2)

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting & Record keeping:

The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

- The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 21

Associated Equipment

Associated Emission Unit ID Number: 21
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: 21
Emission Unit Description: Fire System Engine Combustion
Raw Material/Fuel: Diesel
Rated Capacity: 93 HP-hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 2.5 lb./MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"(2)

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

- No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting & Record keeping:

The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

- The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: 23

Associated Equipment

Associated Emission Unit ID Numbers⁽¹⁾: 04, 05, 06, 07, 14, 24, 03b, 06a, 07a

Emissions Control Equipment ID Number: CE23

Emissions Control Equipment Description: Mikropul Lime Injected Baghouse

EU ID	EU Description	Raw Material	Rated Capacity	Control ID
04	Melting Furnace #1	Metal	17.0 tons/hr	CE23
05	Melting Furnace #2	Metal	17.0 tons/hr	CE23
06	Holding Furnace #1	Metal	87.5 tons/hr	CE23
07	Holding Furnace #2	Metal	87.5 tons/hr	CE23
14	Burner Ball Shaker	Burner Balls	1.00 tons/hr	CE23
24	Caster Belt Brush	Metal	49.0 tons/hr	CE23
06a	Holding Furnace #1 (Natural Gas)	Natural Gas	0.024 MMCF/hr	CE23
07a	Holding Furnace #2 (Natural Gas)	Natural Gas	0.024 MMCF/hr	CE23

⁽¹⁾EU22 (Holding Furnace Degasser; In-Line Fluxor) had been subject to RRR, but the process uses no chlorine or reactive flux. Nitrogen is used to remove natural gas bubbles from the metal, and the connection to EP23 was removed. Unit 22 removed from Title V Permit; however references from Construction Permit 02-A-491-S2 remain as that permit has not yet been modified.

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant	Emission Limit	Authority for Requirement
Opacity	40% ⁽¹⁾	567 IAC 23.3(2)"d" IDNR Construction Permit 02-A-491-S2
Particulate Matter <10 microns (PM ₁₀)	11.312 lb/hr ⁽²⁾	IDNR Construction Permit 02-A-491-S2
Particulate Matter (PM)	11.312 lb/hr ⁽²⁾ 0.1 gr/dscf	567 IAC 23.3(2)"a" IDNR Construction Permit 02-A-491-S2
Sulfur Dioxide (SO ₂)	500 ppmv	567 IAC 23.3(3)"e" IDNR Construction Permit 02-A-491-S2
Nitrogen Oxides (NO _x)	5.8 lb/hr ⁽²⁾	IDNR Construction Permit 02-A-491-S2
Carbon Monoxide (CO)	4.8 lb/hr ⁽²⁾	IDNR Construction Permit 02-A-491-S2

⁽¹⁾ If visible emissions are observed other than startup, shutdown or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

⁽²⁾ Emission limits imposed to limit the potential emissions of PM, PM₁₀, NO_x and CO.

Melter 1 (EU04), Melter 2 (EU05), Holding Furnace 1 (EU06) and Holding Furnace 2 (EU07)

Pollutant	Emission Limit
Particulate Matter (PM)	0.40 lb/ton of feed ⁽¹⁾
Hydrochloric Acid (HCl)	0.40 lb/ton of feed ⁽¹⁾ or 10% of the HCl upstream of the add-on control device ⁽¹⁾
Dioxins/Furans in Toxicity Equivalents (D/F TEQ)	15.0 µg TEQ/Mg of feed ⁽¹⁾

⁽¹⁾Per §63.1505(i)(6), the owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of the feed/charge.

Holding Furnace Degasser (EU22)

Pollutant	Emission Limit
Particulate Matter (PM)	0.40 lb/ton of feed ⁽¹⁾
Hydrochloric Acid (HCl)	0.40 lb/ton of feed ⁽¹⁾ or 10% of the HCl upstream of the add-on control device ⁽¹⁾

⁽¹⁾Per §63.1505(i)(6), the owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of the feed/charge.

Secondary Aluminum Processing Unit

Pollutant	Limit ⁽¹⁾
Particulate Matter (PM) ⁽²⁾	$L_{CPM} = \frac{\sum_{i=1}^n C_{tiPM} x T_{ti}}{\sum_{i=1}^n C_{ti}}$
Hydrogen Chloride (HCl) ⁽³⁾	$L_{CHCl} = \frac{\sum_{i=1}^n C_{tiHCl} x T_{ti}}{\sum_{i=1}^n C_{ti}}$
Dioxins and Furans (D/F) ⁽⁴⁾	$L_{CD/F} = \frac{\sum_{i=1}^n C_{tiD/F} x T_{ti}}{\sum_{i=1}^n C_{ti}}$

⁽¹⁾ The owner or operator of a SAPU at a secondary aluminum production facility that is a major source may demonstrate compliance with the emission limit if §63.1505(k)(1) through (3) by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits of §63.1505(i) and §63.1505(j).

⁽²⁾ Where,

L_{CPM} = The PM emission limit for the secondary aluminum processing unit.

L_{tiPM} = The PM emission limit for individual emission unit i in §63.1505(i)(1) and (2) for a group 1 furnace or §63.1505(j)(2) for an in-line fluxer. **NOTE: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.**

T_{ti} = The feed/charge rate for individual emission unit i.

⁽³⁾ Where,

L_{CHCl} = The HCl emission limit for the secondary aluminum processing unit.

L_{iHCl} = The HCl emission limit for individual emission unit i in §63.1505(i)(4) for a group 1 furnace or §63.1505(j)(1) for an in-line fluxer. **NOTE: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl limit.**

T_{ii} = The feed/charge rate for individual emission unit i.

⁽⁴⁾ Where,

$L_{CD/F}$ = The D/F emission limit for the secondary aluminum processing unit.

$L_{iD/F}$ = The D/F emission limit for individual emission unit i in §63.1505(i)(3) for a group 1 furnace.

T_{ii} = The feed/charge rate for individual emission unit i.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

- A. Melter 1 (EU 04) and Melter 2 (EU 05) are each limited to a maximum throughput of 408 tons per day and 148,900 tons per year of aluminum.
- B. Holding Furnace 1 (EU 06) and Holding Furnace 2 (EU 07) are each limited to a maximum throughput of 87.5 tons per hour of aluminum.
- C. Holding Furnace 1 (EU 06) and Holding Furnace 2 (EU 07) shall be fired by natural gas only.
- D. The Holding Furnace Degasser (EU 22) is limited to a maximum throughput of 1,176 tons per day of aluminum.
- E. The Burner Ball Shaker (EU 14) is limited to a maximum throughput of 24 tons per day.
- F. Baghouse CE23 shall use lime injection and be maintained according to the manufacturer's specifications.
- G. The owner or operator of the facility shall comply with all applicable operating limits and requirements contained in NESHAP Subpart RRR, 40 CFR 63.1506.
- H. The owner or operator shall provide and maintain easily visible labels posted at Melter 1, Melter 2, Holding Furnace 1, Holding Furnace 2 and Holding Furnace Degasser that identifies the applicable emission limits and means of compliance per 40 CFR 63.1506(b) including:
 1. The type of affected source or emission unit
 2. The applicable operational standard(s) and control method(s). This includes but is not limited to, the type of charge to be used for a furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.
- I. The owner or operator shall operate each capture/collection system according to the procedures and requirements in the OM&M plan per 40 CFR 63.1506(c).
- J. The owner or operator shall install and operate a device to measure and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test per 40 CFR 63.1506(d). The weight measurement system or other weight determination procedure shall be operated in accordance with the OM&M plan.

The owner or operator may chose to measure and record aluminum production weight from an affect source or emission unit rather than fee/charge weight to an affect source or unit provided:

1. The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and
 2. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.
- K. The owner or operator of an in-line fluxer (i.e. Holding Furnace Degasser) and group 1 furnaces (i.e. Melter 1, Melter 2, Holding Furnace 1 and Holding Furnace 2) with emissions controlled by a lime-injected fabric filter must, for a bag leak detection system:
1. Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan
 2. Operate the fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period per 40 CFR 63.1506(k)(ii) and 40 CFR 63.1506(m)(iii).
 3. Maintain the 3-hour block average inlet temperature for the fabric filter at or below the average temperature established during the performance test plus 25°F.
- L. The owner or operator of the in-line fluxer (i.e. Holding Furnace Degasser) shall maintain the total reactive chlorine flux injection rate for each operation cycle or time period used in the performance test at or below the average rate established during the performance test per 40 CFR 63.1506(k)(4) and 40 CFR 63.1506(m)(5).

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The permit holder, owner or operator of the facility shall record the amount of aluminum processed in each melter, in ton per day. The permit holder, owner and operator of the facility shall calculate and record the monthly total and the 12-month rolling total.
- B. The permit holder, owner and operator of the facility shall record the amount of aluminum processed in the holding furnace degasser, in tons per day. The permit holder, owner and operator of the facility shall calculate and record the monthly total and the 12-month rolling total.
- C. The owner or operator of the facility shall comply with all applicable operating monitoring requirements contained in NESHAP Subpart RRR, 40 CFR 63.1510.
- D. The owner or operator shall prepare and implement a written operation, maintenance, and monitoring (OM&M) plan per the monitoring requirements of 40 CFR 63.1510. The OM&M plan shall include the required information for secondary aluminum processing units as described in 40 CFR 63.1510(s).
- E. The owner or operator must inspect the labels for Melter 1, Melter 2, Holding Furnace 1, Holding Furnace 2 and Holding Furnace Degasser at least once per calendar month to confirm that posted labels are intact and legible.

- F. The owner or operator shall install, operate, and maintain a capture/collection system for Melter 1, Melter 2, Holding Furnace 1, Holding Furnace 2 and Holding Furnace Degasser and inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection per 40 CFR 63.1510(d).
- G. The owner or operator of Melter 1, Melter 2, Holding Furnace 1, Holding Furnace 2 and Holding Furnace Degasser must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, Melter 1, Melter 2, Holding Furnace 1, Holding Furnace 2 and Holding Furnace Degasser over the same operating cycle or time period used in the performance test per 40 CFR 63.1510(e). The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. The device shall conform to the specifications of 40 CFR 63.1510(e)(1).
- H. The owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as required in 40 CFR 63.1510(f)(1). The bag leak detection system shall conform to the requirements of 40 CFR 63.1510(f)(1)(i) through 40 CFR 63.1510(f)(1)(x).
- I. The owner or operator shall install, calibrate, maintain and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases per 40 CFR 63.1510(h). The device shall conform to the specifications in 40 CFR 63.1510(h)(2)(i) through 40 CFR 63.1510(h)(2)(iii).
- J. The owner or operator shall install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to Melter 1, Melter 2, Holding Furnace 1, Holding Furnace 2 or Holding Furnace Degasser per 40 CFR 63.1510(j). The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
- K. Calculate and record the gaseous or liquid reactive flux injection rate in kg/Mg or lb/ton for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
- L. Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of gaseous or liquid reactive flux, other than chlorine; and solid reactive flux per 40 CFR 63.1510(j).
- M. Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
- N. The owner or operator shall follow all applicable notification requirements of 40 CFR 63.1515.
- O. The owner or operator shall follow all applicable reporting requirements of 40 CFR 63.1516.
- P. The owner or operator shall follow all applicable recordkeeping requirements of 40 CFR 63.1517.

Q. The permit holder, owner and operator of the facility shall maintain a record of maintenance performed on baghouse, CE 23.

Authority for Requirement: Iowa DNR Construction Permit 02-A-491-S2

NESHAP⁽¹⁾:

- The above listed emission sources are subject to 40 CFR 63 Subpart A – General Conditions and 40 CFR 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The Permittee shall comply with all applicable requirements of Subpart RRR. Under Subpart RRR, the emission sources are regulated as the following:

EP	EU	EU Description	Regulated As
23	04	Melting Furnace #1	Main Hearth - Group 2 Furnace Charge Wells – Group 1 Furnace
23	05	Melting Furnace #2	Main Hearth - Group 2 Furnace Charge Wells – Group 1 Furnace
23	06	Holding Furnace #1	Group 1 Furnace
23	06a	Holding Furnace #1 (Natural Gas)	Group 1 Furnace
23	07	Holding Furnace #2	Group 1 Furnace
23	07a	Holding Furnace #2 (Natural Gas)	Group 1 Furnace

⁽¹⁾EU22 (Holding Furnace Degasser; In-Line Fluxor) had been subject to RRR, but the process uses no chlorine or reactive flux. Nitrogen is used to remove natural gas bubbles from the metal, and the connection to EP23 was removed. Unit 22 removed from Title V Permit; however references from Construction Permit 02-A-491-S2 remain as that permit has not yet been modified.

Authority for Requirement: 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 80

Stack Opening, (inches, dia.): 115

Exhaust Flow Rate (acfm): 260,000

Exhaust Temperature (°F): 325

Discharge Style: Vertical, Unobstructed

Authority for Requirement: IDNR Construction Permit 02-A-491-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

Pollutant(s) – Particulate Matter (PM) Particulate Matter <10 Microns (PM₁₀), Opacity
Performance Testing Completed - 7/2/2008
Test Method – EPA Method 5, EPA Method 9
Authority for Requirement - 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

Pollutant – Particulate Matter (PM), Hydrochloric Acid (HCl), Dioxins & Furans (D/F)
Performance Testing Completed - 8/14/2007
Stack Test to be Completed by – Every 5 years
Test Method – See 40 CFR 63 Subpart RRR §63.1511(c)
Authority for Requirement - 567 IAC 23.1(4)"br"
40 CFR 63 Subpart RRR

The owner of this equipment or the owner’s authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

Definitions of acronyms as used in this plan:

CAAA = Clean Air Act Amendments

CE = Control Equipment

CFR = Code of Federal Regulations

CPMS = Continuous Parameter Monitoring System

CMMS = Computerized Maintenance Management System

EU = Emission Unit (defined by MACT as a group 1 furnace or an in-line fluxer; all others are affected sources)

OM&M = Operation, Maintenance, & Monitoring

P.M. = Preventative Maintenance

SAPU = Secondary Aluminum Processing Unit

SECAL MACT = SECondary ALuminum Maximum Achievable Control Technology

Floating Interval = an approximate period of time where the end point is variable; the subsequent approximate period of time begins anew at the end point of the previous time period

Group 1 Furnace = a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing

General Procedures:

Only one item, the baghouse, is needed to prevent excess emissions of hazardous air pollutants from the production of aluminum in the M-1 & 2 / H-1 & 2 / Degasser Unit. Defining the pollution control equipment as the affected sources in this OM&M plan is consistent with the terms outlined in the Preambles of the SECAL MACT standard and Section 112 of the CAAA, and in guidance from the EPA Websites.

This facility is committed to making timely corrective actions to this Unit in times of excursion where the indicators are out of range. Corrective actions may involve an investigation as to the reason, evaluation of the situation, and an appropriate chronological range of actions to remedy the situation. Baghouse bag leak detector system alarms, and baghouse inlet temperature system alarms are considered by the facility as excursions. An excursion does not necessarily indicate a violation of an applicable requirement.

If an excursion occurs, one of three levels of action will be taken: (Level 1) the control equipment causing the excursion shall be repaired in an expeditious manner, or if that cannot be accomplished in a reasonable period of time, (Level 2) the process generating the emissions shall be changed to minimize excess emissions of hazardous air pollutants, or if that cannot be accomplished in a reasonable period of time, (Level 3) commencement of a total orderly shutdown of all production processes that could cause excess hazardous air pollutant emissions. A timely or expeditious manner is the time necessary to determine the cause of the excursion and to correct it in a reasonable period of time. A reasonable period of time is less than 24-hours plus the period of time required to change or shut down the process without jeopardizing employee safety or damaging the process or control equipment.

Emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

minimizing emissions. Run-time conditions will be monitored by the CPMS. Monitoring is not required during periods of time greater than one day when the source does not operate. CPMS detected excursions or malfunctions, including the date, time, and duration, will be recorded as outlined in the SSM Plan. Excess emissions will be reported as required by 40 CFR 63.1516(b) of the SECAL MACT standard.

M-1 & 2 / H-1 & 2 / Degasser Unit OM&M Plan Specifics:

Note: The layout convention below follows the OM&M outline sequence listed in 40 CFR 63.1510(b)

- (1) The following process and control device parameters are monitored to determine compliance with the applicable emission limits for the M-1 & 2 / H-1 & 2 / Degasser Unit:
 - (a) Baghouse leak detector alarm system – automated system to assure that the baghouse bags are in good working condition.
 - (2) Baghouse inlet temperature alarm system – automated system to assure that the baghouse inlet temperature is within allowable parameter range.

The operating levels or ranges for the above parameters are established as follows:

- (a) Baghouse leak detector alarm system – 10 times the reference level.
 - (b) Baghouse inlet temperature alarm system – Less than 229° F + 25° F. *
 - (c) Rotary Degasser (In-line fluxer) – total reactive flux injection rate no greater than 41.104(10⁻³) l/ft narrow (40” or less) and 53.436 (10⁻³) wide (52”) vol. per caster foot, which corresponds to 1.1855(10⁻³) l/lb. volume per unit cast.
- (3) The monitoring schedule for each affected source (control device) is as follows:
 - (a) Baghouse leak detector alarm system – automated system
 - (b) Baghouse inlet temperature alarm system – automated system
 - (d) Degassing Chlorine feed-rate alarm system – automated system
 - (4) Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits are as follows:
 - (a) Baghouse system – Addendum 3(a)
Note: the proper operation and maintenance of the baghouse leak detector alarm system, the baghouse lime injection alarm system, and the baghouse inlet temperature alarm system are incorporated in item (4) below.
 - (5) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: Calibration and Certification of accuracy of each monitoring device, according to the manufacturer’s instructions are as follows:
 - (a) General Operation, Maintenance, and Quality Control of Continuous Parameter Monitoring Systems:
 - (i) This facility will endeavor to maintain and operate each CPMS in a manner consistent with good air pollution practices.
 - (ii) Every attempt will be made to repair CPMS detected malfunctions as outlined in the SSM (Startup, Shutdown, Malfunction) Plan, and reported in the semiannual startup, shutdown, and malfunction report required by the SECAL MACT standard. Any actions not consistent with

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

the SSM Plan will be recorded and reported in the semiannual excess emissions/summary report as required by the SECAL MACT standard (records kept by the Technical Assistant).

- (iii) Baghouse leak detector alarm system – Addendum 4(b)
 - (iv) Baghouse lime injection alarm system – Addendum 4(c)
 - (v) Baghouse inlet temperature alarm system – Addendum 4(d)
 - (vi) Degassing Chlorine feed-rate alarm system – Addendum 4 (e)
- (6) Procedures for monitoring control device parameters are as follows:
- (a) Control device parameter monitoring is done by automation. Should the monitoring system detect a malfunction, it automatically sends an alarm signal to plant operations personnel who will respond and initiate corrective action as outlined in the Unit SSM Plan.
 - (b) Additionally, preventative maintenance procedures are performed that monitor control device parameters as outlined and incorporated in item (4) above.
- (7) Corrective actions to be taken when add-on control device parameters deviate from the specified limit or range, including:
- A. Procedures to determine and record the cause of the deviation or excursion
 - B. The time the deviation or excursion began and ended
 - C. Procedures for recording the corrective action taken
 - D. The corrective action initiation and completion times/dates
 - (a) When a monitored parameter malfunction alarm occurs, Operations Personnel will, as soon as practicable, initiate corrective action. Note that SECAL MACT requires initiation of corrective action within one hour of the alarm.
 - (b) Operations Personnel will then perform appropriate diagnostic and troubleshooting functions on the equipment to determine the cause of the malfunction, and the proper corrective action will be taken as outlined in the Unit SSM Plan.
 - (c) All monitored parameter malfunctions will be detailed and recorded (records kept by the Engineering Secretary) on the “Startup-Shutdown-Malfunction Log”, including:
 - (i) The date of the malfunction.
 - (ii) The time of the alarm.
 - (iii) The time that corrective action was initiated.
 - (iv) Cause of the malfunction.
 - (v) Corrective action taken, including steps to minimize excess stack emissions if necessary.
 - (vi) Date and time that the corrective action was completed.
 - (vii) Total duration, in minutes or hours, of the malfunction.
- (8) Maintenance Schedule for each control device consistent with manufacturer’s instructions and recommendations for routine and long-term maintenance:
- (a) Baghouse leak detector alarm system –yearly floating intervals
 - (b) Baghouse lime injection alarm system –yearly floating intervals
 - (c) Baghouse inlet temperature alarm system –yearly floating intervals
 - (d) Degassing Chlorine feed-rate alarm system – yearly floating intervals,

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

- (9) Documentation of work instructions and pollution prevention measures used to achieve compliance for *group 1* furnaces *without* an add-on pollution control device:
- (a) Not Applicable – All group 1 furnaces in this Unit have an add-on pollution control device
- (10) The following SAPU site-specific information is listed below:
- (a) Identification of each EU (emission unit) in the SAPU:
- (vii) Emission unit 04 = Melter 1 charge wells
 - (viii) Emission unit 05 = Melter 2 charge wells
 - (ix) Emission unit 06 = Holder 1
 - (x) Emission unit 07 = Holder 2
 - (xi) Emission unit 09 = Melter 3 charge wells
 - (xii) Emission unit 13a = Rotary Barrel Furnace 1
 - (xiii) Emission unit 13b = Rotary Barrel Furnace 2
 - (xiv) Emission unit 22 = Degasser
 - (xv) Note: The media (Burner Ball Shaker) cleaning system is common ducted to the M-1&2/ H-1&2/ Degasser baghouse but is not an emission unit as defined in the SECAL MACT standard.
 - (xvi) Note: The Delacquering system is common ducted to the Melter 3 - Delaq baghouse but is not an emission unit as defined in the SECAL MACT standard.
 - (xvii) Note: The Rotary Dross Cooler and the RBF material bins are common ducted to the RBF baghouse but are not Emission Units as defined in the SECAL MACT standard.
- (b) The specific control technology or pollution prevention measure to be used on each EU and the date of its installation or application:
- (i) All M-1 & 2 / H-1 & 2 / Degasser Unit EU's (EU04, EU05, EU06, EU07, EU22) are common ducted to EP23 lime injected baghouse, which, along with a bag leak detection system, a lime injection detection system, and an inlet temperature monitoring system, were installed/approved on December 31, 2002.
 - (ii) EU 09 was installed/approved on 8-5-94 and is common ducted to EP03 lime injected baghouse was installed/approved on 11-5-90. A bag leak detection system and an inlet temperature monitoring system were added to the baghouse (installed /approved) on December 31, 2002.
 - (iii) EU 13a & EU 13b are common ducted to EP13 lime injected baghouse installed/approved Oct. 1998. A bag leak detection system, an updated lime injection system, and an inlet temperature monitoring system were added to the baghouse (installed /approved) on March 23, 2003.
- (c) Calculated SAPU emission limit and performance test results and supporting calculations demonstrating initial compliance for each EU:
- (i) Listed in Addendum 9(c)
- (11) The SAPU compliance procedures within this OM&M plan do not contain any of the following provisions:
- (a) Any averaging among emissions of differing pollutants
 - (b) The inclusion of any affected sources other than EU's in this SAPU, except common ducted sources as allowed by and approved by the permitting authority with the acceptance of this plan.
 - (c) The inclusion of any EU while it is shutdown
 - (d) The inclusion of any periods of startup, shutdown, or malfunction in emission calculations

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

- (12) To revise the SAPU compliance provisions within this OM&M plan prior to the end of the permit term, the owner or operator will submit a request to the applicable permitting authority containing the information required by paragraph (9) of this plan and obtain approval of the applicable permitting authority prior to implementing any revisions.

Addendum 3(a) - Baghouse System

Procedures for the proper operation and maintenance of each add-on control device used to meet the emission limits:

The Secondary Aluminum MACT Standard requires inspection of each capture/collection and closed vent system at least once each calendar year. Although the Company frequently conducts Baghouse Preventative Maintenance (P.M.) at floating intervals, only the yearly inspection is included in this plan, which satisfies the standard and does not overly burden the company with unnecessary record keeping in the spirit of the Paperwork Reduction Act. The Baghouse Yearly Preventative Maintenance Forms have been compiled using both the reasonable manufacturers recommendations and general historical experience. Because the manufacturers' recommendations are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P.M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(b) - Baghouse Leak Detector System

Bag Leak Detector System specific Operation, Maintenance, and Quality Control:

The bag leak detector system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Forms have been compiled using the appropriate manufacturers specifications. Because bag leak detectors have not been previously required or necessary, the company has no experience with them. Since the manufacturers' recommendations are subject to change, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P.M forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4(c) - Baghouse Lime Injection System

Baghouse Lime Injection System specific Operation, Maintenance, and Quality Control:

The baghouse lime injection system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. Zero lime addition is permissible for the lime injection baghouse. Maintenance of lime is not necessary since lime wasn't added during testing and lime is not required for compliance.

Addendum 4(d) - Baghouse Inlet Temperature System

Baghouse Inlet Temperature System specific Operation, Maintenance, and Quality Control:

The baghouse inlet temperature system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Forms have been compiled using the appropriate manufacturers specifications. Because baghouse inlet temperature systems of this type have not been previously required or necessary, the company has little experience with them. Since no manufacturing P.M. specifications are available, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

The P. M. forms are generated by the CMMS (Computerized Maintenance Management System) and the completed work orders are recorded into and kept on file within this system accessible from the Maintenance Advisors office and/or the Maintenance Operations Manager's office. Because the SECAL MACT standard requires an annual compliance certification at the end of each year that must be kept for 5 years, these maintenance records must be kept for a total of six years.

Addendum 4 (e) Degassing Chlorine feed-rate alarm system

The degassing chlorine feed-rate system Preventative Maintenance (P.M.) is conducted at floating intervals yearly. The Preventative Maintenance Forms have been compiled using best maintenance practices since no manufacturing specifications exist. Since the manufacturers' specifications do not exist, the agency will allow the company, without notification to the permitting authority, to adapt quality control improvements and upgrades to its computerized forms during the term of this permit.

M-1 & 2 / H-1 & 2 / DEGASSER UNIT OM&M PLAN

Operation, Maintenance, & Monitoring Plan

Secondary Aluminum MACT Standard

FORM 020408.DOC SA REV 10/23/2007

Addendum 9(c)

Calculated SAPU emission limit and performance test results and supporting calculations demonstrating initial compliance for each EU.

The SAPU emission limit calculations, performance test results, and supporting calculations for demonstrating initial compliance for each EU are presented in Tables 1-12 taken from the October 2003 *Notification of Compliance Status Report*, dated October 2003, and the *Report on Mikropul Baghouse Air Emission Test Program*, dated October 21, 2003.

Revisions:

- (1) Added injection rates for the Rotary Degasser.
- * 10/23/2007, increased the inlet temperature from 219° F to 229° F, based on August 2007 MACT Test data

Emission Point ID Number: Fugitives

Associated Equipment

Associated Emission Unit ID Numbers: FUG MELT, LGT, NAT GAS

Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: FUG MELT

Emission Unit Description: Fugitives from Melters

Raw Material/Fuel: Metal

Rated Capacity: 51.29 ton/hr

Emission Unit vented through this Emission Point: LGT

Emission Unit Description: Fugitive Losses from Volatile Liquids

Raw Material/Fuel: Metal

Rated Capacity: 0.001 ton/hr

Emission Unit vented through this Emission Point: NAT GAS

Emission Unit Description: Miscellaneous Natural Gas Usage

Raw Material/Fuel: Natural Gas

Rated Capacity: 200 MMcf/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"

Agency Approved Operation & Maintenance Plan Required?

Yes No

Facility Maintained Operation & Maintenance Plan Required?

Yes No

Compliance Assurance Monitoring (CAM) Plan Required?

Yes No

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent

with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.

2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.

3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.

- a. Form 1.0 "Facility Identification";
- b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
- c. Form 5.0 "Title V annual emissions summary/fee"; and
- d. Part 3 "Application certification."

4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:

- a. Form 1.0 "Facility Identification";
- b. Form 5.0 "Title V annual emissions summary/fee";
- c. Part 3 "Application certification."

5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.

6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.

7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.

8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
 - a. The date, place and time of sampling or measurements
 - b. The date the analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses; and
 - f. The operating conditions as existing at the time of sampling or measurement.
 - g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

- a. Comply with all terms and conditions of this permit specific to each alternative scenario.
- b. Maintain a log at the permitted facility of the scenario under which it is operating.
- c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

- a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
- b. Compliance test methods specified in 567 Chapter 25; or
- c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

- a. Any monitoring or testing methods provided in these rules; or
- b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures.

Determination of any subsequent enforcement action will be made following review of this report.

If excess emissions are occurring, either the control equipment causing the excess emission shall be

repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal

operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:
 - a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
 - b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
 - c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
 - d. The changes are not subject to any requirement under Title IV of the Act.
 - e. The changes comply with all applicable requirements.
 - f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification,

including the following, which must be attached to the permit by the source, the department and the administrator:

- i. A brief description of the change within the permitted facility,
 - ii. The date on which the change will occur,
 - iii. Any change in emission as a result of that change,
 - iv. The pollutants emitted subject to the emissions trade
 - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
 - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
 - vii. Any permit term or condition no longer applicable as a result of the change.
- 567 IAC 22.110(1)*

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

a. An administrative permit amendment is a permit revision that is required to do any of the following:

- i. Correct typographical errors
- ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
- iii. Require more frequent monitoring or reporting by the permittee; or
- iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

- i. Do not violate any applicable requirements
- ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
- iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
- iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
- v. Are not modifications under any provision of Title I of the Act; and
- vi. Are not required to be processed as significant modification.

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
- ii. The permittee's suggested draft permit
- iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
- iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and

those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113*
The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

G19. Duty to Obtain Construction Permits

Unless exempted under *567 IAC 22.1(2)*, the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to *567 IAC 22.8*, or permits required pursuant to *567 IAC 22.4* and *567 IAC 22.5*. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

G20. Asbestos

The permittee shall comply with *567 IAC 23.1(3)"a"*, and *567 IAC 23.2(3)"g"* when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations, training fires and controlled burning of a demolished building. *567 IAC 23.1(3)"a"*, and *567 IAC 23.2*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by *567 IAC 23.2*. *567 IAC 23.2 except 23.2(3)"h"*; *567 IAC 23.2(3)"h" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

- a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
- b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
- c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
- d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
 - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. 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. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
- a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
- a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
 - b. The department or the administrator determines that the Title V permit contains a material

mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons. 567 IAC 26.1(1)

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1

909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

Field Office 2

2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3

1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4

1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5

401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

Field Office 6

1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Public Works Dept.

Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health Dept.

Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

V. Appendix A: 40 CFR 63, Subpart A, Subpart RRR

- Subpart A: <http://www.epa.gov/ttn/atw/gp/gppg.html>
- Subpart RRR: <http://www.epa.gov/ttn/atw/alum2nd/alum2pg.html>

VI. Appendix B: Health and Safety Documents

Human Safety And Comfort Issues Associated With SECAL MACT

The Company has installed various devices and work practices that take it beyond the minimum compliance requirements of the current Secondary Aluminum MACT Standard. These items are for the safety and comfort of our employees (for example, heat removal) and it must be pointed out that their use and operation - or lack thereof - at any given point in time is not a violation of MACT, but rather enhancements that are used on an as needed basis.

Examples of such items are shown, but not limited to, the list below:

- Material bins in the RBF (Rotary Barrel Furnace) Unit are common ducted to the RBF baghouse to remove heat and to potentially prevent dust from entering the employee work zone.
- Hooding and enclosures over certain exit conveyors in the Delaq System are common ducted to its baghouse to remove heat from inside the building and to potentially prevent dust from entering the employee work zone.
- The burner box ball shaker is common ducted to the M-1&2, H-1&2, Degasser SAPU baghouse to potentially prevent dust from entering the employee work zone.
- Hooding over the in-line fluxer is common ducted to the M-1&2, H-1&2, Degasser SAPU baghouse to remove heat from the employee work zone. HCL emissions are controlled by limiting reactive flux input to less than 0.04 lb/ton.
- Hooding over the Melter Hearths is for removal of heat in the employee work zone. Only clean charge and no reactive flux is used for control of these group 2 furnaces.
- Hooding over the Trommel is common ducted to the Shredder baghouse to potentially prevent dust from entering the employee work zone.
- Lime injection into certain baghouses has been proven through testing to be unnecessary to meet MACT emission limits and may or may not be used for other reasons such as corrosion control and to prevent blinding of new bags.

Revisions:

10/23/2007, removed reference to shredder engines. Electric motors replaced the engines in November 2006.

NICHOLS ALUMINUM BAGHOUSE FILTER FAILURE MONITORS

Model

PCME Dustalert 50 (DA-50)

Installed

MikroPul baghouse, Fuller baghouse, RBF baghouse, shredder baghouse

Theory of Operation

The DA-50 uses Electrodynamic technology. When microscopic particles hit the probe or are in close proximity to the probe, a small electrical charge transfer occurs. The electronics of the probe monitor the electrical charges and provides a signal proportional to the dust concentration.

Application

Each of the 4 baghouse stacks is equipped with 3 DA-50 detectors, located near the stack outlet. The signals are compared to one another to ensure accurate operation.

DA-50 detectors are not calibrated *per se*. A baseline reference level of particulate is established for the detectors under normal baghouse operating conditions by pressing a password-protected button on the control unit. The detector then 'reads' the average particulate level in the stack for a set length of time to determine the baseline reference. This reference level becomes 1, and all other readings are relational to it, as a multiple of this baseline. For example, a reading of 3 indicates 3 times the particulate reference level is passing the probe, and a reading of .25 indicates that one quarter the reference level of particulate is passing the probe. The DA-50s are capable of detecting and displaying 0-10x, 0-100x and 0-1000x the reference level. Casting's detectors are set to display 0-10x.

The DA-50 provides a closed contact relay indicating alarm state. The alarm level is triggered by both particulate level and duration, and is set by the user. Currently, all of Casting's DA-50s are set to alarm at a particulate level of 9x the reference level for a duration of 10 minutes. Experience with our equipment has shown that this setting is sensitive enough to detect as few as one broken bag in an entire baghouse.

Doug Stolley
Engineering Associate – Process Controls
Nichols Aluminum Casting

NICHOLS ALUMINUM LIME FLOW MONITOR

Model

BinMaster Dust Detect 1000 (DD1000)

Installed

Fuller baghouse

Theory of Operation

The DD1000 uses turboelectric technology. When microscopic particles hit the probe or are in close proximity to the probe, a small electrical charge transfer occurs. The electronics of the probe monitor the electrical charges and provide a signal proportional to the dust concentration. The signal generated is proportional to the dust concentration even if an accumulation of dust forms on the sensor rod.

Application

The DD1000 is installed in the vertical section of the 3" stainless steel pipe that carries lime into the Fuller baghouse. This unit is essentially a reversed broken bag detector that is calibrated via internal potentiometers to provide a signal when lime is flowing. Loss of this signal results in an alarm condition. Proper calibration is periodically verified by comparing visual inspection of lime flow at the screw conveyor to the signal (alarm state) on the lime feeder electrical control cabinet.

Doug Stolley
Engineering Associate – Process Controls
Nichols Aluminum Casting