

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N676526016

FACILITY: Aleris Specification Alloys, Inc.		SRN / ID: N6765
LOCATION: 2600 Nodular Drive, SAGINAW		DISTRICT: Saginaw Bay
CITY: SAGINAW		COUNTY: SAGINAW
CONTACT: Brady Myers , Regional Health, Safety & Environmental Manager		ACTIVITY DATE: 07/18/2014
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Facility idled on Dec. 23, 2013 except for screening operations.		
RESOLVED COMPLAINTS:		

I (KLB) conducted a scheduled inspection at Aleris Saginaw facility. Mr. Brad Myers, Regional H, S & E Manager, & Ms. Kelly Streeter, Facility Administrator, participated in the inspection. The facility is an aluminum processing operation that supplied molten aluminum to the General Motors Powertrain Plant located approximately two miles from Aleris. All but a screening/shaker operation has been idle since December 23, 2013.

The facility is categorized as an area source with all processes covered under opt out permit No. 58-07B issued on April 3, 2008. The facility is subject to the area source requirements of 40 CFR 63 Subpart RRR, Secondary Aluminum Production NESHAP. The three reverberatory furnaces are currently the only affected sources under the NESHAP. In 2009 the facility reached agreement with EPA on violations cited in a Consent Decree that required improvements to emission capture. The Consent Decree was terminated on May 17, 2011.

The primary sources of air emissions are a rotary hammer crusher, three (3) reverberatory aluminum melting furnaces, crucible stations and dross handling. The facility was designed & operated to melt clean sows/ingots along with returns from GM in the three reverberatory furnaces. The molten aluminum was brought to spec and tapped into transport crucibles that carried the molten aluminum to GM via semi tractor-trailer.

The facility previously had over 30 employees and operated up to (3) 8-hour shifts. Aleris is maintaining the facility in a condition that would allow operations to occur with minimal start up required.

EUCRSR – 50,000 lb. /hr. Rotary Hammer Crusher: Compliant

A hammer mill unit used to break aluminum returns from GM down to a size more suitable for charging to a furnace. The crusher is controlled by a 60,000 cfm baghouse with bag leak detection. The emission unit was not operating at the time of the inspection. The control equipment is still onsite.

EUCRSR restricts the emission of PM, PM-10, VOC and opacity. Stack testing was conducted in September 2007 which documented an exceedance of the PM-10 limit. A violation notice was issued and the facility subsequently requested and received a permit modification for a higher PM-10 limit. Continued Compliance with the PM emission limits is demonstrated through control equipment monitoring to demonstrate proper operation.

Material throughput is limited to 56,000 tons per year based on a 12 month rolling average. Records reviewed showed that 11,884.8 tons had been charged during 2013, with a 12 month rolling average of 4, 93 as of December 2013.

EUDROSS – Dross Handling and Load out

Handling and load out of dross generated by the reverberatory furnaces. Controlled by 60,000 CFM. The 12 month rolling average for 2013 was 11,885 tons of charge.

EUDROSS restricts the emission of PM and PM-10. Compliance with the emission limits is demonstrated through proper operation of the required baghouse control equipped with a bag leak detection system.

12 mo rolling avg's for flux use and dross from each furnace are attached. The facility will provide baghouse operating and maintenance records at a later date.

The screening/shaker unit was operating during the inspection to process castings from GM SMC0. The emissions vent to same baghouse as EUDROSS – stack vent ID SV003. No opacity was observed emitting from the baghouse. The screened material is sent to an Aleris facility in Coldwater, MI.

EUFURN1 & EUFURN2, EUFURN3, FLUE 1, FLUE 2, and FLUE 3

Emission units associated with the three furnaces and combustion flues for each furnace. Emissions associated with the furnace sidewells have lime-injected baghouse control. Emissions from the flues vent uncontrolled.

Reported emission for HF, HCl, Cl, PM-10, and VOC for EUFURN1 & EUFURN2 (combined), EUFURN3, Flue 1, Flue 2 and Flue 3 were below permitted limits. See the attached emission calculations, PTI tables, and MAERS report for details.

The last stack testing was conducted in September 2007 which documented an exceedance of the PM-10 limit for Flue 1. A violation notice was issued and the facility subsequently requested and received a permit modification for a higher PM-10 limit.

Compliance is demonstrated through previous stack testing as well as proper operation of the lime injected baghouses per the EPA Consent Decree enhanced capture plan.

The facility will provide baghouse operating and maintenance records at a later date.

FG001 – (EUFURN1 & EUFURN2, EUFURN3)

Flex group includes the emission units associated with charging, melting and fluxing of the three furnaces. The furnaces were not operating during the inspection.

Emission limits for dioxin/furan in accordance with Subpart RRR are included in the PTI. Stack testing in 2007 demonstrated compliance with the d/f limit.

FG001 limits charge to the three furnaces to a maximum amount of 285,400 tons per 12-month rolling time period. Records reviewed showed that 60,256 tons have been charged from June 2012 – June 2013.

The process is required to have baghouse control equipped with bag leak detection. We viewed the baghouse serving furnace #3. The baghouse has damper for heat control and equipment for lime addition.

In August 2012 the facility submitted a revised Operation, Maintenance & Monitoring (OMM) plan to include a new lime feeder setting for the baghouses that control furnace exhaust. The facility will provide baghouse operating and maintenance records at a

later date.

Monthly charge rates for 2010 -2014 are attached. Daily charge rates for March 13 -18, 2013 are also attached.

FG002 – (EUHEAT1- HEAT21)

Flex group includes the 18 crucible stations where the molten aluminum is poured into transport crucibles. Emissions from the crucible stations are ducted to a baghouse that also controls emissions from the 9 crucible pre-heat stations and crucible cleaning. The crucibles were not operating during the inspection.

FG002 restricts the emission of PM-10 to 0.22 lb/hr and VOC to 0.33 lb/hr. Compliance with the PM-10 emission limits is demonstrated through proper operation of the required baghouse control equipped with a bag leak detection system. The facility will provide baghouse operating and maintenance records at a later date.

FGFACILITY

Flex group that establishes facility-wide opt out limits and incorporates Subpart RRR requirements.

Emission limits for CO, NOx and PM-10 are 66.12 TPY, 40.01 TPY, and 89.97 TPY. Reported 2013 tons of emissions were 9.67 for CO, 11.5 for NOx, and 32.8 for all PM.. The PM-10 limit is an opt-out for Title V.

Compliance with CO and NOx emissions is determined based upon fuel usage for FGFACILITY. Compliance with PM-10 emissions is determined based upon stack testing for FG001, EUCRSR and Flue 1, 2, and 3. PM-10 emissions from FG002 are based upon fuel usage.

The baghouses for the furnace and crucible emissions remain on site and appear to be installed properly and capable of operating in compliance with air requirements. Furnace baghouses employ lime injection for dioxin/furan control required under the NESHAP. All baghouses are equipped with broken bag detectors and are able to be continually monitored through redundant process control systems and recorded on strip charts on a per shift basis. The baghouse monitoring system is set up to log alarms and record corrective action. An automated preventative maintenance schedule is established for the baghouses.

Please see attached supporting records and calculations for details.

40 CFR PART 63 SUBPART RRR

The facility is subject to Subpart RRR as an area source, with the affected emission units being the three aluminum reverberatory furnaces. As an area source the furnaces are subject to the dioxin/furan limits for a Group 1 furnace as well as the associated monitoring requirements. The facility tested and demonstrated compliance with the D/F limit in September 2007.

Baghouses are the controls used at this facility. Furnace baghouses employ lime injection for dioxin/furan control under the NESHAP. All baghouses are equipped with broken bag detectors, monitored through redundant process control systems and recorded on strip charts. Baghouse alarms and corrective action are recorded. The site has an automated PM schedule for the baghouses.

Based upon the information and observations made during this inspection, the facility is in compliance with applicable air quality rules and regulations, including permit to install No. 58-07B and Subpart RRR, the Secondary Aluminum Production NESHAP.

NAME Kathy R

DATE 9/30/14

SUPERVISOR C. Ware

Aleris Specification Alloys, Inc. - Saginaw, MI
2013 Emission Calculations

Alchem Reverb Furnace Baghouse (Furnace #1) - EUFURN2

Cl2	(Stack Test - 09/01)	0.01 lb/ton	1.0E-02	21,538.8 tpy	0.11 tons	215.4 Lbs.
HCl	(Stack Test - 09/07)	0.006 lb/ton	1.0E-02	21,538.8 tpy	0.06 tons	129.2 Lbs.
HF	(Stack Test - 09/01)	0.00 lb/ton	0.0E+00	21,538.8 tpy	0.00 tons	0.0 Lbs.
PM	(Stack Test - 09/01)	0.01 lb/ton	1.0E-02	21,538.8 tpy	0.11 tons	215.4 Lbs.
PM10	(Stack Test - 09/07)	0.02 lb/ton	2.0E-02	21,538.8 tpy	0.22 tons	430.8 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.01 lb/ton	1.0E-02	21,538.8 tpy	0.11 tons	215.4 Lbs.
VOCs	(Stack Test - 09/01)	0.72 lb/ton	7.2E-01	21,538.8 tpy	7.76 tons	15,507.9 Lbs.

Limit
2.19 Tpy
1.96
0.66
3.29
3.29
16.87
Furnace #1 + 2

Alchem Reverb Furnace Flue (Furnace #1)

Cl2	(Stack Test - 09/01)	0.004 lb/ton	0.0E+00	21,538.8 tpy	0.04 tons	86.2 Lbs.
CO	(AP42)	84.00 lb/mmcf	8.4E+01	113.2 mmcf/yr	4.75 tons	9,509.4 Lbs.
HCl	(Stack Test - 09/01)	0.02 lb/ton	2.0E-02	21,538.8 tpy	0.22 tons	430.8 Lbs.
HF	(Stack Test - 09/01)	0.00 lb/ton	0.0E+00	21,538.8 tpy	0.00 tons	0.0 Lbs.
Lead	(AP42)	0.00 lb/mmcf	5.0E-04	113.2 mmcf/yr	0.00 tons	0.1 Lbs.
NOx	(AP42)	100.00 lb/mmcf	1.0E+02	113.2 mmcf/yr	5.66 tons	11,320.7 Lbs.
PM	(Stack Test - 09/01)	0.29 lb/ton	2.9E-01	21,538.8 tpy	3.12 tons	6,246.3 Lbs.
PM10	(Stack Test - 09/07)	0.66 lb/ton	6.6E-01	21,538.8 tpy	7.11 tons	14,215.6 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.66 lb/ton	6.6E-01	21,538.8 tpy	7.11 tons	14,215.6 Lbs.
SOx	(AP42)	0.60 lb/mmcf	6.0E-01	113.2 mmcf/yr	0.03 tons	67.9 Lbs.
VOCs	(Stack Test - 09/07)	0.02 lb/ton	2.0E-02	21,538.8 tpy	0.16 tons	323.1 Lbs.

Limit
0.01
0.00
0.00
0.00
28.87
4.63 Tpy

Alchem Reverb Furnace Baghouse (Furnace #2) - EUFURN1

Cl2	(Stack Test - 09/01)	0.01 lb/ton	1.0E-02	5,241.6 tpy	0.03 tons	52.4 Lbs.
HCl	(Stack Test - 09/07)	0.006 lb/ton	1.0E-02	5,241.6 tpy	0.02 tons	31.4 Lbs.
HF	(Stack Test - 09/01)	0.00 lb/ton	0.0E+00	5,241.6 tpy	0.00 tons	0.0 Lbs.
PM	(Stack Test - 09/01)	0.01 lb/ton	1.0E-02	5,241.6 tpy	0.03 tons	52.4 Lbs.
PM10	(Stack Test - 09/07)	0.02 lb/ton	2.0E-02	5,241.6 tpy	0.05 tons	104.8 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.01 lb/ton	1.0E-02	5,241.6 tpy	0.03 tons	52.4 Lbs.
VOCs	(Stack Test - 09/01)	0.72 lb/ton	7.2E-01	5,241.6 tpy	1.89 tons	3,774.0 Lbs.

Alchem Reverb Furnace Flue (Furnace #2)

Cl2	(Stack Test - 09/01)	0.01 lb/ton	1.0E-02	5,241.6 tpy	0.01 tons	26.2 Lbs.
CO	(AP42)	84.00 lb/mmcf	8.4E+01	27.5 mmcf/yr	1.16 tons	2,314.1 Lbs.
HCl	(Stack Test - 09/01)	0.01 lb/ton	1.0E-02	5,241.6 tpy	0.04 tons	73.4 Lbs.
HF	(Stack Test - 09/01)	0.00 lb/ton	0.0E+00	5,241.6 tpy	0.00 tons	0.0 Lbs.
Lead	(AP42)	0.00 lb/mmcf	0.0E+00	27.5 mmcf/yr	0.00 tons	0.0 Lbs.
NOx	(AP42)	100.00 lb/mmcf	1.0E+02	27.5 mmcf/yr	1.38 tons	2,754.9 Lbs.
PM	(Stack Test - 09/01)	0.19 lb/ton	1.9E-01	5,241.6 tpy	0.51 tons	1,011.6 Lbs.
PM10	(Stack Test - 09/07)	0.71 lb/ton	7.1E-01	5,241.6 tpy	1.86 tons	3,721.5 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.70 lb/ton	7.0E-01	5,241.6 tpy	1.83 tons	3,669.1 Lbs.
SOx	(AP42)	0.60 lb/mmcf	6.0E-01	27.5 mmcf/yr	0.01 tons	16.5 Lbs.
VOCs	(Stack Test - 09/01)	0.02 lb/ton	2.0E-02	5,241.6 tpy	0.05 tons	104.8 Lbs.

0.88
1.31
0.96
1.81

Alchem Reverb Furnace Baghouse (Furnace #3) - EUFURN3

Cl2	(Furnace 1 & 2 Stack Test - 09/01)	0.01 lb/ton	1.0E-02	11,266.4 tpy	0.06 tons	112.7 Lbs.
HCl	(Stack Test - 09/07)	0.0010 lb/ton	1.0E-03	11,266.4 tpy	0.01 tons	11.3 Lbs.
HF	(Furnace 1 & 2 Stack Test - 09/01)	0.00 lb/ton	0.0E+00	11,266.4 tpy	0.00 tons	0.0 Lbs.
PM	(Stack Test - 03/05)	0.02 lb/ton	2.0E-02	11,266.4 tpy	0.13 tons	259.1 Lbs.
PM10	(Stack Test - 09/07)	0.06 lb/ton	6.0E-02	11,266.4 tpy	0.34 tons	676.0 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.01 lb/ton	1.0E-02	11,266.4 tpy	0.06 tons	112.7 Lbs.
VOCs	(Furnace 1 & 2 Stack Test - 09/01)	0.72 lb/ton	7.2E-01	11,266.4 tpy	4.06 tons	8,111.8 Lbs.

0.85
1.48
0.56
3.29
4.68

Alchem Reverb Furnace Flue (Furnace #3)

Cl2	(Furnace 3 Flue Stack Test - 09/01)	0.01 lb/ton	1.0E-02	11,266.4 tpy	0.03 tons	58.3 Lbs.
CO	(AP42)	84.00 lb/mmcf	8.4E+01	59.2 mmcf/yr	2.49 tons	4,974.1 Lbs.
HCl	(Furnace 1 Flue Stack Test - 09/01)	0.02 lb/ton	2.0E-02	11,266.4 tpy	0.11 tons	225.3 Lbs.
HF	(Furnace 1 Flue Stack Test - 09/01)	0.00 lb/ton	0.0E+00	11,266.4 tpy	0.00 tons	0.0 Lbs.
Lead	(AP42)	0.00 lb/mmcf	0.0E+00	59.2 mmcf/yr	0.00 tons	0.0 Lbs.
NOx	(AP42)	100.00 lb/mmcf	1.0E+02	59.2 mmcf/yr	2.96 tons	5,921.6 Lbs.
PM	(Furnace 1 Flue Stack Test - 09/01)	0.29 lb/ton	2.9E-01	11,266.4 tpy	1.63 tons	3,267.3 Lbs.
PM10	(Stack Test - 09/07)	0.18 lb/ton	1.8E-01	11,266.4 tpy	1.01 tons	2,026.0 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.16 lb/ton	1.6E-01	11,266.4 tpy	0.90 tons	1,802.6 Lbs.
SOx	(AP42)	0.60 lb/mmcf	6.0E-01	59.2 mmcf/yr	0.02 tons	35.5 Lbs.
VOCs	(AP42)	5.50 lb/mmcf	5.5E+00	59.2 mmcf/yr	0.16 tons	325.7 Lbs.

0.26
1.74
1.38
1.936
0.88

Alchem Heating Stations

CO	(AP42)	84.00 lb/mmcf	8.4E+01	30.3 mmcf/yr	1.27 tons	2,545.2 Lbs.
Lead	(AP42)	0.00 lb/mmcf	0.0E+00	30.3 mmcf/yr	0.00 tons	0.0 Lbs.
NOx	(AP42)	100.00 lb/mmcf	1.0E+02	30.3 mmcf/yr	1.52 tons	3,030.0 Lbs.
PM	(AP42)	7.60 lb/mmcf	7.6E+00	30.3 mmcf/yr	0.12 tons	230.3 Lbs.
PM10	(AP42)	7.60 lb/mmcf	7.6E+00	30.3 mmcf/yr	0.12 tons	230.3 Lbs.
PM10 Filterable	(AP42)	1.90 lb/mmcf	1.9E+00	30.3 mmcf/yr	0.03 tons	57.6 Lbs.
SOx	(AP42)	0.60 lb/mmcf	6.0E-01	30.3 mmcf/yr	0.01 tons	18.2 Lbs.
VOCs	(AP42)	5.50 lb/mmcf	5.5E+00	30.3 mmcf/yr	0.08 tons	166.7 Lbs.

Alchem Crusher

PM	(Stack Test - 07/01)	0.01 lb/ton	1.0E-02	23,453.7 tpy	0.12 tons	234.5 Lbs.
PM10	(Stack Test - 09/07)	0.06 lb/ton	6.0E-02	23,453.7 tpy	0.70 tons	1,407.2 Lbs.
PM10 Filterable	(Stack Test - 09/07)	0.02 lb/ton	2.0E-02	23,453.7 tpy	0.23 tons	469.1 Lbs.
VOCs	(Stack Test - 07/01)	0.13 lb/ton	1.3E-01	23,453.7 tpy	1.52 tons	3,049.0 Lbs.

Alchem Dross Handling & Loadout

PM	Mass Balance	0.02 lb/ton	2.00E-02	974.8 tpy	0.01 tons	18.6 Lbs.
PM10	Mass Balance	0.02 lb/ton	2.00E-02	974.8 tpy	0.01 tons	18.6 Lbs.
PM10 Filterable	Mass Balance	0.02 lb/ton	2.00E-02	974.8 tpy	0.01 tons	18.6 Lbs.
Screeners	Mass Balance	40.82				

Alchem Roadway & Material Handling Emissions

PM	(AP42)				2.30 tons	4,605.6 Lbs.
PM10	(AP42)				0.46 tons	921.1 Lbs.
PM10 Filterable	(AP42)				0.46 tons	921.1 Lbs.
PM2.5	(AP42)				0.11 tons	226.1 Lbs.

TOTALS

Cl2	0.27 tons	549.2 Lbs.
CO	9.67 tons	19,342.8 Lbs.
HCl	0.45 tons	901.4 Lbs.
HF	0.00 tons	0.0 Lbs.
Lead	0.00 tons	0.1 Lbs.
NOx	11.51 tons	23,027.2 Lbs.
PM	8.07 tons	16,141.1 Lbs.
PM10	11.88 tons	23,753.9 Lbs.
PM10 Filterable	10.77 tons	21,534.2 Lbs.
PM2.5	11.53 tons	23,058.9 Lbs.
SOx	0.07 tons	138.2 Lbs.
VOCs	15.68 tons	31,362.9 Lbs.

Calculation Parameter	Molten				Scrap				Prime + Hardeners		Dross		Flux	
	E (lb/MT)	W (tons)	M (tons)	M (tons)	E (lb/MT)	W (tons)	M (tons)	M (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)
k (lb PM/MT) Table 13.2.1-1, AP-42	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022
sL (silt loading in g/m2) Table 13.2.1-2, AP-42	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
W (average weight of vehicle in tons)	15.25	39.2	29.65	15.25	45.76	27.5	45.76	27.5	39.5	19.5	32.5	55	45.5	23
P (number of day with at least 0.01" rainfall)	130	130	130	130	130	130	130	130	130	130	130	130	130	130
E (lb/MT) = $k \times (sL)^{0.51} \times (w)^{1.02} \times (1 - P/4N)$	0.28	0.67	0.50	0.26	0.78	0.47	0.78	0.47	0.67	0.33	0.55	0.94	0.78	0.39
P _{ann} (amount of material transferred in ton/yr)														
Vehicle Type	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi
Vcap (capacity of vehicle in tons)	24	24	24	24	24	24	24	24	24	24	24	24	24	24
D (ft traveled for single trip)	685	1505	810	1380	420	420	350	350	300	300	227	227	227	227
D (miles traveled for single trip) miles	0.1297348	0.28503788	0.153409091	0.26136364	0.07954545	0.07954545	0.06628788	0.06628788	0.0568182	0.0568182	0.042992424	0.0429924	0.0429924	0.042992
Number of trips (annual number)	2394	4559	4559	2394	729	729	934	934	1511	1511	76	76	6	6
VMT _{ann} = P _{ann} x D/Vcap (annual vehicle miles traveled)	310.58	1299.51	699.41	625.70	58.02	58.02	61.93	61.93	85.88	85.88	3.25	3.25	0.24	0.24
Uncontrolled Emissions = E x VMT _{ann} /2000 (in tons/yr)	0.04	0.43	0.18	0.08	0.02	0.01	0.02	0.01	0.03	0.01	0.00	0.00	0.00	0.00
Control Factor	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Controlled Annual Emissions (in tons/yr)	0.02	0.22	0.09	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Calculation Parameter	Sand		BH Dust		Nitrogen		Refuse		Lime		General Deliveries		Internal Mat. Hdlng	
	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)	E (lb/MT)	W (tons)
k (lb PM/MT) Table 13.2.1-1, AP-42	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022
sL (silt loading in g/m2) Table 13.2.1-2, AP-42	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
W (average weight of vehicle in tons)	27.5	42.5	27.5	38.88	40	33.57	27.5	36.25	40	26.44	25	22.5	13.68	8.68
P (number of day with at least 0.01" rainfall)	130	130	130	130	130	130	130	130	130	130	130	130	130	130
E (lb/MT) = $k \times (sL)^{0.51} \times (w)^{1.02} \times (1 - P/4N)$	0.47	0.73	0.47	0.66	0.68	0.57	0.47	0.62	0.68	0.48	0.42	0.38	0.23	0.14
P _{ann} (amount of material transferred in ton/yr)														
Vehicle Type	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Semi	Fork	Fork
Vcap (capacity of vehicle in tons)	24	24	24	24	24	24	24	24	24	24	24	24	24	24
D (ft traveled for single trip)	480	480	1340	1340	1000	1000	1000	1000	1350	1350	200	200	450	450
D (miles traveled for single trip) miles	0.0909091	0.09090909	0.253787879	0.25378788	0.18939394	0.18939394	0.18939394	0.18939394	0.25568182	0.25568182	0.037878788	0.037878788	0.0852273	0.085227
Number of trips (annual number)	388	388	25	25	25	25	68	68	15	15	626.85	626.85	1567.125	1567.125
VMT _{ann} = P _{ann} x D/Vcap (annual vehicle miles traveled)	35.28	35.28	6.42	6.42	4.71	4.71	12.81	12.81	3.84	3.84	23.74	23.74	133.56	133.56
Uncontrolled Emissions = E x VMT _{ann} /2000 (in tons/yr)	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01
Control Factor	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Controlled Annual Emissions (in tons/yr)	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00

Based on 5% Increase in lbs in from previous year.
 Flux usage was reduce by 25%

The following conditions apply to: EUFURN1 & EUFURN2, EUFURN3, Flue 1, Flue 2, and Flue 3

Emission Limits*

Equipment	Hydrogen Fluoride		Hydrogen Chloride		Chlorine		PM-10 (A)		VOC	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
3.1a EUFURN1 & EUFURN2	0.15	0.66	0.40	1.76	0.50	2.19	0.75	3.29	3.85	16.87
3.1b EUFURN3	0.13	0.56	0.33	1.47	0.19	0.85	0.75	3.29	1.07	4.68
3.1c Flue 1	0.15	0.66	0.20	0.88	0.10	0.44	6.50	28.47	0.28	1.23
3.1d Flue 2	0.22	0.96	0.30	1.31	0.20	0.88	4.50	19.71	0.41	1.81
3.1e Flue 3	0.31	1.36	0.28	1.24	0.06	0.26	4.42	19.36	0.22	0.98

Handwritten notes:
 - Next to 3.1c: 0.16
 - Next to 3.1d: 0.16
 - Next to 3.1e: 0.16
 - Next to PM-10 tpy for Flue 1: 7.1
 - Next to PM-10 tpy for Flue 2: 5.53
 - Next to PM-10 tpy for Flue 3: 2.5
 - Circled symbol: ALL PM

***Notes:**

1. Time Period for lb/hr and tpy: Test Protocol
2. Testing/Monitoring Method: GC 13, SC 7.4, SC 7.10
3. Applicable Requirements: R 336.1225, R 336.1205(3)

The following conditions apply to: FG001

Emission Limits

Pollutant	Equipment	Limit	Time Period	Testing/Monitoring Method	Applicable Requirement
4.1a Dioxins and Furan (D/F)	FG001	0.00021 grain of D/F TEQ* per ton of charge	Test Protocol	GC 13	40 CFR Part 63, Subpart RRR

* TEQ means the international method of expressing toxicity equivalents for D/F as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016).

Material Usage Limits

4.2 The permittee shall not charge more than 285,400 tons per year of feed or charge to the FG001, based on 12-month rolling time period, as determined at the end of each calendar month. (R 336.1205(3))

Process/Operational Limits

4.3 The permittee shall not operate the FG001 unless its associated baghouses are installed and operating properly. In addition, the bag leak systems shall be monitored and maintained according to their manufacturer's specifications. (R 336.1910)

Recordkeeping/Reporting/Notification

4.4 The permittee shall keep record of the feed/charge to the FG001. Such records shall be kept on file for a period of at least five years and made available to the AQD upon request. (R 336.1205(3))

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (feet)	Minimum Height Above Ground Level (feet)	Applicable Requirement
4.5a	SV002	5.67	75	R 3336.12803, R 336.12804, 40 CFR 52.21 (c) and (d)
4.5b	SV005	3.83	60	R 3336.12803, R 336.12804, 40 CFR 52.21 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG002

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing / Monitoring Method	Applicable Requirement
5.1a	PM-10	FG002	0.22 lb/hr	Test Protocol	GC 13, SC 7.4, SC 7.10	R 336.1205(3)
5.1b	VOC	FG002	0.33 lb/hr	Test Protocol	GC 13	R 336.1205(3)

Process/Operational Limits

5.2 The permittee shall not operate the FG002 unless its associated baghouse is installed and operating properly. In addition, the bag leak detection system shall be monitored and maintained according to its manufacturer's specifications. (R 336.1910)

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (feet)	Minimum Height Above Ground Level (feet)	Applicable Requirement
5.3	SV004	5.0	75	R 3336.12803, R 336.12804, 40 CFR 52.21 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FGFACILITY

2013
MAIERS

	Pollutant	Equipment	Limit v. 2013	Time Period	Testing/ Monitoring Method	Applicable Requirement
6.1a	CO	FGFACILITY	66.12 tpy 9.67	12-month rolling time period as determined at the end of each calendar month	SC 6.9 and Appendix A	R 336.1205(3)
6.1b	NO _x	FGFACILITY	44.01 tpy 11.5	12-month rolling time period as determined at the end of each calendar month	SC 6.9 and Appendix A	R 336.1205(3)
6.1c	PM-10	FGFACILITY	89.97 tpy 32.8	12-month rolling time period as determined at the end of each calendar month	SC 6.4, SC 6.10	R336.1205(3)

Process/Operational Limits

- 6.2 The permittee shall not operate the process or process equipment covered by this permit unless the malfunction abatement plan approved by the AQD District Supervisor has been implemented and is maintained. (R 336.1911)
- 6.3 Applicant shall not operate the process or process equipment covered by this permit unless the Operation, Maintenance & Monitoring plan as specified in 40 CFR Part 63, Subpart RRR, Sections 63.1506 and 63.1510 approved by the AQD District Supervisor has been implemented and maintained. (40 CFR Part 63, Subpart RRR)

Testing

- 6.4 Within 90 days after the issuance date of this permit, the permittee shall verify and quantify PM-10 emission rates from FGFACILITY by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1205, R 336.1220, R 336.1224, R 336.1225, R 336.1299, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)

Monitoring

- 6.5 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage for equipment included in FGFACILITY on a continuous basis. (R 336.1205(3))
- 6.6 Monitoring and recording of emissions and operating information is required to comply with the Federal National Emission Standards for Hazardous Air Pollutants (NESHAP) specified in 40 CFR Part 63, Subpart RRR. All source emissions data and operating data shall be kept on file for a period of at least five years and made available to the AQD upon request. (40 CFR Part 63, Subpart RRR)

Recordkeeping/Reporting/Notification

- 6.7 ✓ For records specified in this permit that are not required by 40 CFR Part 63, Subpart RRR, the permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. For records required by 40 CFR Part 63, Subpart RRR, the permittee shall complete all required calculations as specified in the Operation, Maintenance & Monitoring Plan **(R 336.1205(3), 40 CFR Part 63, Subpart RRR)**
- 6.8 ✓ The permittee shall keep, in a satisfactory manner, monthly fuel use records for equipment included in FGFACILITY, as required by SC 6.5. The permittee shall keep all records on file at a location approved by the AQD District Supervisor for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**
- 6.9 ✓ The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period CO and NOx emission calculation records for all equipment included in FGFACILITY, as required by SC 6.1a, 6.1b and Appendix A. The permittee shall keep all records on file at a location approved by the AQD District Supervisor for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**
- 6.10 ✓ The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period PM-10 emission calculation records for all equipment included in FGFACILITY, as required by SC 6.1c, 6.4 and Appendix A. The permittee shall keep all records on file at a location approved by the AQD District Supervisor for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**

0.00

Calculation Parameter	Storage Piles			
k (unitless) Page 13.2.4-4, AP-42	0.35	0.35	0.35	0.35
M (moisture content in Wt%) Table 13.2.4-1, AP-42	2.2	2.2	2.2	2.2
U (average annual wind speed in mph)	9.735	9.735	9.735	9.735
Emission factor (lb/ton) = $k \times (0.0032) \times [(U/5)^{1.3} / (M/2)^{1.4}]$	0.0023	0.0023	0.0023	0.0023
MPR (material transferred to and from the storage piles in tpy)				
PM emissions (ton/yr) = Emission factor x MPR	0.00	0.00	0.00	0.00

For M, used iron and steel production pellet or material.

For U, used annual average wind speed based upon 1991 hourly observations from the Michiana Regional Airport in South Bend, Indiana

0.00

Calculation Parameter	Storage Piles			
k (unitless) Page 13.2.4-4, AP-42	0.74	0.74	0.74	0.74
M (moisture content in Wt%) Table 13.2.4-1, AP-42	2.2	2.2	2.2	2.2
U (average annual wind speed in mph)	9.735	9.735	9.735	9.735
Emission factor (lb/ton) = $k \times (0.0032) \times [(U/5)^{1.3} / (M/2)^{1.4}]$	0.0049	0.0049	0.0049	0.0049
MPR (material transferred to and from the storage piles in tpy)				
PM emissions (ton/yr) = Emission factor x MPR	0.00	0.00	0.00	0.00

For M, used iron and steel production pellet or material.

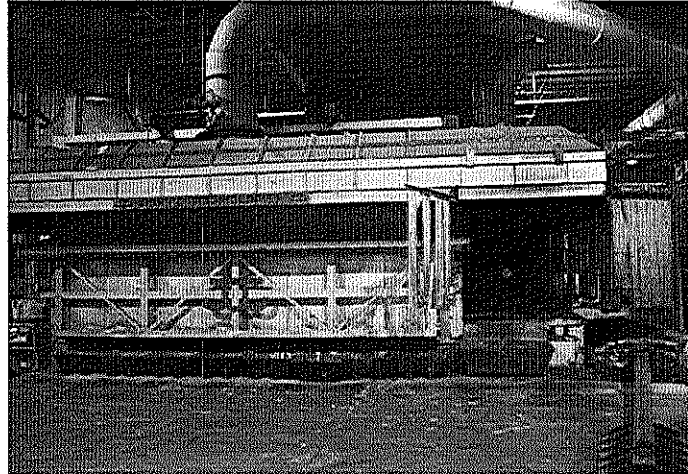
For U, used annual average wind speed based upon 1991 hourly observations from the Michiana Regional Airport in South Bend, Indiana

Alchem Aluminum, Saginaw MI

Reverberatory Furnace #1: ACGIH Ch. 10 without Air Curtain

1. Enclosure Dimensions

Location	Enclosure Open Sq. Ft.
Front	61.3
Sides	23.9
Back	
Total	85.2



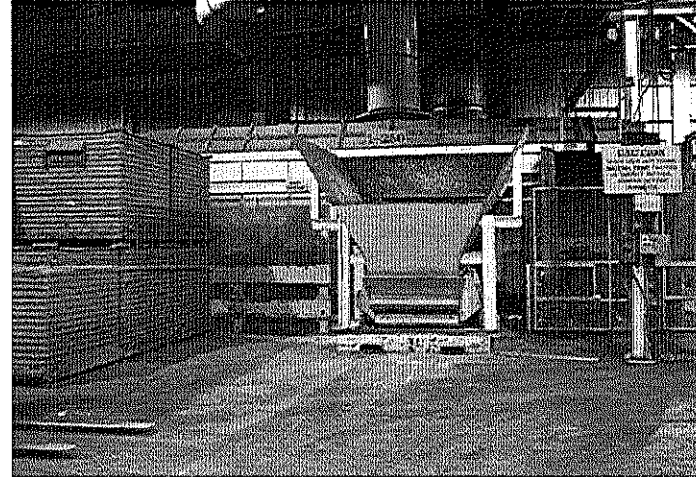
2. ACGIH Handbook Chapter 10

Required SCFM at 150 scfm/ft² 12,780

Total SCFM 12,780

3. Measured Flow

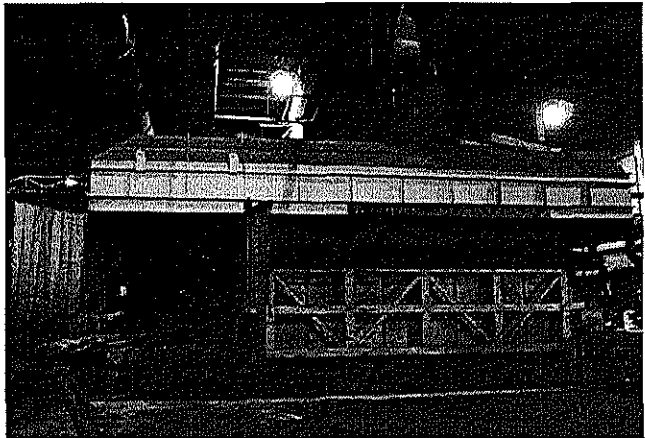
Firm E. Roberts Alley & Associates
Date 09/11/07
Measured SCFM 11,594



Alchem Aluminum, Saginaw MI
Reverberatory Furnace #2: ACGIH Ch. 10 without Air Curtain

1. Enclosure Dimensions

Location	Enclosure Open Sq. Ft.
Front	59.8
Sides	35.7
Back	
Total	95.5

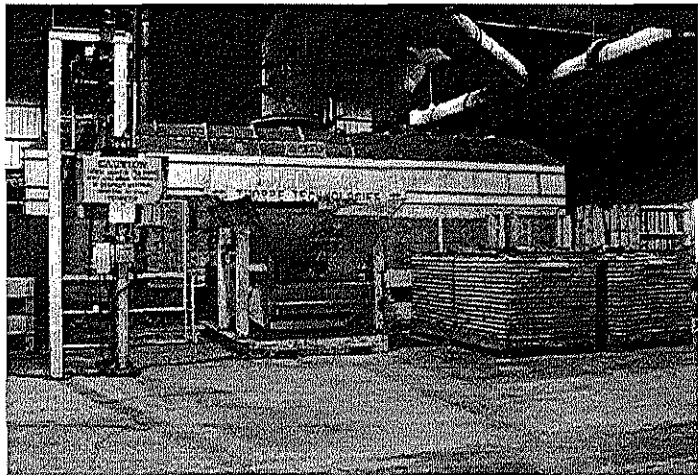


2. ACGIH Handbook Chapter 10

Required SCFM at 150 scfm/ft² 14,325
Total SCFM 14,325

3. Measured Flow

Firm E. Roberts Alley & Associates
Date 09/11/07
Measured SCFM 17,605

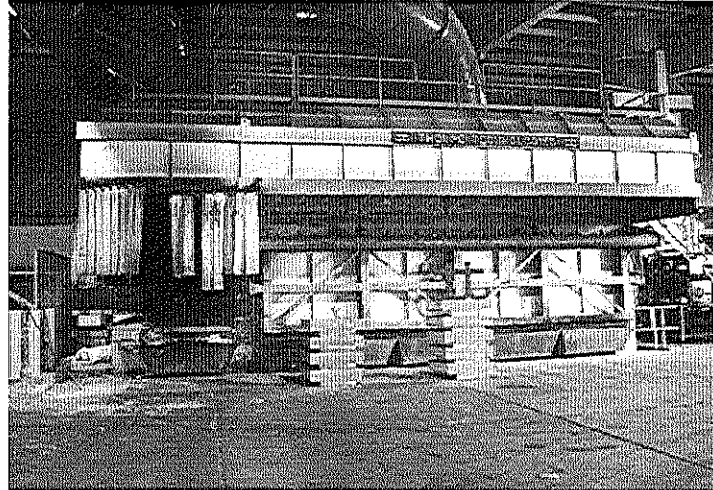


Alchem Aluminum, Saginaw MI

Reverberatory Furnace #3: ACGIH Ch. 10 without Air Curtain

1. Enclosure Dimensions

Location	Enclosure Open Sq. Ft.
Front	61.3
Sides	18.8
Back	
Total	80.1



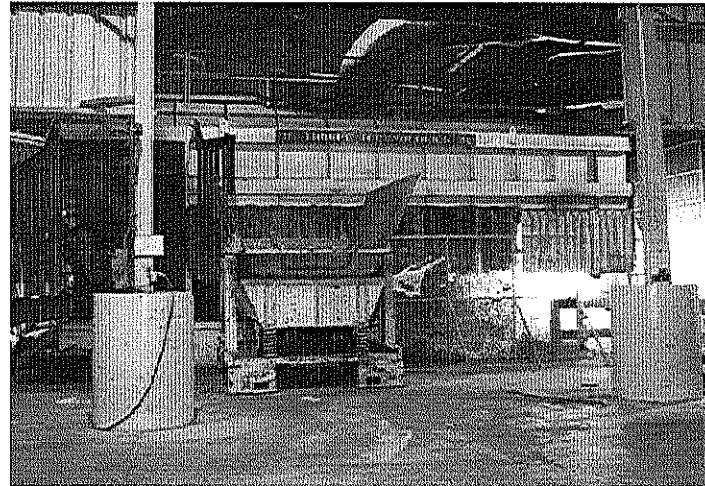
2. ACGIH Handbook Chapter 10

Required SCFM at 150 scfm/ft² 12,015

Total SCFM 12,015

3. Measured Flow

Firm E. Roberts Alley & Associates
Date 09/10/07
Measured SCFM 15,018



2013 Furnace & Crusher Throughputs (IN Tons)

	FCE #1	FCE #2	FCE #3	Crusher/Screeners
Jan	1,138,812	0	0	4786798
Feb	2,533,485	0	0	5550200
March	3,922,960	0	0	5230465
April	4,407,383	0	0	5556016
May	4,634,804	0	0	5351535
June	4,664,923	0	0	4183806
July	4,335,742	0	916,295	3273360
Aug	6,138,169	0	3,866,806	3246368
Sept	6,315,677	0	3,827,803	2963592
Oct	4,985,550	1,826,040	2,174,228	3291203
Nov	0	4,315,910	5,836,040	1976197
Dec	0	4,341,160	5,911,541	1497800
Totals	21538.7525	5241.555	11266.3565	23453.67
mmcf Totals	113.2069784	27.54944157	59.21560111	

FCE Total mmcf for 2013 = 199.972

*I THINK
MONTHLY
VALUES ARE
INVERSE OF
ACTUALS*

Date	Monthly Charge (lbs)	Monthly Charge (lbs)	Monthly Charge (lbs)	Total All Furnaces (Tons)	Monthly Charge (lbs)	Crusher Avg. (Tons)	Monthly Out (lbs)	Monthly Usage (mmcf)	Monthly Usage (mmcf)	Monthly Total (Tons)	12 Month Rolling Total (Tons)	Monthly Total (Tons)	12 Month Rolling Total (Tons)	Monthly Total (Tons)	12 Month Rolling Total (Tons)
Feb-09	3,484,544	2,455,978	0	34,114	2,917,500	8,512	0	15,316	2,794	0,78082	11,159442	0.9055	13,28505	2,162	17,233
Mar-09	4,688,033	2,931,031	0	36,655	3,788,980	9,380	461,002	18,916	3,045	0,922262	11,499432	1.09805	13,6898	2,782	19,388
Apr-09	3,565,480	2,860,897	0	38,096	2,906,180	9,579	148,600	17,511	2,819	0,85388	11,545926	1.0165	13,74515	2,254	20,767
May-09	3,176,188	2,197,530	0	38,486	2,648,780	10,491	230,320	15,377	2,183	0,73752	11,416146	0.878	13,59065	1,964	21,610
Jun-09	0	0	0	33,209	0	9,623	0	0	0	0	10,16547	0	12,10175	0	19,089
Jul-09	1,875,580	690,380	0	31,840	389,080	9,558	83,120	12,897	1,887	0,620928	9,888648	0.7392	11,7722	902	18,587
Aug-09	5,272,700	3,744,869	0	32,713	937,336	8,238	198,300	23,789	3,546	1,14723	9,896376	1.36575	11,7814	3,190	20,054
Sep-09	2,311,788	3,523,927	4,413,517	35,290	4,283,780	10,135	112,000	27,913	4,009	1,340724	10,309446	1.5961	12,27315	2,732	21,887
Oct-09	3,372,481	3,590,644	5,387,968	37,586	3,305,531	11,235	593,780	30,936	3,892	1,462776	10,559976	1.7414	12,5714	3,206	23,259
Nov-09	2,452,066	2,724,862	4,049,327	38,821	1,230,800	11,350	273,940	28,64	4,74	1,40196	10,846962	1.669	12,91305	2,354	24,056
Dec-09	1,972,034	3,929,530	1,948,555	40,408	1,567,270	11,945	204,699	22,818	3,082	1,0878	11,161248	1.295	13,2872	2,388	25,492
Jan-10	3,802,160	4,159,203	2,072,582	43,207	2,028,780	12,701	301,892	26,013	4,998	1,302462	11,638242	1.55055	13,85505	3,123	27,057
Feb-10	3,816,848	2,091,804	5,324,812	45,863	1,816,480	12,050	319,820	26,266	3,758	1,261008	12,13883	1.5012	14,45075	2,782	27,647
Mar-10	3,508,098	4,491,409	6,323,088	49,215	2,835,160	11,575	515,840	29,745	4,305	1,4301	12,646368	1.7025	15,0552	3,681	28,546
Apr-10	3,102,164	3,337,043	5,257,791	52,450	3,231,720	12,037	807,040	32,306	3,865	1,519182	13,31169	1.80855	15,84725	3,129	29,420
May-10	3,008,965	4,069,825	5,657,154	56,131	4,241,580	12,834	322,380	32,433	3,877	1,52502	14,09919	1.8155	16,78475	3,317	30,774
Jun-10	3,595,793	4,025,703	6,670,358	63,277	5,004,900	15,336	171,880	33,733	5,701	1,656228	15,755418	1.9717	18,75645	3,644	34,418
Jul-10	3,122,584	3,437,687	8,108,818	68,328	5,536,050	17,910	259,460	32,414	4,404	1,548356	16,680846	1.8409	19,85815	3,218	36,734
Aug-10	3,425,296	3,652,395	7,242,673	70,979	5,291,122	20,087	251,280	35,622	4,306	1,676976	17,210592	1.9964	20,4888	3,528	37,073
Sep-10	2,093,428	3,401,240	6,614,999	71,910	4,741,800	20,316	532,840	29,962	5,586	1,493016	17,362884	1.7774	20,6701	2,895	37,236
Oct-10	2,899,501	3,479,897	6,752,017	72,380	2,121,859	19,724	517,380	33,319	4,033	1,568784	17,498992	1.8676	20,7963	3,169	37,198
Nov-10	3,003,123	2,614,683	6,024,500	73,568	1,573,960	19,895	279,220	29,675	3,833	1,407378	17,47431	1.67545	20,80275	2,748	37,593
Dec-10	2,700,843	3,122,162	4,535,530	74,822	4,273,520	21,248	246,280	28,876	3,81	1,372812	17,759322	1.6343	21,14205	2,733	37,938
Jan-11	3,423,606	2,552,645	5,832,835	75,710	1,430,340	20,949	173,460	34,98	3,944	1,634808	18,091688	1.9462	21,5377	2,840	37,655
Feb-11	3,510,788	2,877,942	5,507,598	75,941	2,023,320	21,152	101,380	30,495	3,989	1,447488	18,278148	1.7232	21,7597	2,894	37,797
Mar-11	4,726,649	3,079,879	7,259,410	76,313	2,581,560	21,026	401,120	38,701	4,616	1,819314	18,667382	2.16585	22,22305	3,884	37,799
Apr-11	3,626,303	2,908,298	6,813,828	76,638	2,463,880	20,642	179,910	37,939	3,416	1,736991	18,88509	2.06775	22,48225	3,191	37,851
May-11	3,579,526	2,948,177	7,238,132	77,153	2,293,060	19,667	241,160	35,536	3,378	1,634388	18,994458	1.9457	22,61245	3,232	37,776
Jun-11	4,089,420	2,892,052	7,981,430	77,489	2,487,280	18,408	38,635	38,635	4,458	1,809906	19,148136	2.15465	22,7954	3,484	37,516
Jul-11	2,859,357	1,395,608	5,999,961	75,732	1,301,700	16,291	119,660	27,695	4,685	1,35996	18,96174	1.619	22,5735	2,066	38,464
Aug-11	4,846,862	2,751,837	8,150,772	76,446	2,927,431	15,109	531,120	39,259	4,753	1,848504	19,133268	2.2006	22,7777	3,724	36,558
Sep-11	4,117,068	2,800,161	7,162,103	77,431	2,671,140	14,074	352,700	34,959	4,463	1,655724	19,295376	1.9711	22,9714	3,365	37,129
Oct-11	4,114,529	2,372,694	6,988,067	77,552	2,206,449	14,116	382,964	33,068	4,437	1,57521	19,302402	1.87525	22,97805	3,173	37,133
Nov-11	2,798,122	2,106,850	5,821,636	77,064	2,167,540	14,414	0	29,538	3,807	1,40049	19,295514	1.86725	22,97085	2,484	36,849
Dec-11	390,359	3,717,742	5,398,715	76,817	1,472,840	13,013	722,760	20,824	4,771	1,407499	18,997692	1.27975	22,8163	2,184	38,300
Jan-12	4,076,372	2,397,042	7,632,325	77,766	2,197,880	13,397	198,920	35,561	2,933	1,616748	18,979632	1.9247	22,5948	3,245	36,704
Feb-12	4,964,538	2,982,205	9,056,939	80,269	2,285,340	13,528	556,151	38,856	4,176	1,807344	19,339488	2.1516	23,0232	3,828	37,638
Mar-12	5,207,164	2,474,630	9,284,473	81,220	2,295,460	13,385	0	41,806	4,62	1,949892	19,470066	2.3213	23,17855	3,857	37,811
Apr-12	4,337,567	2,254,243	7,543,341	81,613	2,626,560	13,466	518,820	34,602	4,549	1,644342	19,377498	1.95755	23,06845	3,287	37,907
May-12	4,229,492	2,384,202	7,889,104	81,982	2,587,202	13,613	473,475	36,907	4,571	1,742076	19,485186	2.0739	23,19565	3,337	38,012
Jun-12	3,572,843	2,034,585	6,361,451	80,485	1,671,378	13,205	150,660	33,192	4,236	1,571976	19,247256	1.8714	22,9134	2,772	37,301
Jul-12	5,034,949	3,278,273	1,875,694	81,002	1,620,155	13,365	458,280	28,801	3,676	1,364034	19,25133	1.62385	22,91825	3,187	38,422
Aug-12	0	4,742,594	7,653,093	79,426	2,278,315	13,040	458,440	29,607	3,646	1,396626	18,799452	1.86285	22,3803	2,746	37,445
Sep-12	0	3,602,686	8,732,383	77,553	1,405,760	12,407	443,340	31,502	3,495	1,469874	18,613602	1.74985	22,15905	2,169	36,249
Oct-12	0	4,571,205	8,591,173	77,353	1,846,000	12,227	680,137	36,193	3,778	1,678782	18,717174	1.99855	22,28235	2,751	35,827
Nov-12	0	4,525,379	5,868,709	77,217	1,599,710	11,943	373,580	31,223	3,496	1,458198	18,774882	1.73595	22,35105	2,408	35,771
Dec-12	0	3,712,826	5,599,620	77,141	1,355,905	11,885	365,585	28,917	3,112	1,345218	19,04511	1.60145	22,87275	2,071	35,658
Jan-13	0	4,341,160	5,854,820	75,188	1,726,078	11,649	383,020	31,228	3,561	1,465338	18,8937	1.74445	22,4925	2,343	34,757
Feb-13	0	4,131,879	5,836,040	71,818	1,274,460	11,143	284,850	32,255	3,273	1,492176	18,578532	1.77664	22,1173	2,250	33,178
Mar-13	4,985,550	1,858,682	2,174,228	87,844	1,535,265	10,763	89,340	34,681	3,414	1,59999	18,22863	1.80475	21,70075	2,681	32,003
Apr-13	6,345,877	0	3,827,803	65,893	1,493,047	10,197	383,160	29,405	4,847	1,438584	18,022872	1.7126	21,4558	2,666	31,382
May-13	6,138,169	0	3,868,806	63,614	1,515,250	9,661	335,204	30,614	2,812	1,403892	17,694688	1.6713	21,0532	2,600	30,644
Jun-13	4,335,742	0	916,295	80,256	844,220	9,147	173,300	18,638	1,978	0,865872	16,978584	1.0308	20,2126	1,805	29,477
Jul-13	4,664,923	0	0	57,494	67,580	8,371	125,980	16,442	1,635	0,759234	16,373784	0.80385	19,4926	1,589	27,879
Aug-13	4,834,804	0	0	53,513	0	7,232	93,000	16,191	1,403	0,738948	15,716106	0.8797	18,70965	1,577	26,710
Sep-13	4,407,383	0	0	50,549	0	6,529	140,700	16,191	1,47	0,71778	14,964012	0.8545	17,8143	1,500	26,040
Oct-13	3,822,980	0	0	45,975	129,980	5,671	88,340	15,58	2,722	0,766684	14,053914	0.9151	16,73085	1,339	24,628
Nov-13	0	0	0	40,778	0	4,871	0	0	0	0	12,585716	0	14,9949	0	22,220
Dec-13	0	0	0	36,121	0	4,193	0	0	0	0	11,250498	0	13,39345	0	20,149

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Rec'd 7/18/2014 KLS

Date	Furnace #1	Furnace #2	Furnace #3	12 Month Rolling Total All Furnaces (Tons)	Crusher Monthly Charge (lbs)	12 Month Total Crusher Avg. (Tons)	Dross Handling Monthly Out (lbs)	Furnaces & Bldg Natural Gas Usage Monthly Usage (mmcf)	Cruclibe Natural Gas Usage Monthly Usage (mmcf)	Facility Wide CO Emissions Monthly Total (Tons)	Facility Wide CO Emissions 12 Month Rolling Total (Tons)	Facility Wide NOx Emissions Monthly Total (Tons)	Facility Wide NOx Emissions 12 Month Rolling Total (Tons)
	Monthly Charge (lbs)	Monthly Charge (lbs)	Monthly Charge (lbs)										
Nov-00	53,081	0	0	0	0	0				0	0	0	0
Dec-00	1,750,255	0	0	0	0	0			0	0	0	0	0
Jan-01	2,215,766	0	0	0	0	0				0	0	0	0
Feb-01	2,583,156	0	0	0	418,300	0				0	0	0	0
Mar-01	4,816,152	0	0	0	1,607,098	0				0	0	0	0
Apr-01	6,275,081	0	0	0	522,637	0				0	0	0	0
May-01	7,640,653	0	0	0	1,147,196	0				0	0	0	0
Jun-01	8,027,038	0	0	0	2,911,593	0				0	0	0	0
Jul-01	6,755,654	861,685	0	0	694,447	0				0	0	0	0
Aug-01	6,056,311	3,435,670	0	0	1,096,237	0				0	0	0	0
Sep-01	2,888,162	3,248,420	0	0	2,786,160	0				0	0	0	0
Oct-01	6,683,597	1,152,457	0	32,212	5,380,476	0				0	0	0	0
Nov-01	5,632,202	956,633	0	35,480	4,787,283	10,676				0	0	0	0
Dec-01	4,916,698	351,296	0	37,238	0	10,676				0	0	0	0
Jan-02	7,194,839	413,909	0	39,935	0	10,676				0	0	0	0
Feb-02	6,296,533	1,341,740	0	42,462	0	10,467				0	0	0	0
Mar-02	4,856,208	2,854,292	0	43,810	0	9,663				0	0	0	0
Apr-02	8,126,900	621,031	0	45,046	0	9,402				0	0	0	0
May-02	7,631,026	2,614,833	0	46,349	4,034,840	10,846				0	0	0	0
Jun-02	8,090,092	423,473	0	48,592	6,100,889	12,440				0	0	0	0
Jul-02	5,503,936	0	0	45,535	3,732,167	13,959				0	0	0	0
Aug-02	8,260,382	1,892,244	0	45,865	3,773,738	15,298				0	0	0	0
Sep-02	5,945,071	3,639,893	0	47,590	5,128,355	16,469				0	0	0	0
Oct-02	6,606,537	4,779,454	0	49,375	6,146,207	16,852				0	0	0	0
Nov-02	4,474,904	3,410,951	0	50,024	4,494,633	16,705				0	0	0	0
Dec-02	3,495,241	2,907,759	0	50,591	2,806,981	18,009				0	0	0	0
Jan-03	5,161,380	4,475,645	0	51,605	1,517,529	18,788				0	0	0	0
Feb-03	4,266,549	4,109,835	0	51,974	0	18,768				0	0	0	0
Mar-03	5,036,100	4,105,099	0	52,791	3,135,100	20,335				0	0	0	0
Apr-03	5,503,331	3,386,578	0	52,862	4,093,035	22,382				0	0	0	0
May-03	8,148,652	238,949	0	51,933	4,001,890	22,365				0	0	0	0
Jun-03	7,668,910	0	0	51,510	3,349,748	20,990				0	0	0	0
Jul-03	5,737,493	0	0	51,627	1,533,112	19,890				0	0	0	0
Aug-03	6,640,585	0	0	50,871	2,247,765	19,127				0	0	0	0
Sep-03	9,671,893	0	0	50,914	3,137,439	18,132				0	0	0	0
Oct-03	10,901,880	0	0	50,672	2,789,780	16,454				0	0	0	0
Nov-03	8,080,599	0	0	50,769	0	14,206				0	0	0	0
Dec-03	7,188,761	0	0	51,162	0	12,903				0	0	0	0
Jan-04	7,062,423	0	0	49,875	2,004,422	13,146		16,048		0.674016	0.674016	0.8024	
Feb-04	8,173,872	0	0	49,774	615,620	13,454		18,355		0.77091	1.444928	0.91775	
Mar-04	9,183,534	0	0	49,794	3,996,024	13,884		21,019		0.882798	2.327724	1.05095	
Apr-04	7,863,574	0	0	49,281	3,535,065	13,605		16,387		0.688254	3.015978	0.81935	
May-04	7,830,178	0	0	48,902	2,853,015	13,031		16,069		0.674898	3.690876	0.80345	
Jun-04	7,521,307	0	0	48,826	2,102,870	12,408		15,566		0.65373	4.344806	0.77825	
Jul-04	4,724,440	0	0	48,322	1,667,980	12,476		12,761		0.535962	4.860568	0.63805	
Aug-04	8,524,911	0	0	48,264	2,481,632	12,592		12,592		0.893676	5.774244	1.0639	
Sep-04	9,146,170	0	0	48,001	2,498,820	12,273		20,884		0.877128	6.651372	1.0442	
Oct-04	9,734,871	0	0	47,417	3,296,420	12,526		21,855		0.91791	7.569282	1.09275	
Nov-04	8,816,357	0	0	47,765	2,625,245	13,839		18,945		0.79589	8.364972	0.94725	
Dec-04	6,515,703	0	212,855	47,555	3,099,225	15,388		18,173		0.763266	9.128238	0.90865	
Jan-05	0	0	6,650,635	47,349	1,278,540	15,025		14,155	2.157	0.685104	9.139326	0.8158	
Feb-05	0	0	7,948,361	47,235	4,384,340	16,910		14,35	2.233	0.696466	9.064902	0.82915	
Mar-05	0	0	5,833,046	45,660	2,129,920	15,977		11,138	2.128	0.557172	8.739276	0.8633	
Apr-05	0	0	6,264,148	44,770	2,853,655	15,536		12,956	2.162	0.635796	8.686818	0.7569	
May-05	0	0	6,788,834	44,350	1,949,992	15,084		15,032	2.089	0.719082	8.731002	0.85605	
Jun-05	0	0	5,526,091	43,352	1,194,540	14,630		13,864	1.781	0.65709	8.734362	0.78225	
Jul-05	0	0	2,951,391	42,471	1,191,400	14,392		10,251	0.981	0.471744	8.670144	0.5816	
Aug-05	0	0	8,875,674	42,646	2,924,200	14,613		18,698	2.534	0.891744	8.658212	1.0616	
Sep-05	0	0	8,134,033	42,140	2,341,575	14,635		19,228	2.671	0.919758	8.710842	1.09495	
Oct-05	0	0	8,763,195	41,654	3,020,704	14,397		20,16	2.683	0.959406	8.752338	1.14215	
Nov-05	0	0	5,926,725	40,209	1,171,580	13,670		14,293	2.135	0.689976	8.646624	0.8214	
Dec-05	1,238,264	0	4,125,221	39,527	1,761,615	13,001		14,032	1.699	0.659442	8.5428	0.78505	
Jan-06	6,095,926	0	158,892	39,329	1,906,630	13,315	337,680	18,074	2.213	0.852054	8.70975	1.01435	
Feb-06	3,692,103	0	2,204,386	38,304	2,382,782	12,314	282,620	19,713	2.909	0.950292	8.963558	1.1313	
Mar-06	4,200,525	0	3,156,259	39,066	2,954,890	12,727	604,300	23,574	3.24	1.126188	9.532572	1.3407	
Apr-06	3,297,524	0	2,917,560	39,031	2,665,785	12,733	740,760	21,832	2.687	1.029798	9.926574	1.22595	
May-06	4,328,214	0	3,257,749	39,430	2,368,859	12,941	496,800	21,832	3.024	1.043952	10.251444	1.2428	
Jun-06	4,148,573	0	3,457,892	40,470	3,001,110	13,845	425,420	21,791	3.081	1.044624	10.638978	1.2436	
Jul-06	1,732,834	0	1,617,584	40,665	1,493,550	13,996	283,960	15,799	1.633	0.732144	10.899378	0.8716	
Aug-06	4,051,244	0	3,961,987	40,233	2,484,300	13,786	544,860	24,95	3.311	1.186962	11.194596	1.41305	
Sep-06	3,434,857	0	3,102,952	39,435	1,750,360	13,470	434,680	22,429	2.974	1.066926	11.341764	1.27015	
Oct-06	3,325,482	0	2,728,067	38,080	2,718,100	13,319	444,880	21,985	3.185	1.057114	11.439498	1.2585	
Nov-06	2,719,171	0	1,434,647	37,194	1,656,255	13,561	402,460	16,116	2.086	0.764442	11.513964	0.91005	
Dec-06	2,820,892	559,168	298,259	36,351	1,459,840	13,410	283,180	14,491	1.738	0.681618	11.53614	0.81145	
Jan-07	3,462,206	2,165,487	4,826,664	38,451	2,752,200	13,833	452,650	29,551	3.68	1.395702	12.079768	1.66155	
Feb-07	4,116,138	3,427,679	3,867,703	41,209	2,584,855	13,934	200,256	31,871	3.693	1.489488	12.618984	1.7732	
Mar-07	5,903,948	3,593,634	3,317,192	43,938	2,751,890	13,833	603,444	38,688	4.228	1.802472	13.295268	2.1458	
Apr-07	5,070,682	2,961,603	2,464,726	46,079	1,559,470	13,279	216,870	34,827	3.566	1.612506	13.877976	1.91965	
May-07	5,608,930	3,244,783	2,636,108	48,031	2,453,690	13,323	1,045,458	34,288	4.117	1.61301	14.447034	1.92025	
Jun-07	5,114,085	3,381,891	3,677,110	50,314	2,147,090	12,896	345,365	33,077	4.533	1.57962	14.98203	1.8805	
Jul-07	2,312,502	1,681,160	2,573,709	52,022	1,723,240	13,011	296,500	23,457	3.257	1.084902	15.334788	1.29155	
Aug-07	4,966,011	4,268,038	6,006,662	55,636	3,119,061	13,338	532,146	38,593	4.373	1.804572	15.952398	2.1483	
Sep-07	3,404,823	3,210,553	4,156,659	57,763	2,824,930	13,876	826,189	32,647	4.16	1.541894	16.427166	1.83535	
Oct-07	4,379,764	3,290,863	6,621,340	61,872	2,949,255	13,991	432,010	35,649	4.55	1.688358	17.058384	2.00995	
Nov-07	2,647,640	2,390,786	4,438,050	64,534	2,949,310	14,187	536,815	29,205	5.923	1.475376	17.769318	1.7664	
Dec-07	1,790,202	2,311,500	4,169,198	66,830	1,253,220	14,084	431,589	24,355	2.87	1.14345	18.23115	1.36126	
Jan-08	1,930,202	2,823,539	5,581,038	66,770	1,626,780	13,521	580,578	27,743	3.682	1.319885	18.156298	1.57125	
Feb-08	1,666,381	2,536,138	6,125,351	66,228	0	12,229	352,800	29,909	3.879	1.419096	18.084906	1.6894	
Mar-08	466,673	641,090	1,430,899	61,090	2,050,320	11,878	102,000	11,752	2.114	0.582372	16.864606	0.6933	
Apr-08	1,790,978	72,50											

Bldg Usage	Crucible Natural Gas Usage	Facility Wide CO Emissions	Facility Wide CO Emissions	Facility Wide NOx Emissions	Facility Wide NOx Emissions	Facility Wide PM10 Emissions	Facility Wide PM10 Emissions
Usage	Monthly Usage (mmcf)	Monthly Total (Tons)	12 Month Rolling Total (Tons)	Monthly Total (Tons)	12 Month Rolling Total (Tons)	Monthly Total (Tons)	12 Month Rolling Total (Tons)
		0	0	0	0	0	18
		0	0	0	0	0	695
		0	0	0	0	0	753
		0	0	0	0	0	891
		0	0	0	0	0	1,686
		0	0	0	0	0	2,149
		0	0	0	0	0	2,632
		0	0	0	0	0	2,817
		0	0	0	0	0	2,632
		0	0	0	0	0	3,246
		0	0	0	0	0	2,251
		0	0	0	0	0	2,948
		0	0	0	0	0	2,408
		0	0	0	0	0	1,800
		0	0	0	0	0	2,597
		0	0	0	0	0	2,631
		0	0	0	0	0	2,625
		0	0	0	0	0	2,990
		0	0	0	0	0	3,670
		0	0	0	0	0	3,088
		0	0	0	0	0	1,983
		0	0	0	0	0	3,612
		0	0	0	0	0	3,504
		0	0	0	0	0	4,175
		0	0	0	0	0	2,901
		0	0	0	0	0	2,328
		0	0	0	0	0	3,434
		0	0	0	0	0	2,951
		0	0	0	0	0	3,305
		0	0	0	0	0	3,230
		0	0	0	0	0	2,978
		0	0	0	0	0	2,708
		0	0	0	0	0	1,997
		0	0	0	0	0	3,005
		0	0	0	0	0	3,383
		0	0	0	0	0	3,790
		0	0	0	0	0	2,747
		0	0	0	0	0	2,444
		0	0	0	0	0	2,461
16.048		0.674016	0.674016	0.8024	0.8024	2.780	35,000
16.355		0.77091	1.444926	0.91775	1.72015	2.798	34,847
21.019		0.882798	2.327724	1.05095	2.7711	3.242	34,783
16.387		0.668254	3.015976	0.81935	3.59045	2.780	34,333
16.059		0.674898	3.890876	0.80345	4.3939	2.680	34,035
15.665		0.65373	4.344606	0.77825	5.17215	2.620	33,948
12.761		0.535962	4.850588	0.63805	5.8102	1.656	33,607
21.278		0.693878	5.774244	1.0639	6.8741	2.973	33,575
20.884		0.877128	6.651372	1.0442	7.9183	3.185	33,377
21.855		0.91791	7.569282	1.09275	9.01105	3.409	32,995
18.945		0.79569	8.364972	0.94725	9.9583	3.078	33,324
18.173		0.763269	9.128238	0.90865	10.86695	2.334	33,214
14.155	2.157	0.665104	9.139326	0.8156	10.88015	836	31,589
14.35	2.233	0.696486	9.064902	0.82915	10.79155	1,085	29,877
11.138	2.128	0.557172	8.739276	0.6833	10.4039	764	27,398
12.958	2.182	0.635796	8.688818	0.7589	10.34145	834	25,452
15.032	2.089	0.719082	8.731002	0.85605	10.39405	873	23,645
13.864	1.781	0.65709	8.734362	0.78225	10.39805	699	21,724
10.251	0.981	0.471744	8.670144	0.5616	10.3216	391	20,459
18.698	2.534	0.891744	8.668212	1.0618	10.3193	1,153	18,639
19.228	2.671	0.919758	8.710842	1.09495	10.37005	1,046	16,500
20.16	2.683	0.959406	8.752338	1.14215	10.41945	1,142	14,234
14.293	2.135	0.689976	8.646624	0.8214	10.2936	746	11,904
14.032	1.689	0.659442	8.5428	0.78505	10.17	969	10,539
18.074	2.213	0.852054	8.70975	1.01435	10.36875	2,152	11,855
19.717	2.909	0.950292	8.963566	1.1313	10.6709	1,594	12,364
23.574	3.24	1.126189	9.532572	1.34071	11.3483	1,902	13,501
21.832	2.687	1.029798	9.926574	1.22695	11.81735	1,559	14,226
21.832	3.024	1.043952	10.251444	1.2428	12.2041	1,939	15,292
21.791	3.081	1.044624	10.638978	1.2436	12.65545	1,920	16,513
15.799	1.633	0.732144	10.899378	0.8716	12.97545	831	16,952
24.95	3.311	1.186962	11.194596	1.41305	13.3269	1,932	17,732
22.429	2.974	1.068926	11.341764	1.27015	13.5021	1,597	18,283
21.985	3.165	1.05714	11.439498	1.2585	13.61845	1,544	18,684
16.115	2.088	0.784442	11.513984	0.91005	13.7071	1,150	19,088
14.491	1.738	0.681618	11.53614	0.81145	13.7335	1,246	19,365
29.551	3.66	1.395702	12.079788	1.66155	14.3807	2,634	19,847
31.871	3.593	1.489488	12.618984	1.7732	15.0226	3,194	21,447
38.688	4.228	1.802472	13.295268	2.1458	15.8277	3,806	23,351
34.827	3.566	1.612506	13.877976	1.91965	16.5214	3,150	24,942
34.288	4.117	1.61301	14.447034	1.92025	17.19885	3,492	26,495
33.077	4.533	1.57962	14.98203	1.8805	17.83575	3,482	28,058
23.457	2.374	1.084902	15.334788	1.29155	18.2557	1,836	29,093
38.593	4.373	1.804572	15.952398	2.1483	18.99095	4,066	31,197
32.547	4.16	1.541694	16.427166	1.83535	19.55615	2,921	32,521
35.649	4.55	1.688358	17.058384	2.00995	20.3076	3,578	34,555
29.205	5.923	1.475376	17.769318	1.7564	21.15395	2,372	35,777
24.355	2.87	1.14345	18.23115	1.36125	21.70375	1,995	36,526
27.743	3.682	1.31985	18.155298	1.57125	21.61345	2,411	36,303
29.909	3.879	1.419096	18.084906	1.6894	21.52965	2,231	35,340
11.752	2.114	0.582372	16.864806	0.6933	20.07715	627	32,161
17.184	2.039	0.807366	16.059666	0.96115	19.11865	875	29,886
18.095	2.555	0.8873	15.313956	1.0325	18.2309	1,121	27,515
27.277	2.501	1.250676	14.985012	1.4889	17.8393	2,520	26,554
19.858	1.517	0.89775	14.79786	1.06875	17.6165	1,294	26,012
25.165	1.968	1.139502	14.13279	1.35655	16.82475	1,833	23,778
20.405	1.682	0.927654	13.51875	1.10435	16.09375	1,099	21,956
27.303	1.56	1.212246	13.042638	1.44315	15.52695	1,634	20,013
24.939	1.608	1.114974	12.682236	1.32735	15.0979	1,556	19,197
16.958	1.459	0.773514	12.3123	0.92085	14.6576	952	18,154
15.983	3.671	0.825488	11.817918	0.9827	14.06895	1,559	17,302

Aieris Intl. Saginaw Heat Sheet

Arch Height 16 inches. Do NOT charge flux or scrap if metal level is less than 17 inches.

Fce. #	2	Customer		G.M. SAG.		Alloy	319	Heat #	C0203858		CELLS ARE HIGHLIGHTED IN RED WHEN FURNACE LEVEL IS NOT RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.					
Heat Start	Date	3/15/13	Time	4:00PM	Supv.	MB	Level	17"	Temp.	1474	RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.					
Certify	Date	3/18/13	Time	12:15AM	Supv.	DS	Level	29"	Temp.	1440	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX					
Pour Start	Date	3/18/13	Time	1:05AM	Supv.	DS	Level	24"	Temp.	1450	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX					
Pour End	Date	3/18/13	Time	1:15AM	Supv.	DS	Level	24"	Temp.	1450	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX					
Pot Numbers		BV 8		Specific Gravity		2.50		Flux Percentage		0.00						
Supv. Initials	Time Start	Time End	Control Sample Number	Furnace Temp.	Scrap Location		Sub-Lot/ Receipt #		Alloy Class.	Total Hourly Weight	* Load Status	Level	Flux	Blk. Dross BDMIX	Wht. Dross WDMIX	Cruce Skim BPSKIM
MB	4:00PM		1	1474	RUN-976		BX102 106 110 5		CTA319IV-F	33,759		17"				
MB			1		RUN-976		BX 121 123 134 109		CTA319IV-F	34,321		29"				
DS		1:15AM	1		UFA		127422		HDMGGM-F	100						
Totals										68,180			0	0	0	0
OP. SPEC	Cu	Si	Fe	Mn	Mg	Zn	Ni	Sn	Ti	Cr	Ca	P	Li	Fe/Mn	Totals	
Min.	2.90	6.85	0.30	1/2 Fe	0.37	0.35			0.14		0.0060			0.55	Actual Heat Time 57.25	
Max.	3.10	7.15	0.38	1X Fe	0.43	0.45	0.04	0.04	0.18	0.08	0.0080	0.010	0.0003	1.00		
Desire	3.00	7.00		.22-.35	0.40				0.16		0.0065				Pour Time 0.17	
Sample 1	2.946	6.927	0.394	0.252	0.338	0.352	0.034	0.010	0.169	0.014	0.0048	0.0005	0.0000	0.6402		
sample 2	2.921	7.003	0.390	0.246	0.413	0.350	0.034	0.011	0.171	0.014	0.0053	0.0007	0.0001	0.6303	Oracle Heat Time 56.42	
Sample 3														#DIV/0!	Lbs. In 68,180	
Sample 4														#DIV/0!	Cert. Gas 479,339	
Sample 5														#DIV/0!	Tot. Gas 482,274	
Sample 6														#DIV/0!	Cert. MMBTU/LB 7,270	
Sample 7														#DIV/0!	Tot. MMBTU/LB 7,314	
Operating Comments:																
Operating Comments if Over .5 Idle Time																
*Load Status: EOL = End of Load NL = New Load																

Aleris Intl. Saginaw Heat Sheet

Arch Height 16 inches. Do NOT charge flux or scrap if metal level is less than 17 inches.

Fce. #	2	Customer		G.M. SAG.		Alloy	319	Heat #	C0203857		CELLS ARE HIGHLIGHTED IN RED WHEN FURNACE LEVEL IS NOT RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.					
Heat Start	Date	3/15/13	Time	10:45AM	Supv.	MR	Level	17	Temp.	1435						
Certify	Date	3/15/13	Time	3:30PM												
Pour Start	Date	3/15/13	Time	3:45PM	Supv.	MB	Level	27.5	Temp.	1429						
Pour End	Date	3/15/13	Time	4:00PM	Supv.	MB	Level	17"	Temp.	1474	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX					
Pot Numbers		BV 3 6		Specific Gravity		2.51	Flux Percentage		0.00							
Supv. Initials	Time Start	Time End	Control Sample Number	Furnace Temp.	Scrap Location	Sub-Lot/ Receipt #	Alloy Class.	Total Hourly Weight	* Load Status	Level	Flux	Bik. Dross BDMIX	Wht. Dross WDMIX	Cruce Skim BPSKIM		
MR	10:45AM		1		MS 12-1	127873	RSP1020A-F	25,070	NL							
MR			1		A-4	127779	L850-I	19,786	NL							
MR			1		RUN 976	BX 120	CT319IV-F	8,369		25"						
MB			1		UFA	126846	HDSILGM-F	2,050								
MB			1		UFA	127422	HDMGGM-F	140								
MB			1		UFA	127741	HDCUCPGM-F	840								
MB			1		UFA	126643	HDMNGM-F	75								
MB			1		UFA	127225	HDZN95GM-F	95								
MB			1		UFA	127706	HDTIGM-F	65								
MB			1		UFA	115808	HDFE-F	95								
Totals								56,585			0	0	0	0		
OP. SPEC	Cu	Si	Fe	Mn	Mg	Zn	Ni	Sn	Ti	Cr	Ca	P	Li	Fe/Mn	Totals	
Min.	2.90	6.85	0.30	1/2 Fe	0.37	0.35			0.14		0.0060			0.55	Actual Heat Time	5.25
Max.	3.10	7.15	0.38	1X Fe	0.43	0.45	0.04	0.04	0.18	0.08	0.0080	0.010	0.0003	1.00		
Desire	3.00	7.00		.22-.35	0.40				0.16		0.0065				Pour Time	0.25
Sample 1	3.050	7.050	0.379	0.250	0.431	0.373	0.032	0.009	0.140	0.013	0.0043	0.0000	0.0000	0.6596		
sample 2														#DIV/O!	Oracle Heat Time	5.00
Sample 3														#DIV/O!	Lbs. In	56,585
Sample 4														#DIV/O!	Cert. Gas	130,998
Sample 5														#DIV/O!	Tot. Gas	137,071
Sample 6														#DIV/O!	Cert. MMBTU/LB	2,394
Sample 7														#DIV/O!	Tot. MMBTU/LB	2,505
Operating Comments:																
Operating Comments if Over .5 Idle Time																
*Load Status: EOL = End of Load NL = New Load																

Aleris Intl. Saginaw Heat Sheet

Arch Height 16 inches. Do NOT charge flux or scrap if metal level is less than 17 inches.

Fce. #	2	Customer		G.M. SAG.	Alloy	319	Heat #	C0203856		CELLS ARE HIGHLIGHTED IN RED WHEN FURNACE LEVEL IS NOT RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.							
Heat Start	Date	3/15/13	Time	1:00AM	Supv.	DS	Level	22"	Temp.	1440							
Certify	Date	3/15/13	Time	5:15AM													
Pour Start	Date	3/15/13	Time	10:30AM	Supv.	MR	Level	28	Temp.	1450							
Pour End	Date	3/15/13	Time	10:45AM	Supv.	MR	Level	17	Temp.	1435	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX						
Pot Numbers		BV 8,14		Specific Gravity		2.58		Flux Percentage		0.00							
Supv. Initials	Time Start	Time End	Control Sample Number	Furnace Temp.	Scrap Location		Sub-Lot/ Receipt #		Alloy Class.	Total Hourly Weight	* Load Status	Level	Flux	Blk. Dross 8DMIX	Wht. Dross WDMIX	Cruce Skim BPSKIM	
DS	1:00AM		1		RUN 976		BX 5,111,49,130		CT319IV-F	33,970		22"					
DS			1		UFA		126846		HDSILGM-F	100							
DS			1		UFA		127741		HDCUCPGM-F	80							
DS			1		UFA		127422		HDMGGM-F	25							
DS			1		UFA		126643		HDMNGM-F	30							
Totals										34,205			0	0	0	0	
OP. SPEC	Cu	Si	Fe	Mn	Mg	Zn	Ni	Sn	Ti	Cr	Ca	P	Li	Fe/Mn	Totals		
Min.	2.90	6.85	0.30	1/2 Fe	0.37	0.35			0.14		0.0060			0.55	Actual Heat Time	9.75	
Max.	3.10	7.15	0.38	1X Fe	0.43	0.45	0.04	0.04	0.18	0.08	0.0080	0.010	0.0003	1.00			
Desire	3.00	7.00		.22-.35	0.40				0.16		0.0065				Pour Time	0.25	
Sample 1	2.937	6.886	0.365	0.233	0.387	0.352	0.030	0.010	0.175	0.011	0.0050	0.0008	0.0000	0.6403			
sample 2	3.053	7.058	0.372	0.262	0.405	0.361	0.031	0.011	0.172	0.012	0.0051	0.0006	0.0000	0.7032	Oracle Heat Time	4.50	
Sample 3														#DIV/0!	Lbs. In	34,205	
Sample 4														#DIV/0!	Cert. Gas	90,057	
Sample 5														#DIV/0!	Tot. Gas	130,841	
Sample 6														#DIV/0!	Cert. MMBTU/LB	2,722	
Sample 7														#DIV/0!	Tot. MMBTU/LB	3,955	
Operating Comments:																	
Operating Comments if Over .5 Idle Time																	
*Load Status: EOL = End of Load NL = New Load																	

Aleris Intl. Saginaw Heat Sheet

Arch Height 16 inches. Do NOT charge flux or scrap if metal level is less than 17 inches.

Fce. #	2	Customer	G.M. SAG.		Alloy	319	Heat #	C0203855								
Heat Start	Date	3/14/13	Time	8:15PM	Supv.	MB	Level	19"	Temp.	1354	CELLS ARE HIGHLIGHTED IN RED WHEN FURNACE LEVEL IS NOT RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.					
Certify	Date	3/15/13	Time	12:45AM												
Pour Start	Date	3/15/13	Time	12:50AM	Supv.	DS	Level	27"	Temp.	1425						
Pour End	Date	3/15/13	Time	1:00AM	Supv.	DS	Level	22"	Temp.	1440	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX.					
Pot Numbers	BV 3		Specific Gravity	2.60		Flux Percentage	0.00									
Supv. Initials	Time Start	Time End	Control Sample Number	Furnace Temp.	Scrap Location	Sub-Lot/ Receipt #	Alloy Class.	Total Hourly Weight	* Load Status	Level	Flux	Bik. Dross BDMIX	Wht. Dross WDMIX	Cruce Skim BPSKIM		
MB	8:15PM		1	1354	UF-6-2	127771	L850-I	8,644	EOL							
MB			1		MS-24-1	127889	P1020	29,725	EOL							
MB			1		UFA	126846	HDSILGM-F	2,425								
MB			1		UFA	127422	HDMGGM-F	175								
MB			1		UFA	127741	HDCUCPGM-F	1,025								
MB			1		UFA	127706	HDTIGM-F	70								
MB			1		UFA	126643	HDMNGM-F	85								
MB			1		UFA	127225	HDZN95GM-F	150								
MB		1:00AM	1		UFA	115808	HDFEGM-F	100								
Totals								42,399			0	0	0	0		
OP. SPEC	Cu	Si	Fe	Mn	Mg	Zn	Ni	Sn	Ti	Cr	Ca	P	Li	Fe/Mn	Totals	
Min.	2.90	6.85	0.30	1/2 Fe	0.37	0.35			0.14		0.0060			0.55	Actual Heat Time	4.75
Max.	3.10	7.15	0.38	1X Fe	0.43	0.45	0.04	0.04	0.18	0.08	0.0080	0.010	0.0003	1.00		
Desire	3.00	7.00		.22-.35	0.40				0.16		0.0065				Pour Time	0.17
Sample 1	3.026	7.079	0.344	0.235	0.426	0.342	0.030	0.010	0.126	0.011	0.0046	0.0006	0.0000	0.6814		
sample 2	2.969	6.949	0.358	0.230	0.412	0.356	0.029	0.010	0.149	0.011	0.0046	0.0008	0.0000	0.6426	Oracle Heat Time	4.72
Sample 3														#DIV/0!	Lbs. In	42,399
Sample 4														#DIV/0!	Cert. Gas	110,744
Sample 5														#DIV/0!	Tot. Gas	119,411
Sample 6														#DIV/0!	Cert. MMBTU/LB	2,701
Sample 7														#DIV/0!	Tot. MMBTU/LB	2,912
Operating Comments:																
Operating Comments if Over .5 Idle Time																
*Load Status: EOL = End of Load NL = New Load																

Aleris Intl. Saginaw Heat Sheet

Arch Height 16 inches. Do NOT charge flux or scrap if metal level is less than 17 inches.

Fce. #	2	Customer		G.M. SAG.	Alloy	319	Heat #	C0203854									
Heat Start	Date	3/14/13	Time	2:00AM	Supv.	DS	Level	17.5"	Temp.	1441	CELLS ARE HIGHLIGHTED IN RED WHEN FURNACE LEVEL IS NOT RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.						
Certify	Date	3/14/13	Time	8:15AM													
Pour Start	Date	3/14/13	Time	8:00PM	Supv.	MB	Level	29"	Temp.	1330							
Pour End	Date	3/14/13	Time	8:15PM	Supv.	MB	Level	19"	Temp.	1354	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OT FLUX						
Pot Numbers		BV 8 18		Specific Gravity	2.51			Flux Percentage	0.00								
Supv. Initials	Time Start	Time End	Control Sample Number	Furnace Temp.	Scrap Location		Sub-Lot/ Receipt #		Alloy Class.		Total Hourly Weight	* Load Status	Level	Flux	Blk. Dross BDMIX	Wht. Dross WDMIX	Cruce Skim BPSKIM
DS	2:00AM		1		UF6-2		127771		L850-I		10,428						
DS			1		MS24-1		127889		RSP1020A-F		36,125						
DS			1		UFA		127741		HDCUCPGM-F		1,100						
DS			1		UFA		126846		HDSILGM-F		2,700						
DS			1		UFA		126643		HDMNGM-F		100						
DS			1		UFA		127422		HDMGGM-F		215						
DS			1		UFA		127225		HDZN95GM-F		130						
DS			1		UFA		127706		HDTIGM-F		75						
DS			1		UFA		124115		HDCA-F		5						
MR			2		RUN 974		BX 112,124		CT319IV-F		16,798	EOL	26.5"				
Totals											67,676		0	0	0	0	

OP. SPEC	Cu	Si	Fe	Mn	Mg	Zn	Ni	Sn	Ti	Cr	Ca	P	Li	Fe/Mn	Totals	
Min.	2.90	6.85	0.30	1/2 Fe	0.37	0.35			0.14		0.0060			0.55	Actual Heat Time	18.25
Max.	3.10	7.15	0.38	1X Fe	0.43	0.45	0.04	0.04	0.18	0.08	0.0080	0.010	0.0003	1.00		
Desire	3.00	7.00		.22-.35	0.40				0.16		0.0065				Pour Time	0.25
Sample 1	2.229	5.061	0.332	0.181	0.277	0.280	0.031	0.007	0.121	0.012	0.0044	0.0003	0.0000	0.7355	Oracle Heat Time	6.50
sample 2	2.960	7.050	0.320	0.235	0.320	0.340	0.030	0.010	0.142	0.011	0.0045	0.0006	0.0000	0.7355		
Sample 3	2.930	6.930	0.323	0.241	0.418	0.343	0.030	0.010	0.165	0.011	0.0048	0.0005	0.0000	0.7461	Lbs. In	67,676
Sample 4														#DIV/0!	Cert. Gas	123,404
Sample 5														#DIV/0!	Tot. Gas	208,009
Sample 6														#DIV/0!	Cert. MMBTU/LB	1,885
Sample 7														#DIV/0!	Tot. MMBTU/LB	3,178

Operating Comments:

Operating Comments if Over .5 Idle Time

*Load Status: EOL = End of Load NL = New Load

Aleris Intl. Saginaw Heat Sheet

Arch Height 16 inches. Do NOT charge flux or scrap if metal level is less than 17 inches.

Fce. #	2	Customer		G.M. SAG.		Alloy	319	Heat #	C0203853								
Heat Start	Date	3/13/13	Time	11:45PM	Supv.	DS	Level	25.5"	Temp.	1460	CELLS ARE HIGHLIGHTED IN RED WHEN FURNACE LEVEL IS NOT RECORDED OR IS NOT SUFFICIENT FOR CHARGING CAST OR FLUX.						
Certify	Date	3/14/13	Time	1:00AM													
Pour Start	Date	3/14/13	Time	1:40AM	Supv.	DS	Level	28"	Temp.	1425							
Pour End	Date	3/14/13	Time	2:00AM	Supv.	DS	Level	17.5"	Temp.	1441	LEVEL AND TIME MUST BE RECORDED WHEN CHARGING CAST OR FLUX						
Pot Numbers		BV 6,8		Specific Gravity		2.61		Flux Percentage		0.00							
Supv. Initials	Time Start	Time End	Control Sample Number	Furnace Temp.	Scrap Location		Sub-Lot/ Receipt #		Alloy Class.		Total Hourly Weight	* Load Status	Level	Flux	Bik. Dross BDMIX	Wht. Dross WDMIX	Cruce Skim BPSKIM
DS	11:45PM		1		RUN 974		BX 115,130		CT319IV-F		17,407		25.5"				
DS		2:00AM	1		UFA		127706		HDTIGM-F		40						
Totals											17,447		0	0	0	0	
OP. SPEC	Cu	Si	Fe	Mn	Mg	Zn	Ni	Sn	Ti	Cr	Ca	P	Li	Fe/Mn	Totals		
Min.	2.90	6.85	0.30	1/2 Fe	0.37	0.35			0.14		0.0060			0.55	Actual Heat Time		2.25
Max.	3.10	7.15	0.38	1X Fe	0.43	0.45	0.04	0.04	0.18	0.08	0.0080	0.010	0.0003	1.00			
Desire	3.00	7.00		.22-.35	0.40				0.16		0.0065				Pour Time		0.33
Sample 1	2.983	7.049	0.372	0.244	0.383	0.355	0.034	0.010	0.158	0.013	0.0048	0.0005	0.0000	0.6542			
sample 2														#DIV/0!	Oracle Heat Time		1.58
Sample 3														#DIV/0!	Lbs. In		17,447
Sample 4														#DIV/0!	Cert. Gas		32,683
Sample 5														#DIV/0!	Tot. Gas		44,397
Sample 6														#DIV/0!	Cert. MMBTU/LB		1,937
Sample 7														#DIV/0!	Tot. MMBTU/LB		2,631
Operating Comments:																	
Operating Comments if Over .5 Idle Time																	
*Load Status: EOL = End of Load NL = New Load																	

SRN: N6765
 Found: 7

Address: 2600 NODULAR DRIVE

City: SAGINAW
 County: SAGINAW

ZIP Code: 48601

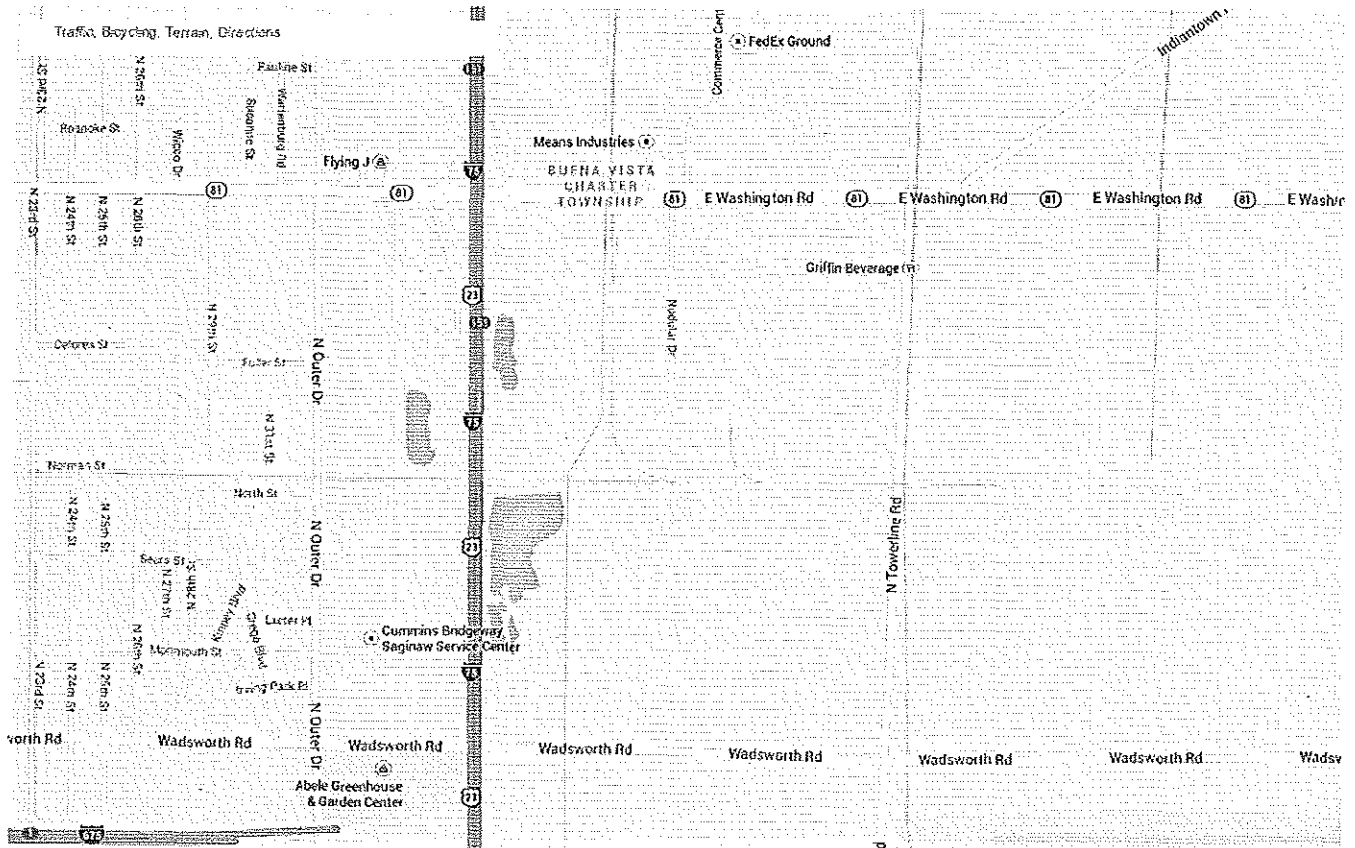
Note: This address reflects permit No. 58-07B. The equipment addresses for other applications / permits may differ if they are for portable sources or if the company is located at a large complex.

Status: 1 Active Permit

<u>Company</u>	<u>Permit No.</u>	<u>Rev.</u>	<u>Received</u>	<u>Denied</u>	<u>Approved</u>	<u>Voided</u>	<u>Remarks</u>
ALCHEM ALUMINUM, INC	58-07B	0	3/12/2008		4/3/2008		MINOR EMISSION LIMITS REVISION.

Status: 6 Voided Permits

<u>Company</u>	<u>Permit No.</u>	<u>Rev.</u>	<u>Received</u>	<u>Denied</u>	<u>Approved</u>	<u>Voided</u>	<u>Remarks</u>
ALCHEM ALUMINUM, INC	58-07A	0	8/22/2007		8/29/2007	4/3/2008	EXTEND TESTING DEADLINE
ALCHEM ALUMINUM, INC	58-07	0	2/2/2007		3/29/2007	8/29/2007	SECONDARY ALUMINUM PRODUCTION
ALCHEM ALUMINUM, INC	79-04	0	3/16/2004		4/28/2004	3/29/2007	REVERB FURNACE & 14 CRUCIBLE HEATING STATIONS
ALCHEM ALUMINUM, INC	455-99C	0	4/8/2002		4/19/2002	11/26/2002	NEW CRUSHER
ALCHEM ALUMINUM, INC	455-99B	0	2/20/2002		11/26/2002	3/29/2007	EMISSION LIMIT CHANGES
ALCHEM ALUMINUM, INC	455-99	0	11/16/1999		5/2/2000	9/18/2001	INSTALL NEW SECONDARY ALUM PRODUCTION FACILITY



2600 Nalukau Pt

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Source Totals

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys,
Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Red Text - Indicates Criteria Pollutants

SOURCE REPORTED EMISSIONS		
Pollutant	Amount	Unit
CO	19342.00	LB <i>TPY</i>
NOX	23028.00	LB <i>11.5</i>
PM10,FLTRBLE	20614.00	LB
PM10,PRIMARY	23298.00	LB <i>32.8</i>
PM2.5,FLTRBL	20068.00	LB
PM2.5,PRIMRY	1656.00	LB
SO2	139.00	LB
VOC	28315.00	LB
HCL	602.00	LB

AQD CALCULATED EMISSIONS		
Pollutant	Amount	Unit
CO	19342.00	LB
NOX	24198.00	LB
PM10,FLTRBLE	198390.40	LB
PM10,PRIMARY	23298.00	LB
PM2.5,FLTRBL	164363.04	LB
PM2.5,PRIMRY	1656.00	LB
SO2	139.00	LB
VOC	15302.80	LB
HCL	602.00	LB

65633 { 20614.00
23298.00
20068.00
1656.00 }

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys,
Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUHEAT						SCC/AMS Code: 30490003							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	2545.00	LB	2012	3888.20	LB	-34.5	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
NOX	2013	3030.00	LB	2012	4628.80	LB	-34.5	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
PM10,FLTRBLE	2013	58.00	LB	2012	87.90	LB	-34.1	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
PM10,PRIMARY	2013	230.00	LB	2012	351.80	LB	-34.7	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
PM2.5,PRIMRY	2013	230.00	LB	2012	351.80	LB	-34.7	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
SO2	2013	18.00	LB	2012	27.80	LB	-35.7	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
VOC	2013	167.00	LB	2012	254.60	LB	-34.5	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	

Emission Unit ID:		EUSVFLUE1						SCC/AMS Code: 30490033							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	2314.00	LB	2012	8570.40	LB	-73.0	NATURAL GAS	28.00	MMCF	NATURAL GAS	102.00	MMCF	-72.5	

Emission Unit ID:		EUSVFLUE2						SCC/AMS Code: 30490033							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	9509.00	LB	2012	6966.00	LB	36.5	NATURAL GAS	113.00	MMCF	NATURAL GAS	82.90	MMCF	36.3	

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys, Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUSVFLUE3						SCC/AMS Code: 30490033							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	4974.00	LB	2012	18665.60	LB	-73.4	NATURAL GAS	59.00	MMCF	NATURAL GAS	222.20	MMCF	-73.4	

Emission Unit ID:		EUSVFLUE3						SCC/AMS Code: 30400103							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
NOX	2013	5922.00	LB	2012	22220.90	LB	-73.3	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
PM10,FLTRBLE	2013	1803.00	LB	2012	6735.90	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
PM10,PRIMARY	2013	2028.00	LB	2012	7577.80	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
PM2.5,FLTRBL	2013	1803.00	LB	2012	6735.90	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
SO2	2013	36.00	LB	2012	133.30	LB	-72.9	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
VOC	2013	326.00	LB	2012	1222.10	LB	-73.3	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	

Emission Unit ID:		EUSVFLUE2						SCC/AMS Code: 30400103							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
NOX	2013	11321.00	LB	2012	8292.90	LB	36.5	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
PM10,FLTRBLE	2013	14216.00	LB	2012	10369.60	LB	37.1	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
PM10,PRIMARY	2013	14216.00	LB	2012	10369.60	LB	37.1	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
PM2.5,FLTRBL	2013	14216.00	LB	2012	4556.30	LB	212.0	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
SO2	2013	68.00	LB	2012	49.80	LB	36.0	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
VOC	2013	323.00	LB	2012	235.70	LB	36.9	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
HCL	2013	431.00	LB	2012	314.20	LB	37.3	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys, Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUSVFLUE1						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
NOX	2013	2755.00	LB	2012	10202.80	LB	-73.0	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM10,FLTRBLE	2013	3669.00	LB	2012	13531.00	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM10,PRIMARY	2013	3722.00	LB	2012	13724.30	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM2.5,FLTRBL	2013	3669.00	LB	2012	3730.70	LB	-1.7	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
SO2	2013	17.00	LB	2012	61.20	LB	-72.1	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
VOC	2013	105.00	LB	2012	386.60	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9

Emission Unit ID:		EUFURN1						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	52.00	LB	2012	193.30	LB	-73.1	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM10,PRIMARY	2013	105.00	LB	2012	386.60	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM2.5,FLTRBL	2013	52.00	LB	2012	193.30	LB	-73.1	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
VOC	2013	3774.00	LB	2012	13917.60	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
HCL	2013	31.00	LB	2012	116.00	LB	-73.3	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9

Emission Unit ID:		EUCRSR						SCC/AMS Code: 30400108						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	469.00	LB	2012	237.70	LB	97.1	METAL	23454.00	TON	METAL	11884.80	TON	97.3
PM10,PRIMARY	2013	1407.00	LB	2012	713.00	LB	97.3	METAL	23454.00	TON	METAL	11884.80	TON	97.3
PM2.5,PRIMRY	2013	1407.00	LB	2012	118.80	LB	1082.4	METAL	23454.00	TON	METAL	11884.80	TON	97.3

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys,
Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUFURN3						SCC/AMS Code: 30400103							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
PM10,FLTRBLE	2013	113.00	LB	2012	421.00	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
PM10,PRIMARY	2013	676.00	LB	2012	2525.90	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
PM2.5,FLTRBL	2013	113.00	LB	2012	421.00	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
VOC	2013	8112.00	LB	2012	30311.40	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	
HCL	2013	11.00	LB	2012	42.10	LB	-73.8	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2	

Emission Unit ID:		EUDROSS						SCC/AMS Code: 30400107							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
PM10,FLTRBLE	2013	19.00	LB	2012	44.70	LB	-57.8	METAL	975.00	TON	METAL	2338.70	TON	-58.3	
PM10,PRIMARY	2013	19.00	LB	2012	44.70	LB	-57.8	METAL	975.00	TON	METAL	2338.70	TON	-58.3	
PM2.5,PRIMRY	2013	19.00	LB	2012	44.70	LB	-57.8	METAL	975.00	TON	METAL	2338.70	TON	-58.3	

Emission Unit ID:		EUFURN2						SCC/AMS Code: 30400103							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
PM10,FLTRBLE	2013	215.00	LB	2012	157.10	LB	36.9	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
PM10,PRIMARY	2013	431.00	LB	2012	314.20	LB	37.3	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
PM2.5,FLTRBL	2013	215.00	LB	2012	157.10	LB	36.9	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
VOC	2013	15508.00	LB	2012	11312.30	LB	37.1	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	
HCL	2013	129.00	LB	2012	94.30	LB	37.2	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1	

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys,
Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:

EUROADWAY

SCC/AMS Code: 30400160

Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,PRIMARY	2013	464.00	LB	2012	921.10	LB	-49.6	MATERIAL	355822.00	TON	MATERIAL	0.00	TON	

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys, Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUSVFLUE1						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
NOX	2013	2755.00	LB	2012	10202.80	LB	-73.0	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM10,FLTRBLE	2013	3669.00	LB	2012	13531.00	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM10,PRIMARY	2013	3722.00	LB	2012	13724.30	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM2.5,FLTRBL	2013	3669.00	LB	2012	3730.70	LB	-1.7	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
SO2	2013	17.00	LB	2012	61.20	LB	-72.1	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
VOC	2013	105.00	LB	2012	386.60	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9

Emission Unit ID:		EUFURN1						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	52.00	LB	2012	193.30	LB	-73.1	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM10,PRIMARY	2013	105.00	LB	2012	386.60	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
PM2.5,FLTRBL	2013	52.00	LB	2012	193.30	LB	-73.1	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
VOC	2013	3774.00	LB	2012	13917.60	LB	-72.9	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9
HCL	2013	31.00	LB	2012	116.00	LB	-73.3	ALUMINUM	5242.00	TON	ALUMINUM	19329.90	TON	-72.9

Emission Unit ID:		EUCRSR						SCC/AMS Code: 30400108						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	469.00	LB	2012	237.70	LB	97.1	METAL	23454.00	TON	METAL	11884.80	TON	97.3
PM10,PRIMARY	2013	1407.00	LB	2012	713.00	LB	97.3	METAL	23454.00	TON	METAL	11884.80	TON	97.3
PM2.5,PRIMRY	2013	1407.00	LB	2012	118.80	LB	1082.4	METAL	23454.00	TON	METAL	11884.80	TON	97.3

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys,
Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUFURN3						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	113.00	LB	2012	421.00	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
PM10,PRIMARY	2013	676.00	LB	2012	2525.90	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
PM2.5,FLTRBL	2013	113.00	LB	2012	421.00	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
VOC	2013	8112.00	LB	2012	30311.40	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
HCL	2013	11.00	LB	2012	42.10	LB	-73.8	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2

Emission Unit ID:		EUDROSS						SCC/AMS Code: 30400107						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	19.00	LB	2012	44.70	LB	-57.8	METAL	975.00	TON	METAL	2338.70	TON	-58.3
PM10,PRIMARY	2013	19.00	LB	2012	44.70	LB	-57.8	METAL	975.00	TON	METAL	2338.70	TON	-58.3
PM2.5,PRIMRY	2013	19.00	LB	2012	44.70	LB	-57.8	METAL	975.00	TON	METAL	2338.70	TON	-58.3

Emission Unit ID:		EUFURN2						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,FLTRBLE	2013	215.00	LB	2012	157.10	LB	36.9	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
PM10,PRIMARY	2013	431.00	LB	2012	314.20	LB	37.3	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
PM2.5,FLTRBL	2013	215.00	LB	2012	157.10	LB	36.9	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
VOC	2013	15508.00	LB	2012	11312.30	LB	37.1	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
HCL	2013	129.00	LB	2012	94.30	LB	37.2	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys,
Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID: EUROADWAY **SCC/AMS Code:** 30400160

Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
PM10,PRIMARY	2013	464.00	LB	2012	921.10	LB	-49.6	MATERIAL	355822.00	TON	MATERIAL	0.00	TON	

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys, Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUHEAT						SCC/AMS Code: 30490003							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	2545.00	LB	2012	3888.20	LB	-34.5	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
NOX	2013	3030.00	LB	2012	4628.80	LB	-34.5	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
PM10,FLTRBLE	2013	58.00	LB	2012	87.90	LB	-34.1	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
PM10,PRIMARY	2013	230.00	LB	2012	351.80	LB	-34.7	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
PM2.5,PRIMRY	2013	230.00	LB	2012	351.80	LB	-34.7	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
SO2	2013	18.00	LB	2012	27.80	LB	-35.7	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	
VOC	2013	167.00	LB	2012	254.60	LB	-34.5	NATURAL GAS	30.00	MMCF	NATURAL GAS	46.30	MMCF	-35.2	

Emission Unit ID:		EUSVFLUE1						SCC/AMS Code: 30490033							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	2314.00	LB	2012	8570.40	LB	-73.0	NATURAL GAS	28.00	MMCF	NATURAL GAS	102.00	MMCF	-72.5	

Emission Unit ID:		EUSVFLUE2						SCC/AMS Code: 30490033							
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change	
CO	2013	9509.00	LB	2012	6966.00	LB	36.5	NATURAL GAS	113.00	MMCF	NATURAL GAS	82.90	MMCF	36.3	

Michigan Air Emissions Reporting System (MAERS)

Emissions Comparison - Previous Year

AQD Source ID (SRN): N6765

Reporting Year: 2013

Source Name: Aleris Specification Alloys, Inc.

Source Locations: 2600 Nodular Drive , SAGINAW, MI, 48601

Fee Category: III

Emission Unit ID:		EUSVFLUE3						SCC/AMS Code: 30490033						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
CO	2013	4974.00	LB	2012	18665.60	LB	-73.4	NATURAL GAS	59.00	MMCF	NATURAL GAS	222.20	MMCF	-73.4

Emission Unit ID:		EUSVFLUE3						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
NOX	2013	5922.00	LB	2012	22220.90	LB	-73.3	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
PM10,FLTRBLE	2013	1803.00	LB	2012	6735.90	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
PM10,PRIMARY	2013	2028.00	LB	2012	7577.80	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
PM2.5,FLTRBL	2013	1803.00	LB	2012	6735.90	LB	-73.2	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
SO2	2013	36.00	LB	2012	133.30	LB	-72.9	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2
VOC	2013	326.00	LB	2012	1222.10	LB	-73.3	ALUMINUM	11266.00	TON	ALUMINUM	42099.10	TON	-73.2

Emission Unit ID:		EUSVFLUE2						SCC/AMS Code: 30400103						
Pollutant	Curr Year	Curr Amt	Curr Unit	Prev Year	Prev Amt	Prev Unit	Pct Change	Curr Year Material	Thrup Curr Amt	Thrup Curr Unit	Prev Year Material	Thrup Prev Amt	Thrup Prev Unit	Thrup Pct Change
NOX	2013	11321.00	LB	2012	8292.90	LB	36.5	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
PM10,FLTRBLE	2013	14216.00	LB	2012	10369.60	LB	37.1	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
PM10,PRIMARY	2013	14216.00	LB	2012	10369.60	LB	37.1	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
PM2.5,FLTRBL	2013	14216.00	LB	2012	4556.30	LB	212.0	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
SO2	2013	68.00	LB	2012	49.80	LB	36.0	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
VOC	2013	323.00	LB	2012	235.70	LB	36.9	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1
HCL	2013	431.00	LB	2012	314.20	LB	37.3	ALUMINUM	21539.00	TON	ALUMINUM	15711.50	TON	37.1



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Regulatory Summary

Please type in...to start a search Facility

Facility:Aleris Specification Alloys, Inc.

Address:2600 Nodular Drive, SAGINAW

Contact:Kathy Brewer -

SRN/ID:N6765

District:Saginaw Bay

Regulatory Details

EPA Class:

Syn Minor Opt Out *

Fee Category:

III

CMS:

Compliance Status:

In-Compliance

Last Inspection:

07/18/2014

Title V Potential to Emit

HAPS

NOx

SOx

CO

Pb

GHG

PM

VOC

Minor

Minor

Minor

Synthetic

Save

Help

Subject To

Subject To	Comments
40 CFR Part 63 / Subpart RRR	Area Source subject to Subpart RRR.
FESOP (SM Opt-Outs and 208a Sources)	