



South Coast Air Quality Management District



21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

February 7, 2014

Mr. Gerardo C. Rios
Chief of Permit Operation
U. S. EPA, Region IX, AIR 3
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Mr. Rios:

Sierra Aluminum Company (ID 85943) has proposed to revise their Title V Permit by the addition of a new billet oven and the modification of two aging ovens. This is an aluminum extrusion/metal finishing facility (SIC 3354) located at 11711-11806 Pacific Avenue, Fontana CA 92335. This proposed permit revision is considered a "de minimus significant" permit revision to their Title V permit. Attached for your review are the evaluation and permit for the proposed permit revision. With your anticipated receipt of the proposed Title V permit revision today, we will note that the EPA 45-day review period begins on February 7, 2014.

If you have any questions or need additional information regarding the proposed permit revision, please call Monica Fernandez-Neild at 909.396.2202.

Very truly yours,

A handwritten signature in black ink, reading "Mohan Balagopalan".

Mohan Balagopalan
Senior Manager
Chemical, Mechanical and Port Permitting

MB:mfn

Attachments

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION PROCESSING AND CALCULATIONS	PAGE 1	PAGES 9
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**NEW CONSTRUCTION & EQUIPMENT MODIFICATION
PERMIT TO CONSTRUCT ANALYSIS**

FACILITY MAILING ADDRESS

Sierra Aluminum Company
2345 Fleetwood Drive
Riverside, CA 92509

(ID: 085943 NOx RECLAIM Cycle 2 - TITLE V)

EQUIPMENT LOCATION

11711-11806 Pacific Avenue
Fontana, CA 92337

EQUIPMENT DESCRIPTION

APPLICATION NO. 559106 - FACILITY PERMIT MODIFICATION

APPLICATION NO. 559107 - NEW CONSTRUCTION

PROCESS 4: ALUMINUM EXTRUSION

OVEN, (NEW), BILLET, GRANCO-CLARK, MODEL NO. 69-35-3, HOT-JET
RECUPERATION, ONE 20'-0" PRE-HEATING CHAMBER, ONE 15'-0" DIRECT
FIRE HEATING CHAMBER, 5,430,000 BTU/HR, LOW NOX BURNER,
NATURAL GAS WITH ONE 7.5 HP COMBUSTION BLOWER.

APPLICATION NO. 559108 - EQUIPMENT MODIFICATION

PROCESS 4: ALUMINUM EXTRUSION

OVEN, D84, AGING, GRANCO-CLARK, 80'-0" L. X 14'-0" W. 6'-0" W., TWO MAXON
EB4PAKT, NATURAL GAS, LOW NOX BURNERS, EACH 2,700,000 BTU/HR,
WITH TWO 10-HP COMBUSTION BLOWERS.

APPLICATION NO. 559109 - EQUIPMENT MODIFICATION

PROCESS 4: ALUMINUM EXTRUSION

OVEN, D85, AGING, GRANCO-CLARK, 80'-0" L. X 9'-0" W. 6'-0" W., TWO MAXON
EB3PAKT, NATURAL GAS, LOW NOX BURNERS, EACH 1,700,000 BTU/HR,
WITH TWO 7.5-HP COMBUSTION BLOWERS.

HISTORY

Application No. 559106 was filed on December 12, 2013, for a Facility Permit
Modification. Application No. 559107 was filed on December 12, 2013, for a Class I

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Permit to Construct. Application Nos. 559108 and 559109 were filed on December 12, 2013, for a Class I Equipment Modification.

Sierra Aluminum is proposing to modify Aging Ovens D84 and D85 by replacing the Maxon Cyclomax Low NOx Burner (Each Aging oven has one 2.7 mmbtu/hr burner). Aging Oven D84 will have two Maxon EB4PAKT Low NOx Burners. Each burner is rated 2.7 mmbtu/hr for a total rating of 5.4 mmbtu/hr, an increase of 2.7 mmbtu/hr from previously permitted. Aging Oven D85 will have two Maxon EB3PAKT Low NOx Burners. Each burner is rated 1.7 mmbtu/hr for a total rating of 3.4 mmbtu/hr, an increase of 0.7 mmbtu/hr than previously permitted.

Complaints There were no complaints credited to Sierra Aluminum during the past 2 years.

Notices to Comply

D10800, 12/19/12 to report Process Unit and Rule 219 equipment emissions electronically using all available record identifiers.
NOV issued, see below

Notices of Violation

P57812, 8/13/13 for failure to comply with conditions A433.2, B27.8, and B58.2.
P57818, 1/2/14 for failure to report electronic emissions for Process Units and Rule 219 equipment using all available record identifiers.

PROCESS DESCRIPTION

Sierra Aluminum extrudes aluminum frames of various shapes and sizes at this location. In addition, some of the frames are painted to customer specifications.

EVALUATION

New Billet Oven	D90	A/N 559107
Operating Schedule:	24 hrs/day, 6 days/wk, 50 wks/yr (Maximum)	
Maximum Heat Input:	5.43 MMBtu/hr	
Monthly Fuel Limit:	None, calculations to be based on 24/7/52	
Normal Operating Temperatures:	Zone 1 680°F; Zone 2 800°F; Zone 3 900°F	
Maximum Temperature:	1,100°F (See condition C6.13)	
NOx Emissions:	30 ppmv (Manufacturer's guarantee, to be verified by conditioned source test.	

See **Attachment 1** for Criteria Pollutant Emission Calculations for the Billet Oven

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Aging Oven D84 A/N 559108, previously A/N 359834
Operating Schedule: 24 hrs/day, 6 days/wk, 50 wks/yr (Maximum)
Maximum Heat Input: 5.4 MMBtu/hr (Previously rated 2.7 mmbtu/hr)
Monthly Fuel Limit: 2.20 mmcf of Natural Gas (See Condition C1.7)
Normal Operating Temperature: 365°F
Maximum Temperature: 500°F (See condition C6.12)
NOx Emissions: 30 ppmv (Manufacturer's guarantee, to be verified by conditioned source test.)

See **Attachment 2** for Criteria Pollutant Emission Calculations for Aging Oven D84

Aging Oven D85 A/N 559109, previously A/N 359835
Operating Schedule: 24 hrs/day, 6 days/wk, 50 wks/yr (Maximum)
Maximum Heat Input: 3.4 MMBtu/hr
Monthly Fuel Limit: 2.20 mmcf of Natural Gas (See Condition C1.7)
Operating Temperature: 365°F
Maximum Temperature: 500°F (See condition C6.12)
NOx Emissions: 30 ppmv (Manufacturer's guarantee, to be verified by conditioned source test.)

See **Attachment 3** for Criteria Pollutant Emission Calculations for Aging Oven D85

RULES COMPLIANCE

RULE 212 Public Notification
Paragraph 212 (c)(1) Requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. According to the website geodistance.com the closest school, Chaparral Elementary School is over 1 mile from Sierra Aluminum's property line. A 30-Day Public Notice is not required under this paragraph.
Paragraph 212(c)(2) The equipment will not result in on-site emission increase exceeding the daily maximums as specified in the table in Rule 212(g). Therefore, a 30-day public notice period will not be required under this paragraph.
Paragraph 212(c)(3) Public notice will not be required under this paragraph. See Rule 1401 evaluation section.

RULE 401 Visible emissions are not expected with proper operation and maintenance of this equipment.

RULE 402 Nuisance is not expected with proper operation and maintenance of this equipment.

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RULE 404 The ovens are in compliance with this rule. Natural gas combustion is the only source of PM contaminants. The maximum expected PM concentration of 0.0029 gr/dscf is well below the allowable limit of 0.158 gr/dscf (see Table 404(a)) for an oven discharge of 1,560 dscfm.

RULE 405 The ovens are in compliance. For process weight of 6,600 lbs/hr, the allowable discharge rate is 6.95 lb/hr

RULE 407: Compliance is expected. CO is expected to be below 2000 ppm. Burner manufacturer has source test results on record for similar equipment with CO emissions averaging less than 400 ppm @ 3% O₂.

RULE 1147: Sierra Aluminum is in NOx RECLAIM and thus is not subject to Rule 1147. Rule 1147 NOx limit for a Metal Heat Treating Furnace/Oven is 60 ppmvd.

REG XIII/XX: BACT

Small Source BACT for Metal Heat Treating Furnaces is natural gas combustion with Low NOx burner ≤ 50 ppmvd. The applicant has requested the NOx concentration limit for RECLAIM reporting to be 30 ppmv for the new Billet Oven and the modified Aging Ovens. Compliance with the limit is expected and will be verified with a source test. See Condition D29.1

Modeling

Heat Input Range mmbtu/hr	NOx Lbs/hr	CO Lbs/hr	PM ₁₀ Lbs/hr
> 2 < 5	0.31	17.1	1.9
Aging Oven D85 3.4	0.1234	0.1133	0.0243
>5 < 10	0.47	25.9	2.8
Aging Oven D84 5.40	0.196	0.1800	0.0386
Billet Oven D90 5.43	0.1971	0.1810	0.0388

Criteria Pollutants are below the screening level of Table A-1. No further modeling is required.

Offsets

Sierra Aluminum is in NOx RECLAIM. Sierra Aluminum holds enough NOx RTCs to offset the increase associated with these proposed applications. See conditions I297.1, I297.2 & I297.3 for NOx RTC hold requirement per Rule 2005.

Memo to file contains emission history for the Aging Ovens as permitted in 1999 and 2002

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30-Day Average Emissions, lb/day

	ROG	NOx	SOx	CO	PM ₁₀
D90 Proposed	0.58	3.20	0.05	2.92	0.63
Previous	0	0	0	0	0
Delta	+0.58	+3.20	+0.05	+2.92	+0.63
D84 Proposed	0.513	2.816	0.044	2.567	0.550
Previous	0.389	2.117	0.033	1.944	0.417
Delta	+0.124	+0.699	+0.011	+0.623	+0.138
D85 Proposed	0.513	2.816	0.044	2.567	0.550
Previous	0.389	2.117	0.033	1.944	0.417
Delta	+0.124	+0.699	+0.011	+0.623	+0.138

Sierra Aluminum is over the 22 pound a day limit for ROG. The Billet Oven will require the purchase of a pound of ROG. Shayne Seever, VP of Administration for Sierra Aluminum is aware that they will be required to purchase one ROG ERC, see attached e-mail. The ROG increase for the Aging Ovens is less than 0.2 lb/day; ROG ERCs will not be required for the Aging Ovens. Offsets are not required for the other pollutants, SOx, CO and PM₁₀ are below the offset threshold.

RULE 1401 The Billet Oven has the highest Toxic emission of the ovens. The Billet Oven is in compliance with Tier II Screening. See attached Rule 1401 calculation sheets.

REG XXX This is a de minimus significant permit revision; a 45-day EPA review is required.

RECOMMENDATION

Issue Permits to Construct for the following equipment as described in this evaluation and noted in the Facility Permit.

APPLICATION NO. 559107 - NEW CONSTRUCTION
OVEN, (NEW), BILLET, GRANCO-CLARK, MODEL NO. 69-35-3, HOT-JET
RECUPERATION, ONE 20'-0" PRE-HEATING CHAMBER, ONE 15'-0" DIRECT FIRE

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HEATING CHAMBER, 5,430,000 BTU/HR, LOW NOX BURNER, NATURAL GAS WITH ONE 7.5 HP COMBUSTION BLOWER.

Conditions:

B59.1 THE OPERATOR SHALL NOT USE THE FOLLOWING MATERIAL(S) IN THIS DEVICE:

Metals contaminated with rubber, plastics, paper, rags, oil, grease, or similar smoke-producing materials.

C6.13 THE OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE TEMPERATURE BEING MONITORED, AS INDICATED BELOW, DOES NOT EXCEED 1100 DEG F.

To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the Billet Oven Exhaust.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

D28.2 THE OPERATOR SHALL CONDUCT SOURCE TEST(S) IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

The test shall be conducted within 12 months of the approval of the concentration limit.

The test shall be conducted to determine the NOx emissions at the outlet.

The test shall be conducted every five period, with the first five year period ending June 30, 2005.

D29.1 THE OPERATOR SHALL CONDUCT SOURCE TEST(S) FOR THE POLLUTANT(S) IDENTIFIED BELOW.

POLLUTANT(S) TO BE TESTED	REQUIRED TEST METHOD(S)	AVERAGING TIME	TEST LOCATION
NOX EMISSIONS	APPROVED DISTRICT METHOD	15 MINUTES	OUTLET
CO EMISSIONS	APPROVED DISTRICT METHOD	15 MINUTES	OUTLET

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit the protocol to the AQMD no later than 45 days prior to the proposed test date, and notify the District of the date and time of the test at least 10 days prior to the test.

The test(s) shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

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The test shall be conducted to demonstrate compliance with the BACT limit of 50 ppmv at 3 percent oxygen for NOx.

Notwithstanding the requirements of Section E conditions, the source test results shall be submitted to the District no later than 30 days after the source test was conducted.

Mail completed source test report to SCAQMD, P.O. Box 4941, Diamond Bar, CA 91765.

D323.1 THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON A SEMI-ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE SEMI-ANNUAL PERIOD. THE ROUTINE SEMI-ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS.

IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL VERIFY AND CERTIFY WITHIN 24 HOURS THAT THE EQUIPMENT CAUSING THE EMISSION AND ANY ASSOCIATED AIR POLLUTION CONTROL EQUIPMENT ARE OPERATING NORMALLY ACCORDING TO THEIR DESIGN AND STANDARD PROCEDURES AND UNDER THE SAME CONDITIONS UNDER WHICH COMPLIANCE WAS ACHIEVED IN THE PAST, AND EITHER:

- 1). TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN SECTION K OF THIS PERMIT;
OR
- 2). HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- 1). STACK OR EMISSION POINT IDENTIFICATION;

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- 2). DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- 3). DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- 4). ALL VISIBLE EMISSION OBSERVATION RECORDS BY OPERATOR OR A CERTIFIED SMOKE READER.

I297.3 THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE FACILITY HOLDS 1703 POUNDS OF NOX RTCS IN ITS ALLOCATION ACCOUNT TO OFFSET THE ANNUAL EMISSIONS INCREASE FOR THE FIRST YEAR OF OPERATION. RTCS HELD TO SATISFY THIS CONDITION MAY BE TRANSFERRED ONLY AFTER ONE YEAR FROM THE INITIAL START OF OPERATION. IF THE HOLD AMOUNT IS PARTIALLY SATISFIED BY HOLDING RTCS THAT EXPIRE MIDWAY THROUGH THE HOLD PERIOD, THOSE RTCS MAY BE TRANSFERRED UPON THEIR RESPECTIVE EXPIRATION DATES. THIS HOLD AMOUNT IS IN ADDITION TO ANY OTHER AMOUNT OF RTCS REQUIRED TO BE HELD UNDER OTHER CONDITION(S) STATED IN THIS PERMIT.

APPLICATION NO. 559108 - EQUIPMENT MODIFICATION
 OVEN, D84, AGING, GRANCO-CLARK, 80'-0" L. X 14'-0" W. 6'-0" W., TWO MAXON EB4PAKT, NATURAL GAS, LOW NOX BURNERS, EACH 2,700,000 BTU/HR, WITH TWO 10-HP COMBUSTION BLOWERS.

Conditions:

B59.1 Same as Above

C1.7 THE OPERATOR SHALL LIMIT THE FUEL USAGE TO NO MORE THAN 2.2 MM CUBIC FEET IN ANY ONE CALENDAR MONTH.

For the purpose of this condition, fuel usage shall be defined as Natural Gas.

To comply with this condition, the operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage being supplied to the fuel supply line of the Aging Oven.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

C6.12 THE OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE TEMPERATURE BEING MONITORED, AS INDICATED BELOW, DOES NOT EXCEED 500 DEG F.

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To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the Billet Oven Exhaust.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

D28.2 Same as Above

D29.1 Same as Above

D323.1 Same as Above

I297.1 THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE FACILITY HOLDS 1014 POUNDS OF NOX RTCS IN ITS ALLOCATION ACCOUNT TO OFFSET THE ANNUAL EMISSIONS INCREASE FOR THE FIRST YEAR OF OPERATION. RTCS HELD TO SATISFY THIS CONDITION MAY BE TRANSFERRED ONLY AFTER ONE YEAR FROM THE INITIAL START OF OPERATION. IF THE HOLD AMOUNT IS PARTIALLY SATISFIED BY HOLDING RTCS THAT EXPIRE MIDWAY THROUGH THE HOLD PERIOD, THOSE RTCS MAY BE TRANSFERRED UPON THEIR RESPECTIVE EXPIRATION DATES. THIS HOLD AMOUNT IS IN ADDITION TO ANY OTHER AMOUNT OF RTCS REQUIRED TO BE HELD UNDER OTHER CONDITION(S) STATED IN THIS PERMIT.

APPLICATION NO. 559109 - EQUIPMENT MODIFICATION
OVEN, D85, AGING, GRANCO-CLARK, 80'-0" L. X 9'-0" W. 6'-0" W., TWO MAXON EB3PAKT, NATURAL GAS, LOW NOX BURNERS, EACH 1,700,000 BTU/HR, WITH TWO 7.5-HP COMBUSTION BLOWERS.

Conditions:

Same conditions a D84 except:

I297.2 THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE FACILITY HOLDS 1014 POUNDS OF NOX RTCS IN ITS ALLOCATION ACCOUNT TO OFFSET THE ANNUAL EMISSIONS INCREASE FOR THE FIRST YEAR OF OPERATION. RTCS HELD TO SATISFY THIS CONDITION MAY BE TRANSFERRED ONLY AFTER ONE YEAR FROM THE INITIAL START OF OPERATION. IF THE HOLD AMOUNT IS PARTIALLY SATISFIED BY HOLDING RTCS THAT EXPIRE MIDWAY THROUGH THE HOLD PERIOD, THOSE RTCS MAY BE TRANSFERRED UPON THEIR RESPECTIVE EXPIRATION DATES. THIS HOLD AMOUNT IS IN ADDITION TO ANY OTHER AMOUNT OF RTCS REQUIRED TO BE HELD UNDER OTHER CONDITION(S) STATED IN THIS PERMIT.

EMISSIONS FOR FIRING ON NATURAL GAS
(OVENS, FURNACES, HEATERS, ETC.)

Emission factors are from form B-1
Except NOx which is calculated from the ppm of NOx

Maximum Burner Rating in BTU/hr =	5,430,000	BTU/hr
Average Operating Schedule =	20	hr/day
Maximum Operating Schedule =	24	hr/day
Expected emission of NOx=	30	ppm
Average Loading=	60.0%	
Maximum Loading =	100.0%	
Maximum operating days per month =	30	days

AVERAGE EMISSIONS

RHC	=	0.0217	lb/hr	0.4344	lb/day
NOx	=	0.1183	lb/hr	2.3653	lb/day
SO2	=	0.0019	lb/hr	0.0372	lb/day
CO	=	0.1086	lb/hr	2.1720	lb/day
PART	=	0.0233	lb/hr	0.4654	lb/day

MAXIMUM EMISSIONS

RHC	=	0.0362	lb/hr	0.8688	lb/day
NOx	=	0.1971	lb/hr	4.7306	lb/day
SO2	=	0.0031	lb/hr	0.0745	lb/day
CO	=	0.1810	lb/hr	4.3440	lb/day
PART	=	0.0388	lb/hr	0.9309	lb/day

Thirty day average and yearly emissions

RHC	=	0.869	lb/dy	312.8	lb/yr
NOx	=	4.731	lb/dy	1703.0	lb/yr
SO2	=	0.074	lb/dy	26.8	lb/yr
CO	=	4.344	lb/dy	1563.8	lb/yr
PART	=	0.931	lb/dy	335.1	lb/yr

EMISSIONS FOR FIRING ON NATURAL GAS
(OVENS, FURNACES, HEATERS, ETC.)

Emission factors are from form B-1

Except NOx which is calculated from the ppm of NOx

Maximum Burner Rating in BTU/hr =	5,400,000	BTU/hr
Max conditioned fuel usage =	2,200,000	CF/mo
Previously conditioned fuel usage =	0	CF/mo
Average Operating Schedule =	16	hr/day
Maximum Operating Schedule =	24	hr/day
Expected emission of NOx=	30	ppm
Average Loading=	65.0%	
Maximum Loading =	100.0%	
Maximum operating days per month =	30	days

AVERAGE EMISSIONS

RHC	=	0.0234	lb/hr	0.3744	lb/day
NOx	=	0.1274	lb/hr	2.0386	lb/day
SO2	=	0.0020	lb/hr	0.0321	lb/day
CO	=	0.1170	lb/hr	1.8720	lb/day
PART	=	0.0251	lb/hr	0.4011	lb/day

MAXIMUM EMISSIONS

RHC	=	0.0360	lb/hr	0.8640	lb/day
NOx	=	0.1960	lb/hr	4.7045	lb/day
SO2	=	0.0031	lb/hr	0.0741	lb/day
CO	=	0.1800	lb/hr	4.3200	lb/day
PART	=	0.0386	lb/hr	0.9257	lb/day

Thirty day average emissions

RHC	=	0.513	lb/dy	184.8	lb/yr
NOx	=	2.816	lb/dy	1013.8	lb/yr
SO2	=	0.044	lb/dy	15.8	lb/yr
CO	=	2.567	lb/dy	924.0	lb/yr
PART	=	0.550	lb/dy	198.0	lb/yr

Monthly Emissions

RHC	=	15.40	lb/mo
NOx	=	84.48	lb/mo
SO2	=	1.32	lb/mo
CO	=	77.00	lb/mo
PART	=	16.50	lb/mo

EMISSIONS FOR FIRING ON NATURAL GAS
(OVENS, FURNACES, HEATERS, ETC.)

Emission factors are from form B-1
Except NOx which is calculated from the ppm of NOx

Maximum Burner Rating in BTU/hr =	3,400,000	BTU/hr
Max conditioned fuel usage =	2,200,000	CF/mo
Previously conditioned fuel usage =	0	CF/mo
Average Operating Schedule =	16	hr/day
Maximum Operating Schedule =	24	hr/day
Expected emission of NOx=	30	ppm
Average Loading=	65.0%	
Maximum Loading =	100.0%	
Maximum operating days per month =	30	days

AVERAGE EMISSIONS

RHC	=	0.0147	lb/hr	0.2357	lb/day
NOx	=	0.0802	lb/hr	1.2836	lb/day
SO2	=	0.0013	lb/hr	0.0202	lb/day
CO	=	0.0737	lb/hr	1.1787	lb/day
PART	=	0.0158	lb/hr	0.2526	lb/day

MAXIMUM EMISSIONS

RHC	=	0.0227	lb/hr	0.5440	lb/day
NOx	=	0.1234	lb/hr	2.9621	lb/day
SO2	=	0.0019	lb/hr	0.0466	lb/day
CO	=	0.1133	lb/hr	2.7200	lb/day
PART	=	0.0243	lb/hr	0.5829	lb/day

Thirty day average emissions

RHC	=	0.513	lb/dy	184.8	lb/yr
NOx	=	2.816	lb/dy	1013.8	lb/yr
SO2	=	0.044	lb/dy	15.8	lb/yr
CO	=	2.567	lb/dy	924.0	lb/yr
PART	=	0.550	lb/dy	198.0	lb/yr

Monthly Emissions

RHC	=	15.40	lb/mo
NOx	=	84.48	lb/mo
SO2	=	1.32	lb/mo
CO	=	77.00	lb/mo
PART	=	16.50	lb/mo

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 4: ALUMINUM EXTRUSION					
OVEN, HEAT TREATING, AGE, NATURAL GAS, ALUMINUM, GRANCO-CLARK, MAXON EB4-PAKT BURNERS, WITH LOW NOX BURNER, 5.4 MMBTU/HR A/N:	D84		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; NOX: 50 PPMV NATURAL GAS (4) [RULE 2005, 6-3-2011]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	B59.1, C1.7, C6.12, D28.2, D29.1, D323.1, I297.1
OVEN, HEAT TREATING, AGE, NATURAL GAS, ALUMINUM, GRANCO-CLARK, MAXON EB3-PAKT BURNERS, WITH LOW NOX BURNER, 3.4 MMBTU/HR A/N:	D85		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; NOX: 50 PPMV NATURAL GAS (4) [RULE 2005, 6-3-2011]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	B59.1, C1.7, C6.12, D28.2, D29.1, D323.1, I297.2
OVEN, HEAT TREATING, BILLET, NATURAL GAS, ALUMINUM, GRANCO-CLARK, MODEL 69-35-3 "HOT-JET", WITH LOW NOX BURNER, FLUE GAS RECIRCULATION, 5.43 MMBTU/HR A/N:	D90		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 30 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; NOX: 50 PPMV NATURAL GAS (4) [RULE 2005, 6-3-2011]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	B59.1, C6.13, D28.2, D29.1, D323.1, I297.3

* (1) (1A) (1B) Denotes RECLAIM emission factor
 (2) (2A) (2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit
 (4) Denotes BACT emission limit
 (5) (5A) (5B) Denotes command and control emission limit
 (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit
 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits
 (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

FACILITY CONDITIONS

F2.1 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 150 LBS IN ANY ONE DAY

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

F2.2 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
Single Volatile Hazardous Air Pollutant (VHAP)	Less than 10 TONS IN ANY 12-MONTH PERIOD
Combination of Volatile Hazardous Air Pollutants (VHAPs)	Less than 25 TONS IN ANY 12-MONTH PERIOD

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

To maintain exemption from the requirements of 40 CFR 63, Subpart MMMM, the operator shall comply with the Volatile Hazardous Air Pollutant (VHAP) emission limits of this condition. To ensure compliance with the VHAP emission limits of this condition, the operator shall comply with the following recordkeeping requirements:

(a) Comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).

(b) Within 14 calendar days after the end of each month, total and record VHAP emissions for the month and for the previous 12 month period from all equipment and operations that are required to have written permits or are exempt from written permits pursuant to Rule 219. The record shall include any procedures used to account for control device efficiencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.

(c) Maintain a single list which includes only the name and address of each person from whom the facility acquired VHAP-containing material regulated by the District that was used or stored at the facility during the preceding 12 months.

(d) Retain all purchase invoices for all VHAP-containing material used or stored at the facility, and all waste manifests for all waste VHAP-containing material removed from the facility.

(e) Retain all records required by this permit at the facility for five years, and make all records available to any District representative upon request.

[40CFR 63 Subpart MMMM, 1-2-2004]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 - Accidental Release Prevention, 5-24-1996]

SYSTEM CONDITIONS

S1.2 The operator shall limit the throughput to no more than 3500 gallon(s) per month.

For the purpose of this condition, throughput shall be defined as total primer coating usage for both systems.

**[RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(1)-Modeling, 12-6-2002;
RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Systems subject to this condition : Process 2, System 1 , 2]

DEVICE CONDITIONS

B. Material/Fuel Type Limits

B59.1 The operator shall not use the following material(s) in this device :

Metals contaminated with rubber, plastics, paper, rags, oil, grease, or similar smoke-producing materials

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The operator shall comply with the terms and conditions set forth below:

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : D84, D85, D90]

C. Throughput or Operating Parameter Limits

- C1.7 The operator shall limit the fuel usage to no more than 2.2 MM cubic feet in any one calendar month.

For the purpose of this condition, fuel usage shall be defined as Natural Gas.

To comply with this condition, the operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage being supplied to the fuel supply line of the Aging Oven.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D84, D85]

- C6.12 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 500 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the Aging Oven Exhaust.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1401, 9-10-2010]

[Devices subject to this condition : D84, D85]

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

C6.13 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 1100 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the Billet Oven Exhaust.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1401, 9-10-2010]

[Devices subject to this condition : D90]

D. Monitoring/Testing Requirements

D28.2 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the NOX emissions at the outlet.

The test shall be conducted every five years, with the first five year period ending June 30, 2005.

The test shall be conducted within 12 months of of the approval of the concentration limit.

[RULE 2005, 5-6-2005; RULE 2012, 5-6-2005]

[Devices subject to this condition : D84, D85, D90]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

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The operator shall comply with the terms and conditions set forth below:

NOX emissions	Approved District method	15 minutes	Outlet
CO emissions	Approved District method	15 minutes	Outlet

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit the protocol to the AQMD engineer no later than 45 days prior to the proposed test date, and notify the District of the date and time of the test at least 10 days prior to the test.

The test(s) shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test shall be conducted to demonstrate compliance with the NOx BACT limit of 50 ppmv at 3 percent Oxygen.

Notwithstanding the requirements of Section E conditions, the source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Mail Completed source test report to SCAQMD, P. O. Box 4941, Diamond Bar, CA 91765

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D84, D85, D90]

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

FACILITY PERMIT TO OPERATE SIERRA ALUMINUM COMPANY

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : D84, D85, D90]

I. Administrative

1297.1 This equipment shall not be operated unless the facility holds 1014 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D84]

1297.2 This equipment shall not be operated unless the facility holds 1014 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D85]

1297.3 This equipment shall not be operated unless the facility holds 1703 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

**FACILITY PERMIT TO OPERATE
SIERRA ALUMINUM COMPANY**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D90]