

South Coast Air Quality Management District

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

December 5, 2008

Mr. Gerardo C. Rios
Chief of Permit Operations
US EPA Region IX Air 3
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Mr. Rios:

SUBJECT: Proposed RECLAIM/Title V Facility Permit Revision (Facility ID: 16639)

Shultz Steel Company (ID 16639), located at 5321 Firestone Boulevard, South Gate, CA 90280, has proposed to revise their RECLAIM/Title V permit as follows:

1. Modifying Furnace FD-8 (Device D3) by replacing one Bloom Engineering burner, Model 2110-040, 2,170,000 BTU/hr with one North American burner, Model 4825-6Z, 1,005,000 BTU/hr, and removing the existing recuperator.
2. Modifying Furnace FDR (Device D13) by replacing six Eclipse burners, Model 85 TA, each 750,000 BTU/hr with eight North American burners, Model 4441-4A, each 525,000 BTU/hr.

This is a custom steel parts fabrication facility (SIC 3462) located at 5321 Firestone Boulevard, South Gate, CA 90280. This proposed permit revision is considered as a "de minimus significant permit revision" to their RECLAIM/Title V permit. Attached for your review are the permit evaluations and proposed Section H. With your receipt of the proposed Section H today, we will note that the EPA 45-day review period will begin on December 5, 2008.

If you have any questions or need additional information regarding the proposed permit revision, please call Mr. Kien Huynh at (909) 396-2635.

Sincerely,



Brian L. Yeh
Senior Manager
Chemical/Mechanical Operations

BLY:kh
Attachments

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

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 1 : FORGING OPERATION					
BURNER, NATURAL GAS, NORTH AMERICAN, MODEL 4441-4-A, 8 TOTAL; 0.525 MMBTU/HR				PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981]	
FURNACE, FUF, NATURAL GAS, WITH LOW NOX BURNER, 12 MMBTU/HR WITH A/N: 455695 Permit to Construct Issued: 08/04/06 BURNER, NATURAL GAS, HOTWORK, MODEL HV400, 6 TOTAL; 2 MMBTU/HR	D106		NOX: LARGE SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; NOX: 50 PPMV NATURAL GAS (4) [RULE 2005,5-6-2005] ; PM: (9) [RULE 404,2-7-1986] PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981]	B59.1, D28.6, L341.1
FURNACE, FORGE, ROTARY, FPK, NATURAL GAS, 8 MMBTU/HR WITH A/N: 468861 Permit to Construct Issued: 09/14/07	D42		NOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; NOX: 50 PPMV NATURAL GAS (3) [RULE 2012,5-6-2005] ; PM: (9) [RULE 404,2-7-1986] PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981]	B59.1, D28.5, D28.6

* (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 SHULTZ STEEL CO

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 1 : FORGING OPERATION					
BURNER, NATURAL GAS, GDA ASSOCIATES, MODEL HV300 COLD AIR PULSED, 8 TOTAL; 1 MMBTU/HR					
FURNACE, FORGE, ROTARY, FNH, NATURAL GAS, 8 MMBTU/HR WITH A/N: 469865 Permit to Construct Issued: 09/14/07 BURNER, NATURAL GAS, GDA ASSOCIATES, MODEL HV300 COLD AIR PULSED, 8 TOTAL; 1 MMBTU/HR	D46		NOX: PROCESS UNIT**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; NOX: 50 PPMV NATURAL GAS (3) [RULE 2012,5-6-2005] ; PM: (9) [RULE 404,2-7-1986] PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981]	B59.1, D28.5, D28.6
FURNACE, HEAT TREATING, FXF, GDA ASSOCIATES, MODEL HV400 COLD AIR PULSED, NATURAL GAS, 32 MMBTU/HR WITH A/N: 477520 Permit to Construct Issued: 06/12/08	D115		NOX: LARGE SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; NOX: 50 PPMV NATURAL GAS (3) [RULE 2012,5-6-2005] ; NOX: 50 PPMV NATURAL GAS (4) [RULE 2005,5-6-2005] PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: (9) [RULE 404,2-7-1986]	B59.1, C1.19, C1.21, D28.6, E71.2

* (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 SHULTZ STEEL CO

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 1 : FORGING OPERATION					
BURNER, NATURAL GAS, HOTWORK COMBUSTION TECHNOLOGY, MODEL HV400, WITH LOW NOX BURNER, 19 TOTAL; 32 MMBTU/HR					
Process 2 : ABRASIVE BLASTING					
ABRASIVE BLASTING, MACHINE, RVP, CRUCIBLE LANCE BLASTER, STEEL GRIT, PANGBORN ROTOBLAST WITH A/N: 476975 Permit to Construct Issued: 04/01/08 ABRASIVE BLASTING NOZZLE, 2 TOTAL; DIAMETER: 0.375 IN; 80 PSIG	D111	C113		PM: (9) [RULE 1140,2-1-1980;RULE 1140,8-2-1985;RULE 405,2-7-1986]	D323.2, L341.3
BAGHOUSE, RVD, PANGBORN, MODEL PC 02-04, PULSE JET CLEANED, 760 SQ.FT.; 4 CARTRIDGE A/N: 476978 Permit to Construct Issued: 04/01/08	C113	D111		PM: (9) [RULE 404,2-7-1986]	C6.1, D28.7, D322.1, D381.1, E102.1, K67.1
FILTER, HEPA, WITH TWO HIGH EFFICIENCY PARTICULATE AIR FILTERS A/N: 476978 Permit to Construct Issued: 04/01/08	C114			PM: (9) [RULE 404,2-7-1986]	C10.1, D28.7, D322.1, D381.1, K67.1

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

SECTION H: DEVICE ID INDEX

**The following sub-section provides an index
to the devices that make up the facility
description sorted by device ID.**

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D3	1	1	0
D13	1	1	0
D42	2	1	0
D46	3	1	0
D105	1	1	0
D106	2	1	0
D111	4	2	0
C113	4	2	0
C114	4	2	0
D115	3	1	0

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

DEVICE CONDITIONS

B. Material/Fuel Type Limits

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

Metal contaminated with rubber, plastic, paper, rags, oil, grease

Smoke producing material

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

[Devices subject to this condition : D3, D13, D42, D46, D105, D106, D115]

C. Throughput or Operating Parameter Limits

C1.19 The operator shall limit the natural gas fuel usage to no more than 24 MM cubic feet in any one calendar month.

this limit is based on the combined natural gas usage of devices D14, D47, D49, D73, D99, and D115.

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

[Devices subject to this condition : D115]

C1.21 The operator shall limit the natural gas fuel usage to no more than 22.1696 MM cubic feet in any one calendar month.

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

[Devices subject to this condition : D115]

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

- C1.23 The operator shall limit the natural gas fuel usage to no more than 1.67 MM cubic feet in any one calendar month.

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

[Devices subject to this condition : D13]

- C6.1 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, does not exceed 6 inches water column.

To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the bags.

The operator shall record the parameter being monitored once every month.

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

[Devices subject to this condition : C113]

- C10.1 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, is maintained between 0.5 and 3 inches water column.

To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the filter.

The operator shall determine and record the differential pressure across the filter once a week.

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

[Devices subject to this condition : C114]

D. Monitoring/Testing Requirements

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

- D12.1 The operator shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage in the furnace.

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

[Devices subject to this condition : D13]

- D12.2 The operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the furnace.

The operator shall also install and maintain a device to continuously record the parameter being measured.

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

[Devices subject to this condition : D3, D13]

- D28.5 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted every five -year period with the first period ending on December 31, 2009.

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

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

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

[Devices subject to this condition : D3, D13, D42, D46]

- D28.6 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine NOx concentrations, in terms of ppmv on a dry basis corrected to 3% oxygen, at the outlet.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

[**RULE 2005, 5-6-2005**]

[Devices subject to this condition : D42, D46, D105, D106, D115]

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D28.7 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to simultaneously determine the PM emissions at the inlet of the baghouse and outlet of the HEPA filter.

The test shall be conducted when the air supply to the blasting operation is at 80 psig.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

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

[Devices subject to this condition : C113, C114]

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	District-approved averaging time	Outlet

The test shall be conducted at the furnace maximum operating temperature to determine NOx concentrations, in terms of ppmv on a dry basis corrected to 3% oxygen, at the outlet.

The test shall determine/document the exhaust flow rate, in acfm; the moisture content, in %; the furnace temperature, in degree F; the exhaust temperature, in degree F; the oxygen content, in %; and the fuel rate, in scfh.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D3, D13]

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D322.1 The operator shall perform annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

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

[Devices subject to this condition : C113, C114]

D323.2 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 an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine 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]

[Devices subject to this condition : D111]

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D381.1 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 quarterly basis, at least, unless the equipment did not operate during the entire quarterly period. The routine quarterly 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, the operator shall 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.

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; and
- 3). Date and time visible emission was abated.

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

[Devices subject to this condition : C113, C114]

E. Equipment Operation/Construction Requirements

E71.2 The operator shall only operate this equipment if the furnace temperature does not exceed 2000 F.

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D115]

E102.1 The operator shall discharge dust collected in this equipment only into closed containers.

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

[Devices subject to this condition : C113]

K. Record Keeping/Reporting

FACILITY PERMIT TO OPERATE SHULTZ STEEL CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

The name of the person performing the inspection and/or maintenance of the filter media

The date, time and results of the inspection

The date, time and description of any maintenance or repairs resulting from the inspection

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

[Devices subject to this condition : C113, C114]

L. Expiration Date

L341.1 Within 90 days after start-up of this equipment, the following device(s) shall be removed from operation:

D17

[RULE 1313(d), 12-7-1995]

[Devices subject to this condition : D106]

L341.2 Within 90 days after start-up of this equipment, the following device(s) shall be removed from operation:

D10

[RULE 1313(d), 12-7-1995]

[Devices subject to this condition : D105]

**FACILITY PERMIT TO OPERATE
SHULTZ STEEL CO**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

L341.3 Within 90 days after start-up of this equipment, the following device(s) shall be removed from operation:

D92

[RULE 1401, 3-4-2005]

[Devices subject to this condition : D111]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	Page	1 of 4
<i>ENGINEERING & COMPLIANCE</i>	A/N	480319
APPLICATION PROCESSING AND CALCULATIONS	Processed By	KH
	Checked By	
	Date	4/14/08

Applicant's Name: Shultz Steel
Mailing Address: 5321 Firestone Blvd.
South Gate, CA 90280

Equipment Location: Same

Equipment Description:

APPLICATION NO. 480319: D3
ALTERATION TO HEAT TREAT FURNACE PERMIT TO OPERATE F83551 (A/N 454771), DEVICE D3, BY:
THE REMOVAL OF:
- ONE BLOOM ENGINEERING BURNER, MODEL 2110-040 , NATURAL GAS-FIRED, 2,170,000 BTU/HR
- THE EXISTING RECUPERATOR
AND THE ADDITION OF:
- ONE NORTH AMERICAN BURNER, MODEL 4825-6Z , NATURAL GAS-FIRED, 1,005,000 BTU/HR

HISTORY:

Application(s) received on: 4/1/08
Equipment installed: N/A
Violations recorded: 1 Notice of Violation has been issued in the last 2 years. All concerns pertaining to the notice have been resolved.

The application was filed to modify the furnace by replacing an existing 2.17 MM BTU/hr Bloom Engineering burner with a new 1.005 MM BTU/hr North American burner and removing an existing recuperator.

Equipment & NSR history:

The furnace was installed prior to June 3, 1988. since the equipment rating, 4.5 MM BTU/hr, was less than 20 MM BTU/hr, it was not required to have a written permit per Rule 219 Amended September 4, 1981. Rule 219 Amended on June 3, 1988 lowered the heat input for exempt equipment from 20 MM BTU/hr to 2 MM BTU/hr. As a result, A/N 198350 was filed for Permit to Operate the furnace. The application was received on 6-2-1989 and Permit D31515 was granted on 9-4-1990..

NSR data sheet for A/N 198350 shows 0 emission for all pollutants.

On 2-19-98, A/N 337902 was received. The application was filed to remove the propane fuel system from the furnace. NSR data sheet shows:

Operating schedule: 18 hrs/day, 5 days/week
CO, 30-day average: 2 lb/day
NOx, 30-day average: 8 lb/day
PM10, 30-day average: 1 lb/day
ROG, 30-day average: 0 lb/day

On 3-16-06, A/N 454771 was received. The application was filed to change NOx RECLAIM concentration limit from 213 lb/MM cf (166 ppm @ 3% O₂) to 108.44 ppm @ 3% O₂ to reflect source test results. NSR data sheet shows the same operating schedule and emissions as for the previous A/N 337902.

A check of the records shows that in the emission calculations for A/N 198350, a load factor of 0.6 was applied. When A/N 337902, subsequent to A/N 198350, for removal of propane "standby" capability (no emission impacts), was processed, an additional load factor of 0.535 was applied on top of the 0.6 factor. The use of the two load factors resulted in recorded emissions equaling to 32.6% of the correct emissions.

If emissions were correctly calculated for this previous Rule 219 equipment (See ATTACHMENT A), NSR accounts for A/N 454771, previous to A/N 480319, would show:

CO, 30-day average: 7 lb/day
NOx, 30-day average: 24 lb/day
PM10, 30-day average: 1 lb/day
ROG, 30-day average: 1 lb/day

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<i>ENGINEERING & COMPLIANCE</i>	A/N	480319
APPLICATION PROCESSING AND CALCULATIONS	Processed By	KH
	Checked By	
	Date	4/14/08

PROCESS DESCRIPTION

The equipment is for pre-heating non-ferrous alloys for forging.
It is fueled with natural gas.

CALCULATIONS:

Given:

	Proposed	Existing
Maximum Heat Input Rating, MM BTU/hr:	7.035	8.2
Fuel:	Natural gas	
Equipment Operating Load:	100%	
Conversion Factors, ppm @ 3% O ₂ to lb/MM BTU		
NOx	0.00121	
CO	0.00074	
Operating Schedule:		
hrs/day	24	
days/wk	7	
weeks/yr	52	
	Proposed	Existing
NOx Concentration, ppm @ 3% O ₂ (dry)	108.44	108.44

CO Concentration, ppm @ 3% O₂ (dry)

Emission Factors, lb/MM BTU:

ROG:	0.0067	
SOx :	0.0008	
CO:	0.0333	
PM:	0.0071	
PM ₁₀ in total PM:	100%	
HHV of natural gas:	1,050 BTU/ft ³	
CO limit?	No	

Computations:

VOC:

lb/hr	0.0067 lb/MM BTU*7.035 MM BTU =	0.05 lb/hr
lb/day Max.	0.05 lb/hr*24 hrs/day =	1.13 lb/day
lb/day, Avg	0.05 lb/hr*24 hrs/day*1 (Load factor) =	1.13 lb/day
lb/yr	1.13 lb/day*7 days/wk*52 wks/yr =	409.72 lb/yr

NOx:

lb/MM BTU	0.00121 lb/MM BTU-ppm*108.44 ppm =	0.1317 lb/MM BTU
lb/hr	0.1317 lb/MM BTU*7.035 MM BTU =	0.93 lb/hr
lb/day Max.	0.93 lb/hr*24 hrs/day =	22.23 lb/day
lb/day, Avg	0.93 lb/hr*24 hrs/day*1 (Load factor) =	22.23 lb/day
lb/yr	22.23 lb/day*7 days/wk*52 wks/yr =	8091.04 lb/yr

SOx:

lb/hr	0.0008 lb/MM BTU*7.035 MM BTU =	0.006 lb/hr
lb/day Max.	0.006 lb/hr*24 hrs/day =	0.13 lb/day
lb/day, Avg	0.006 lb/hr*24 hrs/day*1 (Load factor) =	0.13 lb/day
lb/yr	0.13 lb/day*7 days/wk*52 wks/yr =	48.58 lb/yr

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CO:

lb/hr	0.0333 lb/MM BTU*7.035 MM BTU =	0.23 lb/hr
lb/day Max.	0.23 lb/hr*24 hrs/day =	5.63 lb/day
lb/day, Avg	0.23 lb/hr*24 hrs/day*1 (Load factor) =	5.63 lb/day
lb/yr	5.63 lb/day*7 days/wk*52 wks/yr =	2048.59 lb/yr

PM/PM10

lb/hr	0.0071 lb/MM BTU*7.035 MM BTU =	0.05 lb/hr
lb/day Max.	0.05 lb/hr*24 hrs/day =	1.21 lb/day
lb/day, Avg	0.05 lb/hr*24 hrs/day*1 (Load factor) =	1.21 lb/day
lb/yr	1.21 lb/day*7 days/wk*52 wks/yr =	438.98 lb/yr

	VOC	NOx	SOx	CO	PM/PM10
Factor (lb/10 ⁶ BTU)	0.0067	0.1317	0.0008	0.0333	0.0071
lb/hr	0.05	0.93	0.006	0.23	0.05
lb/day					
Max.	1.13	22.23	0.13	5.63	1.21
Avg.	1.13	22.23	0.13	5.63	1.21
lb/yr	409.72	8,091.04	48.58	2,048.59	438.98

Fuel consumption 4,873,848 ft³/month

Emission impacts due to the modification:

	lb/day				
	VOC	NOx	SOx	CO	PM10
A/N 454771 (Before)					
from ATTACHMENT A	1.31	24.37	0.16	6.56	1.41
A/N 480319 (After)	1.13	22.23	0.13	5.63	1.21
After - Before	-0.19	-2.14	-0.02	-0.93	-0.20
Emission impacts	Decreased	Decreased	Decreased	Decreased	Decreased

RULES EVALUATION

Rule 212:

(c) (1): Emissions near a school

There is no emission increase due to the modification. This is not a project requiring notification as described in this paragraph.

(c) (2): On-site emission increases exceeding the daily maximums

There is no emission increase due to the modification. This is not a project requiring notification as described in this paragraph.

(c) (3): Emissions of toxic air contaminants

There is no increase in emissions of toxic air contaminants. This is not a project requiring notification under this paragraph.

(g): Emission increases exceeding the daily maximums

There is no emission increase due to the modification. This is not a project subject to the notification requirements of subdivision (g) of this rule.

Rule 401:

No visible emissions are expected from this type of equipment. Compliance is expected.

Rule 402:

Nuisance problems due to the operation of this equipment are unlikely.

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Rule 404:

Combustion of natural gas does not generate a significant amount of PM emission. Compliance is expected.

Rules 407/409:

This equipment is fired with natural gas. Compliance is expected.

Regulation XIII - New Source Review

ROG/SOx/PM10/CO:

There is no emission increase due to the modification, NSR is not applicable.

Rule 1401:

There is no emission increase due to the modification, this rule is not applicable.

Rule 1703 - PSD Analysis:

There is no CO emission increase due to the modification, all requirements of Regulation XVII - Prevention of Significant Deterioration - are not applicable.

Rule 2005 - New Source Review for RECLAIM

NOx:

There is no emission increase due to the modification, NSR is not applicable.

DISCUSSIONS

The burner manufacturer does not want to guarantee the NOx concentrations. It is believed that the NOx concentrations with the new burner will be lower than those with the replaced burner. The applicant has agreed to use the existing NOx concentration, 108.44 ppm @ 3% O₂, for P/C processing. Source tests will be required to verify the NOx emissions. If results of the source tests show that there is an increase in the NOx concentration, BACT analysis will be conducted in the P/O evaluation. Also, from the source test results, the maximum furnace temperature will be determined and imposed on the permit.

The equipment was exempt from a written permit when it was first installed. There was no fuel limit on the initial permit. The permit had been revised two times. However, since NSR was considered not being triggered in those two revisions, no fuel limit was imposed. Again, this revision does not trigger NSR; therefore, there will be no fuel limit recommended for this time either.

Based on information submitted with the application and the above evaluation, it is determined that the equipment will operate in compliance with all the applicable rules and regulations of the District.

RECOMMENDATIONS

Issue Permit to Construct subject to permit conditions as stated in Section H.

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Applicant's Name: Shultz Steel
Mailing Address: 5321 Firestone Blvd.
South Gate, CA 90280

Equipment Location: Same

Equipment Description:

APPLICATION NO. 480320: D13

ALTERATION TO HEAT TREAT FURNACE PERMIT TO OPERATE F92393 (A/N 468864), DEVICE D13, BY:
THE REMOVAL OF:

- SIX ECLIPSE BURNERS, MODEL 85TA , NATURAL GAS-FIRED, EACH 750,000 BTU/HR

AND THE ADDITION OF:

- EIGHT NORTH AMERICAN BURNERS, MODEL 4441-4-A , NATURAL GAS-FIRED, EACH 525,000 BTU/HR

HISTORY:

Application(s) received on: 4/1/08

Equipment installed: N/A

Violations recorded: 1 Notice of Violation has been issued in the last 2 years. All concerns pertaining to the notice have been resolved.

The application was filed to modify the equipment by replacing six 750,000 BTU/hr existing Eclipse burners (4.5 MM BTU/hr total) with eight 525,000 BTU/hr North American burners (4.2 MM BTU/hr total).

Equipment & NSR history:

The furnace was installed prior to June 3, 1988. since the equipment rating, 8.2 MM BTU/hr, was less than 20 MM BTU/hr, it was not required to have a written permit per Rule 219 Amended September 4, 1981.

Rule 219 Amended on June 3, 1988 lowered the heat input for exempt equipment from 20 MM BTU/hr to 2 MM BTU/hr. As a result, A/N 198322 was filed for Permit to Operate the furnace. The application was received on 6-2-1989 and Permit D31536 was granted on 9-4-1990.

NSR data sheet for A/N 198322 shows 0 emission for all pollutants.

On 2-19-98, A/N 337929 was received. The application was filed to remove the propane fuel system from the furnace. NSR data sheet shows:

Operating schedule: 18 hrs/day, 5 days/week

CO, 30-day average: 1 lb/day

NOx, 30-day average: 4 lb/day

PM10, 30-day average: 0 lb/day

RUG, 30-day average: 0 lb/day

On 9-27-01, A/N 391602 was received. The application was filed to change NOx RECLAIM concentration limit from 130 lb/MM cf (102 ppm @ 3% O₂) to 65 ppm @ 3% O₂ to reflect source test results. NSR data sheet shows the same operating schedule and emissions as for the previous A/N 337929.

On 6-21-07, AN 468864 was received. The application was filed to change NOx RECLAIM concentration from 65 ppm @ 3% O₂ to 70.31 ppm @ 3% O₂ to reflect the source test results. NSR data sheet shows NOx = 5 lbs/day, CO = 2 lbs/day, PM10 = 0 and VOC = 0.

PROCESS DESCRIPTION

The equipment is for pre-heating non-ferrous alloys for forging.

It is fueled with natural gas.

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CALCULATIONS:

Given:

	<u>Proposed</u>	<u>Existing</u>
Maximum Heat Input Rating, MM BTU/hr:	4.2	4.5
Fuel:	Natural gas	
Equipment Operating Load:	57%	
Conversion Factors, ppm @ 3% O ₂ to lb/MM BTU		
NOx	0.00121	
CO	0.00074	
Operating Schedule:		
hrs/day	24	
days/wk	7	
weeks/yr	52	
	<u>Proposed</u>	<u>Existing</u>
NOx Concentration, ppm @ 3% O ₂ (dry)	70.31	70.31
CO Concentration, ppm @ 3% O ₂ (dry)		
Emission Factors, lb/MM BTU (Default)		
ROG:	0.0067	
SOx :	0.0008	
CO:	0.0333	
PM:	0.0071	
PM ₁₀ in total PM:	100%	
HHV of natural gas:	1,050 BTU/ft ³	
CO limit?	No	

Computations:

VOC:

lb/hr	0.0067 lb/MM BTU*4.2 MM BTU =	0.03 lb/hr
lb/day Max.	0.03 lb/hr*24 hrs/day =	0.67 lb/day Max.
lb/day, Avg	0.03 lb/hr*24 hrs/day*0.57 (Load factor) =	0.39 lb/day, Avg
lb/yr	0.39 lb/day*7 days/wk*52 wks/yr =	140.39 lb/yr

NOx:

lb/MM BTU	0.00121 lb/MM BTU-ppm*70.31 ppm =	0.0854 lb/MM BTU
lb/hr	0.0854 lb/MM BTU*4.2 MM BTU =	0.36 lb/hr
lb/day Max.	0.36 lb/hr*24 hrs/day =	8.60 lb/day Max.
lb/day, Avg	0.36 lb/hr*24 hrs/day*0.57 (Load factor) =	4.94 lb/day, Avg
lb/yr	4.94 lb/day*7 days/wk*52 wks/yr =	1797.53 lb/yr

SOx:

lb/hr	0.0008 lb/MM BTU*4.2 MM BTU =	0.003 lb/hr
lb/day Max.	0.003 lb/hr*24 hrs/day =	0.08 lb/day Max.
lb/day, Avg	0.003 lb/hr*24 hrs/day*0.57(Load factor) =	0.05 lb/day, Avg
lb/yr	0.05 lb/day*7 days/wk*52 wks/yr =	16.65 lb/yr

CO:

lb/hr	0.0333 lb/MM BTU*4.2 MM BTU =	0.14 lb/hr
lb/day Max.	0.14 lb/hr*24 hrs/day =	3.36 lb/day Max.
lb/day, Avg	0.14 lb/hr*24 hrs/day*0.57 (Load factor) =	1.93 lb/day, Avg
lb/yr	1.93 lb/day*7 days/wk*52 wks/yr =	701.94 lb/yr

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Rule 401:

No visible emissions are expected from this type of equipment. Compliance is expected.

Rule 402:

Nuisance problems due to the operation of this equipment are unlikely.

Rule 404:

Combustion of natural gas does not generate a significant amount of PM emission. Compliance is expected.

Rules 407/409:

This equipment is fired with natural gas. Compliance is expected.

Regulation XIII - New Source Review

ROG/ SOx/PM10/CO:

There is no emission increase due to the modification, NSR is not applicable.

Rule 1401:

There is no emission increase due to the modification, this rule is not applicable.

Rule 1703 - PSD Analysis:

There is no CO emission increase due to the modification, all requirements of Regulation XVII - Prevention of Significant Deterioration - are not applicable.

Rule 2005 - New Source Review for RECLAIM

NOx:

There is no emission increase due to the modification, NSR is not applicable.

DISCUSSIONS

The burner manufacturer does not want to guarantee the NOx concentrations. It is believed that the NOx concentrations with the new burners will be lower than those with the replaced burners. The applicant has agreed to use the existing NOx concentration, 70.31 ppm @ 3% O2, for P/C processing. The existing fuel limit is kept. Source tests will be required to verify the NOx emissions. If results of the source tests show that there is an increase in the NOx concentration, BACT analysis will be conducted in the P/O evaluation. Also, from the source test results, the maximum furnace temperature will be determined and imposed on the permit.

Based on information submitted with the application and the above evaluation, it is determined that the equipment will operate in compliance with all the applicable rules and regulations of the District.

RECOMMENDATIONS

Issue Permit to Construct subject to permit conditions as stated in Section H.