

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>STATIONARY SOURCE AND COMPLIANCE DIVISION</b> <i>Large Coating, Printing and Chemical Operations Team</i> <b>APPLICATION PROCESSING AND CALCULATIONS</b>	PAGE	1 of 11
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	PROCESSED BY	SMP
	REVIEWED BY	
	DATE	07/24/11

**CHANGE OF CONDITION EVALUATION  
NATURAL GAS FUELED BOILERS**

<b>Applicant's Name</b>	DOUGLAS AIRCRAFT CO.
<b>Company I.D.</b>	800038
<b>Mailing Address</b>	3855 LAKEWOOD BLVD., LONG BEACH, CA 90846
<b>Equipment Address</b>	3855 LAKEWOOD BLVD., LONG BEACH, CA 90846

**EQUIPMENT DESCRIPTION**

**Application No. 523969**

RECLAIM/TITLE V PERMIT REVISION

**Application No. 523973 (C/C, Previous A/N 436754, P/N F78973) (D549)**

BOILER, CLEAVER BROOKS, MODEL NO. CEW 700-400 150#HW, FIRETUBE TYPE FOR HOT WATER, 29' – 9" L.X 11' – 2" W. X 5' – 7" H., 16.3 MM BTU PER HOUR MAXIMUM HEAT INPUT RATE, NATURAL GAS FIRED, WITH A LOW NOX CLEAVER BROOKS BURNER, MODEL NO. PROFIRE-NT.

**Application No. 523976 (C/C, Previous A/N 436753, P/N F78972) (D551)**

BOILER, CLEAVER BROOKS, MODEL NO. CEW 700-400 150#HW, FIRETUBE TYPE FOR HOT WATER, 29' – 9" L.X 11' – 2" W. X 5' – 7" H., 16.3 MM BTU PER HOUR MAXIMUM HEAT INPUT RATE, NATURAL GAS FIRED, WITH A LOW NOX CLEAVER BROOKS BURNER, MODEL NO. PROFIRE-NT.

**Application No. 523977 (C/C, Previous A/N 436755, P/N F78974) (D553)**

BOILER, CLEAVER BROOKS, MODEL NO. CEW 700-800, FIRETUBE TYPE FOR HOT WATER, 30' – 4" L.X 11' – 2" W. X 5' – 7" H., 32.5 MM BTU PER HOUR MAXIMUM HEAT INPUT RATE, NATURAL GAS FIRED, WITH A LOW NOX CLEAVER BROOKS BURNER, MODEL NO. PROFIRE-NT.

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<b>HISTORY</b>
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The Boeing Company – C17 program submitted above applications to change the permit conditions of the three permitted boilers at their Long Beach facility. The applicant has requested to increase the CO emission limit to the BACT requirement of 50 ppmv at 3% O<sub>2</sub> from the current 10 ppmv at 3% O<sub>2</sub> offset requirement. All the three boilers are installed in their C-17 aircraft production area. The boilers are used to provide comfort air and heating to the spray booths (hangers) and buildings.

Originally the applicant accepted 10 ppmv CO at 3% O<sub>2</sub> emission limit for these boilers and provided the necessary offsets in year 2003. The usage of the boilers has gone down at the facility and the applicant desires to use these boilers at a lower operating range in compliance with the modified permit conditions. Hence they have applied under this project to increase the CO emission limit to the BACT requirement. The company does not have to provide any additional CO offsets for this project because effective June 11, 2007, EPA has re-designated South Coast Air Basin as attainment with respect to the CO National Ambient Air Quality Standard. Since the District has also attained the State standards, the offset requirements of Regulation XIII do not apply to any new or modified source for CO.

The applicant has not requested any other changes from the current permit conditions which will affect the other emissions from these boilers. The natural gas usage limits for the three boilers as shown in the following table will remain the same. The applicant has a single combined usage limit for all three boilers for some flexibility in their operation, which will also remain the same. Hence under this project only CO potential to emit emissions will increase. Offsets for Co are not required.

Application No.	Previous Application No.	Boiler Device No.	BTU Rating MmBTU/hr	Therm Usage limit requested
523973	436754	D549	16.3	81560
523976	436753	D551	16.3	70416
523977	436755	D553	32.5	122850
<b>TOTAL</b>				<b>274826</b>

The applicant provided offsets for the criteria pollutant emissions when the boilers were first permitted in year 2003. The following data were obtained from the previous evaluation when these boilers were issued initial permits to construct.

This is a NO<sub>x</sub> RECLAIM facility and the company had sufficient NO<sub>x</sub> RECLAIM Trading Credits (RTCs) on account to offset excess NO<sub>x</sub> emissions from this project, when it was modified last time. However, the applicant provided ERCs for CO, ROG, and PM10 emissions necessary for this project. The following table describes the emissions during the last modification of this project, for which the applicant provided the necessary offsets.

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Emission Summary (NSR 30 day average)

A/N	Equipment	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	VOC (lbs/day)	SOx (lbs/day)
436753	CEW 700-400	1.77	3.48	1.17	1.30	0*
436754	CEW 700-400	2.05	4.03	1.36	1.50	0*
436755	CEW 700-800	3.08	6.03**	2.05	2.26	0*
Total for the Project		6.9	13.54	4.58	5.06	0*
Offsets required (@ 1.2 to 1)		8	(RECLAIM)	5	6	0

\* Emission is less than 0.5 lb/day

\*\* Based on NOx concentration of 12 ppmv @ 3% O<sub>2</sub> (See page 5 of this evaluation)

The original Permits to Construct were issued for the above boilers on 09-23-03. The company submitted a source test protocol, which the District approved on 01-14-04. The company performed the source test per approved protocol on 03-25-04. The source test results indicated compliance with the BACT requirements and confirmed emission factors for offset calculations, as described below.

Boiler Device No.	BTU Rating MmBTU/hr	BTU During Test MmBTU/hr	NOx Test Results ppm	NOx BACT ppm	CO Test Results ppm	CO BACT ppm
D549	16.3	8.3	9.8	12	0.008	50
D551	16.3	8.7	9.2	12	0.00	50
D553	32.5	16	6.4	9	0.00	50

The manufacturer has guaranteed CO emissions to be less than 10 ppmv @ 3% O<sub>2</sub> during the operation from 25% to 100% firing rate. A permit condition is imposed on these boilers to maintain an interlock device, so that the boilers can be operated when the natural gas firing rate is at 25% or more of the maximum heat input rating of the equipment.

Boeing manufactures/fabricates military and civilian aircrafts at this location. The company operates a number of permitted equipment such as spray booths, ovens, boilers, degreasers, I.C. engines, scrubbers, storage tanks, chemical process lines, afterburner, etc. under the Title V/RECLAIM permit (I. D. # 800038).

The District database shows that the applicant has not received any odor nuisance complaints from the public in the last two years. The company also has not received any Notices to Comply or Notice of Violation in the last two years.

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This facility is not located within 1000 feet from any school and there are no emission increases exceeding Rule 212 thresholds from this project, hence, these applications do not require a public notice.

This facility is a Title V facility. A renewal Title V permit was issued to this facility on January, 20, 2008. The proposed project is considered a “de minimis significant permit revision” to the initial Title V permit, as described in Regulation XXX evaluation.

**PROCESS DESCRIPTION**

The boilers emit combustion pollutants such as NO<sub>x</sub>, CO, PM<sub>10</sub>, SO<sub>x</sub>, ROG and hazardous air pollutants. Each boiler is equipped with a high radiant multi-port burner. The heat from the combustion products, which flow through tubes, is transferred to water which circulates outside of the tubes. The boiler manufacturer informed the District that the boilers will not emit more than 10 ppmv CO emissions, if not used at less than 25% of the maximum heat input. Manufacturer will provide a mechanical inter-lock device on all the boilers, so that they cannot be operated below 25% load.

These boilers are equipped with low-NO<sub>x</sub> burners and flue gas recirculation to meet the BACT requirements for NO<sub>x</sub> emissions (9 ppmv for CEW 700-800 and 12 ppmv for CEW 700-400). Low NO<sub>x</sub> burners reduce NO<sub>x</sub> emissions by combusting in stages. Staging partially delays the combustion process, resulting in a cooler flame which suppresses NO<sub>x</sub> formation.

In the flue gas recirculation system, a portion of the flue gas is recycled from the stack to the burner wind box. Upon entering the wind box, the gas is mixed with combustion air prior to be fed to the burner. The recycled flue gas contains combustion products which act as inert materials during combustion. This additional mass is heated in the combustion zone, thereby lowering the peak flame temperature and reducing the NO<sub>x</sub> formation. To a lesser extent, flue gas recirculation also reduces oxygen content in the flame zone and as a result forms less NO<sub>x</sub>.

**OPERATING HOURS**

Average: 24 hour/day, 7 day/week, 52 weeks/year  
/Maximum: 24 hour/day, 7 day/week, 52 weeks/year

**EMISSION CALCULATIONS**

The applicant has decided to take daily natural gas usage limit of 122850 therms/month for the CEW-800 boiler (D553). That is equivalent to 17.0625 mmBTU/HR heat input. (122850/30/24) X 100000 = 17062500 BTU. Thus emissions will be as follows for CEW-800 boiler (D553).

Cleaver Brooks Boiler

523977

	maximum	normal
hr/dy	24	24
dy/wk	7	7
wk/yr	52	52
load	100%	100%

max heat input	1.71E+07 (BTU/hr)
<u>gross heating value</u>	1050 (BTU/scf)

	Emission Factors	MAX (lb/hr)	AVE (lb/hr)	MAX (lb/dy)	30-DAY (lb/dy)	MAX (lb/yr)	MAX (ton/yr)
SO <sub>2</sub> (R1)	0.6	0.010	0.010	0.234	NA	85	0.043
SO <sub>2</sub> (R2)	0.6	0.010	0.010	0.234	0.234	85	0.043
NO <sub>2</sub> (R1)	100	1.625	1.625	39.000	NA	14,196	7.098
NO <sub>2</sub> (R2)	11.6	0.189	0.189	4.524	4.524	1,647	0.823
CO (R1)	39.5	0.642	0.642	15.405	NA	5,607	2.804
CO (R2)	39.5	0.642	0.642	15.405	15.405	5,607	2.804
N <sub>2</sub> O (R1)	2.2	0.036	0.036	0.858	NA	312	0.156
N <sub>2</sub> O (R2)	0.64	0.010	0.010	0.250	0.250	91	0.045
PM, PM <sub>10</sub> (R1=R2)	5.25	0.085	0.085	2.048	2.048	745	0.373
CO <sub>2</sub> (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC (R1=R2)	5.8	0.094	0.094	2.262	2.262	823	0.412
ethyle benzene	0.0095	1.5E-04	1.5E-04	3.7E-03	NA	1.35E+0	6.74E-4
acetaldehyde	0.0043	7.0E-05	7.0E-05	1.7E-03	NA	6.10E-1	3.05E-4
acrolein	0.0027	4.4E-05	4.4E-05	1.1E-03	NA	3.83E-1	1.92E-4
benzene	0.008	1.3E-04	1.3E-04	3.1E-03	NA	1.14E+0	5.68E-4
formaldehyde	0.017	2.8E-04	2.8E-04	6.6E-03	NA	2.41E+0	1.21E-3
naphthalene	0.0003	4.9E-06	4.9E-06	1.2E-04	NA	4.26E-2	2.13E-5
PAH's	0.0001	1.6E-06	1.6E-06	3.9E-05	NA	1.42E-2	7.10E-6
toluene	0.0366	5.9E-04	5.9E-04	1.4E-02	NA	5.20E+0	2.60E-3
xylenes	0.0272	4.4E-04	4.4E-04	1.1E-02	NA	3.86E+0	1.93E-3

NO <sub>2</sub> @ 3% excess O <sub>2</sub> ----->>>	8.94	(ppmv)	SO <sub>2</sub> @ 3% excess O <sub>2</sub> ----->>>	0.33	(ppmv)
CO @ 3% excess O <sub>2</sub> ----->>>	49.98	(ppmv)	PM @ 12% CO <sub>2</sub> ----->>>	3.9E-09	(grain/ft <sup>3</sup> )

Ver. 1.3

Since Douglas Products Div. has requested a combined natural gas usage limit of 274,826 (122,850 + 81,560 + 70,416). The NO<sub>x</sub> emissions for 30 day average for this boiler has been adjusted using 12 ppmv instead of 9 ppmv (since all natural gas may be combusted in CEW-400 boilers. i.e. 4.524 X (12/9) = 6.032.

The applicant has decided to take daily natural gas usage limit of 81,560 therms/month for the CEW-400 boiler (D549). That is equivalent to 11.327 mmBTU/HR heat input. (81,560/30/24) X 100,000 = 11,327,777 BTU. Thus emissions will be as follows for CEW-400 boiler (D549).

A/N 523973

Cleaver Brooks Boiler

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	maximum	normal		
hr/dy	24	24	max heat input	1.13E+07 (BTU/hr)
<u>dy/wk</u>	7	7	<u>gross heating value</u>	1050 (BTU/scf)
<u>wk/yr</u>	52	52		
<u>load</u>	100%	100%		

	Emission Factors	MAX (lb/hr)	AVE (lb/hr)	MAX (lb/dy)	30-DAY (lb/dy)	MAX (lb/yr)	MAX (ton/yr)
SO <sub>2</sub> (R1)	0.6	0.006	0.006	0.155	NA	57	0.028
SO <sub>2</sub> (R2)	0.6	0.006	0.006	0.155	0.155	57	0.028
NO <sub>2</sub> (R1)	100	1.079	1.079	25.892	NA	9,425	4.712
NO <sub>2</sub> (R2)	15.58	0.168	0.168	4.034	4.034	1,468	0.734
CO (R1)	39.5	0.426	0.426	10.227	NA	3,723	1.861
CO (R2)	39.5	0.426	0.426	10.227	10.227	3,723	1.861
N <sub>2</sub> O (R1)	2.2	0.024	0.024	0.570	NA	207	0.104
N <sub>2</sub> O (R2)	0.64	0.007	0.007	0.166	0.166	60	0.030
PM, PM <sub>10</sub> (R1=R2)	5.25	0.057	0.057	1.359	1.359	495	0.247
CO <sub>2</sub> (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC(R1=R2)	5.8	0.063	0.063	1.502	1.502	547	0.273
ethyle benzene	0.0095	1.0E-04	1.0E-04	2.5E-03	NA	8.95E-1	4.48E-4
acetaldehyde	0.0043	4.6E-05	4.6E-05	1.1E-03	NA	4.05E-1	2.03E-4
acrolein	0.0027	2.9E-05	2.9E-05	7.0E-04	NA	2.54E-1	1.27E-4
benzene	0.008	8.6E-05	8.6E-05	2.1E-03	NA	7.54E-1	3.77E-4
formaldehyde	0.017	1.8E-04	1.8E-04	4.4E-03	NA	1.60E+0	8.01E-4
naphthalene	0.0003	3.2E-06	3.2E-06	7.8E-05	NA	2.83E-2	1.41E-5
PAH's	0.0001	1.1E-06	1.1E-06	2.6E-05	NA	9.42E-3	4.71E-6
toluene	0.0366	3.9E-04	3.9E-04	9.5E-03	NA	3.45E+0	1.72E-3
xylenes	0.0272	2.9E-04	2.9E-04	7.0E-03	NA	2.56E+0	1.28E-3

NO <sub>2</sub> @ 3% excess O <sub>2</sub> ----->>>	12.00	(ppmv)	SO <sub>2</sub> @ 3% excess O <sub>2</sub> ----->>>	0.33	(ppmv)
CO @ 3% excess O <sub>2</sub> ----->>>	49.98	(ppmv)	PM @ 12% CO <sub>2</sub> ----->>>	3.9E-09	(grain/ft <sup>3</sup> )

Ver. 1.3

The applicant has decided to take daily natural gas usage limit of 70,416 therms/month for the CEW-400 boiler (D551). That is equivalent to 9.78 mmBTU/HR heat input.  $(70,416/30/24) \times 100,000 = 9,780,000$  BTU. Thus emissions will be as follows for CEW-400 boiler (D551).

A/N 523976

Cleaver Brooks Boiler

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	maximum	normal		
hr/dy	24	24	max heat input	9.78E+06 (BTU/hr)
<u>dy/wk</u>	7	7	<u>gross heating value</u>	1050 (BTU/scf)
<u>wk/yr</u>	52	52		
<u>load</u>	100%	100%		

	Emission Factors	MAX (lb/hr)	AVE (lb/hr)	MAX (lb/dy)	30-DAY (lb/dy)	MAX (lb/yr)	MAX (ton/yr)
SO <sub>2</sub> (R1)	0.6	0.006	0.006	0.134	NA	49	0.024
SO <sub>2</sub> (R2)	0.6	0.006	0.006	0.134	0.134	49	0.024
NO <sub>2</sub> (R1)	100	0.931	0.931	22.354	NA	8,137	4.068
NO <sub>2</sub> (R2)	15.58	0.145	0.145	3.483	3.483	1,268	0.634
CO (R1)	39.5	0.368	0.368	8.830	NA	3,214	1.607
CO (R2)	39.5	0.368	0.368	8.830	8.830	3,214	1.607
N <sub>2</sub> O (R1)	2.2	0.020	0.020	0.492	NA	179	0.090
N <sub>2</sub> O (R2)	0.64	0.006	0.006	0.143	0.143	52	0.026
PM, PM <sub>10</sub> (R1=R2)	5.25	0.049	0.049	1.174	1.174	427	0.214
CO <sub>2</sub> (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC(R1=R2)	5.8	0.054	0.054	1.297	1.297	472	0.236
ethyle benzene	0.0095	8.8E-05	8.8E-05	2.1E-03	NA	7.73E-1	3.87E-4
acetaldehyde	0.0043	4.0E-05	4.0E-05	9.6E-04	NA	3.50E-1	1.75E-4
acrolein	0.0027	2.5E-05	2.5E-05	6.0E-04	NA	2.20E-1	1.10E-4
benzene	0.008	7.5E-05	7.5E-05	1.8E-03	NA	6.51E-1	3.25E-4
formaldehyde	0.017	1.6E-04	1.6E-04	3.8E-03	NA	1.38E+0	6.92E-4
naphthalene	0.0003	2.8E-06	2.8E-06	6.7E-05	NA	2.44E-2	1.22E-5
PAH's	0.0001	9.3E-07	9.3E-07	2.2E-05	NA	8.14E-3	4.07E-6
toluene	0.0366	3.4E-04	3.4E-04	8.2E-03	NA	2.98E+0	1.49E-3
xylenes	0.0272	2.5E-04	2.5E-04	6.1E-03	NA	2.21E+0	1.11E-3

NO <sub>2</sub> @ 3% excess O <sub>2</sub> ----->>>	12.00	(ppmv)	SO <sub>2</sub> @ 3% excess O <sub>2</sub> ----->>>	0.33	(ppmv)
CO @ 3% excess O <sub>2</sub> ----->>>	49.98	(ppmv)	PM @ 12% CO <sub>2</sub> ----->>>	3.9E-09	(grain/ft <sup>3</sup> )

Ver. 1.3

Emission Summary (NSR 30 day average)

A/N	Equipment	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	VOC (lbs/day)	SOx (lbs/day)
523973	CEW 700-400	10.23	3.48	1.17	1.30	0*
523976	CEW 700-400	8.82	4.03	1.36	1.50	0*
523977	CEW 700-800	15.41	6.03**	2.05	2.26	0*

\* Emission is less than 0.5 lb/day

\*\* Based on NOx concentration of 12 ppmv @ 3% O<sub>2</sub> (See page 5 of this evaluation)

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**RULES/REGULATION EVALUATION**

▣ **RULE 212, PUBLIC NOTIFICATION**

v **SECTION 212(c)(1):**

This section 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. These sources are not located within 1,000 feet from the outer boundary of a school. Therefore, public notice will not be required by this section.

v **SECTION 212(c)(2):**

This section requires a public notice for all new or modified facilities which have on-site emission increases exceeding any of the daily maximums as specified in subdivision (g). As shown in the following table, the emission increases for all the boilers are below the daily maximum limits specified by Rule 212(g). Therefore, these applications are not subject to this section.

LB/DAY	CO	NOX	PM <sub>10</sub>	ROG	SOX	Pb
<b>MAX. LIMIT</b>	220	40	30	30	60	3
<b>INCREASES</b>	27	0	0	0	0	0

v **SECTION 212(c)(3):**

Please, see Rule 1401 evaluation section.

v **SECTION 212(g):**

This section requires a public notice for all new or modified sources which have on-site emission increases exceeding any of the daily maximums as specified in subdivision. As shown in the following table, the emission increases for CEW 700-800 boiler (D553, highest emission of the three boilers) are below the daily maximum limits specified by Rule 212(g). Therefore, these applications are not subject to this section.

LB/DAY	CO	NOX	PM <sub>10</sub>	ROG	SOX	Pb
<b>MAX. LIMIT</b>	220	40	30	30	60	3
<b>INCREASES</b>	12	0	0	0	0	0

▣ **RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE**

No visible emissions are expected with proper operation of the equipment. These boilers are in operation for a number of years without any complaints from the public.

▣ **RULES 404, PARTICULATE MATTER - CONCENTRATION**

With proper operation of the equipment, these boilers are expected to comply with the requirements.

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>STATIONARY SOURCE AND COMPLIANCE DIVISION</b> <i>Large Coating, Printing and Chemical Operations Team</i> <b>APPLICATION PROCESSING AND CALCULATIONS</b>	PAGE	9 of 11
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▣ **RULE 1146, EMISSIONS OF OXIDES OF NITROGEN FROM BOILERS AND HEATERS**

This rule requires natural gas fired boilers to emit no more than 30 ppmv of NO<sub>x</sub> at 3% O<sub>2</sub>. The emissions of NO<sub>x</sub> from these boilers are 12 ppmv or less at 3% O<sub>2</sub> for CEW 700-400 boilers and 9 ppmv at 3% O<sub>2</sub> for CEW 700-800 boiler. Previous source test results confirmed compliance of these boilers. Also, this is a NO<sub>x</sub> RECLAIM facility and thus Reg XX supersedes this requirement.

The 400 ppm CO emission limit is set in order to prevent emissions of higher CO to lower the NO<sub>x</sub> emissions. Thus, the CO emission of 50 ppmv will comply this requirement. Previous source test results confirmed compliance of these boilers.

**REGULATION XIII**

▣ **RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)**

The previous source test results show that these boilers comply with the following BACT requirements:

Pollutants	NO <sub>x</sub> (PPMV @ 3% O <sub>2</sub> )	CO (PPMV @ 3% O <sub>2</sub> )
BACT Requirements	12 (A/N 523973)	50 (A/N 523973)
	12 (A/N 523976)	50 (A/N 523976)
	9 (A/N 523977)	50 (A/N 523977)

To ensure compliance with BACT requirements, the above concentration limits will be imposed in the permit for these boilers.

▣ **RULE 1303(b)(1), MODELING**

This section provides an exemption for air quality modeling requirements if the emissions are less than the emissions specified in table A-1. As shown in the following table, the emission increases are below the hourly maximum limits specified. Therefore, these applications are not subject to this section.

LB/HR	CO	NO <sub>x</sub>	PM <sub>10</sub>
<b>MAX. LIMIT</b>	47.3 (A/N 523973/6)	0.86 (A/N 523973/6)	5.2 (A/N 523973/6)
	72.1 (A/N 523977)	1.31 (A/N 523977)	7.9 (A/N 523977)
<b>INCREASES</b>	8.18 (A/N 523973)	0 (A/N 523973)	0 (A/N 523973)
	7.06 (A/N 523976)	0 (A/N 523976)	0 (A/N 523976)
	12.33 (A/N 523977)	0 (A/N 523977)	0 (A/N 523977)

▣ **RULE 1303 (b)(2), EMISSION OFFSETS**

There will be CO emission increases from this project. However, the company does not have to provide any CO offsets for this project because effective June 11, 2007 EPA has re-designated South Coast Air Basin as attainment with respect to CO National Ambient Air Quality Standard. The District has already attained the State standards, thus offset requirements of the Regulation XIII do not apply to any modified sources with a net emission increase in CO.

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▣ **RULE 1401, NEW SOURCE REVIEW OF CARCINOGENIC AIR CONTAMINANTS**

There will not be any changes in the toxic emissions under this project. Thus, this will not trigger Rule 1401 requirements.

▣ **REGULATION XX - RECLAIM**

▣ **RULE 2005(C)(1), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)**

As discussed above boilers comply with the current BACT requirements.

▣ **RULE 2005(c)(2), EMISSION OFFSETS**

Rule 2005(c)(2) requires operators of new or modified sources that result in an emission increase to hold sufficient RECLAIM Trading Credits (RTCs) to offset annual emission increase for the first year of the operation at a 1-to-1 ratio. There are no NOx emission increases under this project.

**REGULATION XXX**

The proposed project is considered as a “de minimis significant permit revision” to the initial Title V permit issued to this facility I January 2010. Rule 3000(b)(6) defines a “de minimis significant permit revision” as any Title V permit revision where the cumulative emission increases on non-RECLAIM pollutants or hazardous air pollutants (HAP) from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

<b>Air Contaminant</b>	<b>Daily Maximum (lbs/day)</b>
HAP	30
VOC	30
NOx	40
PM10	30
SOx	60
CO	220

Rule 3003(j) specifies that a proposed permit for the initial Title V permit shall be submitted to EPA for review. To determine if a project qualifies for a “de minimis significant permit revision”, emission increases resulting from all permit revisions that are made after the submittal of proposed permit to EPA shall be accumulated and compared to the above threshold levels. This is the third permit revision to the Title V Permit. The cumulative emission increases resulting from this proposed permit revision are summarized as follows:

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Revision	HAP	VOC	NOx	PM <sub>10</sub>	SOx	CO
1 <sup>st</sup> Permit Revision, Replacement of ICE (A/N 506013)	0	0	0	0	0	0
2 <sup>nd</sup> Permit Revision, Replacement of ICE (A/N 519805)	0	0	0	0	0	0
3 <sup>rd</sup> Permit Revision, Change of condition of boilers (A/N 523973, 523976 and 523977).	0	0	0	0	0	27
Cumulative Total	0	0	0	0	0	27
Maximum Daily	30	30	40	30	60	220

Since NOx is a RECLAIM pollutant for this facility, an analysis must be made to ensure that the proposed permit revision is not considered a “significant permit revision” even though the cumulative increase in NOx emissions is less than the threshold level of 40 lbs/day. Rule 3000(b)(28)(D) defines a “significant permit revision” as any modification at a RECLAIM facility that results in an emission increase of RECLAIM pollutants over the facility’s starting Allocation plus the non-tradeable Allocations. There are no NOx emission increases from this project. As a result, the proposed permit revision is not considered as a “significant permit revision”.

### CONCLUSIONS/RECOMMENDATIONS

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a “de minimis significant permit revision”, it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j) in conjunction with the Rule 212 public notice. If EPA does not raise any objections within the review period and upon completion of the Rule 212 public notice period, a revised Title V permit will be issued to this facility.