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<b>ENGINEERING AND COMPLIANCE DIVISION</b>	APP. NUMBER	491819-821
<i>Large Coating, Printing, Plating, Military &amp; Entertainment Operations Team</i>	PROCESSED BY	
<b>APPLICATION PROCESSING AND CALCULATIONS</b>	REVIEWED BY	
	DATE	3/6/12

**PERMIT TO OPERATE EVALUATION— CHANGE OF CONDITION  
for Boilers D-549, D-551 & D-553**

<b>Applicant's Name</b>	THE BOEING COMPANY, C17 PROGRAM
<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. 491819 (Admin c/c , Previous A/N 523973, P/O ) (D549)**

BOILER, CLEAVER BROOKS, MODEL CEW700-400, 150#HW, NAT\_GAS FIRED, FIRETUBE TYPE, WITH A 16.3 MMBTU PER HOUR CLEAVER BROOKS LOW NO<sub>x</sub> BURNER & FLUE GAS RECIRCULATION.

**APPLICATION NO. 491820 (Admin c/c , Previous A/N 523976, P/O ) (D551)**

BOILER, CLEAVER BROOKS, MODEL CEW700-400, 150#HW, NAT\_GAS FIRED, FIRETUBE TYPE, WITH A 16.3 MMBTU PER HOUR CLEAVER BROOKS LOW NO<sub>x</sub> BURNER & FLUE GAS RECIRCULATION.

**Application No. 491821 (Admin c/c , Previous A/N 523977, P/O ) (D553)**

BOILER, CLEAVER BROOKS, MODEL CEW700-400, 150#HW, NAT\_GAS FIRED, FIRETUBE TYPE, WITH A 32.5 MMBTU PER HOUR CLEAVER BROOKS LOW NO<sub>x</sub> BURNER & FLUE GAS RECIRCULATION.

**Application No. 491817**

RECLAIM AMENDMENT/TITLE V MINOR PERMIT REVISION (TVR – 4<sup>th</sup>)

**HISTORY**

The Boeing Co. submitted the above applications for permits to operate for change of permit condition on 3 existing boilers. The applicant is requesting to change the annual source testing requirement of boiler permit Condition (D29-2) under device #s D549, D551 & D553, for CO from once a year to once every 3 years to reflect the most recent Rule 1146 amendment. Rule 1146 was amended on September 5, 2008 and for this size boiler, the annual testing for CO & NO<sub>x</sub> was changed to once every 3 years under subparagraph (d)(6) [(d)(6) & (d)(8) specify compliance

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determination for NOx, and (d)(9) specifies that the operator can opt to comply with the (monitoring) requirements for CO by (d)(8) or (d)(6).] Since this facility is under the RECLAIM program the applicant is only required to test the boilers for CO emissions under Rule 1146. Testing for NOx emissions as required by Rule 1146 is not applicable for RECLAIM facilities. Boeing conducted source tests for NOx and CO last March 2011 to fulfill the requirement of condition D29-2. The results show compliance with the 400 ppm CO requirement of Rule 1146. There will not be any emission increase due to the proposed change of condition for these boilers. Rule 1146 was recently SIP approved (July 2011) so this change can now be made in their Title V permit. In addition, NSPS 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial Commercial-Institutional Steam Generating Units will also be added to condition H23.11 as an applicable requirement since these boilers were installed after June 9, 1989 and have a maximum design heat input rating of 10-100 MM Btu/hr.

The Boeing Company manufactures/fabricates military aircraft (C17) at this location. The company operates a number of permitted equipment such as spray booths, spray hangars, ovens, boilers, degreasers, I.C. engines, scrubbers, storage tanks, chemical process lines, afterburner, etc. under the Title V/RECLAIM permit (I. D. # 800038). The company did not receive any complaints or notices of violation in the last two years. One Notice to Comply was issued in 2010 for not using normal rounding convention in calculating NOx emissions (RECLAIM).

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

**PROCESS DESCRIPTION**

This is a major aircraft manufacturing facility in the basin. Both military and commercial aircraft are manufactured at this location. These boilers provide hot water for plant use.

**OPERATING HOURS**

Average : 16 hour/day, 6 day/week, 52 weeks/year  
Maximum: 16 hour/day, 6 day/week, 52 weeks/year

**EMISSION CALCULATIONS**

The proposed administrative change of condition to these boiler permits will not result in any changes in emissions, therefore, we will transfer the emission data from each existing boiler permit to the respective new permit. A summary of NSR 30 day average is shown below (from prev appls.)

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A/N	Equipment	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	VOC (lbs/day)	SOx (lbs/day)
491819	CEW 700-400	10.23	3.48	1.17	1.30	0*
491820	CEW 700-400	8.82	4.03	1.36	1.50	0*
491821	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>

### 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. This source is not located within 1,000 feet from the outer boundary of a school and there are no emission increases as a result of this change. 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). There are no emission increases from any of the boilers as a result of this change. Therefore, public notice is not required by this section.

v SECTION 212(c)(3):

There are no emission increases from any of the boilers as a result of this change, public notice is not required by this 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 this subdivision. There are no emission increases from any of the boilers as a result of this change. Therefore, public notice is not required by this section.

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

The equipment is expected to comply with these rules. The proposed change of condition should not have any affect on visible emissions or odors. There are no visible emissions or nuisance complaints against this company in the last two years.

**□ 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 NOx at 3% O<sub>2</sub>. The emissions of NOx 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 by these boilers. Also, this is a NOx 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 NOx emissions. Previous source test results confirmed compliance by these boilers.

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**REGULATION XIII**

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

This equipment is not subject to these requirements because there is no increase in emissions from this project.

▣ **RULE 1303(b)(1), MODELING**

No detailed modeling analysis required as there will not be any emission increases under this project.

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

Emission offsets are not required as there are no emission increases from this project.

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

There are no emission increases from this project, hence Rule 1401 does not apply.

**REGULATION XXX**

The proposed project is considered as a “de minimis significant permit revision” to the current Title V permit for this facility since there is not an emission increase of pollutants subject to Reg. XIII or hazardous air pollutants. 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
NO <sub>x</sub>	40
PM <sub>10</sub>	30
SO <sub>x</sub>	60
CO	220

Rule 3003(j) specifies that a proposed permit for the initial or renewal 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 fourth permit revision requested by the facility since the Title V Renewal permit was issued on January 20, 2008. This revision includes the change to Condition D29-2 to reflect the most recent SIP approved change in Rule 1146 for these three boilers. 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, D567 (A/N 506013)	0	0	0	0	0	0
2 <sup>nd</sup> Permit Revision, Replacement of ICE, D568 (A/N 519805)	0	0	0	0	0	0
3 <sup>rd</sup> Permit Revision, Change of condition for 3 boilers, D549, D551 & D553 (A/N 523973, 523976 & 523977)	0	0	0	0	0	27
4 <sup>th</sup> Permit Revision, Change of Condition for 3 boilers, D549, D551 & D553 (A/N 491819-21)	0	0	0	0	0	0
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). If EPA does not have any objections within the review period, a revised RECLAIM/Title V permit will be issued to this facility, Section D, with the revised CO test condition.