

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE Coating, Printing, Plating, Military & Entertainment Operations PERMIT APPLICATION EVALUATION	Page	1 of 5
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	Date	9/13/2012

PERMIT TO CONSTRUCT EVALUATION
Modification to Oven (replace burner for Rule 1147)

Applicant's Name: INDUSTRIAL CONTAINER SERVICES-CA LLC

Company ID No.: 134018

Mailing Address: P.O. BOX 2067, MONTEBELLO, CA 90640

Equipment Address: 1051 UNION ST., MONTEBELLO, CA 90640

EQUIPMENT DESCRIPTION:

Application 533360 – modification to A/N 439596 (P/C), P/C

MODIFICATION TO OVEN UNDER A/N 439596 (P/C) CONSISTING OF:

DRUM OVEN 8a, CONVEYORIZED, 6' -0" W. x 82' - 4" L. x 6' - 3" H., WITH TWO 3,200,000 BTU/HR INDIRECT GAS FIRED BURNERS, A 5 HP CIRCULATING FAN AND TWO 2 HP CIRCULATING FANS, VENTED TO THE REGENERATIVE THERMAL OXIDIZER

BY THE REPLACEMENT OF:

1. THE TWO 3,200,000 BTU/HR BURNERS WITH TWO 2,500,000 BTU/HR MAXON KINEDIZER LE LOW NO_x NATURAL GAS-FIRED BURNERS, AND
2. TWO 2 H.P. COMBUSTION BLOWERS WITH TWO 7.5 H.P. COMBUSTION BLOWERS

Application No. 533361

TITLE V REVISION, DE MINIMIS SIGNIFICANT

HISTORY:

The company submitted Application No. 533360 on February 2, 2012 for modification to an existing oven operating under P/C. They are proposing to replace the two 3.2 mm Btu/hr burners with two 2.5 mm Btu/hr Maxon Kinedizer LE low NO_x burners that meet the 30 ppm NO_x requirement of Rule 1147. The existing burners are not low NO_x burners. The two combustion blowers will also be replaced with two 7.5 HP combustion blowers. There are no other changes to this oven. This is a conveyORIZED oven used to cure painted metal drums. There is no coating usage limit or VOC emission limit on this oven, however there is an existing facility VOC cap of 1169 lb/day. This oven is vented to an RTO to reduce VOC emissions.

This oven was originally issued a P/O in 1964 as a 1.1 mm Btu/hr gas fired conveyORIZED drum and lid oven. After a site visit in 2003, it was determined that sometime in the past, the oven had been modified. There were two 3.2 mm Btu/hr burners (one on each end of the oven) in the

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conveyorized part of the oven, and attached to the oven was a small batch oven for the drum lids. This batch oven used heat from the conveyorized oven but also had two burners. Since the batch oven could operate independently, it was determined that these are two separate ovens permit units, so the old oven permit was split into two separate permit units for the conveyorized oven (8a) under A/N 420878 and the batch lid oven (8b) under A/N 420879. Since the burners had been changed from what was described on the original permit (larger burners), the modification triggered BACT for NO_x and low NO_x burners were required to comply. In addition, the facility was installing an RTO to reduce VOC from the drum coating line so the modification application for oven 8a was to also vent to the new RTO. Permits to Construct were issued for the project in December 2003. The facility retrofitted the batch oven 8b with low NO_x burners, however, after considerable research, it was determined that low NO_x burners were not technologically feasible for this particular oven. As a result, they submitted A/N 439596 for change of conditions to remove the condition with the 30 ppm NO_x concentration requirement. A Permit to Construct was issued on June 8, 2005 with the revised conditions under A/N 439596, as a command and control permit. The initial Title V permit was in process at this time, so only the previous P/C for this oven under A/N 420878 was included in the facility permit issued on August 15, 2005. The P/C for the oven with the low NO_x requirement removed under A/N 439596 was included in the first revision issued on May 4, 2010 (replaced P/C under A/N 420878). This application A/N 533360 is a modification to the P/C issued under A/N 439596.

Industrial Container is a Title V facility. This is the first revision since the TV renewal was issued on June 7, 2011. According to the AQMD database, there was one NC E09251 issued to the facility on 7/22/11 requiring the facility to register one 1.9 mm Btu boiler; the NC was closed on 8/3/2011. There are no other notices to comply or notices of violation issued to this facility in the last two years, and no complaints about the facility in the last two years.

PROCESS DESCRIPTION:

This facility is a drum reconditioning facility. Lids and drums are painted at the same time (parallel coating operation) but the coating operations are not interrelated. They recondition approximately 3500-3600 drums per day. The drums are first inspected, then cleaned in the burn-off furnace. A conveyor belt for the drums runs through the facility. The conveyor belt has a pin that catches the bottom lip (“chime”) of each drum. After being cleaned, the drums go to a machine that reshapes them. The operator takes the drum and puts it on the machine. The part of the machine that the drum goes on expands and makes the drum round again. The operator takes the drum off the machine and puts it back on the conveyor line. At the next station, the bottom seam (called the “chime”) where the bottom is attached to the sides is resealed to make sure there is no leak. The drum is put on a machine which pinches the seam tight.

Then the operator takes off any drum that has a dent and puts it on another machine that smooths out that section of the drum. For industrial use drums, each drum is then leak tested in a water bath. An additive is mixed with the water to prevent rust. The water is circulated through a filter to keep it clear so the operator can see any bubbles showing a leak. Then the drums are ready to be painted. The lid rings are also chemically cleaned and dip coated. After

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the drums are painted, they are assembled (lids attached) and placed directly on trucks for shipping.

Oven 8a is a long conveyORIZED tunnel that starts at the drum liner (interior) spray booth and ends near the exterior coating booth. It is used to cure the coating applied to the drum interior. Currently there are two burners, one on each end of the oven, which will be replaced with two low NO_x burners, supplying heat to this oven. The oven is indirect fired and the firetube runs under the conveyor, then up through the batch oven. The tunnel oven is operated at 450-500 degrees F however the maximum temperature the oven can achieve for the drying process is 800 deg. F. The spray booths and ovens are vented to an existing RTO.

OPERATING HOURS:

Average: 16 hrs/day, 5 days/week

Maximum: 24 hrs/day, 7 days/week

EMISSION CALCULATIONS

The proposed burner is guaranteed by Maxon to emit less than 30 ppmv NO_x at 3% O₂, in compliance with the Rule 1147 limit. The new burners will be smaller than the existing burners, as a result, there will be a NO_x reduction, as well as a reduction of all other combustion contaminants and TACs from the combustion of natural gas. The CO concentration from the new burner based on Maxon data is 50 ppm. See the attached Excel worksheets for detailed calculations. The existing burners (3.2 mmbtu X 2) were source tested on 5/11/2005 and this NO_x results were utilized for calculations. The following table summarizes the calculated results:

EMISSION SUMMARY (lb/hr & lb/day)

	ROG		NO _x		SO _x		CO		PM ₁₀	
	Lb/hr	Lb/day	Lb/hr	Lb/day	Lb/hr	Lb/day	Lb/hr	Lb/day	Lb/hr	Lb/day
Before modification	0.043	1.024	0.64	15.36	0.005	0.121	0.213	5.12	0.046	1.097
After modification	0.033	0.800	0.185	4.45	0.003	0.069	0.188	4.514	0.036	0.857
Change		-0.224		-10.91		-0.052		-0.606		-0.24

RULE EVALUATION:

RULE 212, PUBLIC NOTIFICATION

PARAGRAPH 212(c)(1):

This paragraph 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. The facility is not located within 1000 feet of any schools. Therefore, public notice will not be required by this section.

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PARAGRAPH 212(c)(2) and (g)

These sections require a public notice for all new and modified facilities and equipment which have emission increases exceeding any of the daily maximums specified in subdivision (g). The proposed project will result in a net emission decrease from the equipment and facility. There is no increase in VOC from the equipment or facility from the curing of coatings in the oven since there is no change to the spray booth permits. Public notice is not required by this section.

PARAGRAPH 212(c)(3):

There will be a decrease in toxics emissions from the combustion of natural gas in this oven. Public notice is not required by this section.

RULE 401, VISIBLE EMISSIONS

Visible emissions are not expected with proper operation of this equipment. There are no complaints on file in the last two years for visible emissions from this equipment. Compliance with this rule is expected.

RULE 402, NUISANCE

Odors are not expected with proper operation of this equipment. This oven is vented to an RTO to control emissions from the coating. There are no complaints on file in the last two years for odors or nuisance from this equipment. Compliance with this rule is expected.

Rule 1147, NO_x REDUCTION

The proposed low-NO_x burners have been guaranteed to emit less than 30 ppmv NO_x at 3% O₂. A condition will be placed on the permit to construct to conduct a source test to verify compliance with Rule 1147 requirements.

REG. XIII

Rule 1303(a): BACT is not triggered for this modification since there is no emission increase, however the burner is guaranteed to emit less than 30 ppmv NO_x at 3% O₂ which meets BACT. There is a net decrease in other criteria pollutants so BACT is not triggered for these pollutants.

Rule 1303(b)(1): There is no increase in emissions as a result of this modification. Therefore modeling analysis is not required.

Rule 1303(b) (2) Offset: Offsets are not required for this project since there is a decrease in NO_x emissions, and other combustion contaminants. There is no VOC emission increase from the facility from use of coatings since there are no changes to the spray booth permits and the facility cap will remain the same.

Rule 1303(b) (4): This facility is expected to comply with all applicable rules and regulations of the District.

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RULE 1401, TOXICS

There is decrease in TAC since the new burners have a lower Btu rating than the old burners. Compliance is expected.

REG XXX:

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

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NO _x	40
PM ₁₀	30
SO _x	60
CO	220

To determine if a project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 1st permit revision to the Title V renewal permit issued to this facility on June 7, 2011. The following table summarizes the cumulative emission increases resulting from all permit revisions since the initial Title V permit was issued:

1 st Revision	HAP	VOC	NO _x	PM ₁₀	SO _x	CO
Modify Oven 8a by replacing the burners -A/N 533360		-0.224	-10.91	-0.24	-0.052	-0.606
Cumulative Total	0	-0.224	-10.91	-0.24	-0.052	-0.606
Maximum Daily	30	30	40	30	60	220

RECOMMENDATION

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 Title V permit will be issued to this facility with a Permit to Construct for this equipment.