

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE AND COMPLIANCE DIVISION <i>Large Coating, Printing and Chemical Operations Team</i> APPLICATION PROCESSING AND CALCULATIONS	PAGE	1 of 11
	APP. NUMBER	550674-5
	PROCESSED BY	SMP
	REVIEWED BY	
	DATE	08/09/13

**PERMIT TO CONSTRUCT EVALUATION
(IMPREGNATING LINE AND AFTERBURNER)**

Applicant's Name	ARLON ELECTRONICS SUBSTRATES DIVISION
Company I.D.	046646
Mailing Address	9433 HYSSOP DR., RANCHO CUCAMONGA, CA 91730
Equipment Address	SAME AS ABOVE

EQUIPMENT DESCRIPTION

Application No. 550674, (Modification, Previous P/O F88837, A/N 461895)

MODIFICATION OF AIR POLLUTION CONTROL SYSTEM UNDER P/O F88837 (A/N 461895) CONSISTING OF:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. AFTERBURNER, REGENERATIVE, HOT ROCK BED TYPE, SMITH, 9'-0" W. X 20'-0" L. X 20'-3" H., 12,000 SCFM WITH A HEAT EXCHANGE CHAMBER, 2 CANISTER, CERAMIC MEDIA AND A BURNER OF 2,640,000 BTU PER HOUR, NATURAL GAS FIRED, AND A 7.5 HP COMBUSTION BLOWER.
2. EXHAUST SYSTEM WITH TWO 30 HP AND ONE 5 H P BLOWERS VENTING COATING LINE NO. 1, EIGHT MIXING TANKS AND ONE CLEANING ENCLOSURE.

BY THE REPLACEMENT OF:

THE 2,640,000 BTU/HR BURNER WITH ONE 2,000,000 BTU/HR, ECLIPSE WINNOX, MODEL NO. WX0200, LOW NOX NATURAL GAS-FIRED BURNER.

Application No. 550675, (Modification, Previous P/O D79869, A/N 229449)

MODIFICATION OF AIR POLLUTION CONTROL SYSTEM UNDER P/O D79869 (A/N 229449) CONSISTING OF:

FIBERGLASS CLOTH IMPREGNATING SYSTEM NO. 1 CONSISTING OF:

1. FABRIC UNWIND STAND.

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2. SPLICER, WITH FOUR 1,000 WATTS HEATING ELEMENTS.
3. ACCUMULATOR ROLLS, 70 LINEAR FEET CAPACITY, AIR OPERATED.
4. IMPREGNATION SECTION, TOTAL ENCLOSURE 18'-0" L. X 11'-0" W. X 7'-0" H., WITH THREE 3" DIA INFEEED ROLLS AND TWO 2' DIA. METERING ROLLS.
5. ONE 30 GALLON RESIN DIP TANK.
6. ONE 90 GALLON RESIN SUMP TANK.
7. OVEN WITH SIX HEATING ZONES, EACH 6'-0" W. X 7'-0" L. X 7'-6" H., WITH SIX 500,000 BTU/HR DIRECT FIRED NATURAL GAS BURENRS, WITH SIX 3 HP RECIRCULATION BLOWERS AND THREE COMBUSTION BLOWERS.
8. CHILL ROLL SECTION WITH THREE 8" DIA. ROLLS, WITH A 314 H P DRIVE.
9. REWIND SECTION WITH TWO COLLECTOR ROLLS, ONE 1/3 HP AND ONE ½ HP DRIVE MOTORS.

BY THE REPLACEMENT OF:

THE SIX 500,000 BTU/HR BURNERS WITH SIX 540,000 BTU/HR, ECLIPSE LINNOX, MODEL NO. ULE, LOW NOX NATURAL GAS-FIRED BURNER.

Application No. 550673

TITLE V REVISION - MINOR

HISTORY

The Arlon Materials Division submitted above applications to modify the air pollution control device and a impregnating coating line by replacing old burners with low NOx burners to comply with the Rule 1147 requirements.

The existing oven in the previously permitted coating line is equipped with six 500,000 BTU/HR burners, with 100 PPMV NOx at 3% O₂. The applicant is proposing to modify the oven by replacing the six 500,000 BTU/HR burners with six 540,000 BTU/HR low NOx burners with 30 PPMV NOx at 3% O₂. Under this project there will be reduction in the NOx emissions and is expected to comply with the Rule 1147 requirements of 30 ppmv NOx. The oven is used to cure fiberglass resin coating. The increase in the other criteria pollutants under this modification are <0.5 lb/day. Hence it will comply with the BACT requirements and no offsets will be required.

From the past experience it can be asumed that the the toxic emission increases from modified oven due the increase in the BTU/HR of 0.24 mm is expected to comply with the Rule 1401 requiremenrs.

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The previously permitted RTO is equipped with a 2,640,000 BTU/HR burner, with 100 PPMV NOx at 3% O₂. The applicant is proposing to modify the RTO by replacing the burner with one 2,000,000 BTU/HR low NOx burner with 30 PPMV NOx at 3% O₂. Under this project also there will be reduction in the combustion emissions (except CO) and is expected to comply with the Rule 1147 requirements of 30 ppmv NOx. The project with reductions in the toxic emissions is exempt from Rule 1401 requirements.

Arlon Materials Division manufactures pre-preg (resin impregnated fabrics) for the circuit board laminate industries at this location. The manufacturing involves resin and solvent mixing, resin impregnating, and assembling of the copper foils and pre-pregs into boards under the pressure. District Rules 1128 and 1171 apply to this facility. The company currently operates a number of active permitted equipment under the District I. D. # 46646, such as coating lines, afterburner units, boilers, and blending equipment. A facility-wide VOC emission limit of 311 pounds per day has been established for this facility. The applicant has requested no VOC emission increases from the coating operation.

The District database shows that this company has not received any odor nuisance complaints from the public in last two years. There were no records of any notices of violation or notices to comply issued against the facility in the last two years.

The facility is located within an industrial area. It is not located within 1000 feet from any school and there will not be any emission increases exceeding the threshold levels under this project. Hence, this application will not require a public notification per Rule 212.

Arlon Materials is a Title V facility. A Title V renewal permit was issued to this facility on 6/18/2011. This project is forth permit revision of the Title V renewal permit. The proposed permit revision is considered as a “de minimis significant permit revision” to the renewed Title V permit, as described in Regulation XXX evaluation.

PROCESS DESCRIPTION

The company impregnates resin on the fabric on dip-coating lines, which are currently vented to emission control devices. The resin impregnated fabric is used as a laminate between the copper foils to make the circuit boards. The presses used for this purposes use steam from the boilers to heat the products. The applicant mixes resin mixture on site. Different resins and solvents are used for these purposes. All these mixing tanks are covered and vented to an afterburner unit. Resins and solvents are pumped into the vat via pipes from 55 gallon drums.

This regenerative thermal oxidizer is designed to destroy at least 97% collected VOCs from the contaminated process air. The coatings applied in this process and the clean-up solvents used complies with Rule 1128 and 1171 with adequate control device efficiency.

OPERATING HOURS

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

EMISSION CALCULATIONS

The modified oven will have six low NOx burners with a total of 3,240,000 BTU/HR total heat input. This will reduce the NOx emissions under this project, however there will be a slight increase in the other combustion contaminants since the new burners have higher Btu ratings.

<u>550675</u>	<u>Oven (Proposed)</u>	@
	<u>maximum</u> <u>normal</u>	
<u>hr/dy</u>	24 8	<u>max heat input</u> 3.24E+06 (BTU/hr)
<u>dy/wk</u>	7 5	<u>gross heating value</u> 1050 (BTU/scf)
<u>wk/yr</u>	52 52	
<u>load</u>	100% 100%	

	<u>Emission</u>	<u>MAX</u>	<u>AVE</u>	<u>MAX</u>	<u>30-DAY</u>	<u>MAX</u>	<u>MAX</u>
	<u>Factors</u>	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)
SO ₂ (R1)	0.83	0.003	0.003	0.061	NA	22	0.011
SO ₂ (R2)	0.83	0.003	0.003	0.061	0.061	22	0.011
NO ₂ (R1)	38.94	0.120	0.120	2.884	NA	1,050	0.525
NO ₂ (R2)	38.94	0.120	0.120	2.884	2.884	1,050	0.525
CO (R1)	59.25	0.183	0.183	4.388	NA	1,597	0.799
CO (R2)	59.25	0.183	0.183	4.388	4.388	1,597	0.799
TOC (R1=R2)	7	0.022	0.022	0.518	NA	189	0.094
N ₂ O (R1=R2)	2.2	0.007	0.007	0.163	0.163	59	0.030
PM, PM ₁₀ (R1=R2)	7.5	0.023	0.023	0.555	0.555	202	0.101
Hexane	0.0063	1.9E-05	1.9E-05	4.7E-04	NA	1.70E-1	8.49E-5
Ammonia	3.2	9.9E-03	9.9E-03	2.4E-01	NA	8.63E+1	4.31E-2
ethyl benzene	0.0095	2.9E-05	2.9E-05	7.0E-04	NA	2.56E-1	1.28E-4
acetaldehyde	0.0043	1.3E-05	1.3E-05	3.2E-04	NA	1.16E-1	5.80E-5
acrolein	0.0027	8.3E-06	8.3E-06	2.0E-04	NA	7.28E-2	3.64E-5
benzene	0.008	2.5E-05	2.5E-05	5.9E-04	NA	2.16E-1	1.08E-4
formaldehyde	0.017	5.2E-05	5.2E-05	1.3E-03	NA	4.58E-1	2.29E-4
naphthalene	0.0003	9.3E-07	9.3E-07	2.2E-05	NA	8.09E-3	4.04E-6
PAH's	0.0001	3.1E-07	3.1E-07	7.4E-06	NA	2.70E-3	1.35E-6
toluene	0.0366	1.1E-04	1.1E-04	2.7E-03	NA	9.87E-1	4.93E-4
xylenes	0.0272	8.4E-05	8.4E-05	2.0E-03	NA	7.33E-1	3.67E-4

NO ₂ @ 3% excess O ₂ ----->>>	30.00	(ppmv)	SO ₂ @ 3% excess O ₂ ----->>>	0.46	(ppmv)
CO @ 3% excess O ₂ ----->>>	74.98	(ppmv)	PM @ 12% CO ₂ ----->>>	5.5E-09	(grain/ft ³)

550675

Oven (Pre-Modification)

@

	<u>maximum</u>	<u>normal</u>		
<u>hr/dy</u>	24	8	<u>max heat input</u>	3.00E+06 (BTU/hr)
<u>dy/wk</u>	7	5	<u>gross heating value</u>	1050 (BTU/scf)
wk/yr	52	52		
load	100%	100%		

	<u>Emission</u>	MAX	AVE	MAX	30-DAY	MAX	MAX
	<u>Factors</u>	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)
SO ₂ (R1)	0.83	0.002	0.002	0.057	NA	21	0.010
SO ₂ (R2)	0.83	0.002	0.002	0.057	0.057	21	0.010
NO ₂ (R1)	130	0.371	0.371	8.914	NA	3,245	1.622
NO ₂ (R2)	130	0.371	0.371	8.914	8.914	3,245	1.622
CO (R1)	35	0.100	0.100	2.400	NA	874	0.437
CO (R2)	35	0.100	0.100	2.400	2.400	874	0.437
TOC (R1=R2)	7	0.020	0.020	0.480	NA	175	0.087
N ₂ O (R1=R2)	2.2	0.006	0.006	0.151	0.151	55	0.027
PM, PM ₁₀ (R1=R2)	7.5	0.021	0.021	0.514	0.514	187	0.094
Hexane	0.0063	1.8E-05	1.8E-05	4.3E-04	NA	1.57E-1	7.86E-5
Ammonia	3.2	9.1E-03	9.1E-03	2.2E-01	NA	7.99E+1	3.99E-2
ethyl benzene	0.0095	2.7E-05	2.7E-05	6.5E-04	NA	2.37E-1	1.19E-4
acetaldehyde	0.0043	1.2E-05	1.2E-05	2.9E-04	NA	1.07E-1	5.37E-5
acrolein	0.0027	7.7E-06	7.7E-06	1.9E-04	NA	6.74E-2	3.37E-5
benzene	0.008	2.3E-05	2.3E-05	5.5E-04	NA	2.00E-1	9.98E-5
formaldehyde	0.017	4.9E-05	4.9E-05	1.2E-03	NA	4.24E-1	2.12E-4
napthalene	0.0003	8.6E-07	8.6E-07	2.1E-05	NA	7.49E-3	3.74E-6
PAH's	0.0001	2.9E-07	2.9E-07	6.9E-06	NA	2.50E-3	1.25E-6
toluene	0.0366	1.0E-04	1.0E-04	2.5E-03	NA	9.14E-1	4.57E-4
xylene	0.0272	7.8E-05	7.8E-05	1.9E-03	NA	6.79E-1	3.39E-4

NO ₂ @ 3% excess O ₂ ----->>	100.16	(ppmv)	SO ₂ @ 3% excess O ₂ ----->>	0.46	(ppmv)
CO @ 3% excess O ₂ ----->>	44.29	(ppmv)	PM @ 12% CO ₂ ----->>	5.5E-09	(grain/ft ³)

Ver. 1.13

The following table shows the emission changes due to A/N 550675 oven modification.

	ROG		NOx		SOx		CO		PM10	
	Lb/hr	Lb/day								
Before modification	0.020	0.480	0.370	8.914	0.002	0.057	0.100	2.400	0.021	0.514
After modification	0.022	0.518	0.120	2.884	0.003	0.061	0.183	4.388	0.023	0.555
Change		+0.038		-6.030		+0.004		+1.988		+0.041

A source test will be required to evaluate the NOx emission rate of the modified oven to show compliance with the Rule 1147 requirements.

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It is concluded from past toxic evaluations that this modification with an increase of 240,000 BTU/HR is expected to comply with the Rule 1401 requirements.

COMBUSTION EMISSION CALCULATIONS (RTO) (A/N 459520)

The RTO is equipped with burner of 2,640,000 BTU/HR. The modified RTO will have one low NOx burner with a total of 2,000,000 BTU/HR heat input. This will reduce the all the combustion emissions except CO under this project. Thus, the modified RTO will comply with the Rule 1147 requirements.

<u>550674</u>	<u>Smith RTO (Pre-modification)</u>							@
	<u>maximum</u>	<u>normal</u>						
<u>hr/dy</u>	24	24		<u>max heat input</u>	2.64E+06 (BTU/hr)			
<u>dy/wk</u>	7	7		<u>gross heating value</u>	1050 (BTU/scf)			
<u>wk/yr</u>	50	50						
<u>load</u>	100%	100%						
	<u>Emission</u>	<u>MAX</u>	<u>AVE</u>	<u>MAX</u>	<u>30-DAY</u>	<u>MAX</u>	<u>MAX</u>	
	<u>Factors</u>	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)	
SO ₂ (R1)	0.6	0.002	0.002	0.036	NA	13	0.006	
SO ₂ (R2)	0.6	0.002	0.002	0.036	0.036	13	0.006	
NO ₂ (R1)	130	0.327	0.327	7.845	NA	2,746	1.373	
NO ₂ (R2)	130	0.327	0.327	7.845	7.845	2,746	1.373	
CO (R1)	35	0.088	0.088	2.112	NA	739	0.370	
CO (R2)	35	0.088	0.088	2.112	2.112	739	0.370	
N ₂ O (R1)	2.2	0.006	0.006	0.133	NA	46	0.023	
N ₂ O (R2)	2.2	0.006	0.006	0.133	0.133	46	0.023	
PM, PM ₁₀ (R1=R2)	11.9	0.030	0.030	0.718	0.718	251	0.126	
CO ₂ (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000	
TOC(R1=R2)	5.8	0.015	0.015	0.350	0.350	122	0.061	
ethyl benzene	0.0095	2.4E-05	2.4E-05	5.7E-04	NA	2.01E-1	1.00E-4	
acetaldehyde	0.0043	1.1E-05	1.1E-05	2.6E-04	NA	9.08E-2	4.54E-5	
acrolein	0.0027	6.8E-06	6.8E-06	1.6E-04	NA	5.70E-2	2.85E-5	
benzene	0.008	2.0E-05	2.0E-05	4.8E-04	NA	1.69E-1	8.45E-5	
formaldehyde	0.017	4.3E-05	4.3E-05	1.0E-03	NA	3.59E-1	1.80E-4	
naphthalene	0.0003	7.5E-07	7.5E-07	1.8E-05	NA	6.34E-3	3.17E-6	
PAH's	0.0001	2.5E-07	2.5E-07	6.0E-06	NA	2.11E-3	1.06E-6	
toluene	0.0366	9.2E-05	9.2E-05	2.2E-03	NA	7.73E-1	3.86E-4	
xylenes	0.0272	6.8E-05	6.8E-05	1.6E-03	NA	5.74E-1	2.87E-4	
NO ₂ @ 3% excess O ₂ ----->>>	100.16					0.33	(ppmv)	
CO @ 3% excess O ₂ ----->>>	44.29					8.8E-09	(grain/ft ³)	

550674

Smith RTO (Proposed)

@

<u>maximum</u>	<u>normal</u>	<u>max heat input</u>	2.00E+06 (BTU/hr)
<u>hr/dy</u>	24	<u>gross heating value</u>	1050 (BTU/scf)
<u>dy/wk</u>	7		
wk/yr	50		
load	100%		

	Emission <u>Factors</u>	MAX (lb/hr)	AVE (lb/hr)	MAX (lb/dy)	30-DAY (lb/dy)	MAX (lb/yr)	MAX (ton/yr)
SO ₂ (R1)	0.6	0.001	0.001	0.027	NA	10	0.005
SO ₂ (R2)	0.6	0.001	0.001	0.027	0.027	10	0.005
NO ₂ (R1)	38.94	0.074	0.074	1.780	NA	623	0.312
NO ₂ (R2)	38.94	0.074	0.074	1.780	1.780	623	0.312
CO (R1)	59.25	0.113	0.113	2.709	NA	948	0.474
CO (R2)	59.25	0.113	0.113	2.709	2.709	948	0.474
N ₂ O (R1)	2.2	0.004	0.004	0.101	NA	35	0.018
N ₂ O (R2)	2.2	0.004	0.004	0.101	0.101	35	0.018
PM, PM ₁₀ (R1=R2)	11.9	0.023	0.023	0.544	0.544	190	0.095
CO ₂ (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC(R1=R2)	5.8	0.011	0.011	0.265	0.265	93	0.046
ethyl benzene	0.0095	1.8E-05	1.8E-05	4.3E-04	NA	1.52E-1	7.60E-5
acetaldehyde	0.0043	8.2E-06	8.2E-06	2.0E-04	NA	6.88E-2	3.44E-5
acrolein	0.0027	5.1E-06	5.1E-06	1.2E-04	NA	4.32E-2	2.16E-5
benzene	0.008	1.5E-05	1.5E-05	3.7E-04	NA	1.28E-1	6.40E-5
formaldehyde	0.017	3.2E-05	3.2E-05	7.8E-04	NA	2.72E-1	1.36E-4
napthalene	0.0003	5.7E-07	5.7E-07	1.4E-05	NA	4.80E-3	2.40E-6
PAH's	0.0001	1.9E-07	1.9E-07	4.6E-06	NA	1.60E-3	8.00E-7
toluene	0.0366	7.0E-05	7.0E-05	1.7E-03	NA	5.86E-1	2.93E-4
xylene	0.0272	5.2E-05	5.2E-05	1.2E-03	NA	4.35E-1	2.18E-4

NO ₂ @ 3% excess O ₂>>>	30.00	(ppmv)	SO ₂ @ 3% excess O ₂>>>	0.33	(ppmv)
CO @ 3% excess O ₂>>>	74.98	(ppmv)	PM @ 12% CO ₂>>>	8.8E-09	(grain/ft ³)

Ver. 1.3

The following table shows the emission changes due to A/N 550675 oven mmodification.

	ROG		NOx		SOx		CO		PM10	
	Lb/hr	Lb/day								
Before modification	0.015	0.350	0.327	7.845	0.002	0.036	0.088	2.112	0.030	0.718
After modification	0.011	0.265	0.74	1.780	0.001	0.027	0.113	2.709	0.023	0.544
Change		-0.085		-6.065		-0.009		+0.597		-0.174

There are no toxic emission increases from this modification. Thus, it is exempt from Rule 1401 requirements.

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PROJECT EMISSIONS

The following table summarizes the change in emissions for this project.

Application Nos.	ROG (lb/day)	NOx (lb/day)	SOx (lb/day)	CO (lb/day)	PM10 (lb/day)
550674 Previous	0.350	7.845	0.036	2.112	0.718
550674 Proposed	0.265	1.780	0.027	2.709	0.544
Modification Change	-0.085	-6.065	-0.009	+0.597	-0.174
550675 Previous	0.480	8.914	0.057	2.400	0.514
550675 Proposed	0.518	2.884	0.061	4.388	0.555
Modification Change	+0.038	-6.030	+0.004	+1.988	+0.041
Project Change	-0.047	-12.095	-0.005	+2.585	-0.133

RULES/REGULATION EVALUATION

▣ **RULE 212, PUBLIC NOTIFICATION**

√ **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. Therefore, public notice will not be required by this section.

√ **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 from this project are below the daily maximum limits specified by Rule 212(g). Therefore, public notice will not be required by this section.

LB/DAY	CO	NOX	PM ₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	+2.59	-12.10	-0.133	-0.047	0	-0.005

√ **SECTION 212(c)(3):**

Please, see Rule 1401 evaluation section.

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√ **SECTION 212(g):**

This section requires a public notice for all new or modified sources which undergo construction or modifications resulting an emissions increase exceeding any of the daily maximum specified in the table below. As shown in the following table, the emission increases from this project are below the daily maximum limits. Therefore, public notice will not be required by this section.

LB/DAY	CO	NOX	PM₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	+1.99	-6.03	+0.04	+0.04	0	+0.01

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

This equipment is expected to comply with the rule requirements. The District database has no records of any visible emissions or nuisance complaints against this equipment.

□ **RULES 404 & 405, PARTICULATE MATTER CONCENTRATION & WEIGHT**

Compliance with these provisions is expected with proper operation and maintenance of the equipment.

□ **RULE 1128 PAPER, FABRIC, AND FILM COATING OPERATIONS**

√ **SECTION (c)(2) & (c)(5), VOC CONTENT OF COATINGS**

The usage of an approved control device with at least 90% collection and 95% destruction efficiencies will provide compliance with these provisions.

√ **SECTION (c)(6), TRANSFER EFFICIENCY**

Dip-coating method complies with the rule requirements.

□ **RULE 1147, NOX REDUCTIONS FROM MISCELLANEOUS SOURCES**

This rule requires gas fired combustion sources, in this case oven & RTO, to emit no more than 30 and 60 ppmv of NOx at 3% O₂ respectively. The emissions of NOx from the new burners are expected to be less than 30 ppmv at 3% O₂. Thus, this equipment is expected to comply with this requirement. Source tests will be required to demonstrate compliance.

□ **RULE 1171, SOLVENT CLEANING OPERATIONS**

The proposed modification does not result in any change of facility operations. The company is expected to continue to comply with the provisions of this rule by using compliant solvents.

REGULATION XIII

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

The burners are guaranteed to emit less than 30 ppmv NO_x at 3% O₂ which is BACT for oven and RTO. A source test will be conducted to verify compliance. There is an increase in CO over 1 lb/day since the new burners are slightly larger than the existing burners, and also the new burner CO concentration is higher than the default CO factor for natural gas combustion from oven and RTO.

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However, there is no additional BACT for CO from a natural gas fired oven and RTO. The emission increase of PM, ROG and SOx are well below 1 lb/day so BACT is not triggered for these pollutants.

▣ **RULE 1303(b)(1), MODELING**

Modeling is not required since PM10, NOx and CO emissions are below the allowable emissions.

NOx (lbs/hr)		PM10 (lbs/hr)		CO (lbs/hr)	
Allowed	Actual	Allowed	Actual	Allowed	Actual
1.26	-6.03	7.6	+0.041	69.3	+1.99

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

There are no VOC emission increases under this project from the coating operation. No emission offsets are required for <0.5 lb/day emission increases for other criteria pollutants (SOx, ROG and PM10) from the natural gas combustion. No offsets will be required for this project as the District has attained the national and state standards for CO emissions.

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

As discussed in the evaluation report the slight toxic emission increases from this project will result in a cancer risk of less than 1 in a million and HIA/HIC below 1. Therefore, this project is expected to comply with these requirements.

REGULATION XXX

The proposed project is considered as a “de minimis significant permit revision” to the renewed Title V permit issued to this facility on 18 June 2011. 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:

Air Contaminant	Daily Maximum (lbs/day)
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

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permit revision to the renewed Title V Permit. The cumulative emission increases resulting from this proposed permit revision are summarized as follows:

Revision	HAP	VOC	NOx	PM ₁₀	SOx	CO
1 st Revision Modification of boilers (A/N 530199, 530200)	0	0	0	0	0	0
2 nd Permit Revision, Replacement of burners on coating line (A/N 545264)	0	0	0	0	0	0
Current 3 rd Permit Revision, Replacement of burners on coating line oven (A/N 550675) and RTO (A/N 550674)	0	0	0	0	0	3
Cumulative Totals	0	0	0	0	0	3
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.