

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION <i>Large Coating, Printing, Aerospace and Chemical Operations Team</i> APPLICATION PROCESSING AND CALCULATIONS	PAGE	1 of 22
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PERMIT TO CONSTRUCT EVALUATION
Modification of Existing RTO to vent Compound Mix Room PTE,
which Will Contain Four New Mixers, and
to Vent Two New Coating Lines

Applicant's Name	ARLON GRAPHICS LLC
Company I.D.	174406
Mailing Address	200 BOYSENBERRY LANE, PLACENTIA, CA 92870
Equipment Address	200 BOYSENBERRY LANE, PLACENTIA, CA 92870

EQUIPMENT DESCRIPTION

Application No. 563695 (Relocation, Previous A/N 557380, D3, D14, D25, D47)

PAPER/FILM COATING SYSTEM (LINE #C3):

1. PRIMARY DUAL ROLL UNWIND STAND WITH A BRAKE UNWIND SYSTEM.
2. PRINTING PRESS, FLEXOGRAPHIC, WOLVERINE, MODEL NO. 66-1, 66 INCH WEB WIDTH, ONE COLOR. (D25)
3. COMMA ROLLCOATING SYSTEM, FAUSTEL, MODEL MARK V SERIES, WITH ONE 2 H.P. MOTOR. (D14)
4. THREE ZONE DRYING AND COOLING OVEN, FAUSTEL, WITH A TOTAL EXHAUST CAPACITY OF 11,200 ACFM, 10 H.P. RECIRCULATING FAN, ONE AUXILIARY START-UP STACK, AND A 30 H.P. EXHAUST BLOWER CONSISTING OF (D3):
 - ZONE 1, 7' - 6" W. X 4' - 6" H. X 30' - 0" L., WITH A 1,000,000 BTU PER HOUR, MAXON CROSSFIRE, LOW-NOX BURNER, AND A 15 H.P. AIR SUPPLY FAN.
 - ZONE 2, 7' - 6" W. X 4' - 6" H. X 26' - 0" L., WITH A 1,000,000 BTU PER HOUR, MAXON CROSSFIRE, LOW-NOX BURNER, AND A 50 H.P. AIR SUPPLY FAN.
 - ZONE 3, 7' - 6" W. X 4' - 6" H. X 20' - 0" L., WITH A 2,000,000 BTU PER HOUR, MAXON CROSSFIRE, LOW-NOX BURNER, AND A 25 H.P. AIR SUPPLY FAN.
5. STEAM MOISTURIZATION SYSTEM AND A COOLING ROLL.
6. SECONDARY UNWIND WITH A BRAKE SYSTEM.
7. INFRARED WEB HEATER SYSTEM.

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8. LAMINATOR, WITH ONE 5 H.P. MOTOR AND ONE 3 H.P. MOTOR. (D47)
9. STRIPPING, SLITTING, INSPECTION, TRIMMING AND REWIND STATION WITH ONE 5 H.P. AND TWO 10 H.P. MOTORS.
10. SECONDARY REWIND TURRET WITH ONE 5 H.P. AND TWO 10 H.P. MOTORS.

Application No. 563696 (Relocation, Previous A/N 557379, D13, D2, D52)

PAPER/FILM COATING SYSTEM (LINE #C2):

1. PRIMARY DUAL ROLL UNWIND STAND WITH A BRAKE UNWIND.
2. CARTRIDGE CASTING SYSTEM, FAUSTEL, WITH TWO 1 H.P. AND TWO 3 H.P. MOTORS. (D13)
3. FOUR ZONE DRYING AND COOLING OVEN, ASI, MODEL C4E-8000-68-1/RDGPJDS, WITH A TOTAL EXHAUST CAPACITY OF 12,000 ACFM, ONE AUXILIARY START-UP STACK, AND A 15 H.P. EXHAUST FAN CONSISTING OF (D2):

ZONE 1, OVEN, 7' - 6" W. X 7' - 0" H. X 12' - 9" L., WITH A 1,300,000 BTU PER HOUR, MAXON OVENPAK LE, LOW-NOX BURNER, AND A 7.5 H.P. AIR SUPPLY FAN.

ZONE 2, OVEN, 7' - 6" W. X 7' - 0" H. X 20' - 0" L., WITH A 1,300,000 BTU PER HOUR, MAXON OVENPAK LE, LOW-NOX BURNER, AND A 7.5 H.P. AIR SUPPLY FAN.

ZONE 3, OVEN, 7' - 6" W. X 7' - 0" H. X 20' - 0" L., WITH A 1,300,000 BTU PER HOUR, MAXON OVENPAK LE, LOW-NOX BURNER, AND A 7.5 H.P. AIR SUPPLY FAN.

ZONE 4, OVEN, 7' - 6" W. X 7' - 0" H. X 20' - 0" L., WITH A 1,300,000 BTU PER HOUR, MAXON OVENPAK LE, LOW-NOX BURNER, AND A 7.5 H.P. AIR SUPPLY FAN.
3. LAMINATOR/CHILLER SYSTEM WITH TWO 3 H.P. MOTORS. (D52)
4. SPLICER, SLITTING, INSPECTION, TRIMMING AND REWIND STATION WITH ONE 1 H.P. AND FOUR 5 H.P. MOTORS.

Application No. 563697 (Modification, Previous A/N 556095, C28)

MODIFICATION OF THE RTO TO VENT ADDITIONAL COATING LINES C2 AND C3, AND COMPOUND MIX ROOM PERMANENT TOTAL ENCLOSURE, WITH FOLLOWING EQUIPMENT DESCRIPTION:

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. REGENERATIVE THERMAL OXIDIZER, HOT ROCK BED TYPE, ADWEST, MODEL NO. RETOX 50.0 RTO97, 9' - 0" W. X 20' - 0" L. X 20' - 3" H., 57,500 SCFM, WITH TWO HEAT EXCHANGE CHAMBERS OF CERAMIC MEDIA, A MAXON KINEDIZER LE BURNER, 14,450,000 BTU PER HOUR, NATURAL GAS-FIRED, A NATURAL GAS INJECTION SYSTEM, 7,500,000 BTU/HR, AND A 25 HP COMBUSTION AIR BLOWER. (C28)

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2. FILTER BOX CONTAINING THREE 24" X 24" X 2" PANEL FILTERS, 3-HP BLOWER MOTOR, VENTING FOUR MIXERS LOCATED IN COMPOUND MIX ROOM PERMANENT TOTAL ENCLOSURE (C58).
3. EXHAUST SYSTEM WITH ONE 350-HP BLOWER, VENTING THE FOLLOWING:
 - A. COATING LINE (LINE #C2)
 - B. COATING LINE (LINE #C3)
 - C. COATING LINE (LINE #C4)
 - D. COATING LINE (LINE #C5)
 - E. COMPOUND MIX ROOM PERMANENT TOTAL ENCLOSURE, 71' W. X 101' L. X 33' H. (MAXIMUM), WITH THREE SCALES (RULE 219 EXEMPT), FOUR MIXERS, ONE PIGMENT MILL (RULE 219 EXEMPT), ONE DE-AERATION DEVICE (RULE 219 EXEMPT), ONE DRUM CLEANER, AND ONE SOLVENT STILL.

Application No. 563694

TITLE V/RECLAIM PERMIT REVISION

Application No. 569476 (New Construction, D59)

MIXING STATION NO. 1, CASTING, MYERS, MODEL NO. 800A-30-1644, SERIAL NO. 2633, 250-GAL CAPACITY (MAX), 30 HP MOTOR, LOCATED WITHIN COMPOUNDING MIX ROOM PERMANENT TOTAL ENCLOSURE, AND VENTED TO AIR POLLUTION CONTROL SYSTEM.

Application No. 569478 (New Construction, D60)

MIXING STATION NO. 2, CASTING, MYERS, MODEL NO. 800A-30-1644, SERIAL NO. 2634, 250-GAL CAPACITY (MAX), 30 HP MOTOR, LOCATED WITHIN COMPOUNDING MIX ROOM PERMANENT TOTAL ENCLOSURE, AND VENTED TO AIR POLLUTION CONTROL SYSTEM.

Application No. 569479 (New Construction, D61)

MIXING STATION NO. 3, CASTING, MYERS, MODEL NO. 800A-30-1644, SERIAL NO. 2635, 250-GAL CAPACITY (MAX), 30 HP MOTOR, LOCATED WITHIN COMPOUNDING MIX ROOM PERMANENT TOTAL ENCLOSURE, AND VENTED TO AIR POLLUTION CONTROL SYSTEM.

Application No. 569480 (New Construction, D62)

COLOR MIXING STATION, PIGMENT, ARMENCO, MODEL NO. 7000, SERIAL NO. 390237, 250-GAL CAPACITY (MAX), 30 HP MOTOR, LOCATED WITHIN COMPOUNDING MIX ROOM PERMANENT TOTAL ENCLOSURE, AND VENTED TO AIR POLLUTION CONTROL SYSTEM.

Application No. 569475 (New Construction, D53, C54)

INTERNAL COMBUSTION ENGINE, PERKINS (CATERPILLAR), EMERGENCY ELECTRICAL GENERATION, MODEL NO. C4.4, DIESEL-FUELED, FOUR CYLINDERS, TURBOCHARGED, AFTERCOOLED, 98-BHP, WITH DIESEL PARTICULATE FILTER, MIRATECH, MODEL NO. LTRV2-2.5-XRI, AND A DATA LOGGING AND ALARM SYSTEM.

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HISTORY

Arlon Graphics, LLC (Arlon Graphics) submitted permit applications in April 2014 to relocate two coating/drying lines, C2 and C3, from their current facility in Santa Ana (ID # 167066) to their new Placentia facility (#174406). The company has decided to move all their current manufacturing operations in Santa Ana to this new location due to expansion of the business. The new Placentia facility currently has active permits to construct from the District to install three coating lines, a drum cleaner, a solvent still and a regenerative thermal oxidizer (RTO). One permit application was submitted under this project for the RTO to vent the additional two coating lines, C2 and C3.

In addition, applications were submitted on October 28, 2014 for the new construction (Class I) of four mixers, and an emergency IC engine. The four mixers will be located within the proposed compound mix permanent total enclosure, which will be vented to the existing RTO.

Arlon Graphics is a decorative film manufacturer at the Santa Ana location for a number of years. Their products are sold all over the world. The manufacturing process at the Placentia location will be same as in Santa Ana facility. The manufacturing process involves casting of a vinyl film and application of several coatings, such as adhesive, ink and primer. This adhesive-backed digital printable vinyl film is used for graphics printing (number, logos, pictures, etc.) by the customers, and applied to their vehicles or any other surfaces.

The company also has active permits to operate four coating lines, one solvent reclaim still, two blending equipment, one solvent drum cleaning system, and one afterburner at their Santa Ana facility (# 167066). The facility informed the District that they plan to relocate all the equipment to the new Placentia location in stages, so that the production continues to satisfy the customer's demands. The facility would like to complete the relocation by December 2014 when their current lease ends. A facility-wide VOC emission limit of 931 pounds per day has been established for Arlon Graphics, LLC for their Santa Ana location (#167066).

The applicant requested a facility-wide VOC emission limit of 931 lbs/day for the Placentia location under this project (same as Santa Ana facility) under relocation offset exemption. The VOC limit will be shared between the two locations, until all of the manufacturing operations are relocated to the new Placentia location. A permit condition is imposed on all the VOC emitting equipment at both locations to share the group facility VOC emission limit.

The emissions from the new coating and drying lines, and four mixers will be vented to the existing RTO, which is expected to provide at least 95% overall VOC control efficiency. This will comply with the current VOC BACT requirements for such equipment. The operation of the RTO to control VOC emissions will also provide compliance with requirements of District Rules 1128 and 1171.

The RTO is equipped with a Maxon low-NO_x burner with a guaranteed <30 ppmv NO_x emissions at 3% O₂. This complies with the current NO_x BACT requirements for the RTO. A source test permit condition will be imposed to demonstrate compliance with the VOC collection and destruction efficiencies and the NO_x emissions in ppmv at 3% O₂ during the operation of the RTO. The ovens of the coating lines are equipped with Maxon low-NO_x burners with a guaranteed <30 ppmv NO_x emissions at 3% O₂. This will comply with the current NO_x BACT requirements for a natural gas

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fired oven. A source test permit condition will be imposed to demonstrate compliance with the NO_x emissions in ppmv @ 3% O₂ for the oven burners. The flexographic printer associated with the line C3 will not be vented to RTO because the emissions are <1 lb/day and BACT is not triggered.

The District database shows that the operator has not received any odor, nuisance or visible emission complaints from the public in the last two years at their current location in Santa Ana. The database also indicated that no Notice to Comply or the Notice of Violation was issued to this facility in the last two years at their current locations in Santa Ana and Placentia.

This facility is located within an industrial area. It is not located within 1000 feet from any school. The equipment criteria pollutant emissions will exceed the Rule 212 emission threshold under this project. There are no carcinogenic air toxic compounds present in this operation, other than the natural gas combustion. The cancer risk is expected to be less than 1 in a million.

Arlon Graphics is a RECLAIM and Title V facility. The initial Title V permit was issued to this facility on April 16, 2014. The proposed project is considered as a “significant permit revision” to the RECLAIM/Title V permit, as described in the Regulation XXX evaluation. This is the first revision since the TV permit was issued.

PROCESS DESCRIPTION

The manufacturing process involves casting of a vinyl film and application of adhesive on the film. This adhesive-backed digital printable vinyl film is used for graphics (number, logos, pictures, etc.) by the customers, and applied to their vehicles or other surfaces. The company is relocating all existing coating/drying lines from the Santa Ana location. These lines are used to cast vinyl, apply adhesive, apply primer, and apply logos by printing. The coatings are dried and cured in the natural gas-fired ovens on the coating lines. The vinyl substrate also gets laminated with adhesive coated release liner in the coating line.

In all the coating lines, the coating enters the application chamber via various piston pumps. The substrate is pulled through the coating chambers and gets coated as they leave the chambers. The coating and liner are pulled through the process line using a knife over roll coater gap to ensure the proper thickness of the coating. The coating will be applied in permanent total enclosures (PTE) for 100% collection, which will be vented to the existing RTO. Casting, coating and roll cleaning operations will also be performed in a PTE, and vented to the existing RTO for control of VOCs.

The company will cast a vinyl film on a substrate using a knife over roll coater on line C2. The coating enters the application chamber via a piston pump. The substrate is pulled through the coating chamber where organosol coats the substrate. The coating and liner are pulled through a knife over roll coater gap to ensure the proper thickness of the coating. The coating is applied within a PTE, which is vented to the existing RTO. The film then enters in a four zone oven, which is like an enclosed tunnel and located immediately after the coating chamber. The initial two zones are to flash off the solvent and then the remaining two zones will cure the coating. Permit conditions will require that the coating line, whenever in operation, be vented to the existing RTO in order to control VOC emissions. The four-zone oven will have a single auxiliary stack that will be used during cold start-ups, or other emergency scenarios where purge maybe required, and will comply with National Fire Protection Authority (NFPA) 86: Standard for Oven and Furnaces requirements.

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The vinyl casting material that is applied in casting line nos. C2 (new) and C4 (existing PC, A/N 556097) will be in the proposed compounding mix room permanent total enclosure. This room will be vented to the RTO for control. The liquid vinyl material will be weighed into several totes, which will range in capacity from 55-gals to 250 gals. Totes will then go to one of three mixers where pigments and other powders will be added. Each of these three mixers will be vented through a slot hood through a particulate filter box, and then vented directly to the existing RTO. Existing permitted drum cleaner/tote washer and solvent still will also be located in the compound mix room PTE and directly vented to the RTO. Some totes with casting material will use the new color mixer when additional color matching is needed. The powder loading and mixing process will also be vented to the particulate filter box. The four mixers will be handwiped using solvent. Slot hoods and floor vents throughout the PTE will be used to control VOC released during the weighing, mixing, filtering, and cleaning. When in operation, the two existing lines (C4 and C5) and two new lines (C2 and C3) will get their make-up air for combustion from the compound mix room PTE, which will then be vented to the RTO for control. This will be done to achieve process and energy efficiencies.

The company will apply coating (adhesive) on the previously casted vinyl substrate in the coating line (C3). This line will join the existing adhesive coating line C5 (PC, A/N 556096). The company will apply adhesive to release liner on the line using a knife over a rollercoater. The film will then enter the three zone oven, which is an enclosed tunnel and located immediately after the coating chamber. The initial two zones are to flash off the solvent and then the remaining zone is to cure the coating. Permit conditions will require that the coating line, whenever in operation, be vented to the existing RTO in order to control VOC emissions. This equipment will also have a single auxiliary stack that will be used during cold start-ups, or other emergency scenarios where purge maybe required, and will comply with National Fire Protection Authority (NFPA) 86: Standard for Oven and Furnaces requirements. Once the liner leaves the oven, it enters the cooling zone to reduce the temperature of the adhesive and the liner. The entire cooling zone is also vented to the RTO. The liner with adhesive passes a steam foil to increase the moisture level of the liner. The steam will be provided by Rule 219 exempt equipment. Finally, the vinyl film will be laminated with the adhesive backed liner. For some customers, a small logo will be printed on the film. The flexographic printing press will apply water-based low VOC inks on the films. This press will not be vented to the RTO.

It should be noted that the existing coating line nos. 4 and 5 each also have a single auxiliary stack that is used during start-up, or other emergency scenarios, when purge may be required.

The existing RTO has a design capacity of 57,000 scfm of process air from the coating application enclosures, associated drying/curing ovens, and compound mix room PTE. Approximately 55,320 scfm total of process air will be vented when all the equipment is operational at the Placentia facility. (See the drawing in the folder.) The RTO is initially heated to 1500°F by a start-up burner, which supplies heat to the ceramic media. This media is located in two combustion chambers. The hot exhaust air goes to the other chamber to transfer the heat to the other ceramic bed. The thermal energy recovery is more than 95%. The contaminated air switches every two minutes between the two ceramic chambers. If the VOC in the contaminated stream is not sufficient to sustain the temperature, then natural gas is injected into the RTO. The RTO is expected to provide at least 95% overall control efficiency, based on the operation of similar equipment, which has been source tested a number of times to demonstrate that control efficiency.

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The VOC content of the material as applied varies per mix slightly. The maximum VOC content is about 6.0 lbs/gallon. MEK is used to clean the equipment in the enclosure, which will be vented to the RTO. The VOC content of the flexographic inks is <0.58 lb/gal. The average and maximum ink usage will be 0.1 gallon and 0.15 gallon/day respectively. The venting to the RTO complies with the District Rules 1128 and 1171. Low VOC inks and <1 lb/day VOC emissions from the flexographic printing operation will comply with Rule 1130 requirements and BACT is not triggered. A number of toxics are emitted in this process. The applicant has provided the emission data based on their experience of operation at Santa Ana location. The facility will operate an average/maximum of 24 hour/day, 7 days/week, 52 weeks/year

Arlon Graphics has also proposed to construct a new emergency IC engine, which would provide power to the facility in case of outage. The engine is equipped with a Diesel Particulate Filter system, which consists of an oxidizing catalyst followed by a particulate filter. The filter primarily traps the carbon particulates coming from the engine exhaust. The catalyst is positioned before the filter to convert NO to NO₂. The NO₂ then oxidizes the soot that is collected on the filter to regenerate the filter. The NO₂ is more effective than oxygen in combusting the soot and at a much lower temperature than is normally required so no supplemental heat is necessary. Regeneration will occur when the engine exhaust temperature is at least 260°C (or 500°F). The filter has been approved by CARB to remove at least 85% of PM emissions.

The CARB certification requires that this filter system be installed with a Data Logging and Alarm System. This system allows for the continuous monitoring of exhaust temperature and backpressure. The CARB certification for this filter system also included limitations on operation of the engine in idle mode, minimum temperature requirements, and a recommended total hours of operation after which the integrity of the filter should be checked and/or replaced (please see attached copy of CARB verification order). Conditions implementing these CARB requirements will be added to the permit. The operating hours for the engine will be one hr/day, one day/wk, and 50 wks per yr.

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EMISSION CALCULATIONS

Application no. 563695 (C3 Coating Line)

VOC Emissions from Coating Usage on Line C3:

Coating emissions from this equipment are mostly ROG. No particulate emissions are expected from the operation of dip-coating and roller-coating. The coating line oven will have additional natural gas combustion emissions. VOC emissions from the inks are negligible.

		Average	Maximum
Lbs of VOCs/month between line C3	A	173046	205493
Gallons of coating per day from line C3 A/30/6	B	961	1142
Coating usage (gal/hr)	B/24	40	48
VOC content of the coating (lbs/gal)	D	6	6
R1, VOC emissions per hr (lbs/hr)	C X D	240	288
R1, VOC emissions (lbs/day)	E X 24	5760	6912
R2, VOC emissions (lbs/hr)	E X 0.05	12	14.4
R2, VOC emissions (lbs/day)	F X 0.05	288	345.6

Toxic Emissions from Coating and Ink Usage (C3):

The applicant provided District Rule 1401 toxic emissions (maximum) expected from this project from the past experience at their Santa Ana facility. Toxics from the inks are included here.

Compound	CAS No.	R1 Monthly Emissions Lbs/Mo (A)	R2 Monthly Emissions Lbs/Mo (B)	R2 Lbs/hr B/30/24
ethyl benzene	100-54-3	1.0	0.05	0.000069
hexane	110-54-3	25	1.25	0.0017
toluene	108-88-3	429	21.45	0.0298
xylene	1330-20-7	28.0	1.4	0.0019
isopropanol (IPA)	67-63-0	128	6.4	0.0089
methyl ethyl ketone (MEK)	78-93-3	800.0	40	0.056
ethylene glycol monobutyl ether	111-76-2	4533	226.7	0.3149
propylene glycol monomethyl ether	107-98-2	144	7.2	0.01

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Emissions from Combustion (Coating Line C3 Oven):

A/N 563695 Coating Line Oven @

	maximum	normal		
hr/dy	24	2	max heat input	4.00E+06 (BTU/hr)
<u>dy/wk</u>	7	7	<u>gross heating value</u>	1050 (BTU/scf)
<u>wk/yr</u>	52	52		
load	100%	100%		

	Emission Factors	MAX (lb/hr)	AVE (lb/hr)	MAX (lb/dy)	30-DAY (lb/dy)	MAX (lb/yr)	MAX (ton/yr)
SO ₂ (R1)	0.6	0.002	0.002	0.055	NA	20	0.010
SO ₂ (R2)	0.6	0.002	0.002	0.055	0.055	20	0.010
NO ₂ (R1)	38.94	0.148	0.148	3.560	NA	1,296	0.648
NO ₂ (R2)	38.94	0.148	0.148	3.560	3.560	1,296	0.648
CO (R1)	316	1.204	1.204	28.891	NA	10,516	5.258
CO (R2)	316	1.204	1.204	28.891	28.891	10,516	5.258
TOC (R1=R2)	7	0.027	0.027	0.640	NA	233	0.116
N ₂ O (R1=R2)	2.2	0.008	0.008	0.201	0.201	73	0.037
PM, PM ₁₀ (R1=R2)	7.5	0.029	0.029	0.686	0.686	250	0.125
Hexane	0.0063	2.4E-05	2.4E-05	5.8E-04	NA	2.10E-1	1.05E-4
Ammonia	3.2	1.2E-02	1.2E-02	2.9E-01	NA	1.06E+2	5.32E-2
ethyl benzene	0.0095	3.6E-05	3.6E-05	8.7E-04	NA	3.16E-1	1.58E-4
acetaldehyde	0.0043	1.6E-05	1.6E-05	3.9E-04	NA	1.43E-1	7.16E-5
acrolein	0.0027	1.0E-05	1.0E-05	2.5E-04	NA	8.99E-2	4.49E-5
benzene	0.008	3.0E-05	3.0E-05	7.3E-04	NA	2.66E-1	1.33E-4
formaldehyde	0.017	6.5E-05	6.5E-05	1.6E-03	NA	5.66E-1	2.83E-4
naphthalene	0.0003	1.1E-06	1.1E-06	2.7E-05	NA	9.98E-3	4.99E-6
PAH's	0.0001	3.8E-07	3.8E-07	9.1E-06	NA	3.33E-3	1.66E-6
toluene	0.0366	1.4E-04	1.4E-04	3.3E-03	NA	1.22E+0	6.09E-4
xylene	0.0272	1.0E-04	1.0E-04	2.5E-03	NA	9.05E-1	4.53E-4

NO ₂ @ 3% excess O ₂ ----->>>	30.00	(ppmv)	SO ₂ @ 3% excess O ₂ ----->>>	0.33	(ppmv)
CO @ 3% excess O ₂ ----->>>	399.87	(ppmv)	PM @ 12% CO ₂ ----->>>	5.5E-09	(grain/ft ³)

Ver. 1.3

A Tier 2 Risk Assessment was performed to determine the health risk from the toxic air contaminants emitted from the coatings and the oven combustion of natural gas. The assessment calculated a cancer risk of 0.0431 in a million for the residential receptor and 0.0445 in a million for a commercial receptor. The assessment also calculated both acute and chronic hazard index risks and all the risks were below 1. Thus, the Tier 2 risk assessment demonstrated compliance with the Rule 1401 requirements.

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Application no. 563696 (C2 Coating Line)

VOC Emissions from Coating Usage on Line C2:

Coating emissions from this equipment are mostly VOC. No particulate emissions are expected from the operation of dip-coating and roller-coating. The coating line oven will have additional natural gas combustion emissions.

		Average	Maximum
Lbs of VOCs/month between line C3	A	67973	79034
Gallons of coating per day from line C3 A/30/6	B	377.6	439.1
Coating usage (gal/hr)	B/24	15.73	18.29
VOC content of the coating (lbs/gal)	D	6	6
R1, VOC emissions per hr (lbs/hr)	C X D	94.38	109.74
R1, VOC emissions (lbs/day)	E X 24	2265.1	2634.8
R2, VOC emissions (lbs/hr)	E X 0.05	4.72	5.49
R2, VOC emissions (lbs/day)	F X 0.05	113.26	131.74

Toxic Emissions from Coating Usage C2:

The applicant provided District Rule 1401 toxic emissions expected from this project from the past experience of the same coating application at their Santa Ana location. The following table provides the details of the toxic emissions expected.

Compound	CAS No.	R1 Monthly Emissions (Lbs/Mo) (A)	R2 Monthly Emissions (lbs/mo) (B)	R2 (lbs/hr) B/30/24
ethyl benzene	100-54-3	0.16	0.008	0.000011
toluene	108-88-3	8116	405.8	0.5636
xylene	1330-20-7	38338	1916.9	2.6624
methyl ethyl ketone	78-93-3	32	1.6	0.0022
glycol ether	111-80-5	2885	144.25	0.2
formaldehyde	50-00-0	0.0081	0.00041	0.0000006
isopropanol (IPA)	67-63-0	2029	101.45	0.141

A Tier 2 Risk Assessment was performed to determine the health risk from the toxic air contaminants emitted from the coatings and the oven combustion of natural gas. The assessment calculated a cancer risk of 0.056×10^{-6} for the residential receptor and 0.058×10^{-6} for a commercial receptor. The acute and chronic hazard index risks were below 1. Thus, the Tier 2 risk assessment demonstrated compliance with the Rule 1401 requirements.

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Emissions from Combustion (Coating Line C2 Oven):

<u>563696</u>	Coating Line Oven							@
	maximum	normal						
hr/dy	24	2			max heat input	5.20E+06 (BTU/hr)		
<u>dy/wk</u>	7	7			<u>gross heating value</u>	1050 (BTU/scf)		
<u>wk/yr</u>	52	52						
load	100%	100%						
	Emission	MAX	AVE	MAX	30-DAY	MAX	MAX	
	Factors	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)	
SO ₂ (R1)	0.6	0.003	0.003	0.071	NA	26	0.013	
SO ₂ (R2)	0.6	0.003	0.003	0.071	0.071	26	0.013	
NO ₂ (R1)	38.94	0.193	0.193	4.628	NA	1,685	0.842	
NO ₂ (R2)	38.94	0.193	0.193	4.628	4.628	1,685	0.842	
CO (R1)	316	1.565	1.565	37.559	NA	13,671	6.836	
CO (R2)	316	1.565	1.565	37.559	37.559	13,671	6.836	
TOC (R1=R2)	7	0.035	0.035	0.832	NA	303	0.151	
N ₂ O (R1=R2)	2.2	0.011	0.011	0.261	0.261	95	0.048	
PM, PM ₁₀ (R1=R2)	7.5	0.037	0.037	0.891	0.891	324	0.162	
Hexane	0.0063	3.1E-05	3.1E-05	7.5E-04	NA	2.73E-1	1.36E-4	
Ammonia	3.2	1.6E-02	1.6E-02	3.8E-01	NA	1.38E+2	6.92E-2	
ethyl benzene	0.0095	4.7E-05	4.7E-05	1.1E-03	NA	4.11E-1	2.06E-4	
acetaldehyde	0.0043	2.1E-05	2.1E-05	5.1E-04	NA	1.86E-1	9.30E-5	
acrolein	0.0027	1.3E-05	1.3E-05	3.2E-04	NA	1.17E-1	5.84E-5	
benzene	0.008	4.0E-05	4.0E-05	9.5E-04	NA	3.46E-1	1.73E-4	
formaldehyde	0.017	8.4E-05	8.4E-05	2.0E-03	NA	7.35E-1	3.68E-4	
naphthalene	0.0003	1.5E-06	1.5E-06	3.6E-05	NA	1.30E-2	6.49E-6	
PAH's	0.0001	5.0E-07	5.0E-07	1.2E-05	NA	4.33E-3	2.16E-6	
toluene	0.0366	1.8E-04	1.8E-04	4.4E-03	NA	1.58E+0	7.92E-4	
xylenes	0.0272	1.3E-04	1.3E-04	3.2E-03	NA	1.18E+0	5.88E-4	
NO ₂ @ 3% excess O ₂ ----->>>		30.00		(ppmv)	SO ₂ @ 3% excess O ₂ ----->>>		0.33	(ppmv)
CO @ 3% excess O ₂ ----->>>		399.87		(ppmv)	PM @ 12% CO ₂ ----->>>		5.5E-09	(grain/ft ³)

Ver. 1.3

Application no. 563697 (modification of RTO)

Under this application, the existing RTO will be modified by the venting of two additional coating lines (C2 and C3), and the construction of the compound mix room permanent total enclosure (PTE). This PTE will contain four new mixers, and an existing drum cleaner and solvent still; as well as three scales, one pigment mill, and one deaeration device, which are exempt under Rule 219. There will not be any emission changes under this administrative change application. Hence, previous emission data will be re-entered for this application.

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Application nos. 569476, 569478, 569479 and 569480 (D57, D58, D59, D60)

VOC and PM₁₀ Emissions from Mixing Station #1, #2 and #3, and Color mixer:

VOC emissions will occur during the mixing operations that take place in three mixing stations, which will be used to provide the casting vinyl material for coating lines #C2 and C4. The color mixer is used when color matching, as needed. There will be no VOC emissions associated with the color mixer. As provided by the applicant, the average and maximum casting material for both lines are shown below. VOC emission loss during the mixing process will be assumed to be 0.02 lbs VOC/1 lb solvent material processed (AP-42, paint mixing operations). The particulate emissions (PM₁₀) will be based upon 20 lbs of PM/2000 lbs of powder. The PM₁₀ emissions will be associated with the four mixers as a group. These calculations are shown below.

			Avg	Max
Lbs of VOC/month for lines C2 and C4	A		149,800	175,956
Emission factor, paint mixing, 0.02 lbs VOC/1 lb mat'l	A x 0.02	B	2996	3519
R1, daily VOC emissions (lbs VOC/day)	B / 30	C	99.9	117.3
R1, hourly VOC emissions (lbs VOC/hr)	C / 24	D	4.16	4.89
R2, daily VOC emissions (lbs VOC/day)	C X 0.05	E	5.00	5.87
R2, hourly VOC emissions, (lbs VOC/hr)	D X 0.05	F	0.21	0.24

			Avg	Max
Lbs of powder per day for lines C2 and C4 (lb/day)	G		15,927	33,034
Emission factor, paint mixing, 20 lbs PM/2000 lb powder (lb PM/day)	G x 0.01	H	159.27	330.3
R1, daily PM ₁₀ emissions (lbs PM ₁₀ /day)	H / 2	I	79.6	165.2
R1, hourly PM ₁₀ emissions (lbs PM ₁₀ /hr)	I / 24	J	3.32	6.88
R2, daily PM ₁₀ emissions (lbs PM ₁₀ /day)	I X 0.01	K	0.80	1.65
R2, hourly PM ₁₀ emissions, (lbs PM ₁₀ /hr)	J X 0.01	L	0.033	0.069

Note: PM₁₀ = 1/2 PM

Toxic Emissions from Mixing Station #1, #2 and #3, and Color Mixer:

Toxic emissions are associated with mixing stations #1, #2 and #3, and the color mixer. Toxic emission from these mixing operations (group) will be based on material usage for lines #C2 and C4, as provided by the applicant (see file A/N 569478). The same 0.02 lbs/lb material processed will be applied. Therefore, a summary of toxic emissions from the mixing operations is shown below.

Compound	CAS No.	R1 Monthly Emissions (Lbs/Mo) (A)	R2 Monthly Emissions (lbs/mo) (B)	R2 (lbs/hr) B/30/24
ethyl benzene	100-54-3	0.007	3.6×10^{-4}	4.9×10^{-7}
toluene	108-88-3	361.38	18.07	0.025
xylene	1330-20-7	1707.08	85.35	0.119
methyl ethyl ketone	78-93-3	1.43	0.071	0.000
glycol ether	111-80-5	128.46	6.423	0.009
formaldehyde	50-00-0	0.000	1.8×10^{-5}	2.7×10^{-8}

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isopropanol (IPA)	67-63-0	90.35	4.517	0.00628
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A Tier 2 risk analysis was performed to determine the health risk from the toxic air contaminants emitted from the mixing operations within the compound mix room PTE. The analysis resulted in a cancer risk of 9.45×10^{-11} for the residential receptor and 1.79×10^{-10} for a commercial receptor. The acute and chronic hazard index risks were well below 1. Thus, the Tier 2 risk assessment demonstrated compliance with the Rule 1401 requirements.

Application no. 569475 (Emergency ICE)

The engine is an EPA certified Tier III engine. The emission factors used for calculations are the current EPA tier III emission limits of 3.0 NO_x + ROG gm/bhp-hr (2.9 NO_x, 0.1 ROG), 2.6 gm/bhp-hr CO and 0.22 gm/bh-hr of PM.

The emissions are discounted by 85% for PM for engines equipped with DPF and oxidation catalyst.

For emission calculations, please refer to attached spreadsheet and as summarized below.

A/No. 569475 (98 BHP)

	VOC	NO _x	SO _x	CO	PM	PM10
Emission factor, g/HP-hr	0.1	2.90	0.0049	2.60	0.22	0.21
With Control	0.1	2.90	0.0049	2.60	0.045	0.043
lb/hr	0.02	0.63	0.00	0.56	0.0097	0.0093
lb/day max.	0	1	0	1	0	0
lb/day avg.	0	0.09	0	0	0	0
lb/yr	1.10	31.92	0.05	28.62	0.50	0.48

Greenhouse Gases Calculations

Please refer to attached calculations worksheets and are summarized below:

$$\text{CO}_2 = 1.1289 \text{ lb/bhp-hr} \times 98 \text{ bhp} = 110.632 \text{ lb/hr}$$

$$\text{CH}_4 = 0.000022 \text{ lb/bhp-hr} \times 98 \text{ bhp} = 0.0022 \text{ lb/hr}$$

$$\text{N}_2\text{O} = 0.000015 \text{ lb/bhp-hr} \times 98 \text{ bhp} = 0.00147 \text{ lb/hr}$$

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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. 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.

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 VOC emission increases are above the daily maximum limits specified by Rule 212(g). Therefore, public notice will be required by this section.

LB/DAY	CO	NOX	PM ₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	67	8.19	3.23	483.2	0	0.13

SECTION 212(C)(3):

A Tier 2 Risk Assessment was performed to determine the health risk from the toxic air contaminants emitted from the coatings and the natural gas combustion from this project. The assessment calculated a cancer risk of 0.10×10^{-6} for the residential receptor and 0.11×10^{-6} for a commercial receptor. Therefore, public notice will not be required by this section. The health risk from the RTO not included here as it is existing equipment.

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 maximum VOC emission increases from a coating line are above the daily maximum limits specified by Rule 212(g). Therefore, public notice will be required by this section.

LB/DAY	CO	NOX	PM ₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	37.6	4.63	0.89	345.6	0	0.071

RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE

The District database has no records of any visible emissions or nuisance complaints against this company at their previous location.

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RULE 1110.2, EMISSION SFROM GASEOUS- AND LIQUID-FUELED ENGINES

Emergency engines are exempt from requirements of this rule.

RULE 1128 PAPER, FABRIC, AND FILM COATING OPERATIONS

SECTION (c)(2), VOC CONTENT OF COATINGS

The applicant will be in compliance with these requirements by using air pollution control equipment with a sufficient VOC control efficiency (100% collection and 95% destruction).

SECTION (c)(6), TRANSFER EFFICIENCY

Roller coating and dip coating application methods comply with this requirement. Also applicant will be in compliance with these requirements by using an air pollution control system with a sufficient VOC control efficiency (100% collection and 95% destruction).

RULE 1130, GRAPHIC ARTS

SECTION (C)(1), VOC CONTENT OF INKS

The VOC content of the flexographic ink is less than 100 grams per liter. Thus they comply with the rule requirement of less than 300 grams per liter VOC content.

RULE 1147, NOX REDUCTIONS FROM MISCELLANEOUS SOURCES

This rule requires gas fired combustion sources, in this case ovens and afterburner, to emit no more than 30 ppmv of NO_x at 3% O₂ for ovens and 60 ppmv of NO_x at 3% O₂ for afterburner. The emissions of NO_x from all the burners are expected to be less than 30 ppmv. Thus, this equipment is expected to comply with this requirement. However, this is a NO_x RECLAIM facility, which is exempt from the requirements of the Rule 1147.

RULE 1171, SOLVENT CLEANING OPERATIONS

The applicant will be in compliance with these requirements by using an air pollution control system with a sufficient VOC control efficiency (100% collection and 95% destruction).

REGULATION XIII

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

(a) VOC EMISSIONS

VOC emissions from the coating lines and four mixers will be vented to an air pollution control system consisting of an RTO with a sufficient VOC control efficiency (at least 100% collection and 95% destruction). This will comply with the provisions of the current BACT requirements.

(b) PM₁₀ EMISSIONS

PM10 emissions from the mixing operations will be vented to an air pollution control device, and particulate filters in the filter box will be rated for 99% removal efficiency. This will comply with the current particulate BACT requirements.

(c) NO_x EMISSIONS

The applicant has proposed to use RTO and oven burners with guaranteed less than 30 ppmv NO_x at 3% oxygen level. This will provide compliance with these requirements.

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The proposed engine is required to be Tier 3. In addition, since the facility is a major source, a diesel particulate filter approved by CARB is required to satisfy LAER requirements.

BACT/LAER REQUIREMENTS (TIER 3 ENGINES)

	NO_x + ROG (Gm/bhp-hr)	CO (Gm/bhp-hr)	PM (Gm/bhp-hr)
Required	3.0	2.6	PM filter
Actual	3.0	2.6	Installed
Compliance	Yes	Yes	Yes

RULE 1303(b)(1), MODELING

Modeling is not required since PM₁₀, NO_x and CO emissions are below the Table A-1 allowable emissions. Emergency engines are exempt from Modeling and Offset requirements per section 1304 (a) (4) of Reg. XIII.

NO_x (lbs/hr)		PM₁₀ (lbs/hr)		CO (lbs/hr)	
Allowed	Actual	Allowed	Actual	Allowed	Actual
0.31	0.148	1.9	0.686	17.1	1.204
0.47	0.193	2.8	0.037	25.9	1.565

RULE 1303 (b)(2), EMISSION OFFSETS

Emission offsets are not required for this project as the criteria pollutant emission increases are less than 4 tons/year threshold limits. No VOC emission offsets are required due to relocation of the manufacturing operations.

RULE 1401, NEW SOURCE REVIEW OF TOXIC CONTAMINANTS

Emergency engines are exempt from the requirements of this rule as per section (g)(1)(F). As described above in the evaluation report, and as shown below, the proposed equipment is expected to comply with these requirements.

A/N	Description	MICR, resid	MICR, comm.	HIA	HIC
563695	Coating line #C3 with oven	0.043 x 10 ⁻⁶	0.045 x 10 ⁻⁶	0.0194	0.0058
563696	Coating line #C2 with oven	0.056 x 10 ⁻⁶	0.058 x 10 ⁻⁶	0.0945	0.1700
569476, 569478, 569479, 569480	Mixing stations #1, #2 and #3; and color mixer	4.21 x 10 ⁻¹²	7.96 x 10 ⁻¹²	0.0039	0.0074
569475	ICE, emergency generator	-	-	-	-
Total		0.099 x 10 ⁻⁶	0.10 x 10 ⁻⁶	0.118	0.183

Note: Emergency ICE exempt from Rule 1401 requirements.

RULE 1470, REQUIREMENTS FOR STATIONARY DIESEL-FUELED INTERNAL COMBUSTION AND OTHER COMPRESSION IGNITION ENGINES

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The engines are meeting NO_x+ROG and CO emissions standards specified in Table 2 of paragraph (c)(2)(C) (viii) as indicated above in Reg. XIII evaluation section.

For PM emissions limit compliance, the engines are expected to emit 0.0043 gm/bhp-hr of PM, which is lower than required 0.22 gm/bhp-hr limit specified in paragraph (c) (2)(C) (iii) of the rule for engines. Therefore, compliance with this rule is expected.

RULE 1472, REQUIREMENTS FOR FACILITIES WITH MULTIPLE STATIONARY EMERGENCY STANDBY DIESEL-FUELED INTERNAL COMBUSTION ENGINES

The facility has less than 3 emergency engines on site. This rule is applicable to facilities having 3 or more engines. Therefore, the rule is not applicable.

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

As discussed above the equipment is expected to 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. This facility will hold sufficient NO_x RTCs to offset emission increases from the equipment.

40 CFR, PART 60, SUBPART IIII

Section D of this subpart requires the engines <3000 BHP manufactured after 2007 meet appropriate Tier 2 or Tier 3 standards as applicable based on the horsepower. Since the engine is >50 - <751 BHP, Tier 3 standards apply and are summarized below:

TIER 3 ENGINE

	NO_x + ROG (Gm/bhp-hr)	CO (Gm/bhp-hr)	PM (Gm/bhp-hr)
Required	3.0	2.6	0.15
Actual	3.0	2.6	0.043
Compliance	Yes	Yes	Yes

Other Requirements in the NSPS for New CI Emergency Engines

	NSPS Requirement	Proposed Equipment	Compliance
New Engine	Manufactured after 7/1/2006	Manufactured >2006	Yes
Emission Standards Post 2007 model year	Tier 2/3 standards	The engines meet Tier 2/3 standards based on HP ratings.	Yes
Fuel Requirement	Ultra low sulfur diesel (15 ppmw)	Included in permit condition	Yes
Monitoring/Recordkeeping/Reporting	Non-resettable hour meters and records of operation	Included in permit condition	Yes
Reporting	None	None	Not applicable

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40 CFR PART 63, SUBPART JJJJ – PAPER AND OTHER WEB COATING

Emission standard with use of an oxidizer requires no greater than 20 parts per million HAP emissions by volume (ppmv) by compound on a dry basis and 100% capture efficiency. The facility will comply with this regulation by operating the coating operations within a PTE and have an overall destruction efficiency of at least 95%. The requirements of this subpart are not applicable to compression ignition engines. Compliance with this regulation is expected.

40 CFR Part 63, SUBPART ZZZZ

The facility is an Area Source for HAPs. The requirements of this Subpart are therefore applicable. The engines were purchased post June 12, 2006, and are therefore considered new engines.

	NESHAP Requirement	Proposed Equipment	Compliance
New Engine	Ordered After June 12, 2006	After June 12, 2006	Yes
Emission Standards	Meet NSPS standards	Yes (Complies with emissions standard in Subpart III)	Yes
Operating Limitations	None	200 hrs/yr Included in permit condition	Yes
Fuel Requirement	None	Ultra low sulfur diesel (15 ppmw) Included in permit condition	Yes
Compliance requirements (Section 60.4211)	No limits on hours for emergency service	200 hours per year included in permit condition	Yes
Compliance requirements (Section 60.4211)	100 hrs/yr for maintenance and testing: 100 Hours can be used for: -Testing & Maintenance - No peak shaving or demand response program -Deviation of Voltage Frequency of 5% or greater below standard voltage of frequency -Up to 50 hours/yr for non-emergency use	50 hrs/yr for maintenance and testing per BACT requirements. No peak shaving or demand response per Rule 1470.	Yes
Notification and Reporting (Section 60.4214)	Beginning 2015, engines over 100 HP are required to file annual reports to include: - Company Name and address of engine location - Engine Make and Model No. - Hours of operation	Engine is >100 HP and the recordkeeping and reporting requirements are included in the permit.	N/A

40 CFR Part 64, CAM Requirements

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CAM requirements were imposed on the RTO when the initial Title V permit was issued for this facility on April 16, 2014. This RTO will still be the control device for the new coating lines and the new mixers. Therefore, no new CAM conditions are required for this project.

REGULATION XXX

This facility is in the RECLAIM program. The proposed project is considered as a “significant permit revision” for non-RECLAIM pollutants to the RECLAIM/Title V permit for this facility. The inclusion of the engines is also considered as a “significant permit revision” to the Title V permit for this facility.

Rule 3000(b)(31)(l) defines a “significant permit revision” as any Title V permit revision that includes the “Installation of a new permit unit or the modification or reconstruction of an existing permit unit subject to a New Source Performance Standard (NSPS) per 40 CFR Part 60 or a National Emission Standard for HAPs per 40 CFR Part 61 or Part 63.”

Since the engine is subject to 40CFR63 Subpart ZZZZ, this proposed project is considered as a “significant permit revision”. This proposed project is the 1st permit revision to the initial Title V permit, which was issued on April 16, 2014.

Non-RECLAIM Pollutants or HAPs

Rule 3000(b)(6) defines a “significant permit revision” as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or HAPs from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

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

* Not applicable if this is a RECLAIM pollutant

To determine if a project is considered as a “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 initial Title V permit issued to this facility on April 16, 2014. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

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Revision		HAP	VOC	NO _x *	PM ₁₀	SO _x	CO
1 st Permit Revision:	Relocate lines C2 & C3 and vent them to RTO, PC A/Ns 563695, 563696	0	477	8.19*	1.58	0.13	66.45
	Modification of existing RTO to vent new lines C2 and C3, and compound mix room PTE, PC A/N 563697	0	0	0	0	0	0
	Installation of three casting mixers and one color mixer in compound mix room permanent total enclosure, PC A/Ns 569476, -478, -479, -480	0	5.9	0	1.65	0	0
	Installation of new emergency engine A/N 569475	0	0	9	0	0	1
Cumulative Total		0	483	17.19*	3.23	0.13	67.5
Maximum Daily		30	30	40*	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

Since the cumulative VOC emission increases resulting from all permit revisions are greater than the emission threshold level, this proposed project is considered as a “significant permit revision” for non-RECLAIM pollutants or HAPs emissions. Also, Arlon is subject to the NESHAP (National Emission Standard for Hazardous Air Pollutants) 40 CFR Part 63 Subpart JJJJ – Paper and Other Web Coating; Rule 3000 (b)(28) defines Significant Permit Revision as the installation of new equipment subject to a NESHAP pursuant to 40 CFR Part 63.

RECLAIM Pollutants

Since NO_x 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 NO_x 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.

Section B of the initial Title V permit shows that the NO_x starting allocation plus the non-tradeable Allocation for this facility is 11,352 pounds. The total NO_x emissions from permit revision at this facility is 8 lb/day X 365 = 2,920 lb/year, which is less than the starting Allocation plus the non-tradeable Allocations of 11,352 pounds. 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 “significant permit revision”, it is subject to the public participation requirements under Rule 3006 (b) will be followed prior to the issuance of the permits.

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 raise any objections within the review period and upon

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completion of the Rule 212 and Rule 3006 public notice period, a revised Title V permit will be issued to this facility.