



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

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Deminimus Significant Title V Permit Revision
Section D (PC/PO)
Flow Coating Systems
Paint Spray Booth

Legal Owner
or Operator: SIERRACIN/SYLMAR CORP
12780 SAN FERNANDO RD.
SYLMAR, CA 91342

ID: 149814

Equipment
Location: 12780-82 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description:
A/N 540588
Title V Permit Revision (non RECLAIM), Deminimus Significant

SECTION D

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1: COATING					
COATER, PLANT 1, GFA TRANSFER ROOM, GFA COATER NO. 1, WITH ONE 10-L MILLIPORE FLOW COATER, AND, ONE SHARED MOTOMAN HP50-35 ROBOTIC UV CURING SYSTEM A/N: 547847 (new construction)	D65			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	A63.12, B59.5, H23.7, K67.1, K67.2
COATER, PLANT 1, GFA TRANSFER ROOM, GFA COATER NO. 2, WITH ONE 10-L MILLIPORE FLOW COATER, AND, ONE SHARED MOTOMAN HP50-35 ROBOTIC UV CURING SYSTEM A/N: 547848 (new construction)	D66			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	A63.12, B59.5, H23.7, K67.1, K67.2
COATER, PLANT 1, GFA TRANSFER ROOM, GFA COATER NO. 3, WITH ONE 10-L MILLIPORE FLOW COATER, AND, ONE SHARED MOTOMAN HP50-35 ROBOTIC UV CURING SYSTEM A/N: 547849 (new construction)	D67			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	A63.12, B59.5, H23.7, K67.1, K67.2
COATER, PLANT 1, GFA TRANSFER ROOM, GFA COATER NO. 4, WITH ONE 10-L MILLIPORE FLOW COATER,	D68			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR	A63.12, B59.5, H23.7, K67.1, K67.2



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AND, ONE SHARED MOTOMAN HP50-35 ROBOTIC UV CURING SYSTEM A/N: 547850 (new construction)				63 Subpart GG, 12-8-2000]	
SPRAY COATING OPERATION, WITH EIGHT 24 IN X 24 IN FILTERS, 14 FT D. X 12 FT W. X 8 FT H., WITH SPRAY BOOTH A/N: 547851 (new construction)	D69			PM: (9) [RULE 404, 2-7-1986]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]; VOC (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008, RULE 1171, 5-1-2009]	A63.9, B59.6, C1.4, C6.1, D182.2, D322.1 E175.1, H23.3, K67.1, K67.2, K67.4, K67.5
COATER, FLOW, FLOW, 4 W. X 1 L. X 6 H. (FEET), WITH 15-KW INFRA RED LAMPS A/N: 462111 547852 (c/c)	D9			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	<u>A63.13, C1.1, H23.2, H23.7, K67.1</u>
COATER, FLOW, FLOW, 4 W. X 1 L. X 6 H. (FEET), WITH 18-KW INFRA RED LAMPS A/N: 462117 547853 (c/c)	D10			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	<u>A63.13, C1.1, H23.2, H23.7, K67.1</u>
COATER, PLANT 1, ROOM NO. 3, ONE 5GAL MILLIPORE FLOW COATER, W/ ONE 45KW-IR CURING BANK, & FIVE 7.2KW-TOTAL UV ROBOTIC CURING SYSTEMS COMMON TO ROOMS NOS. 1 THROUGH 6 & ONE MOTOMAN HP50-35 ROBOTIC UV CURING SYSTEM A/N: 468418 533578 (c/d)	D13			VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 2-1-2008; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	A63.8, B27.1, H23.7, K67.1, K67.2
SPRAY COATING OPERATION, 5 FT D. X 4 FT W. X 7 FT H., WITH SPRAY BOOTH A/N: 510705 (REMOVED)	D17			PM: (9) [RULE 404, 2-7-1986]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]; VOC (9) [RULE 1124, 9-21-2001; RULE 1171, 11-7-2003, RULE 1171, 5-1-2009]	A63.9, C1.3, C6.1, D182.2, D322.1 E175.1, H23.3, K67.4, K67.5
COATER, PLANT 1, ROOM 5, ONE 5-GAL MILLIPORE FLOW COATER, W/ ONE 45KW-IR CURING BANK & FIVE 7.2 KW TOTAL UV ROBOTIC CURING SYSTEMS, COMMON TO ROOM NOS. 1 THROUGH 6 A/N: 468420 (REMOVED)	D44	C45-C46		VOC: (9) [RULE 1124, 9-21-2001; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]; VOC: (10) [40CFR 63 Subpart GG, 12-8-2000]	A63.8, B27.1, H23.7, K67.1, K67.2, K67.3
CARBON FILTER, 16 IN. X 25 IN X 2 IN A/N: 484820 (REMOVED)	E45	D44			
CARBON FILTER, 16 IN. X 25 IN X 2 IN A/N: 484820 (REMOVED)	E46	D44			



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History

The company manufactures military/commercial aircraft canopies and windows made of clear acrylic materials. Protective transparent films are flow coated on to these clear acrylic substrates inside clean rooms with dedicated flow coater(s) in each room. Coated parts are cured by air drying, portable IR-lamp curing bank(s), portable UV-robotic curing system(s), or by a UV curing conveyor. In this project, the company is proposing the following:

1. To construct a new clean room called GFA, in which there will be four separate flow coaters (D65, D66, D67 & D68) in parallel sharing a UV robotic curing system. The clean room is directly vented to the atmosphere. The company will manage its flow coating usages to comply with the existing facility-wide ROG limit of 3510 pounds per month (Condition No. F2.1) and Rule 442 limit of 833 pounds per month of ROG (Condition No. F2.2). Therefore, there will not be any net emission increases facility-wide. The company has agreed to accept an equipment daily limit of 5.5 pounds of ROG from each flow coater to comply with BACT and Rule 212 requirements.
2. To construct a new GFA spray booth (D69).
3. To convert the existing limit of two gallons per day (C1.1) into a new limit of three pounds of VOC per day (A63.13) for the two existing flow coaters, D9 and D10 respectively. The company is requesting this change in order to make them the same as other existing flow coaters, which are all subject to pounds of VOC per day limits.
4. To update the description of UV Room #3 (D13), by adding a robotic UV curing system, Motoman HP50-35. This robotic curing system is identical to the new one being proposed in the GFA area, but the two are separate systems. This description change will not affect emissions.
5. To delete the following equipment from Section D of the permit since the equipment has been removed from the facility:
 - a. D44 flow coater and associated carbon filters, C45 & C46.
 - b. D17 spray booth

A review of District compliance records indicates that there are no complaints filed against the company in the last two years. However, the facility was issued two Notices to Comply (NC) and a



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Notice of Violation (NOV) during the last two years. The following is a summary of the notices issued:

<i>Notice Type</i>	<i>Notice No.</i>	<i>Issue Date</i>	<i>Rule Description</i>	<i>Latest Status</i>
NC	E03485	3/11/11	Provide VOC recordkeeping, submit corrected semi-annual monitoring report and annual compliance certification	Company provided requested information/ in compliance
NC	E07489	3/8/12	Provide max heat input ratings for all forming & curing Ovens; year built; make; model #; serial numbers; records of operation of forming oven # 2; and VOC emission records for all IPA & adhesives used in 2011.	Company provided requested information/ in compliance
NOV	P57463	6/26/12	Failure to submit the semi-annual monitoring report on time	NA

Other than the above, the company has been operating in compliance with all District rules and regulations.

Process Description

GFA Flow Coating Operation:

In the proposed GFA flow coating operations, parts to be coated will be manually placed on a rotating fixture, which is equipped with a collection reservoir at the bottom to capture run-off flow coating materials. A continuous stream of liquid coatings will be applied on parts using four identical (10-L Millipore) flow coaters in parallel. Only 10% of applied coatings stay on parts. The remaining 90% of applied coatings is run-off and collected in the reservoir. The collected run-off materials cannot be reused because of product quality concerns. At the end of each flow coating process, the run-off materials are transferred to a vapor tight storage container for later offsite hazardous disposal.

Coated parts are then cured by UV light. A bank of 6-KW total UV lamps are installed at the end of the proposed Monoman robotic arm, which moves over part surfaces for an even exposure of UV light.

Clear coatings will be applied on transparent acrylic parts. VOC emissions from GFA flow coating and curing areas will be vented directly to the atmosphere.



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GFA Spray Coating Operation:

A conventional spray booth and HVLP spray guns are being proposed for this operation, with less than one gallon per day maximum of coatings and solvents to be used. The coated parts will be air dried. PM emissions will be controlled by 2-inch thick dry filters. VOC emissions will be vented directly to the atmosphere.

No facility-wide emission increases are expected from these proposed GFA flow coating, curing, and spray coating operations. All new emissions will be bubbled under the facility wide emission limits. Since the new proposed GFA system provides better production accuracy, slight emission reductions are expected as a result of material saving.

ROG Emission Limits

The company is subject to a facility limit of 3510 pounds of ROG in any one month (Condition F2.1). The operation is also subject to a Rule 442 limit of 833 pounds of ROG in any one month (Condition F2.2).

All new emissions resulting from the new four flow coaters and the spray booth will be bubbled into the above emission limits of 3510 and 833 pounds of ROG in any one month.

The proposed change of conditions, consisting of the conversion from a gallon-per-day limit to a pound-per-day limit, will not result in any emission increases from flow coaters D9 and D10. Therefore, there will be no ROG emission increases facility-wide from the entire project.

The company is proposing a daily equipment limit of 5.25 pounds of ROG emissions from each new flow coater. With these equipment limits, the project is in compliance with BACT (below 36 lbs/day) and not subject to Rule 212(g) public notice.

The company is also accepting a 1-gal/day usage limit of all coatings and solvents used in the new GFA spray booth.

Emission Calculations

New Flow Coaters (D65, D66, D67 & D68):

The coating used in the flow coaters meet the exemption specified in Rule 1124(1)(5) "The provisions of paragraph (c)(1) shall not apply to clear or translucent coatings applied on clear or transparent substrates." The applicant will be using IPA for surface preparation which meets the vapor pressure limits of the rule for



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cleaning operation. Based on multiple tests conducted by the company and observed by District representative on 7-25-03 & 8-27-03, the amount of run-off coatings material collected in reservoirs were determined to be ranging from 92.64% to 94.18% by weight. Based on the above, it was determined that an emission factor of 0.10 (1-90%) to be used for this operation. The following equation determines the ROG emissions from the flow coating and curing operations at this facility:

$$\text{ROG (lb/day)} = \text{Usage (gal/day)} \times \text{VOC (lb/gal)} \times 0.10$$

The applicant is required to use the same emission factor of 0.10 in their calculations to show compliance with applicable emission limits (Condition A63.12).

For each new flow coater, based on a maximum daily emission limit of 5.25 pounds of VOC per day, the following are the VOC emissions to be entered in NSR for each new flow coater:

$$\text{ROG (R1)} = (5.25 \text{ lb/dy}) / (24 \text{ hr/dy}) = 0.22 \text{ lb/hr}$$

$$\text{ROG (R2)} = 0.22 \text{ lb/hr}$$

However, since all new emissions are being bubbled into the monthly facility wide emission limit of 3510 and 833 pounds, the 30DA are manually set to zero.

Existing Flow Coaters (D9 & D10):

From the initial engineering evaluation A/N's 126030-31 of the flow coating equipment, the limit of two gallons per day is equivalent to a limit of 3 pounds of ROG per day. Therefore, based on the proposed maximum daily emission limit of 3 pounds of ROG per day per equipment, the following are the ROG emissions to be entered in NSR for existing flow coaters D9 & D10:

$$\text{ROG (R1)} = (3 \text{ lb/dy}) / (24 \text{ hr/dy}) = 0.125 \text{ lb/hr}$$

$$\text{ROG (R2)} = 0.125 \text{ lb/hr}$$

New GFA Spray Booth (D69):

The spray booth will be limited to one gallon per day. The coating used in the spray booth meet the exemption specified in Rule 1124(1)(5) "The provisions of paragraph (c)(1) shall not apply to clear or translucent coatings applied on clear or transparent



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substrates." The applicant will be using IPA for surface preparation which meets the vapor pressure limits of the rule for cleaning operation. The following are ROG and PM10 emissions from the new GFA booth:

Coating used = 0.5 gal/day

ROG = 7.3 lb/gal

$$\begin{aligned} \text{ROG (R1=R2)} &= 0.5 \text{ gal/day} \times 7.3 \text{ lb/gal} = 3.65 \text{ lb/day} \\ &= 0.15 \text{ lb/hr} \end{aligned}$$

Surface prep = 0.4 gal/day

ROG = 3.66 lb/gal

$$\begin{aligned} \text{ROG (R1=R2)} &= 0.4 \text{ gal/day} \times 3.66 \text{ lb/gal} = 1.46 \text{ lb/day} \\ &= 0.06 \text{ lb/hr} \end{aligned}$$

ROG Total = 5.1 lb/day

$$= 0.21 \text{ lb/hr}$$

PM10 (R1) = 0.00048 lb/hr

PM10 (R2) = 0.00005 lb/hr

However, since all new emissions are being bubbled into the monthly facility wide emission limit of 3510 and 883 pounds, the 30DA are manually set to zero.

Emission Offset Evaluation

Existing Flow Coaters without Increase Throughput (D9 & D10):

In the original permit-to-operate evaluation A/N 126030-31 for the two flow coaters, an entry of 3 lbs/day of ROG was recorded in NSR for each coater. Therefore, external emission offsets still will not be needed since there will be no increase in emissions.

New Flow Coaters and Spray Booth (D65, D66, D67, D68 & D69):

Although the additional new equipment will result in emission increases, external emission offsets will not be needed for this project since the company will manage its usage of coatings and



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solvents to stay in compliance with the existing facility-wide limits of 3510 pounds of ROG in any one month (Condition F2.1) and a Rule 442 limit of 833 pounds of ROG in any one month (Condition F2.2).

BACT Evaluation

Existing and New Flow Coaters (D9, D10, D65, D66, D67 & D68):

The following is a summary of emission limits for flow coaters in this project and the previous two years:

<i>Equipment Description</i>	<i>A/Ns</i>	<i>Device Nos.</i>	<i>ROG Increases (lbs/day)</i>
<i>New Flow Coater No. 1</i>	<i>547847</i>	<i>D65</i>	<i><5.25</i>
<i>New Flow Coater No. 2</i>	<i>547848</i>	<i>D66</i>	<i><5.25</i>
<i>New Flow Coater No. 3</i>	<i>547849</i>	<i>D67</i>	<i><5.25</i>
<i>New Flow Coater No. 4</i>	<i>547850</i>	<i>D68</i>	<i><5.25</i>
<i>Existing Flow Coater</i>	<i>547852</i>	<i>D9</i>	<i>0</i>
<i>Existing Flow Coater</i>	<i>547853</i>	<i>D10</i>	<i>0</i>
<i>Recent 2- year Project</i>	<i>521385</i>	<i>D64</i>	<i><15</i>
<i>TOTAL =</i>			<i><36</i>
<i>BACT COMPLIANCE (<36)</i>			<i>YES</i>

The combined ROG emissions from all the above flow coaters are below the BACT threshold of 36 pounds per day. Therefore, the requirement for add-on control equipment is not needed for this project.

New Spray Booth (D69):

The proposed booth is equipped with filters that are at least two inches thick. Only HVLP spray guns will be used inside the booth. Therefore, this equipment is considered BACT for controlling PM10 emissions.

The proposed booth is subject Condition No. C1.4, limiting total daily maximum usage of coatings and solvents to less than one gallon, equivalent to 5.15 pounds of ROG per day maximum, which is below the threshold of 39 pounds per day for spray booths.



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Rule 1401 Evaluation

New Flow Coaters (D65, D66, D67 & D68):

The following flow coating materials containing various TACs are being proposed for this project. The applicant has proposed the following maximum daily usages in each flow coater:

<i>Material Description</i>	<i>Average</i> <i>(gal/dy)</i>	<i>Maximum</i> <i>(gal/dy)</i>	<i>IPA</i> <i>(wt %)</i>	<i>PGME</i> <i>(wt %)</i>	<i>xylenes</i> <i>(wt %)</i>
<i>FX-411A</i>	2.34	4.55	0.06	0.337	
<i>FX-411B</i>	0.26	0.5		0.75	
<i>FX-167-82</i>	0.88	1.71	0.1		
<i>FX-178-F</i>	2.75	5.36	1		
<i>FX-369</i>	2.75	5.36			
<i>FX-5</i>	0.88	1.71			0.55
<i>FX-313</i>	5.25	10.24	0.68	0.726	
<i>FX-359 Cleaner</i>	0.2	0.39	0.55		

The attached excel worksheet calculates TAC emissions from each of the four new flow coaters. A scaling factor of 0.2541 is used so that the total ROG emissions will be below the equipment limit of less than 5.25 pounds per day. The following is a summary of the calculated results:

<i>Compound</i>	<i>lb/hr</i>
<i>Isopropyl alcohol</i>	1.11E-01
<i>Propylene glycol monomethyl ether</i>	7.34E-02
<i>Xylenes (isomers and mixtures)</i>	7.56E-03

The attached excel worksheet also calculates MICR, HIAs and HICs from each proposed new flow coater. The emissions from the addition of the flow coater resulted in emissions below Tier 1 screening levels:

Cancer/Chronic	Acute
3.40E-02	4.17E-01
Passed	Passed



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Therefore, Rule 1401 compliance is expected for this type of equipment.

New Spray Booth (D69):

The applicant has proposed the following maximum daily usages with the following primer and cleaner, containing the following TACs:

Material Description	Average (gal/dy)	Maximum (gal/dy)	IPA (wt %)	toluene (wt %)	formaldehyde (wt %)	PGME (wt %)	benzene (wt %)	phenol (wt %)	cresol, o- (wt %)
FX-29	0.2	0.5	0.05	0.19	0.07	0.04	0.000004	0.007	0.001
FX-329	0.2	0.4	0.55						

The attached excel worksheet calculates TAC emissions and the following is a summary of the calculated results:

Compound	lb/hr
Isopropyl alcohol	6.84E-02
Toluene (methyl benzene)	3.05E-02
Formaldehyde	1.12E-02
Propylene glycol monomethyl ether	6.43E-03
Benzene (including benzene from gasoline)	6.43E-07
Phenol	1.12E-03
Cresol, o-	1.61E-04

The attached excel worksheet also calculates MICR, HIAs and HICs from the proposed new spray booth. Calculated MICRs for both receptors are less than 1E-6. Calculated HIAs and HICs for all target organs are less than 1.0 for both receptors. Therefore, Rule 1401 compliance is expected for this equipment. The following is a summary of calculated results:

Compound	MICR Residential	MICR Commercial
Isopropyl alcohol		
Toluene (methyl benzene)		
Formaldehyde	8.85E-07	7.08E-07
Propylene glycol monomethyl ether		
Benzene (including benzene from gasoline)	2.41E-10	1.93E-10
Phenol		



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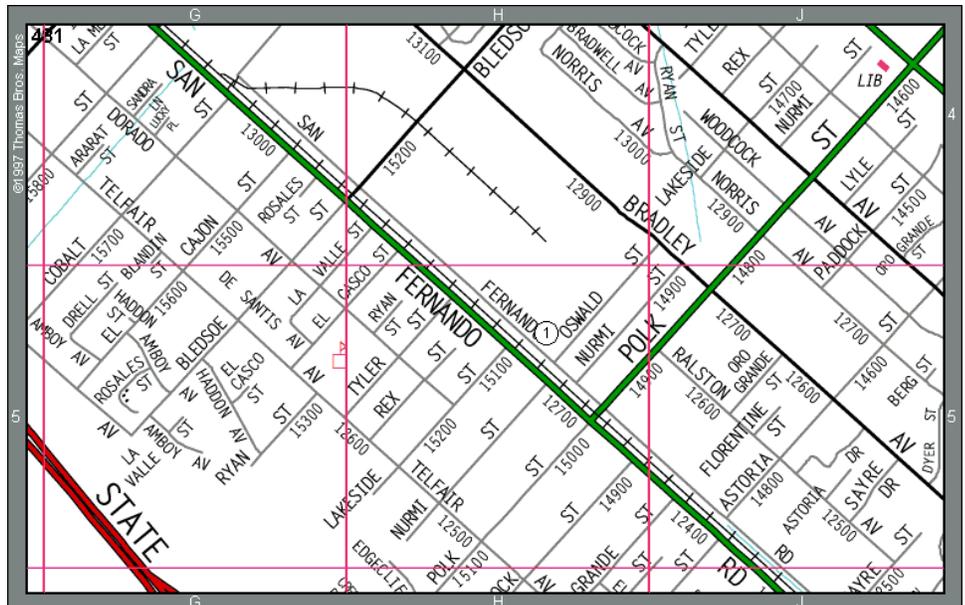
<i>Cresol, o-</i>		
<i>Total</i>	8.85E-07	7.08E-07
	PASS	PASS

Target Organs	Acute	Chronic	Acute Pass/Fail	Chronic Pass/Fail
<i>Alimentary system (liver) - AL</i>		3.46E-04	Pass	Pass
<i>Bones and teeth - BN</i>			Pass	Pass
<i>Cardiovascular system - CV</i>		2.98E-04	Pass	Pass
<i>Developmental - DEV</i>	6.90E-04	5.91E-03	Pass	Pass
<i>Endocrine system - END</i>			Pass	Pass
<i>Eye</i>	1.90E-01		Pass	Pass
<i>Hematopoietic system - HEM</i>	4.13E-07	5.67E-07	Pass	Pass
<i>Immune system - IMM</i>	4.13E-07		Pass	Pass
<i>Kidney - KID</i>		8.16E-04	Pass	Pass
<i>Nervous system - NS</i>	6.89E-04	5.70E-03	Pass	Pass
<i>Reproductive system - REP</i>	6.90E-04		Pass	Pass
<i>Respiratory system - RES</i>	1.87E-02	7.16E-02	Pass	Pass
<i>Skin</i>			Pass	Pass

Rule Evaluation

Rule 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.





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Since no school is located within 1,000 ft, a public notice will not be required.

Rule 212(c)(2): This section requires a public notice for all new or modified facilities that have on-site emission increases exceeding any of the daily maximums as specified by Rule 212(g).

	Maximum Daily Controlled Emissions					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Total Increase (lb/dy)	0	0	0	0	0	0
MAX MDC Limit (lb/dy)	30	40	30	60	220	3
Compliance Status	Yes	Yes	Yes	Yes	Yes	yes

The above table summarizes the emission limits and increases. Since emission increases are less than the limits, a public notice will not be required.

Rule 212(c)(3): There will be increases in TACs. However, the calculated MICR is less than 1E-6 for both receptors. Therefore, a public notice will not be required.

Rule 212(g): This section requires a public notice for all new or modified sources that have equipment emission increases exceeding any of the daily maximums as specified by Rule 212(g).

The proposed project will result in the emission increases:

	Maximum Daily Controlled (MDC) Emissions					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Maximum Per equipment	26	0	0	0	0	0
MAX MDC Limit (lb/dy)	30	40	30	60	220	3
Compliance Status	Yes	Yes	Yes	Yes	Yes	yes

No public notice is required since the emission increase is below the limits.



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- Rule 401: Visible emissions are not expected with the proper operation of the equipment.
- Rule 402: Nuisance is not expected with the proper operation of the equipment.
- Rule 404: Negligible PM emissions are expected from the new D69 spray booth as shown in the attached calculation. Therefore, rule compliance is expected.
- Rule 442: Since the proposed coatings used are exempt from Rule 1124 VOC requirements, they are subject to Rule 442. The facility is subject to a monthly maximum ROG limit of 833 pounds in any one month from all emission sources that are subject to Rule 442. By complying with facility condition F2.2, the company is expected to be in compliance with this Rule.
- Rule 1124: Coatings used are exempt from Rule 1124(c)(1)(A) VOC content requirements per Rule 1124(1)(5) since coatings used at the facility are translucent and applied on transparent substrates.
- IPA is used to clean miscellaneous polycarbonate substrates as surface preparation, in compliance with Rule 1124(c)(1)(A)—the VOC composite partial pressure is 31.5 mm Hg, less than 45 mm Hg.
- Flow coaters and HVLP spray guns complies with Rule 1124(c)(3) transfer efficiency requirement of 65%.
- Rule 1132: Sierracin/Sylmar is a high voc-emitting facility and is subject to the requirements of this rule. This spray booth will meet the exemption from section (c) of this rule by meeting the requirements of 1132(h)(2). The spray booth is limited to 12 lbs of voc per day. The exhaust flow rate from the booth is 3,000 cfm. The exemption requires the booth exhaust flow rate to remain below 10,000 cfm.



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- Rule 1145: Coatings used are exempt from Rule 1145(c)(1) VOC content requirements per Rule 1145(i)(1)(C) since coatings used at the facility are clear or translucent. Flow coaters and HVLP spray guns complies with Rule 1145(c)(3).
- Rule 1171: Acetone is used as equipment clean-up solvent, in compliance with Rule 1171(c)(1)(C).

IPA usage in the flow coaters and the spray booth is exempt from Rule 1171, pursuant to Rule 1171(g)(2)(D), since it is used for surface preparation of aerospace parts prior to coating operations.
- Rule 1303(a): Please see BACT Evaluation section for more details.
- Rule 1303(b)(1): Further air quality modeling analysis will not be needed since negligible PM₁₀ emissions are expected from this project.
- Rule 1303(b)(2): Emissions from this project are bubbled into the exiting facility limit of 3510 pounds of ROG per month. Therefore, external emission offsets will not be needed.
- Rule 1401: Please see Rule 1401 Evaluation section for more details.

Regulation XXX Evaluation

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 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
NOx	40
PM ₁₀	30



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SOx	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 renewal Title V permit shall be accumulated and compared to the above threshold levels. This proposed project is the 2nd permit revision to the renewal Title V permit issued to this facility on 6/7/11. The following table summarizes the cumulative emission increases resulting from all permit revisions since the initial Title V permit was issued:

	HAP	VOC	NOx	PM10	SOx	CO
1 st Revision--Adding D64 Flow Coater	0	0	0	0	0	0
Current Project (Adding 4 New Flow Coaters & 1 PSB)	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40	30	60	220

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a "de minimus significant permit revision" for non-RECLAIM pollutants or HAPs.

Recommendation

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimus 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 the following permit conditions:

Conditions:



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Facility Conditions:

F2.1 THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS FACILITY AS FOLLOWS:

CONTAMINANT	EMISSIONS LIMIT
VOC	LESS THAN OR EQUAL TO 3510 LBS IN ANY ONE MONTH

To ensure compliance with the monthly Volatile Organic Compound (VOC) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

- (1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).
- (2) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from all equipment and operations covered by the monthly emission limit(s). The record shall include any procedures used to account for control device efficiencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.
- (3) The operator shall maintain a single list which includes only the name and address of each person from whom the facility acquired VOC-containing material regulated by the District that was used or stored at the facility during the preceding 12 months.
- (4) The operator shall retain all purchase invoices for all VOC-containing material used or stored at the facility, and all waste manifests for all waste VOC-containing material removed from the facility, for five years.

For the purpose of this condition, the VOC emission limit shall be from all equipment and operations that are required to have written permits or are exempt from written permits pursuant to rule 219.

F2.2 THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS FACILITY AS FOLLOWS:

CONTAMINANT	EMISSIONS LIMIT
VOC	LESS THAN OR EQUAL TO 833 LBS IN ANY ONE MONTH

For the purpose of this condition, the VOC emission limit shall be from all equipment and operations that are subject to rule 442.

To ensure compliance with the VOC Volatile Organic Compound (VOC) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

- (1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).



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(2) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from all equipment and operations covered by the monthly emission limit(s). The record shall include any procedures used to account for control device efficiencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.

Device Conditions:

A63.8 The operator shall limit emissions from this equipment as follows:
CONTAMINANT EMISSIONS LIMIT

VOC Less than 15 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) in this device for coating usage based on total collection efficiency of 90 % by weight.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]
[Devices subject to this condition : D4, D13, D19, D60, D61, D64]

A63.9 The operator shall limit emissions from this equipment as follows:
CONTAMINANT EMISSIONS LIMIT

VOC Less than or equal to 12 LBS IN ANY ONE DAY

For the purpose of this condition and for exemption under Rule 1132(h)(2), the VOC emissions from this equipment shall be defined as a monthly average for each calendar month, calculated by dividing the total emissions from this equipment for the calendar month by the number of calendar days in that month.

If the records generated after the end of any calendar month exceed the emission cap of this condition, the operator shall submit the appropriate applications and achieve compliance pursuant to the requirements specified in Rule 1132. Exceedance of the VOC emission limit of this condition shall not subject this equipment to new source review requirements if the operator complies with all other permit conditions that are applicable to such equipment.

In addition to the recordkeeping requirements of Rule 109, the operator shall keep adequate records to demonstrate compliance with this condition.

[RULE 1132(h)(2) - Exemptions, 3-5-2004; RULE 1132(h)(2) - Exemptions, 5-7-2004]
[Devices subject to this condition : D16, D69]

A63.12 The operator shall limit emissions from this equipment as follows:
CONTAMINANT EMISSIONS LIMIT

VOC Less than 5.25 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) in this device for coating usage based on total collection efficiency of 90 % by weight.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]
[Devices subject to this condition : D65, D66, D67, D68]



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A63.13 The operator shall limit emissions from this equipment as follows:
CONTAMINANT EMISSIONS LIMIT

VOC Less than 3 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) in this device for coating usage based on total collection efficiency of 90 % by weight.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D9, D10]

B27.1 The operator shall not use materials containing any compounds identified in the SCAQMD Rule 1401, as amended 12/07/1990. For the purposes of this condition, compounds are those in Table I of the above mentioned rule, with an effective date of 12/07/1990 or earlier.

[RULE 1401, 12-7-1990]

[Devices subject to this condition : D4, D12, D13, D14, D19, D35, D53, D54]

B59.5 The operator shall not use the following material(s) in this device :
Materials containing any toxic air contaminants (TAC) listed in Table 1 of Rule 1401, with an effective date of September 10, 2010, or earlier, except isopropyl alcohol (CAS No. 67-63-0), xylenes (CAS No. 1330-20-7) and propylene glycol methyl ether (CAS No. 107-98-2).

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D65, D66, D67, D68]

B59.6 The operator shall not use the following material(s) in this device :
Materials containing any toxic air contaminants (TAC) listed in Table 1 of Rule 1401, with an effective date of September 10, 2010, or earlier, except benzene (CAS No. 71-43-2), formaldehyde (CAS No. 50-00-00), o- cresol (CAS No. 95-48-7), phenol (CAS No. 108-95-2), isopropyl alcohol (CAS No. 67-63-0), toluene (CAS No. 108-88-3) and propylene glycol methyl ether (CAS No. 107-98-2).

[RULE 1401, 9-10-2010]

[Devices subject to this condition : D69]

C1.4 The operator shall limit the coating and solvent usage to no more than 1 gallon(s) per day.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D16, D69]

C6.1 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, does not exceed 0.25 inches water column.

To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the filters.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D14, D16, D69]



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D182.2 The operator shall test this equipment in accordance with the following specifications:

The exhaust flow rate from this equipment shall be less than 10,000 SCFM. If the exhaust fan of this spray booth is repaired, modified, or replaced, the operator shall conduct tests pursuant to an appropriate AQMD approved test method to determine the exhaust flow rate within 60 days of such repair, modification, or replacement

[RULE 1132(h)(2) - Exemptions, 3-5-2004; RULE 1132(h)(2) - Exemptions, 5-7-2004]
[Devices subject to this condition : D16, D69]

D322.1 The operator shall perform a weekly inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]
[Devices subject to this condition : D14, D16, D69]

E175.1 The operator shall not use this equipment unless all exhaust air passes through the following:

Filter media at least 2 inches thick

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]
[Devices subject to this condition : D14, D16, D69]

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant Rule Rule/Subpart
VOC District Rule 109
PM District Rule 481

[RULE 109, 5-2-2003; RULE 481, 1-11-2002]
[Devices subject to this condition : D14, D15, D16, D18, D55, D69]

H23.7 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant Rule Rule/Subpart
VOC District Rule 109
VOC District Rule 442

[RULE 109, 5-2-2003; RULE 442, 12-15-2000]
[Devices subject to this condition : D4, D12, D13, D19, D57, D60, D61, D62, D64, D65, D66, D67, D68]

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Daily usage of coatings and solvents

[RULE 109, 5-2-2003; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]



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[Devices subject to this condition : D4, D6, D9, D10, D12, D13, D16, D19, D53, D54, D60, D61, D64, D65, D66, D67, D68, D69]

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Material safety data sheets for all coatings and solvents used at this facility shall be kept current and made available to district personnel.

[RULE 109, 5-2-2003; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D4, D12, D13, D14, D19, D57, D60, D61, D64, D65, D66, D67, D68, D69]

K67.4 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

the date, time and description of any maintenance or repairs resulting from the inspection

the name of the person performing the inspection and/or maintenance of the filter media

the date, time and results of the inspection

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]
[Devices subject to this condition : D14, D16, D69]

K67.5 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

weekly record of pressure drop across the filter media

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]
[Devices subject to this condition : D14, D16, D69]