

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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ENGINEERING DIVISION

APPL. NOS.

DATE

531841

05/24/12

APPLICATION PROCESSING AND CALCULATIONS

PROCESSED BY

CHECKED BY

ABDI MAJIDIFAR

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## PERMIT TO CONSTRUCT/OPERATE

**APPLICANT'S NAME** LA City, Hyperion Treatment Plant

**MAILING ADDRESS** 12000 Vista Del Mar  
Playa Del Mar, CA 90293

**EQUIPMENT LOCATION** Same

### **EQUIPMENT DESCRIPTION**

MODIFICATION OF THE SPRAY BOOTH (P/O F19609), BINKS, MODEL NO. WE-14-10-T-LH, WATER WASH TYPE, 14'-0" W. X 12'-7" L. X 12'-2" H., ONE 7.5 HP WATER RECIRCULATING PUMP, AND ONE 7.5 HP EXHAUST FAN, BY CONVERTING WATER WASH TYPE SPRAY BOOTH TO DRY FILTRATION TYPE SPRAY BOOTH CONSISTING OF :

SPRAY BOOTH, FLOOR TYPE, BINKS, MODEL NO. 14-10-T, 14'-0" W. X 20'-0" L. X 10'-2" H., WITH TWENTY FOUR 20" W. X 25" L. X 0'-5" THICK EXHAUST FILTERS, AND ONE 15-HP EXHAUST FAN.

### **HISTORY**

Application No. 531841 was filed on 2/1/12 for modification of an existing spray booth with an active PO # F19609 (see attached copy) at the above facility.

### **PROCESS DESCRIPTION**

The parts such as plastic/fiberglass and metal parts are sprayed in the booth. During the coating operation, the blower will draw the air from the booths through the filters. The coated parts are then air dried.

## EVALUATION

Given:

Operating schedule (max.): 8 hrs/day, 5 days/wk, 52 wks/yr

Note: Total of 6 gals/day of coatings & solvents (assuming 3 gals/day for each coating & solvent) to be used in the evaluation based on the limit in the existing permit F19609.

### Emissions:

Assuming Transfer Efficiency of 65% for HVLP Spray Guns, 50% fallout, and Filter Efficiency of 90%.

### Topcoat:

Coating VOC = 0.79 lb/gal

Material VOC = 0.57 lb/gal

PM = 11.35 lbs/gal

### ROG:

$R1 = R2 = 3 \text{ gals/day} \times 0.57 \text{ lb/gal}$

$= 1.71 \text{ lbs/day} \times 1 \text{ day}/8 \text{ hrs}$

$= 0.21 \text{ lb/hr}$

$= 444.6 \text{ lbs/yr}$

### PM:

$R1 = 11.35 \text{ lbs/gal} \times 3 \text{ gals/day} \times (1 - 0.65) \times (1 - 0.5)$

$= 5.96 \text{ lbs/day}$

$= 0.74 \text{ lb/hr}$

$R2 = 0.74 \text{ lb/hr} \times (1 - 0.9)$

$= 0.074 \text{ lb/hr}$

$= 0.59 \text{ lb/day}$

$= 154 \text{ lbs/yr}$

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PM10 = 0.5 PM (assume)

R1 = 0.37 lb/hr  
= 2.96 lbs/day

R2 = 0.037 lb/hr  
= 0.296 lb/day  
= 77 lbs/yr

Primer:

Coating VOC = 0.55 lb/gal  
Material VOC = 0.44 lb/gal  
PM = 11.99 lbs/gal

ROG:

R1 = R2 = 3 gals/day x 0.44 lb/gal  
= 1.32 lbs/day x 1 day/8 hrs  
= 0.165 lb/hr  
= 343 lbs/yr

PM:

R1 = 11.99 lbs/gal x 3 gals/day x (1 - 0.65) x (1 - 0.5)  
= 6.29 lbs/day  
= 0.786 lb/hr

R2 = 0.786 lb/hr x (1 - 0.9)  
= 0.0786 lb/hr  
= 0.629 lb/day  
= 164 lbs/yr

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PM10 = 0.5 PM (assume)

R1 = 0.393 lb/hr  
= 3.144 lb/day

R2 = 0.0393 lb/hr  
= 0.314 lb/day  
= 82 lbs/yr

Emiss. Summary

	<u>R1</u>		<u>R2</u>		
	<u>lb/hr</u>	<u>lb/day</u>	<u>lb/hr</u>	<u>lb/day</u>	<u>lb/yr</u>
ROG	0.375	3.03	0.375	3.03	787
PM	1.53	12.25	0.15	1.22	318
PM10	0.76	6.1	0.076	0.61	159

Note:

The ROG emissions of 1.49 lbs/hr & 11.92 lbs/day reported in the existing permit evaluation will be reported in the NSR for the above application.

Screening Risk Assessment:

Since the proposed modifications will not result in any emissions increase (the coatings & solvents usage limit of 6 gals/day stated in the existing permit will remain the same), screening analysis is not required.

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**RULES COMPLIANCE****RULE 212**

Public Notice not required (no schools within 1,000 ft. of the property).

**RULE 401**

Visible emissions from this equipment are expected to be minimal.

**RULE 402**

No nuisance complaints are expected from the operation of this equipment.

**RULE 404**

By considering the transfer efficiency, fallout amount, and the filter efficiency, the max. concentration of PM will be much less than the allowable amount. Compliance.

**RULES 1104, 1106, 1107, 1113, 1151, AND 1171**

The company will be required to comply with these rules as part of the permit conditions.

**Reg. XIII****BACT:**

This booth is equipped with exhaust filters. This control is deemed to be BACT for the control of particulates matter.

**RULE 1401**

The proposed modifications will not result in emissions increase, therefore, cancer risk screening is not required.

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## RECOMMENDATION

Issuance of a Permit to Construct/Operate subject to the following permit conditions is recommended.:

### PERMIT CONDITIONS

Please see Sample Permit for Permit Conditions for this equipment.