



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages 9	Page 1
A/N see below	Date 2-21-08
Processed by RNL	Checked by

Deminimus Significant Title V Permit Revision
New Constructions &
Rule 1401 Change of Conditions
Open Spray Systems

Legal Owner
or Operator:

SILVER CREEK INDUSTRIES, INC
195 E. MORGAN STREET
PERRIS, CA 92571-3112

ID: 147128

Equipment

Location: 195 E. MORGAN STREET, PERRIS, CA 92571-3112

Equipment Description:

A/N 476108
Title V Permit Revision (non RECLAIM)

A/N 476109 (New Construction, PC/PO)
OPEN SPRAY SYSTEM NO. 5, CONSISTING OF:
1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

A/N 476110 (New Construction, PC/PO)
OPEN SPRAY SYSTEM NO. 6, CONSISTING OF:
1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

A/N 476111 (New Construction, PC/PO)
OPEN SPRAY SYSTEM NO. 7, CONSISTING OF:
1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

A/N 476139
(Change of Condition & Equipment Modification, Previous PO No. F82589, A/N 453273)
OPEN SPRAY SYSTEM NO. 1, CONSISTING OF:
1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

~~OPEN SPRAY SYSTEM NO. 1, WITH ONE BINKS, MODEL B-8, PUMP AND TWO MACH SL HVLP SPRAY GUNS.~~

A/N 476140
(Change of Condition & Equipment Modification, Previous PO No. F82590, A/N 453274)
OPEN SPRAY SYSTEM NO. 2, CONSISTING OF:
1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

~~OPEN SPRAY SYSTEM NO. 2, WITH ONE BINKS, MODEL B-8, PUMP AND TWO MACH SL HVLP SPRAY GUNS.~~



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages 9	Page 2
A/N see below	Date 2-21-08
Processed by RNL	Checked by

A/N 476141

(Change of Condition & Equipment Modification, Previous PO No. F82591, A/N 453275)

OPEN SPRAY SYSTEM NO. 3, CONSISTING OF:

1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

~~OPEN SPRAY SYSTEM NO. 3, WITH ONE BINKS, MODEL B 8, PUMP AND TWO MACH SL HVLP SPRAY GUNS.~~

A/N 476142

(Change of Condition & Equipment Modification, Previous PO No. F82592, A/N 453276)

OPEN SPRAY SYSTEM NO. 4, CONSISTING OF:

1. PUMP, BINKS, INFINITY 30:1
2. TWO HVLP GUNS, BINKS, AA 4000

~~OPEN SPRAY SYSTEM NO. 4, WITH GRACO, MODEL 220 954, 207 706, TWO HVLP SPRAY GUNS.~~

History

The company manufactures school classroom modular buildings. It currently operates four open spray systems with a facility-wide monthly VOC limit of 2040 pounds, a facility-wide monthly PM10 limit of 667 pounds, and an equipment daily PM10 limit of 9.84 pounds.

In this project, the company is proposing the following:

1. Adding three additional open spray systems that will be subject to the same VOC and PM10 limits (see above), A/Ns 476109-476111.
2. Updating a Rule 1401 condition for the existing four open spray permits to allow for the use of ethylene glycol monobutyl ether (EGME), A/Ns 476139-476142.
3. Replacing existing pumps and spray guns in the existing four open spray permits, A/Ns 476139-476142.

The proposed project will be the first revision to the Renewed Title V Facility Permit issued to the company on 1-20-08.

The facility has been subject to both self-reporting requirements and AQMD inspections. The facility has had no citizen complaints filed or Notices of Violation issued in the last two years. However, the facility was issued a Notice to Comply on 3/8/2007 requiring the applicant to provide monthly VOC emission records for the previous twelve months. The applicant provided the records and is currently operating in compliance with applicable rules and regulations.



Pages 9	Page 3
A/N see below	Date 2-21-08
Processed by RNL	Checked by

Process Description

The company has a total of five production lines each with floor tract similar to a railroad tract. Rectangular metal beams are cut and welded together to form a metal frame, which is then placed on top of a dolly that rolls on the tract. Along the tract, installation of flooring, outside walls, and roof around the metal frame is carried out manually in stages to form a modular building. Next, electrical wiring, drop ceiling frames, air conditioning ducting, insulation and interior walls are installed to the modular building. Interior walls on some of the modular buildings are not painted and left to the user to finish. Finally, the exterior walls are painted with either rollers or spray guns, with rollers being used most of the time.

The above manufacturing steps are not always in the above order. Soon after the outside walls and roof are installed, the modular building can be pulled out to another tract where the exterior walls are painted. After the exterior painting is done, the installation of interior components is then resumed. To move a modular building from tract to tract, a large overhead crane is used. Because of the size of this large crane and the size of each modular building (some of the buildings are 70 feet long), the use of a spray booth to paint exterior walls is not feasible.

Each new open spray system will also consist of a pump serving up to two air assisted airless spray guns. A pressure pot is not used in these systems. For these guns to be considered HVLPs, the fluid pressures from the pump and the gun inlet air pressures are maintained below 4000 and 15 PSI respectively (Conditions Nos. 6 & 7) so that the tip air pressure is less than 10 PSI.

Emission Calculations

The following is the proposed operating schedule for each open spray system:

<u>hr/dy</u>	<u>dy/wk</u>	<u>wk/yr</u>	
10	5	50	<-- <u>average</u>
24	7	52	<-- <u>maximum</u>

The company is subject to the following PM10 Limits:

1. 667 pounds per month for the facility
2. 9.84 pounds per day per open spray system



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages 9	Page 4
A/N see below	Date 2-21-08
Processed by RNL	Checked by

The applicant is proposing to use the following coatings:

Coatings	Density (lb/gal)	VOC (lb/gal)	Solid (lb/gal)	EGME (% by weight)
306-Series Flat	12.3	0.32	7.749	5
WT-1021 Primer	10.4	0.53	4.836	0

Transfer efficiency = 75%

Fall out = 20%

PM10 = 50% PM

Maximum Potential of Each Open Spray System (in gallons per day):

$$= (9.84 \text{ lb/dy}) / [7.749 \text{ lb/gal} \times (1-75\%) \times (1-20\%) \times 50\%]$$

$$= 12.69 \text{ gal/dy}$$

For NSR Data Entry:

$$\text{ROG (R1=R2)} = (12.69)(0.53) / (24) \text{ lb/hr} = 0.28 \text{ lb/hr}$$

$$\text{PM10 (R2)} = 9.84 / 24 \text{ lb/hr} = 0.41 \text{ lb/hr}$$

$$\text{PM10 (R1)} = 0.41 / (1-75\%)(1-20\%)(50\%) = 4.1 \text{ lb/hr}$$

Maximum Potential Facility-wide (in gallons per month):

$$= (667 \text{ lb/mon}) / [7.749 \text{ lb/gal} \times (1-75\%) \times (1-20\%) \times 50\%]$$

$$= 860.76 \text{ gal/mon}$$

For AEIS Data Entry:

$$\text{ROG (R1=R2)} = 1/7 \times (860.76)(0.53) / (10 \times 5 \times 50 / 12) \text{ lb/hr} = 0.31 \text{ lb/hr}$$

$$\text{PM10 (R2)} = 1/7 \times (667) / (10 \times 5 \times 50 / 12) \text{ lb/hr} = 0.46 \text{ lb/hr}$$

$$\text{PM10 (R1)} = 0.46 / (1-75\%)(1-20\%)(50\%) = 4.6 \text{ lb/hr}$$

For Rule 1401 Assessment:

$$\text{EGME (MHC)} = 12.69 \times 12.3 \times 5\% / 24 \text{ lb/hr} = 0.33 \text{ lb/hr}$$

$$\text{EGME (MYC)} = (860.76 / 7) \times 12 \times 12.3 \times 5\% / 2000 \text{ ton/yr} = 0.454 \text{ ton/yr}$$



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages	9	Page	5
A/N	see below	Date	2-21-08
Processed by	RNL	Checked by	

Rule 1401 Compliance Determination

The attached excel worksheets calculate HIAs and HICs from each open spray system. Calculated HIAs and HICs for all target organs are less than 1.0 for both receptors. Therefore, Rule 1401 compliance is expected for this project.

Public Notice Rule 212(g) Determination

Each open spray system is subject to an equipment cap of PM10 equal to 9.84 pounds per day, which is equivalent to a VOC cap per equipment of 6.72 pounds per day (0.28 lb/hr X 24 hr/dy from Emission Calculations Section). Since the equipment cap of VOC is less than 30 pounds per day, a Rule 212(g) notice will not be required for this project.



Pages 9	Page 6
A/N see below	Date 2-21-08
Processed by RNL	Checked by

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.

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).

MDC emissions per equipment are expected from the proposed new construction. The following summarizes the limit and MDC:

	Maximum Daily Controlled (MDC) Emissions					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Per project	7	0	10	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 MDC is not more than the limits.

Rule 401: Visible emissions are not expected with the proper operation of the equipment.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages 9	Page 7
A/N see below	Date 2-21-08
Processed by RNL	Checked by

- Rule 402: Nuisance is not expected with the proper operation of the equipment.
- Rule 481: Air assisted airless guns are operated at this facility with the fluid pressures from the pump and the gun inlet air pressures maintained below levels described in Conditions Nos. 6 & 7 so that they are considered HVLPs, in compliance with Rule 481(c)(2).
- Rule 1107: The proposed coatings contain a maximum VOC of 64 g/L VOC, in compliance with the limit of 275 g/L of Rule 1107(c)(2) for a pre-fabricated one-component architectural coating.
Air assisted airless guns are operated in compliance with Conditions Nos. 6 & 7. Therefore, they are considered HVLP guns, in compliance with Rule 1107(c)(1).
- Rule 1136: The proposed coatings contain a maximum VOC of 64 g/L VOC, in compliance with the limit of 275 g/L of Rule 1136(c)(1)(A) for top coats and primers.
Air assisted airless guns are operated in compliance with Conditions Nos. 6 & 7. Therefore, they are considered HVLP guns, in compliance with Rule 1136(c)(2).
- Rule 1171: Water is used in cleaning application equipment, in compliance with Rule 1171.
- Rule 1303(a): BACT Due to the size of the large crane and the size of each modular building, the use of a spray enclosure around the spray areas is not feasible. The company is required to use only super low VOC materials at the facility, containing less than 120 g/L VOC of materials (Condition No. 3). Compliance.
- Rule 1303(b)(1): MODELING The applicant is subject to Condition No. 3, which limits the PM10 emission from each piece of equipment to less than 9.84 pounds per day (or 0.41 lb/hr in 24 hrs/dy), below the screening limit specified in Table A-2 of Rule



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages 9	Page 8
A/N see below	Date 2-21-08
Processed by RNL	Checked by

1303. Therefore, further air quality modeling analysis is not needed for this project.

Rule 1303(b)(2): OFFSET The proposed project will not result in any facility-wide emission increases of any criteria pollutants. Therefore, external emission offsets are not needed for this project.

Rule 1401: The proposed coatings contain EGME. However, calculated HIAs and HICs for both receptors are less than 1.0, in compliance with Rule 1401.

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
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 of 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 1st permit revision to the renewed Title V permit issued to this facility on 1-20-08. The following table summarizes the cumulative emission increases resulting from all permit revisions since the renewed Title V permit was issued:



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

Pages 9	Page 9
A/N see below	Date 2-21-08
Processed by RNL	Checked by

	HAP	VOC	NOx	PM10	SOx	CO
1 st and Current Revision	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.