



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

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De Minimis Significant Title V Permit Revision New Construction

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 483629

Title V Permit Revision (non RECLAIM)

A/N 483630

(New Construction, PC/PO)

SPRAY BOOTH, BLEEKER, SABB-46, FLOOR TYPE, 14'-4" W. X 46'-2" L.
X 10'-0" H., WITH EIGHTEEN 20" X 20" EXHAUST FILTERS AND ONE 2-HP
EXHAUST FAN.

History

The company manufactures school classroom modular buildings. It currently operates seven 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 to add one additional spray booth that will be subject to the above facility-wide VOC and PM10 limits. The booth will also be subject to an equipment daily VOC limit of 15 pounds.

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

Based on the District compliant tracking database, the company is currently operating in compliance with all applicable rules and regulations.

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. The proposed spray booth will be used mainly to apply coatings to the metal frames. However, coating of wood articles will also be conducted in the spray booth.

The painted frame is then placed on top of a dolly that rolls on the tract. Along the tract, installation of flooring, outside walls,



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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.

Emission Calculations

The following is the proposed operating schedule:

<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 spray booth is subject to the following limits:

1. 667 pounds of PM10 per month, facility-wide
2. 15 pounds of VOC per day, from the use of all coatings and solvents.

The applicant is proposing to use the following coatings:

Coatings	Density (lb/gal)	Solid (lb/gal)	Material VOC (lb/gal)	Coating VOC (g/L)	EGME (% by weight)
306-Series Flat	12.3	7.749	0.32	49.2	0
WT-1021 Primer	10.4	4.836	0.53	120	5
TIS-25	9.4	2.726	0.54	64.8	0

Dry Filter Control Efficiency = 90%

HVLP Transfer efficiency = 65%

Fall out = 20%

PM10 = 50% PM



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For AEIS Data Entry:

ROG (R1=R2) = (15)/(24) lb/hr = 0.625 lb/hr

PM10 (R2) = (15/0.32)(7.749)(50%)/(24) lb/hr = 7.57 lb/hr

PM10 (R1) = (7.57)(1-65%)(1-20%)(1-90%) = 0.21 lb/hr

For Rule 1401 Assessment:

Ethylene glycol monobutyl ether(MHC) = (15/0.32)(10.4)(5%)/(24) lb/hr = 1.02 lb/hr

Rule 1401 Compliance Determination

The attached excel worksheets calculate HIAs and HICs from the new spray booth. 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.

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.



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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	15	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 MDC is not more than the limits.

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 1107: The proposed coatings contain a maximum VOC of 120 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.

Using of HVLP guns is in compliance with Rule 1107(c)(1).

Rule 1136: The proposed coatings contain a maximum VOC of 120 g/L VOC, in compliance with the limit of 275 g/L of Rule 1136(c)(1)(A) for top coats and primers.

Using of HVLP guns is in compliance with Rule 1136(c)(2).



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- Rule 1171: Water and acetone is used in cleaning application equipment, in compliance with Rule 1171.
- Rule 1303(a): BACT The applicant is accepting a VOC daily limit of 15 pounds per day, in compliance with BACT for controlling VOC emissions. The booth is equipped with filters that are at least 2-inch thick, in compliance with BACT for controlling PM emissions.
- Rule 1303(b)(1): MODELING The calculated PM10 emissions of 0.21 lb/hr are below the screening limit specified in Table A-2 of Rule 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



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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 2nd permit revision to the renewal 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 renewal Title V permit was issued:

	HAP	VOC	NOx	PM10	SOx	CO
1 st Revision	0	0	0	0	0	0
2nd 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 Minimis 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 Minimis Significant Permit Revision", it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]



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3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS ALL EXHAUST AIR PASSES THROUGH FILTER MEDIA AT LEAST 2 INCHES THICK.

[RULE 1303(a)(1)-BACT]

4. A GAUGE SHALL BE INSTALLED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE EXHAUST FILTERS. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 0.25 INCH OF WATER.

[RULE 1303(a)(1)-BACT]

5. THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM THIS EQUIPMENT AND ASSOCIATED OPERATIONS SHALL NOT EXCEED 15 POUNDS IN ANY ONE DAY. ASSOCIATED OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, SURFACE PREPARATION AND EQUIPMENT CLEAN-UP.

[RULE 1303(a)(1)-BACT]

6. IN ADDITION TO THE RECORD KEEPING REQUIREMENTS OF RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY THE DAILY VOC EMISSIONS IN POUNDS AND THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS). THESE RECORDS SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT, SHALL BE RETAINED AT THE FACILITY FOR AT LEAST FIVE YEARS, AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[RULE 109, 1303(a)(1)-BACT, 1303(b)(2)-OFFSET]

7. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE I WITH AN EFFECTIVE DATE OF MARCH 7, 2008 OR EARLIER, EXCEPT ETHYLENE GLYCOL BUTYL ETHER (CAS NO. 111-76-2).

[RULE 1401]

Emissions and Requirements:

8. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 109

VOC: RULE 1107, SEE APPENDIX B FOR EMISSION LIMITS

VOC: RULE 1136, SEE APPENDIX B FOR EMISSION LIMITS

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

PM: RULE 481