SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGE	1
	APPL. NO.	See below
ENGINEERING AND COMPLIANCE DIVISION	PROCESSED BY	HD
	CHECKED BY	
APPLICATION PROCESSING AND CALCULATION	DATE	04/30/13

PERMIT TO CONTRUCT EVALUATION

Applicant's Name	LAMPS PLUS/PACIFIC COAST LIGHTING
Company ID	800428
Mailing Address	20250 PLUMMER ST., CHATSWORTH, CA 91311
Equipment Address	SAME AS ABOVE

EQUIPMENT DESCRIPTION:

A/N 549447 (Change of Conditions- Previous Permit no. M60953)

SPRAY BOOTH, FLOOR TYPE, BLEEKER, MODEL NO. F24-8-10HV, FLOOR TYPE, 24'-0" W. X 10'-0" L. X 8'-0" H., WITH FIFTY - SIX 20" X 20" EXHAUST FILTERS, AND TWO 3 H.P. EXHAUST FANS.

A/N 549448 (Change of Conditions- Previous Permit no. F70753)

SPRAY BOOTH, FLOOR TYPE, BLEEKER, MODEL NO. F-32-8-10-HV, 16'-0" W. X 10'-0" L. X 8'-0" H., WITH THIRTY- SIX 20" X 20" EXHAUST FILTERS AND ONE 3 H.P. EXHAUST FAN.

A/N 549087
TITLE V REVISION APPLICATION, DEMINIMIS SIGNIFICANT PERMIT REVISION.

BACKGROUND:

Lamps Plus submitted the permit applications as Class I (Change of Conditions) on 03/29/13 for Permit to Construct and operate two existing spray booths operating under permit nos. M60953 & F70753. The facility is requesting to add Rule 1145 (Plastic, Rubber, Leather, Glass Coatings) to the existing spray booths so it can apply coatings to glass substrates. They will also be using a new spray gun for this product. This is an existing facility operating under EPA's Title V Facility permit. This facility has permits to operate for two Spray Booths and an emergency engine under its facility permit. The facility requested the application be processed under District's expedited permit processing program per Rule 301 (v).

This is a Title V facility and currently operates under a Title V facility permit that was issued on July 23, 2008. Review of the compliance file for this facility reveals that there are no records of nuisance complaints reported in the last two years. The facility was issued a notice to comply E06668 (Failure to Submit SAM-500 form for the period of January 1, 2010, through June 30, 2010) in June 2011. The facility submitted the form on 7/6/11 and hence the NC was resolved.

In addition, the company has also applied for a new construction permit for an Emergency Engine (a/no 549088) for which a separate permit evaluation is conducted. However, a/no. 549087 will serve as Title V revision application for all 3 applications (549088, 549447-8).

PROCESS DESCRIPTION:

The facility is a manufacturer of decorative lighting products. The existing spray booths are used to apply coatings to ceramic, metal and wood lamp bases. The company is now proposing to apply coatings to glass substrates. District Rule 1145 is applicable in that case. Since the existing booth permits do not allow the company to paint glass, the applications were filed to include Rule 1145 to the existing spray booths.

The glass coating process consists of using a SATAjet 1000 K RP spray gun with a wand extension. The coatings (Rule 1145 compliant) will be sprayed to custom paint the inside of glass lamp bases. The maximum opening of the lamp bases is about 8" in diameter. In case the opening is larger than 8", the company plans to use an adapter to reduce the opening size in order to prevent potential excessive overspray.

The SATAjet 1000 RP spray gun does not meet the definition of HVLP and has not been previously approved for Rule 1145 (it has been approved in Europe for 78% transfer efficiency, and the SATAjet 3000 RP has been approved for Rule 1151.) However, the company demonstrated to the District's satisfaction during a live presentation that the SATAjet 1000 K RP spray gun had a transfer efficiency at least as efficient as an HVLP gun and therefore approved for this particular application under Rule 1145 (c) (3) (G). In the demonstration, the gun with wand extension was used to paint the inside of a glass lamp base in the booth and was attended by district representatives (Field report in Attachment A).

The maximum operating hours are 24 hr/day, 7 days/week, and 52 weeks/yr. The facility has a facility-wide maximum VOC limit of 136 pounds per day with each spray booth having 68 pounds/day of VOC limit each. The company plans to stay within those emissions limits with the proposed project so there is no increase in equipment or facility-wide emissions.

EMISSIONS AND ANALYSIS:

Since the each spray booth has 68 pounds/day limit and company intends to stay within the limits, the maximum VOC emissions will be:

68 pounds/day / 24 hours/day = 2.83 pound/hr, 24,723 pounds/year.

RULES:

RULE 212, PUBLIC NOTIFICATION
PARAGRAPH 212(c) (1):

This paragraph 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. As shown on the digital map of the facility, this facility is not located within 1000 feet of from the outer boundary of a school. Therefore, a 30-day public notice period will not be required under this paragraph.

PARAGRAPH 212(c) (2):
The equipment will not result in on-site emission increase exceeding the daily maximums for VOC and PM10 emissions as specified in Rule 212(g). Therefore, a 30-day public notice period will not be required under this paragraph.

PARAGRAPH 212(c) (3):
There is no increase in toxic emissions due to the proposed project. Therefore, a 30-day public notice period will not be required under this paragraph.

RULE 401, VISIBLE EMISSIONS
With the proper use of the spray booth, no visible emissions are expected.

RULE 402, NUISANCE
With the proper operation of the spray booth, no nuisance problems are expected at this facility. Compliance with this rule is expected.

RULES 1107 & 1136, Metal and Wood Coating
There is no change in the metal and wood coating operations in this booth due to this change of condition. Based on the last inspector's report in 2012, compliant coatings and HVLP spray guns were used. Compliance with these rules is expected.

RULE 1145, Plastic, Rubber, Leather, and Glass Coatings
PARAGRAPH (c) (1), VOC CONTENT OF COATINGS
The company will be using coatings which comply with the requirements of this rule as indicated by the MSDS submitted with the application. Therefore, compliance with this section is expected.

PARAGRAPH (c) (3), TRANSFER EFFICIENCY
The facility, to the satisfaction of the District, has demonstrated the application method used to coat the glass substrates has at least equivalent or better transfer efficiency to HVLP pursuant to (c) (3) (G). (See field evaluation report.) Therefore, compliance with the requirements of this paragraph is expected.

RULE 1171, SOLVENT CLEANING OPERATIONS
The company will use acetone as cleanup solvent which is not a VOC as defined by the rule. Therefore, compliance with this rule is expected.

RULE 1401 - TOXICS

There is no increase in toxic emissions as a result of this change, therefore exempt under (g) (1) (B) – modification with no increase in risk. The previous permits were not subject to Rule 1401, therefore no toxic conditions will be imposed on these permits.

Regulation XXX:
The installation of new emergency engine along with change of conditions on existing booths is considered as a "de minimis permit revision" to the Title V permit for this facility.

Rule 3000(b)(6) defines a "de minimis permit revision" as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants (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
PM10	30
SOx	60
CO	220

To determine if a project is considered as a "deminimis" 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 initial Title V permit shall be accumulated and compared to the above threshold levels. This proposed project is the 2nd permit revision to the initial Title V permit issued to this facility on July 23, 2008. The following table summarizes the cumulative emission increases resulting from all permit revisions since the initial Title V permit was issued.

Title V Permit Revision Summary

	Revision	HAP	VOC	NO_x	PM_{10}	SO_x	CO
1st	Permit Revision: Installation of 1 New Emergency Engine (a/no. 539897).	**0**	**0**	**0**	**0**	**0**	**0**
2nd	Permit Revision: Installation of 1 New Emergency Engine and change of condition on 2 Spray Booths (a/nos. 549088, 549447-8).	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 the permit revisions since the initial Title V are not greater than any of the emission threshold levels, this proposed project is considered as a "deminimis permit revision".

CONCLUSION:

The proposed project is expected to comply with all applicable District Rules and Regulations. Also, since the proposed project is considered as a "deminimis permit revision", it is exempt from the public participation requirements under Rule 3006 (b). A proposed facility permit incorporating this permit revision will be submitted to EPA for a 45-day review period pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit with Permits to Construct for these two spray booths in Section D will be issued to this facility subject to the conditions below:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE 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]

3. THIS SPRAY BOOTH 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 SHALL NOT EXCEED 68 POUNDS IN ANY ONE DAY. [RULE 1303(b)(2)-OFFSET]

6. THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY THE DAILY VOC EMISSIONS IN POUNDS, THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS), AND THE SUBSTRATE TO WHICH THE MATERIAL IS APPLIED. [RULE 109, 1303(b)(2)-OFFSET]

7. WHEN GLASS SUBSTRATES ARE COATED IN THIS EQUIPMENT, ONLY THE INSIDE OF GLASS LAMP BASES SHALL BE COATED USING ONLY A SATAjet 1000K RP SPRAY GUN. [RULE 1145]

8. THE AIR PRESSURE SUPPLIED TO THE SATAjet SPRAY GUN USED TO COAT THE GLASS LAMP BASES SHALL NOT EXCEED 16 PSIG. A PRESSURE GAUGE SHALL BE ATTACHED TO THE SPRAY GUN ASSEMBLY TO ACCURATELY MEASURE THE AIR PRESSURE WHENEVER THE SPRAY GUN IS IN OPERATION. [RULE 1145]

9. THE GLASS LAMP BASES COATED IN THIS EQUIPMENT SHALL NOT HAVE AN OPENING OF GREATER THAN 8 INCHES OF DIAMETER. IF THE OPENING IS LARGER THAN 8 INCHES IN DIAMETER, AN ADAPTER SHALL BE USED TO REDUCE THE SIZE OF THE OPENING TO 8 INCHES OR SMALLER. [RULE 1145]

10. THE SPRAY GUN TRIGGER ON THE SATAjet SPRAY GUN SHALL BE RELEASED BEFORE THE SPRAY GUN EXTENSION NOZZLE IS REMOVED FROM INSIDE THE GLASS LAMP BASE.

Periodic Monitoring:

11. 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. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

    a. THE NAME OF THE PERSON PERFORMING THE INSPECTION AND/OR MAINTENANCE OF THE FILTER MEDIA;
    b. THE DATE, TIME AND RESULTS OF THE INSPECTION; AND
    c. THE DATE, TIME AND DESCRIPTION OF ANY MAINTENANCE OR REPAIRS RESULTING FROM THE INSPECTION.
    [RULE 3004 (a)(4)]

12. THE OPERATOR SHALL DETERMINE AND RECORD THE PRESSURE DROP ACROSS THE FILTERS ONCE EVERY WEEK.
    [RULE 3004 (a)(4)]

Emissions and Requirements:

13. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIRMENTS OF THE FOLLOWING RULES AND REGULATIONS:

    VOC: RULE 109
    VOC: RULE 442
    VOC RULE 1107, SEE APPENDIX B FOR EMISSION LIMITS
    VOC: RULE 1136, SEE APPENDIX B FOR EMISSION LIMITS
    VOC: RULE 1145, 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

FIELD EVALUATION REPORT

A field evaluation was conducted on 4/4/13 at the facility to observe a demonstration to determine the equivalent efficiency of the spray gun used in application of coating on glass substrate. I arrived at the facility at around 10:45 am with Stacey Ebiner, District Senior Engineer. Mr. Viji Sadasivan, the consultant for the company, along with Mr. Clark Linstone of Lamps Plus received us. Representatives from Sherwin Williams, the paint company were also present for the demonstration.

All of us then proceeded to the spray booth where the glass base was horizontally mounted on a rotating turntable in front of the spray booth filters, which allowed the operator to spin the base during the spraying process to get a more even coat. The spray nozzle extension was inserted through the bottom of the lamp which is the only opening since the top of the lamp is completely closed off where it is mounted on the turntable.

The Sherwin Williams representative sprayed the base intermittently, with actual spraying time of approximately 56 seconds. There were periods of no spraying to let the coating "settle" on the inside of the base. During the spraying time and a little after the gun trigger was released, there were some brief periods where the atomized coating came out from the opening and was pulled to the spray booth filters instead of settling on the inside of the base. The spray gun was a SATAjet 1000K RP with pressure gauge reading of 16 psi.

After the demonstration, Mr. Linstone showed different products manufactured on-site by Lamps Plus. We then thanked Mr. Linstone and left the facility around noon.

A video was taken of the demonstration. By observing the video, the overspray period amounted to approximately 18 seconds total. As a conservative approximation, we can assume that when no overspray escaped from the opening there was 100% transfer efficiency and when there was visible overspray coming out from the opening the transfer efficiency was significantly reduced, so the transfer efficiency would be at least (56-18 = 38 sec) ÷ 56 sec = 67% transfer efficiency.

HVLP spray guns were previously tested on these parts with unacceptable results. According to the consultant, the spray droplets were too big to produce the proper finish, and the gun put too much paint on the part. Use of an HVLP gun would create more emissions with a poor quality product. This SATAjet gun with nozzle extension also can spray 360^{o} inside the glass base to provide a thin, even coat. The lamp bases are coated to a custom color requested by the customer.

Based on our observations and since the spraying will be conducted only on the inside of a glass lamp base, we determined that the SATAjet 1000 spray gun complies with the transfer efficiency requirement in Rule 1145(c)(3)(G) – "Such other coating application methods as are demonstrated to the Executive Officer to be capable of achieving at least equivalent or better transfer efficiency to the method listed in subparagraph (c)(3)(F) *[HVLP spray gun]*, using District approved procedures and for which written approval of the Executive Officer has been obtained." Permit conditions will be added to the spray booths to ensure proper operation of the spray gun: only glass sprayed is inside of lamp bases using SATAjet 1000K gun, limit pressure to gun $\leq$ 16 psi and maintain pressure gauge, release trigger of spray gun before the spray gun wand is removed from inside the lamp base, and limit lamp base opening to 8 inches maximum, otherwise use adapter to reduce opening size.