

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

The Solar Corporation
Attn: Ken Formanski
100 Solar Drive
Libertyville, Illinois 60048

Application No.: 05030045
Applicant's Designation:
Subject: Plastic Parts Spray Booths
Date Issued:
Location: 100 Solar Drive, Libertyville

I.D. No.: 097090ABS
Date Received: March 14, 2005

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of two new spray booths with drying ovens, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.0 Unit Specific Conditions

1.1 Unit: Coating Booths
Control: None

1.1.1 Description

Two new coating booths (OVHD7 and OVHD8) will be installed to paint plastic parts for home entertainment products. The booths will also have the capability to paint other plastic parts, including interior plastic parts for automobiles. The painted plastic parts will be baked in drying ovens.

This project also relies upon a decrease in emissions from the existing eleven auto-spray adhesive booths for the purpose of credible decrease for netting. The reduction is the result in the change in operation of the adhesive booths and manufacturing process.

1.1.2 List of Emission Units

Emission Unit	Description
OVHD7	Plastic Parts Coating Booth with Natural Gas Fired Drying Oven
OVHD8	Plastic Parts Coating Booth with Natural Gas Fired Drying Oven

1.1.3 Applicability Provisions and Applicable Regulations

- a. i. An "affected coating booth" for the purpose of these unit-specific conditions, is each coating line described in Conditions 1.1.1 and 1.1.2.
- ii. The "affected adhesive booths" for the purposed of these unit specific condition are the existing auto-spray booths (Auto #1-11).
- b. i. Each affected coating booth is subject to 35 Ill. Adm. Code 218.301 when applying coatings to plastic parts other than plastic automobile parts, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission source, except as provided in the following exception: If no odor nuisance exists, this limitation shall apply only to photochemically reactive material.
- ii. Each affected coating booth is subject to 35 Ill. Adm. Code 218.204(n) when coating plastic automobile parts, which provides that no person shall not apply at any time any coating, which contain a volatile organic material (VOM) content that exceeds the following emission limitations as applied (minus water and other exempted compounds):

	<u>kg/l</u>	<u>lb/gal</u>
Interior Baked Color Coat	0.49	4.1

- c. The affected coating booths are subject to 35 IAC 212.321(b) (1), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].
- d. This permit does not revise or relax any regulatory requirements of the affected adhesive spray booths.

1.1.4 Non-Applicability of Regulations of Concern

- a. Pursuant to 35 IAC 218.209, the coating booths are not subject to the limitations of 35 IAC 218.301 or 218.302 while coatings are subject to the limitations of IAC 218.204.
- b. This permit is issued based on the affected coating booths not being subject to 40 CFR Part 63, Subpart PPPP: Surface Coating of Plastic Parts and Products, because the affected coating booths are not located at a major source of hazardous air pollutants.
- c. This permit is issued based on the affected coating booths not being subject to 35 IAC Part 218, Subpart PP: Miscellaneous Fabricated Product Manufacturing Processes, because the source is limited to less than 100 tons per year of VOM emissions and therefore does not meet the applicability criteria in 35 IAC 218.920(a)(1)(B). In addition, plastic parts coating (other) is a category specifically excluded from the potential to emit calculation for purposes of determining applicability of Subpart PP, pursuant to 35 IAC 218.920(b).
- d. This permit is issued based upon this project not being a major modification under 35 IAC Part 203, Major Stationary Sources Construction and Modification (MSSCM). The source has addressed the applicability of MSSCAM by a 15.60 ton contemporaneous emissions decrease (actual annual emissions during calendar years 2001 and 2002 averaged 16.60 tons) from the affected adhesive booths. The limitations established by this permit are intended to ensure that the construction addressed in this construction permit does not constitute a major modification pursuant to this rule and as further described in Attachment 1.

1.1.5 Operational and Production Limits and Work Practices

- a. The VOM usage of the affected coating booths shall not exceed 1.80 tons/month and 18.67 tons/year.
- b. When applying coatings to the plastic parts other than automotive interior parts, the maximum as applied VOM content shall not exceed 4.2 lb VOM/gallon of coating (less water and exempt solvents), as applied on a daily-weighted average basis.
- c. i. The drying ovens shall have a maximum firing rate of 2 mmBtu/hr.

- ii. Natural gas shall be the only fuel fired in the drying ovens.
- d. i. The VOM usage at the source shall not exceed 10.00 tons/month and 99 tons/year.
- ii. The usage of any individual hazardous air pollutant (HAP) at the source shall not exceed 0.90 tons/month and 9.00 tons/year.
- iii. The usage of total combined HAPs at the source shall not exceed 2.40 tons/month and 24.00 tons/year.

1.1.6 Emission Limitations

- a. The VOM emissions from the affected coating booths shall not exceed 1.80 tons/month and 18.67 tons/year.
- b. i. Emissions of VOM due to natural gas combustion in each drying oven shall not exceed 0.2 lb/hr and 0.05 tons/year.
- ii. Emissions of other pollutants from natural gas combustion in each drier will be minimal.
- c. i. The VOM usage of the eleven Auto-Spray Machines (Auto #1-11), in total, shall not exceed 0.50 tons/month and 1.00 tons/year. These limitations and the limitations of 1.1.6(c) (ii) shall not take effect until the first affected coating booth initially begins operation.
- ii. The VOM emissions from the affected adhesive spray booths shall not exceed 0.50 tons/month and 1.00 tons/year.
- d. i. The total VOM emissions from the source shall not exceed 10.00 tons/month and 99 tons/year.
- ii. The emissions of any individual hazardous air pollutant (HAP) from the source shall not exceed 0.90 tons/month and 9.00 tons/year.
- iii. The emissions of total combined HAPs from the source shall not exceed 2.40 tons/month and 24.00 tons/year.

1.1.7 Testing Requirements

- a. Upon reasonable request by the Illinois EPA, the VOM content of specific coatings used on the affected

coating booths shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 218.105(a) and 218.211(a).

- i. The VOM content of representative coatings "as applied" on the affected coating lines shall be determined according to USEPA Reference Methods 24 and 24A of 40 CFR 60 Appendix A and the procedures of 35 IAC 218.105(a).
- ii. This testing may be performed by the supplier of a material provided that the supplier provides appropriate documentation for such testing to the Permittee and the Permittee's records directly reflect the application of such material and separately account for any additions of solvent [35 IAC 218.105(a) and 218.211(a)].

1.1.8 Monitoring Requirements

None

1.1.9 Recordkeeping Requirements

- a. The Permittee shall maintain an operating log or other records for each affecting coating booth, which contain information identifying the type of production that is occurring and whether it is regulated by 35 Ill. Adm. Code 218.204 or 218.301.
- b. The Permittee shall maintain records for the following items for each affected coating booth and affected adhesive booth each day of operation when it is applying coatings that are regulated by 35 Ill. Adm. Code 218.204:
 - i. The name and identification number of each coating as applied. [35 IAC 218.211(c)(2)(A)];
 - ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied. [35 IAC 218.211(c)(2)(B)].
- c. The Permittee shall maintain a file for the affected coating booths related to compliance with 35 Ill. Adm. Code 218.301 containing the following information, which shall be updated using the most current materials used:

- i. A file containing calculations for the maximum emissions of Organic Material (OM) that could be emitted in any continuous one hour period for each affected booth while applying coatings that are not regulated under 35 Ill. Adm. Code 218.204.
 - ii. If the Permittee chooses to rely on a affected coating booth not having organic material emissions that are photochemically reactive pursuant to 35 IAC 211.4690 so as to meet the exemption provided in 35 IAC 218.301, then the Permittee shall maintain a file containing information on the composition of the organic material in the coatings and other OM containing material used in the booth, showing that organic material emissions would meet the exemption, with supporting documentation and justification for the exception.
- d. The Permittee shall maintain the following records for the affected coating booths and affected adhesive booths:
- i. Usage of each raw material containing VOM, organic material or HAP on each group of affected booths (gallons/month and gallons/year);
 - ii. The VOM, individual HAP and total HAP content of such each raw material (lb/gallon), with supporting documentation used on each group of affected booths;
 - iii. VOM, individual HAP, and Combined HAP emissions from each group of affected booths (tons/month and tons/year).
- e. The Permittee shall maintain the following records for the drying ovens associated with the affected coating booths:
- i. Natural gas usage (mmscf/month and mmscf/year);
 - ii. Emissions of NO_x, CO, PM, and VOM based on current emission factors published by the USEPA and actual or potential natural gas usage for the drying ovens.
- f. The Permittee shall maintain the following source-wide records:

- i. Total VOM usage (tons/month and tons/year);
- ii. Total individual and combined HAP usages (tons/month and tons/year); and
- iii. VOM, individual HAP, and combined HAP emissions (tons/month and tons/year).

1.1.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA of deviations of the affected coating or adhesive booths with the permit requirements. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.
 - b. The Permittee shall fulfill the following requirements related to compliance with 35 IAC 218, Subpart F for coating of automotive plastic parts:
 - i. Any record showing violation of 35 IAC 218.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation [35 IAC 218.211(c) (3) (A)].
 - ii. At least 30 calendar days before changing the method of compliance from 35 IAC 218.204 to 35 IAC 218.205, the owner or operator shall comply with all requirements of 35 IAC 218.211(d) (1). Upon changing the method of compliance from 35 IAC 218.204 to 35 IAC 218.205, the owner or operator shall comply with all requirements of 35 IAC 218.211(d). [35 IAC 218.211(c) (3) (B)].
2. The affected coating booths may be operated under this construction permit until modification or renewal of the CAAPP permit has been issued provided a timely application is submitted to amend the CAAPP permit to incorporate the affected booths.

If you have any questions on this, please call Eric Jones at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:EEJ:psj

cc: Region 1

Attachment 1

VOM Netting Analysis

Contemporaneous Time Period: 2001 Through 2005

Table I - Emissions Increases Associated With The Proposed Project

<u>Item of Equipment</u>	<u>Permitted Emissions (Tons/Year)</u>	<u>Emission Change (Tons/Year)</u>
OVHD 7 and OHVD 8	18.77	<u>18.77</u>
	Total:	18.77

Table II - Source-Wide Creditable Contemporaneous Emission Increases

<u>Item of Equipment</u>	<u>Commencement of Operation Date</u>	<u>Permitted Emissions (Tons/Year)</u>	<u>Permit Number</u>
Coating Booths SP-9R	2002	1.03	02040072
Coating Booths 4 and 6	2004	<u>19.90</u>	04020070
	Total:	20.93	

Table III - Source-Wide Creditable Contemporaneous Emission Decreases

<u>Item of Equipment</u>	<u>Emissions Decrease (Tons/Year)</u>	<u>Permit Number</u>
Unit 3	<u>15.60</u>	05030045
	Total:	15.60

Table IV - Net Emissions Change

	<u>(Tons/Year)</u>
Net Increases Associated With Proposed Project	18.77
Creditable Contemporaneous Emission Increases	20.93
Creditable Contemporaneous Emission Decreases	<u>15.60</u>
	24.10

EEJ:psj