

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>ENGINEERING AND COMPLIANCE DIVISION</b> Large Coating, Printing and Chemical Operations Team  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	PAGE	1 of 9
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	PROCESSED BY	SMP
	REVIEWED BY	
	DATE	12/26/09

**PERMIT TO CONSTRUCT EVALUATION  
SPRAY BOOTH**

<b>Applicant's Name</b>	AMERICAN SECURITY PRODUCTS, INC.
<b>Company I.D.</b>	059237
<b>Mailing Address</b>	11925 PACIFIC AVE., FONTANA, CA 92337
<b>Equipment Address</b>	11925 PACIFIC AVE., FONTANA, CA 92337

**EQUIPMENT DESCRIPTION**

Application No. 503246 (Replacement for P/N F69887, A/N 430080)

SPRAY BOOTH NO. 7, FLOOR TYPE, SPRAY TECH, MODEL NO. SDD-SE48, 16' – 8.75" W. X 24' – 0.312" L. X 13' – 9" H, WITH TWENTY 20" X 20" EXHAUST FILTERS, TWO 3 H. P. EXHAUST FANS AND ONE 1,000,000 BTU/HR NATURAL GAS-FIRED HEATER.

Application No. 504543 (new Construction)

SPRAY BOOTH NO. 8 , FLOOR TYPE, SPRAY TECH, MODEL NO. SDD-SE48, 16' – 8.75" W. X 24' – 0.312" L. X 13' – 9" H, WITH TWENTY 20" X 20" EXHAUST FILTERS, TWO 3 H. P. EXHAUST FANS AND ONE 1,000,000 BTU/HR NATURAL GAS-FIRED HEATER.

Application No. 502670

TITLE V REVISION

**HISTORY**

American Security Products Co. submitted one application for Permit to Construct a new spray booth. The new booth will replace the currently permitted spray booth (P/N F69887). The applicant was informed that with four independent exhaust fans and a partition in the middle, the District considers the configuration as two spray booths. The applicant submitted another application for the second spray booth.

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The facility already has a number of active permits from the District for spray booths, abrasive blasting unit, laser cutters and a cement mixing equipment. This company manufactures security safes for residential and business uses. The proposed equipment will be used to apply coatings for external aesthetics. The company currently uses other spray booths for this purpose. The coatings to be used in this equipment comply with Rule 1107 VOC requirements.

A facility-wide VOC emission limit of 4,080 (136 lbs/day) pounds per month has been established for this location. Some of the permitted equipment has individual usage limits too. The applicant has not requested any increases in the facility-wide VOC emission limit under this project. Thus, no VOC offsets are required for this project. The applicant has requested to operate both booths with a total of not to exceed 850 lbs/mo VOC (major source BACT limit). The previous spray booth (P/N F69887) was permitted not to exceed 73 lbs/day VOC (2,190 lbs/mo). Thus, a public notice will not be required for this project and it will comply with the current VOC BACT requirements. The applicant has accepted 7,692 cubic feet natural gas usage limit for each of the booths, which will have less than 1 lb/day NOx increase per booth. Thus, NOx BACT will not trigger for this equipment.

The District database shows one notice of violation issued to this company to provide records in the last two years. The database did not show any notices to comply issued to this facility in the last two years. The facility now operates “in compliance” upon follow-up inspections. Also, the database shows no complaint against this facility for nuisance odors or visible emissions in the last two years.

American Security is a Title V facility. A Title V renewal permit was issued to this facility in June 2006. This is the fourth revision to the renewed Title V permit. The proposed permit revision is considered as a “de-minimis permit revision”, as described in Regulation XXX evaluation.

**PROCESS DESCRIPTION**

The company is in the security safe manufacturing business. The parts are manufactured from different metals and assembled on site. The safes will be spray coated using liquid coatings in the new spray booth and then heat dried. The spray booth will have regular 2” thick particulate arrestor filters. The filter system will be 90% efficient in controlling PM/PM10 emissions. Coatings are applied using HVLP spray equipment. The recent inspection report indicates that they use HVLP spray guns in their existing booths. The spray guns are cleaned by Rule 1171 compliant (acetone) gun cleaning solvent within an enclosed gun washer. The soiled rags are stored in closed container for later disposal. The new spray booth will be operated in the same manner as the existing booths. The company proposes to use only Rule 1107 compliant coatings in this equipment. PCL topcoats (maximum 1.42 lbs/gal VOC). The topcoat complies 2.3 lbs/gal VOC limit of Rule 1107.

**OPERATING HOURS**

Average : 16 hour/day, 7 day/week, 52 weeks/year  
Maximum: 24 hour/day, 7 days/week, 52 weeks/year



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**Combustion Emissions:**

This equipment is heated with a 1.0 mm BTU/HR burner. The following table provides data on the emissions from the natural gas combustions.

503246, 504543

Spray Booth Heater

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	<u>maximum</u>	<u>normal</u>		
<u>hr/dy</u>	24	24	<u>max heat input</u>	1.00E+06 (BTU/hr)
<u>dy/wk</u>	7	7	<u>gross heating value</u>	1050 (BTU/scf)
<u>wk/yr</u>	52	52		
<u>load</u>	100%	100%		

	<u>Emission</u>	<u>MAX</u>	<u>AVE</u>	<u>MAX</u>	<u>30-DAY</u>	<u>MAX</u>	<u>MAX</u>
	<u>Factors</u>	(lb/hr)	(lb/hr)	(lb/dy)	(lb/dy)	(lb/yr)	(ton/yr)
SO <sub>2</sub> (R1)	0.83	0.001	0.001	0.019	NA	7	0.003
SO <sub>2</sub> (R2)	0.83	0.001	0.001	0.019	0.019	7	0.003
NO <sub>2</sub> (R1)	130	0.124	0.124	2.971	NA	1,082	0.541
NO <sub>2</sub> (R2)	130	0.124	0.124	2.971	2.971	1,082	0.541
CO (R1)	39	0.037	0.037	0.891	NA	324	0.162
CO (R2)	39	0.037	0.037	0.891	0.891	324	0.162
N <sub>2</sub> O (R1)	2.2	0.002	0.002	0.050	NA	18	0.009
N <sub>2</sub> O (R2)	0.64	0.001	0.001	0.015	0.015	5	0.003
PM, PM <sub>10</sub> (R1=R2)	7.5	0.007	0.007	0.171	0.171	62	0.031
CO <sub>2</sub> (R1=R2)	0.000012	0.000	0.000	0.000	0.000	0	0.000
TOC (R1=R2)	7	0.007	0.007	0.160	0.160	58	0.029
ethyle benzene	0.0095	9.0E-06	9.0E-06	2.2E-04	NA	7.90E-2	3.95E-5
acetaldehyde	0.0043	4.1E-06	4.1E-06	9.8E-05	NA	3.58E-2	1.79E-5
acrolein	0.0027	2.6E-06	2.6E-06	6.2E-05	NA	2.25E-2	1.12E-5
benzene	0.008	7.6E-06	7.6E-06	1.8E-04	NA	6.66E-2	3.33E-5
formaldehyde	0.017	1.6E-05	1.6E-05	3.9E-04	NA	1.41E-1	7.07E-5
naphthalene	0.0003	2.9E-07	2.9E-07	6.9E-06	NA	2.50E-3	1.25E-6
PAH's	0.0001	9.5E-08	9.5E-08	2.3E-06	NA	8.32E-4	4.16E-7
toluene	0.0366	3.5E-05	3.5E-05	8.4E-04	NA	3.05E-1	1.52E-4
xylenes	0.0272	2.6E-05	2.6E-05	6.2E-04	NA	2.26E-1	1.13E-4

NO<sub>2</sub> @ 3% excess O<sub>2</sub>----->>> 100.16 (ppmv)  
CO @ 3% excess O<sub>2</sub>----->>> 49.35 (ppmv)

SO<sub>2</sub> @ 3% excess O<sub>2</sub>----->>> 0.46 (ppmv)  
PM @ 12% CO<sub>2</sub>----->>> 5.5E-09 (grain/ft<sup>3</sup>)

The applicant has accepted 7,692 cu. feet per day natural gas usage limit, so that they comply with the BACT requirements.



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√ **SECTION 212(c)(3):**

There are no carcinogenic compounds in the materials to be used in this equipment. Therefore, this application will not be subject to this section.

√ **SECTION 212(g):**

This section requires a public notice for all new or modified sources which undergo construction or modifications resulting an emissions increase exceeding any of the daily maximum specified in the table below. As shown in the following table, the emission increases from this project are below the daily maximum limits specified by paragraph (g). This project is a replacement with an emissions decrease. Therefore, public notice will not be required by this section.

<b>LB/DAY</b>	<b>CO</b>	<b>NOX</b>	<b>PM<sub>10</sub></b>	<b>ROG</b>	<b>Lead</b>	<b>SOX</b>
<b>MAX. LIMIT</b>	220	40	30	30	3	60
<b>INCREASES</b>	0	0	0	0	0	0

□ **RULES 401 & 402, VISIBLE EMISSIONS & NUISANCE**

(a) **SPRAY BOOTH**

With the use of 2" thick dry filters in liquid coating booth compliance with the provisions of these rules is expected. AQMD database has no records of any visible emissions or nuisance complaints against this company.

□ **RULES 404 & 405, PARTICULATE MATTER CONCENTRATION & WEIGHT**

Compliance with these provisions is expected with proper operation of the equipment.

□ **RULE 481, SPRAY COATING OPERATIONS**

√ **SECTION (a)**

The use of HVLP spray equipment will comply with these requirements.

□ **RULE 1107, METAL COMPONENT COATINGS**

√ **SECTION (c)(2), VOC CONTENT OF COATINGS**

Material information submitted with these applications indicates compliance with the Rule. In addition, a condition will be placed on the permit to comply with this rule.

Coating Category	Rule Limit (VOC)	Coating VOC	Compliance
PCL Topcoats	2.3 lb/gal	1.42 lb/gal	Yes

√ **SECTION (c)(6), TRANSFER EFFICIENCY**

The use of HVLP spray equipment will comply with these requirements.

□ **RULE 1171, SOLVENT CLEANING OPERATIONS**

The use of acetone (exempt VOC) will provide compliance with these provisions.

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**REGULATION XIII**

▫ **RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)**

(a) VOC EMISSIONS

Since the VOC emissions from this project will not exceed 850 lbs/month, the installation and operation of add-on control equipment is not achieved in practice.

(b) PM10 EMISSIONS

The use of 2” thick filtering system satisfies BACT requirement for PM emissions.

(c) NOx EMISSIONS

The NOx emissions are expected to be less than 1 lb/day with the natural gas usage limit of 7,692 SCF/day, therefore BACT is not triggered. Permit conditions will be imposed to ensure compliance.

▫ **RULE 1303(b)(1), MODELING**

Modeling is not required since PM10, and CO emissions are below the Table A-1 allowable emissions. Modeling required for NOx. Please refer to attached modeling which shows compliance.

NOx		PM10		CO	
Allowed	Actual	Allowed	Actual	Allowed	Actual
0.20	0.12	1.2	0.01	11.0	0.04

▫ **RULE 1303 (b)(2), EMISSION OFFSETS**

There are no VOC emission increases under this project, since the facility cap will remain the same. Other emissions are within the R1304 threshold limits. Hence, no offsets are required.

▫ **RULE 1401, NEW SOURCE REVIEW OF CARCINOGENIC AIR CONTAMINANTS**

As discussed in the evaluation report, the coatings used by this facility contain toxic air contaminants and with the usage limit imposed, this equipment is expected to comply with the rule requirements. Also, from the previous emission calculations data, the toxic emissions from the natural gas combustion of a 1,000,000 BTU/HR burner are also expected to comply with the rule requirements. this equipment is expected to comply with these rule requirements.

◎ **RULE 1469.1, SPRAYING OPERATIONS USING COATINGS CONTAINING CHROMIUM**

The materials proposed to be used in this equipment do not contain any carcinogenic compounds. A permit condition will be imposed not to use any carcinogenic toxic compound containing materials in this equipment.

**REGULATION XXX**

This facility is not in the RECLAIM program. The proposed project is considered as a “de minimis significant permit revision” to the Title V permit for this facility.

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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 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
NO <sub>x</sub>	40
PM <sub>10</sub>	30
SO <sub>x</sub>	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 for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 4<sup>th</sup> permit revision to the Title V renewal permit issued to this facility on June 2006. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	HAP	VOC	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>x</sub>	CO
1 <sup>st</sup> Revision (Administrative) (A/N 466753)	0	0	0	0	0	0
2 <sup>nd</sup> Revision. Modification (A/N 480171, 480172) (P/C)	0	0	0	0	0	0
3 <sup>rd</sup> Revision (Administrative) (A/N 480171, 480172) (P/C to P/O)	0	0	0	0	0	0
4 <sup>th</sup> Revision. Install new spray booths (A/N 503246, 504543)	0	0	2	2	0	2
Total	0	0	2	0	0	2
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”.

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### **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.