Synthetic Minor Operating Permit Condition #22489

1. The owner/operator shall ensure that this facility, subject to a Synthetic Minor Operating Permit, shall emit no more than the following quantities of emissions in any 12-month period:

   a. 9 tons per year of any single HAP, and
   b. 23 tons per year of any combination of HAPs

   These limits shall include emissions from permitted, unpermitted, portable, and temporary sources at the facility except those sources defined as non-road engines as defined in 40 CFR 89. These limits are for the purpose of this Synthetic Minor Operating Permit only, and do not allow the owner/operator to exceed any other District permit conditions. These Synthetic Minor Operating Permit limits shall not be used as actual emissions, a permitted emission level or baseline emission level in conjunction with new source review, banking of emission reduction credits, or any other District rule. [basis: Synthetic Minor]

For S-1, S-2, S-3, S-4 and S-6 Coaters and Ovens

2. The owner/operator of Sources S-1, S-1, S-3, S-4 and S-6 shall not exceed 32.9 tons of Precursor Organic Compounds (POC) and 24.015 tons of Non-Presursor Organic Compounds (NPOC) in any consecutive 12 month period. [basis: Cumulative Increase]

3. The owner/operator of Sources S-1, S-1, S-3, S-4 and S-6 shall not exceed 464,000 gallons of coatings and 11,000 gallons of solvent in any consecutive 12 month period, unless the operator of this source can demonstrate to the satisfaction of the APCO that a higher usage would not result in emissions exceeding those stipulated in Part #1 and #2. [basis: Cumulative Increase]

4. The owner/operator shall control the VOC emissions from coatings used at sources S-1, S-2, S-3, S-4 and S-6 at least 90% on a mass basis overall (capture and destruction efficiencies combined). [basis: BACT]

5. The owner/operator shall control the POC emissions from S-1, S-2, S-3, and S-4 by a Direct Flame Afterburner, A-1, during all periods of operation. [basis: BACT]

   The owner/operator shall control the POC and NPOC emissions from S-6 by a Thermal Oxidizer, A-2, during all periods of operation. [basis: BACT]

6. The owner/operator shall maintain the POC and/or NPOC destruction efficiency of the afterburner (A-1) and thermal oxidizer (A-2) at a minimum of 98.5%, by weight. [basis: BACT]

7. The owner/operator shall properly maintain the Afterburner, A-1, and Thermal Oxidizer, A-2, and kept them in good operating condition at all times. In no event shall the afterburner and/or thermal oxidizer temperatures (average of the three thermocouples) be less than 1450 degrees F. when S-1, S-2, S-3, S-4, and/or S-6 are in operation. The temperature shall be automatically controlled at all times during operation of S-1, S-2, S-3, S-4, and/or S-6. This minimum temperature may be adjusted by the District if source test data demonstrate that an alternate temperature is

necessary for or capable of maintaining compliance with Part 6 above. [basis: BACT, Regulation 2-1-403]

8. The owner/operator shall demonstrate compliance with Part #7. The afterburner (A-1) and thermal oxidizer (A-2) shall be equipped with continuous measuring and recording instrumentation consisting of at least 3 thermocouple temperature probes in the afterburner and at least one recording device, which will continuously record the afterburner temperature as measured by each of the 3 probes. [basis: BACT]

9. The temperature limit in Part 7 shall not apply during an "Allowable Temperature Excursion", provided that the temperature controller set point complies with the temperature limit. An Allowable Temperature Excursion is one of the following:

   a. A temperature excursion not exceeding 20 degrees F; or
   b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
   c. A temperature excursion for a period or periods which when combined is more than 15 minutes in any hour, provided that all three of the following criteria are met.
   i. the excursion does not exceed 50 degrees F;
   ii. the duration of the excursion does not exceed 24 hours; and
   iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12-month period).

   Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit. [basis: BACT]

10. For each Allowable Temperature Excursion that exceeds 20 degrees F. and 15 minutes in duration, the Permit Holder shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:

    a. Temperature controller set point;
    b. Starting date and time, and duration of each Allowable Temperature Excursion;
    c. Measured temperature during each Allowable Temperature Excursion;
    d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
    e. All strip charts or other temperature records.
    [basis: BACT]

11. For the purposes of parts 9 and 10, a temperature excursion refers only to temperatures below the limit.

12. The owner/operator shall collect the temperature data from the temperature recorders of A-1 and A-2, and shall maintain them in a file, which shall be available for District inspection for a period of at least five years following the date on which such data or reports are recorded or made. [basis: Regulation 2-6-501]

13. The owner/operator shall install enclosures over the all three coaters and ovens (S-1, S-2, S-3, S-4 and S-6) to ensure 100% capture efficiency, EPA Method 204 for Permanent Total Enclosure, when the source(s) is in operation. [Basis: BACT]

14. To demonstrate compliance, the owner/operator of sources S-1, S-2, S-3, S-4 and S-6 shall maintain the following data on a daily basis:
    a. operating time of S-1, S-2, S-3, S-4 and S_6.
    b. amount and type of coating applied, by use of a daily measurement and a daily District approved log.
    c. amount of clean-up solvent used.
    d. a list of all products coated per day and the sheet production rate for each product (sheets/day).
    e. film thickness requirements of product being coated.
    f. charts from the afterburner temperature recorder.
    g. all invoice records of coatings and solvents purchased.
    h. thinning ratios for respective coatings being thinned.
    i. maintain records of Material Safety Data Sheets (MSDS) or other product information identifying the POC content and individual HAP contents for each of the solvent-containing materials used at all sources
    j. calculate monthly emissions of POC and individual HAPs from each source, based on the quantities of materials used and the chemical composition information from the associated Material Safety Data Sheets (MSDS)
    k. calculate total POC and individual HAP emissions from the total of all sources for each month, and on a rolling 12-month basis.

    Records shall be available for District inspection for a period of at least five years following the date on which such data or reports are recorded or made.
    [basis: BACT, Cumulative Increase, Synthetic minor]

15. Rail shipments/receipts from/to the permit holder shall not exceed 50,000 tons during any consecutive 12-month period. A District approved log shall be kept for all rail activity at the facility. [basis: Cumulative Increase]

16. In accordance with the provisions of Regulation 2-3-414, should the facility precursor organic compound (POC) emissions ever equal or exceed 35 tons per year, on a pollutant specific basis, the facility owner/operator shall reimburse the District with emission reduction credits for all offsets of that pollutant provided from the Small Facility Banking Account or its predecessor, the Small Facility Bank. [basis: Offsets]

17. The Owner/Operator shall prepare an annual emissions report. The report shall contain the following items for the year ending December 31:

    a. Monthly report on each individual HAP and total individual HAP emissions for the rolling 12 month period.
    b. Monthly report on each POC and total POC emissions for the rolling 12 month period.

    This report shall be submitted to the Director of Compliance and Enforcement by March 1 of each year. [basis: Synthetic Minor]

18. The owner/operator shall report non-compliance with any of the conditions in writing to the Director of Compliance and Enforcement within 10 calendar days of discovery of non-compliance.
[basis: Synthetic Minor]

19. The owner/operator of A-2 Thermal Oxidizer shall ensure that the nitrogen oxides (NOx) emissions from A-2, shall not exceed 50 ppmvd at 15% O2 (0.20 lb/MMBtu).
[Basis: RACT, Source Test Method 13A]

20. The owner/operator of A-2 Thermal Oxidizer shall ensure that the carbon monoxide (CO) emissions from A-2 shall not exceed 350 ppmvd at 15% O2 (0.80 lb/MMBtu).
[Basis: RACT, Source Test Method 6]

21. Within 60 days of receiving this Permit to Operate, the owner/operator of S-6 and A-2 shall conduct a District approved source test to verify compliance with Parts 6, 9, 19 and 20. The test results shall be submitted to the District within 30 days of completion of the source test. Prior to the performance of the source test, the owner/operator must submit a test protocol to the Source Test division of the Bay Area Air Quality Management District (BAAQMD) for approval. The Source Test Division and the Engineering Division of BAAQMD shall be informed in writing at least 10 days prior to the source test. [Basis: Reg. 2-1-403]

<u>For S-5 solvent tank</u>

22. The owner/operator shall ensure that the total throughput for S-5 shall not exceed 10,130 gallons during any consecutive 12-month period. [basis: cumulative increase]

23. The owner/operator shall ensure that the true vapor pressure of the bulk material stored in S-5 shall not exceed 1.0 psia. [basis: cumulative increase]

24. To demonstrate compliance with the above conditions, the owner/operator shall keep the following records on site and be made available for District inspection for a period of at least five years from the date on which a record was made.
    a. The types of organic liquids stored
    b. The true vapor pressure of each liquid stored, and;
    c. The quarterly throughput quantities.
    [basis: cumulative increase]

<u>For S-7 Water Based Coating Tank</u>

25. The owner/operator of S-7 shall not exceed 100,000 gallons of water based coating during any consecutive twelve-month period:
(Basis: Cumulative Increase)

26. The owner/operator may store alternate liquid(s) other than the materials specified in Part 1 and/or usages in excess of those specified in Part 1, provided that the owner/operator can demonstrate that all of the following are satisfied:
    a. Total POC emissions from S-7 do not exceed 31 pounds in any consecutive twelve month period;
    b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

(Basis: Cumulative Increase; Toxics)

27. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
    a. Quantities of each type of liquid stored at this source on a monthly basis.
    b. If a material other than those specified in Part 1 is stored, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 2, on a monthly basis;
    c. Monthly throughput and/or emission calculations shall be totaled for each consecutive twelve-month period.

    All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations.
    (Basis: Cumulative Increase; Toxics)

<u>For S-8 Solvent Based Coating Tank</u>

28. The owner/operator of S-8 shall not exceed 100,000 gallons of solvent based coating during any consecutive twelve-month period:
    (Basis: Cumulative Increase)

29. The owner/operator may store alternate liquid(s) other than the materials specified in Part 1 and/or usages in excess of those specified in Part 1, provided that the owner/operator can demonstrate that all of the following are satisfied:
    c. Total POC emissions from S-8 do not exceed 46 pounds in any consecutive twelve month period;
    d. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

    (Basis: Cumulative Increase; Toxics)

30. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
    a. Quantities of each type of liquid stored at this source on a monthly basis.
    b. If a material other than those specified in Part 1 is stored, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 2, on a monthly basis;
    c. Monthly throughput and/or emission calculations shall be totaled for each consecutive twelve-month period.

    All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations.
    (Basis: Cumulative Increase; Toxics)

SYNTHETIC MINOR OPERATING PERMIT EVALUATION REPORT
SILGAN CONTAINERS MFG. CORP.
Application #15053 - Plant #14327

2200 Wilbur Ave.
Antioch, CA 94509

I. BACKGROUND

Silgan Containers has applied for an Authority to Construct/Permit to Operate for the following equipment:

S-6 No. 3 Continuous Sheet Coater equipped with Integral Curing Oven and either Anilox single-roller or Wagner/Crabtree two-roller, and the back roller cleaning system may be either a solvent flood, brush, felt bar or a solvent-less scraper system, abated by A-2 Thermal Oxidizer, LTG Technologies Type 8000, 6.8 MMBtu/hr.

S-7 Coating Storage Tank, 7,500 gallons capacity.

S-8 Coating Storage Tank, 7,500 gallons capacity.

And, physically enclose the following existing equipment:

S-1 No. 1 Sheet Coater equipped with either Anilox single-roller or Wagner two-roller, and the back roller cleaning system may be either a solvent flood, brush, felt bar or a solvent-less scraper system, abated by A-1 Direct Flame Afterburner, J.P. Thorpe, 10 MMBtu/hr capacity.

S-3 No. 2 Sheet Coater equipped with either Anilox single-roller or Wagner two-roller, and the back roller cleaning system may be either a solvent flood, brush, felt bar or a solvent-less scraper system, abated by A-1 Direct Flame Afterburner, J.P. Thorpe, 10 MMBtu/hr capacity.

Silgan requests to add one more continuous sheet coater equipped with an integral curing oven, which will be permanently enclosed and vent to a new thermal oxidizer. The heat produced from the thermal oxidizer will be used for curing heat in the oven, so no additional heating system is used. To provide the emission offsets for this new line of coating, Silgan plans to retrofit the existing two sheet coaters (S-1 and S-3) with enclosures, uses more water-base coatings and acetone as a cleanup solvent (NPOC) for all three coaters. Silgan also likes to add two storage tanks for the water-base and solvent coatings. Silgan would like to add the new equipment (S-6, S-7 and S-8) and modify existing equipment (S-1 and S-3) listed above with no net change to the facility emission limits, which is set at 32.9 tons/yr of POC, 23 tons total HAPs, and 9 tons of any individual HAP under Condition # 22489 of its Synthetic Minor Permit.

All three coaters (S-1, S-3 and S-6) will meet the EPA requirement for Permanent Total Enclosure (EPA Method 204). Therefore, they will meet the District's current BACT limits of 100% capture with 98.5% destruction controls for sheet coating lines. The new thermal Oxidizer (A-2) will be conditioned to meet the RACT limit of 50 ppmvd NOx @ 15% oxygen (0.20 lb/MMBtu) and 350 ppmvd CO @ 15% oxygen (0.80 lb/MMBtu).

Silgan is a supplier of cans for food products to a wide variety of customers. There are significantly variations in coating solvent load and film thickness. Silgan tracks the facility emissions by managing the coater loads, coating materials, back washing time, cleaning time, and idle time. The tracking systems are already in place, and Silgan will continue to use the emission tracking systems for reporting the rolling summary of POC, NPOC and HAP. The District will impose a twelve- month throughput limitation on each source or group of sources. Silgan Containers will be required to keep a record of daily throughput, summarized on a monthly basis and monthly year-to-date summaries. Silgan Container will submit a usage report to the District every year. In addition, District staff will inspect its records at least annually to determine compliance. The records will clearly show if, when, and for how long the plant has been out of compliance and the District will take enforcement action accordingly.

II. EMISSION CALCULATIONS

Silgan is committed to maintain the same 32.9 tons/yr of POC emissions as permitted in its Synthetic Minor Permit. However, there will be an increase in the NPOC emissions because Silgan is planning to switch to acetone when ever it can instead of using all POC solvent for cleanup. There will be combustion emission increases of NOx, CO, SO2, and PM10 from the new thermal oxidizer A-2.

Proposed worst-case organic compound emissions and HAPs:

POC Compound	Coater #1 S-1 tons/yr	Coater #2 S-3 tons/yr	S-5 tons/yr	Coater #3 S-6 tons/yr	S-7 & S-8 tons/yr	Total tons/yr
EGME[1]	6.36	6.36	0.0	6.36	0.0	19.08
Xylene	0.15	0.15	1.3 E-4	0.15	6.5 E-5	0.45
Ethylbezene	0.00	0.00	3.0 E-5	0.00	4.0 E-5	7.0E-5
DGME[2]	0.001	0.001	2.0 E-5	0.001	6.5 E-5	8.5 E-5
MIK[3]	0.00	0.00	2.5 E-5	0.00	9.15 E-4	9.4 E-4
Butyl Cell. Acetate[4]	0.00	0.00	4.5 E-5	0.00	1.18 E-3	1.23 E-3
Formaldehyde	0.00	0.00	0.0	0.00	0.00	0.00
Naphthalene	0.00	0.00	1.45 E-4	0.00	0.0	1.45 E-4
Hexane	0.00	0.00	1.5 E-5	0.00	0.0	1.5 E-5
Cumene	0.07	0.07	0.0	0.07	0.0	0.21
1,2,4Trimethylbenzen	1.47	1.47	0.0	1.47	0.0	4.41
n-Butyl Alcohol	0.92	0.92	0.0	0.92	0.0	2.76
Benzene	0.0	0.0	0.0	0.0	0.0	0.0
Other POC	1.97	1.97	1.4E-4	1.97	0.002	5.91
Total POC	10.94	10.94	5.50E-4	10.94	0.025	32.85

[1]EGME = Ethylene Glycol Monobutyl Ether
[2]DGME = Diethylene Glycol Monobutyl Ether
[3]MIK = Methyl Isobutyl Ketone
[4]Butyl Cellosolve Acetate

NPOC Cleanup Acetone – 11,000 gal/yr for all three coaters:
S-1 = 3667 gal/yr X 6.5 lb VOC/gal = 23,836 lb/yr, assumed 100% evaporation because the enclosure must be lifted up for access during cleaning process; therefore, there will not be any capture control efficiency.

S-3 = 3667 gal/yr X 6.5 lb VOC/gal = 23,836 lb/yr, assumed 100% evaporation because the enclosure must be lifted up for access during cleaning process; therefore, there will not be any capture control efficiency.
S-6 = 3667 gal/yr X 6.5 lb VOC/gal x (1-0.985) =358 lb/yr, total enclosures with room for access, assume 98.5% overall control efficiency.
Total NPOC = 23,836 +23,836 + 358 = 48,030 lb/yr or 24.015 ton/yr

Emissions calculation from S-1, S-2 (Curing Oven), S-3, and S-4 (Curing Oven) abated by A-1 Direct Flame Afterburner, and S-6 abated by A-2 Thermal Oxidizer.

The existing throughput limit contained in condition # 22489, Part 3 will be used for all five sources, S-1 through S-4 and S-6, which limit the annual throughput to less than 464,000 gallons of coating and 11,000 gallons of acetone. Silgan can exceed the proposed annual throughput if the company demonstrates that the total annual emissions are less than 32.9 tons per year of Precursor Organic (POC) and 24.015 tons per year of Non-Precursor Organic (NPOC).

The POC emissions from S-1 through S-4 are abated by the Direct Flame Afterburner, A-1, with an operating temperature of at least 1450 ^{0}F, and with an overall control efficiency of 98.5%. This control efficiency was confirmed by the District's source test conducted on February 8, 2001 with the overall efficiency of 99.9% for sources S-1 through S-4 and A-1 afterburner. Since the Direct Flame Afterburner was equipped with a continuous measuring and recording temperature device of at least 1450 ^{0}F as required by Part 8 of the condition, any actual compliance verification will be conducted by the District in the future.

The POC emissions from S-6 will be abated by the Thermal Oxidizer A-2 with an operating temperature of at least 1450 ^{0}F, and with an overall control efficiency of 98.5%. The District will require demonstration of this control efficiency during startup of S-6 and A-2.

Natural-Gas Fired Equipment: A-2 Thermal Oxidizer:

The Curing Oven at S-6 is heated between 200-400 ^{0}F by circulated, exhausted air from the Thermal Oxidizer A-2. The company does not plan to ever fire the ovens because the heat from the Thermal Oxidizer's exhausted air is adequate for the use of the oven. Therefore, only the combustion emissions of the Thermal Oxidizer at the design capacity at 6.8 MMBtu/hr are calculated here. A-2 is conditioned to meet RACT, which is 50 ppmvd of NOx @15% oxygen (0.20 lb/MMBtu) and 350 ppmvd of CO @ 15% oxygen (0.80 lb/MMBtu). The natural gas combustion products from A-2 are tabulated below.

- Thermal Oxidizer = 6.8 MMBtu/hr
- Operation hours = 24 hour/day, 7 day/wk, 52 wk/yr
- Heat capacity = 1,020 MMBtu/10^6 ft^3 natural gas
- Other emission factors are taken from AP-42, Table 1.4-1 and 2 (revised 7/1/98) for small boiler <100 MMBtu/hr
-

SO2 = (0.6 lb/MMscf)/(1020 MMBtu/10^6 ft^3) = 5.882 x 10^{-4} lb/MMBtu
PM10 = (7.6 lb/MMscf)/(1020 MMBtu/10^6 ft^3) = 0.00745 lb/MMBtu
POC = (5.5 lb/MMscf)/(1020 MMBtu/10^6 ft^3) = 0.00539 lb/MMBtu
NPOC = (2.3 lb/MMscf)/(1020 MMBtu/10^6 ft^3) = 0.00225 lb/MMBtu

NOx = 59,405 MMBtu/yr X 0.20 lb/MMBtu = 11,881 lb/yr, or 5.94 ton/yr
CO = 59,405 MMBtu/yr X 0.80 lb/MMBtu = 47,524 lb/yr, or 23.76 ton/yr
SO2 = 59,405 MMBtu/yr X 0.0005882 lb/MMBtu = 34.94 lb/yr, or 0.0175 ton/yr
PM10 = 59,405 MMBtu/yr X 0.00745 lb/MMBtu = 443 lb/yr, or 0.221 ton/yr
POC = 59,405 MMBtu/yr X 0.00539 lb/MMBtu = 320 lb/yr, or 0.160 ton/yr
NPOC = 59,405 MMBtu/yr X 0.00225 lb/MMBtu = 133.7 lb/yr, or 0.067 ton/yr

Combustion Emissions

	A-1 tons/yr	A-2 tons/yr	Total tons/yr
NOx	8.74	5.94	14.68
CO	34.94	23.76	58.70
SO2	0.026	0.0175	0.044
POC	0.235	0.160	0.395
NPOC	0.098	0.067	0.165
PM10	0.325	0.221	0.546

The only sources of NOx, CO and SO2 are from the products of combustion and are very low. The amount of VOC and PM10 from combustion is extremely low and are negligible compared with VOC from coating sources. These sources could not exceed the major facility 100 ton per year threshold for NOX, CO, SO2, or particulate. These sources require no limits on the amount of fuel used.

S-7 and S-8 Solvent Tanks

The POC emissions from these tanks are based on AP-42 Tank 4.0 program. Silgan Containers accepted total throughput of 100,000 gallons of solvent per consecutive 12 months for each tank. The total estimated POC emissions are listed below. See attached Tanks 4.0 emission report for detail calculation.

S-7 Water Based Coating Tank:

Throughput = 5882.3 gal X 17 times/yr = 100,000 gal/yr

	Annual (lb/yr)	Daily (day/yr)	
Working loss	14.46	0.85	(17 time/yr)
Breathing loss	16.63	0.05	(365 day/yr)
Maximum emissions	31.09	0.90	

S-8 Solvent Based Coating Tank:

Throughput = 5882.3 gal X 17 times/yr = 100,000 gal/yr

	Annual (lb/yr)	Daily (day/yr)	
Working loss	23.93	1.41	(17 time/yr)
Breathing loss	22.28	0.06	(365 day/yr)
Maximum emissions	46.21	1.47	

III. PLANT CUMULATIVE INCREASE SINCE 4/5/91

Current	New Ton/yr	New Total Ton/yr	Lbs/yr	Tons/yr
POC =	0.000	0.000	0.00	0.00
NO_x =	0.000	5.94	11,881	5.94
SO_2 =	0.000	0.017	34.94	0.0175
CO =	0.000	23.76	47,524	23.76
NPOC =	0.000	24.082	48,164	24.082
PM_{10} =	0.000	0.221	443	0.221

IV. TOXIC RISK SCREENING

This application required the toxic risk screening analysis because the following sources and compounds exceed the chronic risk trigger level of Regulation 2-5.

Toxic Pollutant Emitted	Emission Rate S-1 lbs/yr	S-3 lbs/yr	S-6 lbs/yr	Risk Screening Trigger Chronic lbs/yr	Acute lb/hr
Ethyl Glycol Butyl Ether	**12,647**	**12,647**	**12,647**	**770**	31
Xylene	0.15	0.15	1.3 E-4	0.15	6.5 E-5
Ethylbezene	9,582	9,582	9,582	77,000	N/A
Phenol	277	277	277	7,700	13
Propyl Glycol Methyl Ether	7,690	7,690	7,690	270,000	N/A
Formaldehyde	0.00	0.00	0.0	0.00	0.00
Naphthalene	342	342	342	53	N/A
Isophorone	2,182	2,182	2,182	77,000	N/A
Zinc Oxide	**2,681**	**2,681**	**2,681**	**1,400**	N/A
Formaldehyde	**139**	**139**	**139**	**30**	0.21
Toluene	7,098	7,098	7,098	27,000	49
Benzene	6.0	6.0	6.0	6.40	2.9

Sources S-1, S-3, and S-6 meet Best Available Control Technology requirement for toxics (TBACT) since S-1, S-3, and S-6 are abated by thermal oxidizers (A-1 and A-2) with greater than 90% overall control efficiency. For equipment that meet the TBACT requirement, they must also pass the toxic risk screening level of less than ten in a million. The cancer risk is conservative. It assumes a constant exposure of the ultra sensitive population (young people, the elderly, and the infirm, etc.) at 24 hours for a 70 years life.

This project passed the Health Risk Screening Analysis (HRA) conducted on October 5, 2006 by the District's Toxic Evaluation Section. The source poses no significant toxic risk, since the risks to the maximally exposed receptors are 7.9 in a million. Thus, in accordance with the District’s Regulation 2-5, the risk screen passes.

V. BEST AVAILABLE CONTROL TECHNOLOGY

BACT is triggered for any single pollutant that exceeds 10 pounds per highest day per Regulation 2-2-301. For this proposed project, S-1, S-3 and S-6 trigger BACT for POC since the highest day emissions are greater than 10 pounds per highest day. Sources S-1, S-3, and S-6 meet Best Available Control Technology requirement for toxics (TBACT) since S-1, S-3, and S-6 are abated by thermal oxidizers (A-1 and A-2) with greater than 90% overall control efficiency (Reference: BACT/TBACT Handbook, Metal Container, Closure, and Coil Coating Operation, Document #112.1).

VI. OFFSETS

Offsets must be provided for any new or modified source at a facility that emits more than 10 tons/yr of POC or NOx per Regulation 2-2-302. The District may provide offsets from the Small Facility Banking Account for a facility with emissions between 10 and 35 tons/yr of POC or NOx, provided that facility has no available offsets, and all existing sources of POC and/or NOx are equipped with Best Available Retrofit Control Technology (BARCT).

Silgan Containers is eligible to receive offsets from the Small Facility Bank since all other existing sources meet BARCT. However, this project does not result in an increase of POC emissions, offset is not required for POC.

Per Regulation 2-2-302, this facility does not trigger NOx offsets because the facility-wide NOx emissions are less than 10 tpy.

VII. STATEMENT OF COMPLIANCE

Sources S-1, S-3, and S-6 Coaters will continue to comply with Regulation 8, Rule 11 – Organic compounds - Metal Container, Closure and Coil Coating.

- Sources S-1, S-3, and S-6 Coaters will be subject to and expected to comply with the following New Emission Standard for Hazardous Air Pollutants (NESHAPS), (40 CFR, Part 63) by September 11, 2006.
    - 40 CFR, Part 63, Subpart KKKK – Surface Coating of Metal Cans.
    - 40 CFR, Part 63, Subpart SSSS – Surface Coating of Metal Coils.

Sources S-7 and S-8 of this application are subject to Regulation 8, Rule 5 – Storage of Organic Liquid. The organic coating storage operation is in compliance with Regulation 8-5-301 requirement, because S-7 and S-8 are tanks that are less than 9,906 gallons and equipped with submerged fill pipes for liquid with the vapor pressure between 1.5 psia to 11 psia.

This application for a proposed new or modified source is classified as ministerial, and is accordingly exempt from the District's California Environmental Quality Act (CEQA) requirement. Since the District's engineering evaluation and basis for approval or denial of the permit application for the project is limited to the criteria set forth in Section 2-1-428 of Regulation 2, Rule 1 and to the specific procedures, fixed standards, and objective measurements set forth in the BACT/TBACT Workbook and Chapter 5.1 and 4 of the District's Permit Handbook.

This project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

Offsets, PSD, and NSPS are not triggered

VIII. CONDITIONS

Synthetic Minor Condition #22489

1. The owner/operator shall ensure that this facility, subject to a Synthetic Minor Operating Permit, shall emit no more than the following quantities of emissions in any 12-month period:

   a. 9 tons per year of any single HAP, and
   b. 23 tons per year of any combination of HAPs

   These limits shall include emissions from permitted, unpermitted, portable, and temporary sources at the facility except those sources defined as non-road engines as defined in 40 CFR 89. These limits are for the purpose of this Synthetic Minor Operating Permit only, and do not allow the owner/operator to exceed any other District permit conditions. These Synthetic Minor Operating Permit limits shall not be used as actual emissions, a permitted emission level or baseline emission level in conjunction with new source review, banking of emission reduction credits, or any other District rule. [basis: Synthetic Minor]

For S-1, S-2, S-3, S-4 and S-~~4~~—6 Coaters and Ovens

2. The owner/operator of Sources S-1, S-1, S-3, S-4 and S-6 ~~In no event~~ shall ~~the total combined daily and annual emissions from S-1, S-2, S-3, and S-4~~ not exceed 32.9 tons of Precursor Organic Compounds (POC) and 24.015 tons of Non-Precursor Organic Compounds (NPOC) in any consecutive 12-month period. [basis: Cumulative Increase]

3. The owner/operator of Sources S-1, S-1, S-3, S-4 and S-6 shall not ~~total coating and solvent usage at sources S-1, S-2, S-3 and S-4 shall not~~ exceed ~~104,720~~464,000 gallons of coating and solvent and 11,000 gallons of solvent in any consecutive 12 month period, unless the operator of this source can demonstrate to the satisfaction of the APCO that a higher usage would not result in emissions exceeding those stipulated in Part #1 and #2. [basis: Cumulative Increase]

4. The owner/operator shall control the VOC emissions from coatings used at sources S-1, S-2, S-3, S-4 and S-~~4~~ 6 ~~shall be controlled by~~ at least 90% on a mass basis overall (capture and destruction efficiencies combined). [basis: BACT]

5. The owner/operator shall control the ~~Precursor Organic Compound (~~POC~~)~~ emissions from S-1, S-2, S-3, and S-4 ~~shall be controlled~~ by a Direct Flame Afterburner, A-1, during all periods of operation. [basis: BACT]

   The owner/operator shall control the POC and NPOC emissions from S-6 by a Thermal Oxidizer, A-2, during all periods of operation. [basis: BACT]

6. The owner/operator shall maintain the ~~The~~ POC and/or NPOC ~~Precursor Organic Compound~~ destruction efficiency of the afterburner (A-1) and thermal oxidizer (A-2) ~~shall be maintained~~ at a minimum of 98.5%, by weight. [basis: BACT]

7. The owner/operator shall properly maintain the Afterburner, A-1, and Thermal Oxidizer, A-2, ~~shall be properly maintained~~ and kee~~pt~~p them in good operating condition at all times. In no event shall the afterburner and/or thermal oxidizer temperatures (average of the three thermocouples) be less than 1450 degrees F. when S-1, S-2, S-3, ~~and/or~~ S-4, and/or S-6 are in operation. The temperature shall be automatically controlled at all times during operation of S-1, S-2, S-3, ~~and/or~~ S-4, and/or S-6. The District may adjust this minimum temperature if source test data demonstrate that an alternate temperature is necessary for or capable of maintaining compliance with Part 6 above. [basis: BACT, Regulation 2-1-403]

8. The owner/operator shall demonstrate ~~To determine~~ compliance with Part #7. T~~, t~~he afterburner (A-1) and thermal oxidizer (A-2) shall be equipped with continuous measuring and recording instrumentation consisting of at least 3 thermocouple temperature probes in the afterburner and at least one recording device, which will continuously record the afterburner temperature as measured by each of the 3 probes. [basis: BACT]

9. The temperature limit in Part 7 shall not apply during an "Allowable Temperature Excursion", provided that the temperature controller set point complies with the temperature limit. An Allowable Temperature Excursion is one of the following:

   a. A temperature excursion not exceeding 20 degrees F; or
   b. A temperature excursion for a period or periods which when combined are less than or equal to 15 minutes in any hour; or
   c. A temperature excursion for a period or periods which when combined is more than 15 minutes in any hour, provided that all three of the following criteria are met.
      i. the excursion does not exceed 50 degrees F;
      ii. the duration of the excursion does not exceed 24 hours; and
      iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12-month period).

   Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit. [basis: BACT]

10. For each Allowable Temperature Excursion that exceeds 20 degrees F. and 15 minutes in duration, the ~~Permit Holder~~ owner/operator shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained for a minimum of five years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:

    a. Temperature controller set point;
    b. Starting date and time, and duration of each Allowable Temperature Excursion;
    c. Measured temperature during each Allowable Temperature Excursion;
    d. Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and

e. All strip charts or other temperature records.
[basis: BACT]

11. For the purposes of parts 9 and 10, a temperature excursion refers only to temperatures below the limit.

12. The owner/operator shall collect the temperature data ~~collected~~ from the temperature recorders of A-1 and A-2, and shall ~~be~~ maintain~~ed~~ them in a file, which shall be available for District inspection for a period of at least five years following the date on which such data or reports are recorded or made. [basis: Regulation 2-6-501]

13. The owner/operator shall install enclosures over the all three coaters and ovens (S-1, S-2, S-3, S-4 and S-6) t~~T~~o ensure 100% capture efficiency as defined by EPA Method 204 for Permanent Total Enclosure when the source(s) is in operation. ~~emissions capture, the average intake flow velocities (face velocity) at each emissions collection point for the above sources shall be 100 ft/min or more.~~

~~The owner/operator shall verify the face velocity at each collection point on a quarterly basis.~~ [Basis: ~~Regulation 2-6-503~~BACT]

14. To demonstrate compliance, the owner/operator of ~~this~~ sources S-1, S-2, S-3, S-4 and S-6 shall maintain the following data on a daily basis:
    a. operating time of ~~Coating Lines 1 & 2.~~S-1, S-2, S-3, S-4 and S_6.
    b. amount and type of coating applied, by use of a daily measurement and a daily District approved log.
    c. amount of clean-up solvent used.
    d. a list of all products coated per day and the sheet production rate for each product (sheets/day).
    e. film thickness requirements of product being coated.
    f. charts from the afterburner temperature recorder.
    g. all invoice records of coatings and solvents purchased.
    h. thinning ratios for respective coatings being thinned.
    i. maintain records of Material Safety Data Sheets (MSDS) or other product information identifying the POC content and individual HAP contents for each of the solvent-containing materials used at all sources
    j. calculate monthly emissions of POC and individual HAPs from each source, based on the quantities of materials used and the chemical composition information from the associated Material Safety Data Sheets (MSDS)
    k. calculate total POC and individual HAP emissions from the total of all sources for each month, and on a rolling 12-month basis.

    Records shall be available for District inspection for a period of at least five years following the date on which such data or reports are recorded or made.
    [basis: BACT, Cumulative Increase, Synthetic minor]

15. The owner/operator shall not ship/receive more than ~~Rail shipments/receipts from/to the permit holder shall not exceed~~ 50,000 tons of materials by rail during any consecutive 12-month period. A District approved log shall be kept for all rail activity at the facility. [basis: Cumulative Increase]

16. In accordance with the provisions of Regulation 2-3-414, should the facility precursor organic compound (POC) emissions ever equal or exceed 35 tons per year, on a pollutant specific basis, the facility owner/operator shall reimburse the District with emission reduction credits for all offsets of that pollutant provided from the Small Facility Banking Account or its predecessor, the Small Facility Bank. [basis: Offsets]

17. The Owner/Operator shall prepare an annual emissions report. The report shall contain the following items for the year ending December 31:
    a. Monthly report on each individual HAP and total individual HAP emissions for the rolling 12-month period.
    b. Monthly report on each POC and total POC emissions for the rolling 12-month period.

    This report shall be submitted to the Director of Compliance and Enforcement by March 1 of each year. [basis: Synthetic Minor]

18. The owner/operator shall report non-compliance with any of the conditions in writing to the Director of Compliance and Enforcement within 10 calendar days of discovery of non-compliance.
    [basis: Synthetic Minor]

19. The owner/operator of A-2 Thermal Oxidizer shall ensure that the nitrogen oxides (NOx) emissions from A-2, shall not exceed 50 ppmvd at 15% O2 (0.20 lb/MMBtu). [Basis: RACT, Source Test Method 13A]

20. The owner/operator of A-2 Thermal Oxidizer shall ensure that the carbon monoxide (CO) emissions from A-2 shall not exceed 350 ppmvd at 15% O2 (0.80 lb/MMBtu). [Basis: RACT, Source Test Method 6]

21. Within 60 days of receiving this Permit to Operate, the owner/operator of S-6 and A-2 shall conduct a District approved source test to verify compliance with Parts 6, 9, 19 and 20. The test results shall be submitted to the District within 30 days of completion of the source test. Prior to the performance of the source test, the owner/operator must submit a test protocol to the Source Test division of the Bay Area Air Quality Management District (BAAQMD) for approval. The Source Test Division and the Engineering Division of BAAQMD shall be informed in writing at least 10 days prior to the source test. [Basis: Reg. 2-1-403]

For S-5 solvent tank

~~19~~22. The owner/operator shall ensure that the total throughput for S-5 shall not exceed 10,130 gallons during any consecutive 12-month period. [basis: cumulative increase]

~~20~~23. The owner/operator shall ensure that the true vapor pressure of the bulk material stored in S-5 shall not exceed 1.0 psia. [basis: cumulative increase]

~~21~~24. To demonstrate compliance with the above conditions, the owner/operator shall keep the following records on site and be made available for District inspection for a period of at least five years from the date on which a record was made.
    a. The types of organic liquids stored
    b. The true vapor pressure of each liquid stored, and;
    c. The quarterly throughput quantities.

[basis: cumulative increase]

For S-7 Water Based Coating Tank

25. The owner/operator of S-7 shall not exceed 100,000 gallons of water based coating during any consecutive twelve-month period. (Basis: Cumulative Increase)

26. The owner/operator may store alternate liquid(s) other than the materials specified in Part 25 and/or usages in excess of those specified in Part 25, provided that the owner/operator can demonstrate that all of the following are satisfied:
    a. Total POC emissions from S-7 do not exceed 31 pounds in any consecutive twelve month period;
    b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

    (Basis: Cumulative Increase; Toxics)

27. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
    a. Quantities of each type of liquid stored at this source on a monthly basis.
    b. If a material other than those specified in Part 25 is stored, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 26, on a monthly basis;
    c. Monthly throughput and/or emission calculations shall be totaled for each consecutive twelve-month period.

    All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase; Toxics)

For S-8 Solvent Based Coating Tank

28. The owner/operator of S-8 shall not exceed 100,000 gallons of solvent based coating during any consecutive twelve-month period. (Basis: Cumulative Increase)

29. The owner/operator may store alternate liquid(s) other than the materials specified in Part 28 and/or usages in excess of those specified in Part 28, provided that the owner/operator can demonstrate that all of the following are satisfied:
    a. Total POC emissions from S-8 do not exceed 46 pounds in any consecutive twelve month period;
    b. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5.

    (Basis: Cumulative Increase; Toxics)

30. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
    a. Quantities of each type of liquid stored at this source on a monthly basis.
    b. If a material other than those specified in Part 28 is stored, POC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 29, on a monthly basis;

c. Monthly throughput and/or emission calculations shall be totaled for each consecutive twelve-month period.

All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase; Toxics)

IX. RECOMMENDATION

Issue the conditional Authority to Construct to Silgan Containers Mfg. for the following equipment:

S-1 No. 1 Sheet Coater equipped with either Anilox single-roller or Wagner two-roller, and the back roller cleaning system may be either a solvent flood, brush, felt bar or a solvent-less scraper system, abated by A-1 Direct Flame Afterburner, J.P. Thorpe, 10 MMBtu/hr capacity.

S-3 No. 2 Sheet Coater equipped with either Anilox single-roller or Wagner two-roller, and the back roller cleaning system may be either a solvent flood, brush, felt bar or a solvent-less scraper system, abated by A-1 Direct Flame Afterburner, J.P. Thorpe, 10 MMBtu/hr capacity.

S-6 No. 3 Continuous Sheet Coater equipped with Integral Curing Oven and either Anilox single-roller or Wagner/Crabtree two-roller, and the back roller cleaning system may be either a solvent flood, brush, felt bar or a solvent-less scraper system, abated by A-2 Thermal Oxidizer, LTG Technologies Type 8000, 6.8 MMBtu/hr.

S-7 Coating Storage Tank, 7,500 gallons capacity, abated by A-1 Direct Flame Afterburner, J.P. Thorpe, 10 MMBtu/hr.

S-8 Coating Storage Tank, 7,500 gallons capacity, abated by A-1 Direct Flame Afterburner, J.P. Thorpe, 10 MMBtu/hr.

Thu H. Bui
Air Quality Engineer II
Permit Services Division