Statement of Basis

Final

Cygnus, Inc.
Ponderay, Idaho
Facility ID No. 017-00051
Permit to Construct P-2010.0068

August 2, 2010
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Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
gph	gallons per hour
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
PC	permit condition
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SCL	significant contribution limits
SIC	Standard Industrial Classification
SIP	State Implementation Plan

SM	synthetic minor
SO_2	sulfur dioxide
SO_X	sulfur oxides
T/yr	tons per consecutive 12-calendar month period
TAP	toxic air pollutants
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
$\mu g/m^3$	micrograms per cubic meter

FACILITY INFORMATION

Description

Cygnus is an aerospace parts manufacturer with in-house painting and surface-treatment operations. In-house painting is performed inside of three spray booths. Surface-treatment operations consist of cleaning, passivation (anti-corrosion treatment), Alodine™ deposition, anodizing, and sealing. Process and building heat is provided by various natural gas-fired equipment.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

January 6, 2006	P-040126, Initial PTC for a previously exempt aerospace parts manufacturer. Permit status (S).
August 31, 2010	P-2010.0068, PTC modification to include a third paint booth. NESHAP, subpart HHHHHH requirements were added. No emissions changes or limits were made.

Application Scope

This PTC is for a minor modification at an existing minor facility.

The applicant has proposed to:

- Install and operate a third bench-style paint booth. However, there is no increase of emissions as it is the permittee's intention to redistribute their current paint use from two booths to three. There is also no proposed emissions increase from the current HAPs limit of 12.48 T/yr.

Application Chronology

May 17, 2010	DEQ received an application and an application fee.
June 8 – June 23, 2010	DEQ provided an opportunity to request a public comment period on the application.
June 10, 2010	DEQ received supplemental information from the applicant.
June 16, 2010	DEQ determined that the application was complete.
July 21, 2010	DEQ made available the draft permit and statement of basis for peer and regional office review.
August 2, 2010	DEQ made available the draft permit and statement of basis for applicant review.
August 24, 2010	DEQ received the permit processing fee.
August 31, 2010	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

ID No.	Source Description	Control Equipment Description	Emissions Point ID No. and Description
PB-1 - 3	Exhaust Fan: Manufacturer: Paasche/Hartzell Model: A46-246DA STDCM Type: FABF 6' Capacity Rating: 5583 cfm Construction Date: 6-15-2006	Filter System: Manufacturer Filter: Chemco Mach III Model Filter: 1 inch tick U-poly filter, 2 inch thick PLAF filter, Chemoco Mach III EPA certified Method 319 bag filter. Number of bags: 9 Construction Date: 2006 Control Efficiency:99.99%	Height: 10 ft Exit Diameter: 2 ft Exit Flow Rate: 4450 acfm Exit Temperature: 78 °F
PB-1 - 3	Paint Spray Guns: Manufacturer: Binks & Accuspray Model: Mach 1SLA & 19 Series Type: all are HVLP Capacity Rating: 1.22 gal/hr Transfer Efficiency: 65%	Filter System: Manufacturer Filter: Chemco Mach III Model Filter: 1 inch tick U-poly filter, 2 inch thick PLAF filter, Chemco Mach III EPA certified Method 319 bag filter. Number of bags: 9 Construction Date: 2006 Control Efficiency:99.99%	Height: 10 ft Exit Diameter: 2 ft Exit Flow Rate: 4450 acfm Exit Temperature: 78 °F
Stack #1,2,4	Space Heating & Furnaces Manufacturer: Ruud Model: Silhouette II (3) Capacity Rating: 150,000 Btu/hr	None	Height: 3 ft Exit Diameter: 0.67 ft
Stack #3	Space Heating & Furnaces Manufacturer: Lennox Model: LF 3E Capacity Rating: 200,000 Btu/hr	None	Height: 3 ft Exit Diameter: 0.5 ft
Stack #5,6	Space Heating & Furnaces Manufacturer: Carrier Model: 58 RAV (2) Capacity Rating: 140,000 Btu/hr	None	Height: 2 ft Exit Diameter: 0.5 ft
Fuel-burning	Space Heating & Furnaces Manufacturer: ARES Model: 1200 Capacity Rating: 1.2 MMBtu/hr	None	No stack, louvered vents
Stack #7	Space Heating & Furnaces Manufacturer: Power Flame Model: CX-30 (2) Capacity Rating: 600,000 Btu/hr	None	Height: 24 ft Exit Diameter: 0.67 ft Exit Flow Rate: 501 acfm Exit Temperature: 160.5 °F

Emissions Inventories

An emission inventory was developed for the paint booths and fuel-burning equipment at the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutants were based on emission factors from AP-42, section 1.4 (7/98) and MSDS information with operation of 8,760 hours per year for the paint booths (5,880 hours per year for the fuel-burning equipment), and process information specific to the facility for this proposed project. Summaries of the estimated controlled emissions of criteria pollutants, TAPs, and HAPs from the facility are provided in the following tables.

Pre-Project Potential to Emit

The following table presents the pre-project potential to emit for all criteria pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit. The pre-project estimates are based on 2003 data.

Table 2 PRE-PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

Emissions Unit	PM_{10}		SO_2		NO_X		CO		VOC	
	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]
Point Sources										
Paint Booths 1-2	5.28E-08	2.31E-07	--	--	--	--	--	--	2.65	10.63[c]
Natural Gas-Fired Equipment	0.025	0.074	0.002	0.006	0.31	0.92	0.13	0.39	0.018	0.054
Pre-Project Totals	**0.03**	**0.07**	**0.002**	**0.01**	**0.31**	**0.92**	**0.13**	**0.39**	**2.67**	**10.68**

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.
c) Note that the current PTC Statement of Basis, issued January 6, 2006, showed the annual PTC of VOC to be 10.63 T/yr. However, when analyzing the appendices of that document, the actual amount should have been 11.63 T/yr. While the following two tables suggest an increase of 1.0 T/yr VOC, there really not an increase. Rather the previously typographical error is being remedied.

Post Project Potential to Emit

The following table presents the post project potential to emit for criteria pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit. The post-project estimates are based on 2009 data.

Table 3 POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

Emissions Unit	PM_{10}		SO_2		NO_X		CO		VOC	
	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]
Point Sources										
Paint Booths 1-3	3.37E-08	1.48E-07	--	--	--	--	--	--	2.65	11.63
Natural Gas-Fired Equipment	0.025	0.074	0.002	0.006	0.31	0.92	0.13	0.39	0.018	0.054
Post Project Totals	**0.03**	**0.07**	**0.002**	**0.01**	**0.31**	**0.92**	**0.13**	**0.39**	**2.67**	**11.68**

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required or if emissions modeling may be required, and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 4 CHANGES IN POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

	PM_{10}		SO_2		NO_X		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Sources										
Pre-Project Potential to Emit	0.03	0.07	0.002	0.01	0.31	0.92	0.13	0.39	2.67	10.68
Post Project Potential to Emit	0.03	0.07	0.002	0.01	0.31	0.92	0.13	0.39	2.67	11.68
Changes in Potential to Emit	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00[a]**

a) The increase of VOC emissions is not actually occurring. Rather the Post-Project emissions were updated to reflect the correction of a previous typographical error. See footnote C of Table 2 above for further details.

Non-Carcinogenic TAP Emissions

A summary of the estimated uncontrolled non-carcinogenic emissions increase of toxic air pollutants (TAP) is provided in the following table. The estimated uncontrolled emissions increases of TAP were below applicable emissions screening levels (EL). Estimated controlled TAP emissions were below the annual major source threshold.

Pre- and post project, as well as the change in, non-carcinogenic TAP emissions are presented in the following table:

Table 5 PRE- AND POST PROJECT NON-CARCINOGENIC TAP EMISSIONS SUMMARY
POTENTIAL TO EMIT

Non-Carcinogenic Toxic Air Pollutants	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)[a]	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Acetone	0.00	1.21E-01	**0.1210**	119	No
Ethyl Acetate	0.00	9.94E-04	**0.0010**	93.3	No
2-Methoxy Ethyl Acetate	0.00	4.55E-03	**0.0046**	1.6	No
Ethylenediamine	0.00	3.72E-05	**0.00004**	1.67	No
Trimethyl Benzene	7.89E-05	1.31E-04	**0.0001**	8.2	No
Butyl Carbitol Acetate	0.00	2.16E-06	**0.000002**	0.846	No
Cumene	0.00	1.02E-04	**0.0001**	16.30	No
Carbon Black[b]	0.00	8.25E-10	**8.25E-10**	0.23	No
Cristobalite[b]	0.00	1.49E-10	**1.49E-10**	0.0033	No
Quartz[b]	0.00	1.91E-08	**1.91E-08**	0.0067	No
Amorphous Silica[b]	0.00	4.45E-11	**4.45E-11**	0.667	No
di-Butylyin di-Laurate[b] (as Tin)	0.00	7.53E-14	**7.53E-14**	0.007	No
Phosphoric Acid[b]	0.00	7.18E-12	**7.18E-12**	0.067	No
Barium Chromate[b] (as Barium)	0.00	1.68E-09	**1.68E-09**	0.033	No

a. Note that the Pre-project emissions are 2.25 times greater than what was actually estimated in 2003 as the permittee required the increase for maximum operational flexibility.
b. All of these compounds are considered non-volatile and the post-project lb/hr calculations assume that 0.00004% of paint mist is not arrested by the filter system.

Therefore, modeling is not required for any TAPs because the 24-hour average non-carcinogenic screening EL identified in IDAPA 58.01.01.585 was not exceeded.

Carcinogenic TAP Emissions

A summary of the estimated controlled carcinogenic emissions increase of toxic air pollutants (TAP) is provided in the following table. The estimated controlled emissions increases of TAP were below applicable emissions screening levels (EL). Estimated controlled TAP emissions were below the annual major source threshold. All other hexavalent chromium compounds outlined in Appendix A were actual decreases in emissions when comparing 2003 data to 2009.

Pre- and post project, as well as the change in, carcinogenic TAP emissions are presented in the following table:

Table 6 PRE- AND POST PROJECT CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Carcinogenic Toxic Air Pollutants	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Zinc Chromate[a] (as Cr 6^{+})	0.00	2.78E-12	2.78E-12	5.60E-07	No

a. This compound is considered non-volatile and the post-project lb/hr calculations assume that 0.00004% of paint mist is not arrested by the filter system.

Therefore, modeling is not required for the zinc chromate because the annual average carcinogenic screening EL identified in IDAPA 58.01.01.586 was not exceeded.

Post Project HAP Emissions

The following table presents the post project potential to emit for HAP pollutants from for the painting operations that are being modified as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 7 HAP EMISSIONS SUMMARY POTENTIAL TO EMIT

HAP Pollutants	PTE (T/yr)
Methyl Isobutyl Ketone	0.461
Toluene	0.654
Xylene	0.268
m-Xylene Diamine	1.5E-03
Ethyl Benzene	0.115
Ethylene Glycol	0.003
Napthalene	0.087
Cumene	4.5E-04
Hexamethylene Diisocyanate	0.002
Methylene Diphenyl Diisocyanate	0.091
Hexavalent Chromium compounds	1.48E-07
Totals	1.68

Originally in the previous permit, the facility requested a HAP PTE that was 19 times the 2003 emission rate in order to achieve maximum operational flexibility. This requested PTE exceeded m-xylene diamine, nitric acid, and sulfuric acid EL values, and the facility was informed that a modeling analysis would be necessary to determine compliance with appropriate AAC and AACC values. DEQ determined that an annual paint HAP content of 12.48 tons per year would assure compliance with the ELs. DEQ determined the HAP content value at the request of the facility. The annual HAP content of paints is based 2.25 times the 2003 average hourly HAP emission rate multiplied by 8,760 hours per year of operation. HAP content of acids used at the facility were not limited because the limiting, and also the majority of, pollutants were the HAPs found in the paints used at the facility. Also, the HAPs content that was calculated assumed that all TAPs were also HAPs. Therefore the total HAPs limit was permitted at 12.48 T/yr. However, when calculating the total HAPs for this modification it was evident that the HAPs emissions are much lower than the limit for two reasons. First, only a handful of the TAPs are also HAPs. Secondly, the multiplier of 2.25 was not included in the current analysis. As a result, the current application demonstrated that the facility was below the permitted 12.48 T/yr and all TAP did not exceeded ELs. At the permittee's request, the permit limit remains at 12.48 T/yr.

Ambient Air Quality Impact Analyses

This project did not require an Ambient Air Quality Impact Analysis because there is no change in criteria pollutants. Also, the previous permit demonstrated that all pollutants were below the significance threshold or emission levels. For further detail see permit No. P-040126, issued January 6, 2006.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Bonner County, which is designated as attainment or unclassifiable for $PM_{2.5}$, SO_2, NO_2, CO, and Ozone, and non-attainment for PM_{10}. Refer to 40 CFR 81.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the modified emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 Visible Emissions

The sources of PM_{10} emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Condition 7.

Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676 Standards for New Sources

The fuel burning equipment located at this facility, with a maximum rated input of ten (10) million BTU per hour or more, are subject to a particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This requirement is assured by Permit Condition 32. The facility is demonstrating compliance with this standard in the following manner:

The maximum emission rate for all fuel-burning equipment onsite is from the Power Flame CX-30 Stack at 0.0089 lb/hr. Also the flow rate is 501 acfm. This simple equation demonstrates that the facility is not exceeding the grain-loading standard.

0.0089 lb/hr * 1 min/501 acf * 1 hr/60 min * 7000 grains / lb = 0.002 gr/acf. The variability between dry standard and actual is not great enough to reach 0.015 gr/dscf. Therefore, Cygnus is demonstrating compliance with the standard.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for all criteria pollutants or 10 tons per year for any one HAP or 25 tons per year for all HAPs combined as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is/is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility has proposed to operate as a minor source of hazardous air pollutant (HAP) emissions, and is subject to the requirements of 40 CFR 63, Subpart HHHHHH–National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources. Refer to the Title V Classification section for additional information.

40 CFR 63, Subpart HHHHHH — **National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources**

§ 60.11169 — *What is the purpose of this subpart?*

In accordance with §63.11169, subpart HHHHHH establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in auto body refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations or any coating operations that spray any material that contains any of the target HAPs onto plastic or metal that is not an automobile or mobile equipment.

§ 63.11170 — *Am I subject to this subpart?*

In accordance with §63.11170(a)(3), Cygnus performs spray applications of coatings that contain target HAP, specifically chromium. The coatings are applied to aircraft parts which are typically constructed out of aluminum metal. This coating operation is subject to this subpart because the facility will be operated as an area source of HAP. The facility is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions.

§ 63.11171 — *How do I know if my source is considered new or existing?*

In accordance with §63.11171(b), the spray coating operation is the collection of spray booths, spray guns and associated equipment; spray gun cleaning equipment; and equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint. Paint stripping was not proposed as a business activity.

In accordance with §63.11171(c), this spray coating operation is an existing source because it commenced construction prior to September 17, 2007.

§ 63.11172 — *When do I have to comply with this subpart?*

In accordance with §63.11172(a)(2), because the initial startup of the facility occurred prior to January 9, 2008, the compliance date is January 10, 2011.

§ 63.11173 — *What are my general requirements for complying with this subpart?*

Because the facility has not proposed paint-stripping activities, the requirements of §63.11173(a) through (d) are not applicable. The facility is a miscellaneous spray coating operation, in accordance with §63.11173(e), the permittee must meet the requirements of in paragraphs (e)(1) through (e)(5) of this section.

In accordance with §63.11173(f), each owner or operator of an affected spray coating operation must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

In accordance with §63.11173(g), as required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

Compliance with these requirements is assured by PTC conditions 18.

§ 63.11174 What part of the general provisions apply to me?

In accordance with §63.11174(a), Table 1 of this subpart shows which parts of the General Provisions in subpart A apply. Compliance with these requirements is assured by PTC condition 18.

In accordance with §63.11174(b), an owner or operator of an area source subject to this subpart is exempt from the obligation to obtain a permit under 40 CFR part 70 or 71 provided that a permit under 40 CFR 70.3(a) or 71.3(a) is not required for a reason other than becoming area source subject to this subpart. This permit application and permitting action involve a Permit to Construct, and will not utilize the requirements and procedures in IDAPA 58.01.01.300-399 for the issuance of Tier I operating permits.

§ 63.11175 What notifications must I submit?

In accordance with §63.11175(a), because the facility is a surface coating operation subject to this subpart, the initial notification required by §63.9(b) must be submitted. For this existing operation, the Initial Notification must be submitted no later than on or before March 11, 2011.

In accordance with §63.11175(b), because the facility is an existing source, the permittee is not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided the permittee was able to certify compliance on the date of the initial notification, as part of the initial notification, and the permittee's compliance status has not since changed. The permittee must submit a Notification of Compliance Status on or before March 11, 2011. The permittee is required to submit the information specified in paragraphs (b)(1) through (4) of this section with the Notification of Compliance Status.

Compliance with these requirements is assured by PTC condition 27.

§ 63.11176 What reports must I submit?

In accordance with §63.11176(a), because the permittee is an owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, the permittee is required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

Compliance with these requirements is assured by PTC condition 28.

Because the facility has not proposed to conduct paint stripping operations, the MeCl minimization plan requirements are not applicable.

§ 63.11177 What records must I keep?

In accordance with §63.11177, because the permittee is the owner or operator of a surface coating operation, the permittee must keep the records specified in paragraphs (a) through (d) and (g) of this section. Because the permittee has not proposed to conduct paint stripping operations, the requirements of paragraphs (e) and (f) of this section are not applicable. Compliance with these requirements is assured by PTC condition 24.

§ 63.11178 In what form and for how long must I keep records?

In accordance with 40 CFR 63.11178(a) because the permittee is the owner or operator of an affected source, the permittee must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period. Compliance with these requirements is assured by PTC condition 24.

§ 63.11179 Who implements and enforces this subpart?

In accordance with §63.11179(a), this subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority. At the time of this permitting action, the EPA had not delegated authority to the State of Idaho. However, IDAPA 58.01.01.107.03.i incorporates by reference all Federal Clean Air Act requirements including. Therefore, the requirements of this subpart have been placed in the permit.

Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Existing Permit Condition 1.1

Table 1.1 lists all sources of regulated emissions in this PTC.

Table 1.1 SUMMARY OF REGULATED SOURCES

Permit Section	*Source Description*	***Emissions Control(s)***
2	*Paint Booths PB-1*	*Filter Stack*
2	*Paint Booths PB-2*	*Filter Stack*
3	*Ruud Silhouette II*	*None*
3	*Ruud Silhouette II*	*None*
3	*Lennox LF 3E*	*None*
3	*Ruud Silhouette II*	*None*
3	*Carrier 58 RAV*	*None*
3	*Carrier 58 RAV*	*None*
3	*Power Flame CX-30*	*None*
3	*Make-up Air Unit*	*None*

Revised Permit Condition 4

The emission sources regulated by this permit are listed in the following table.

Table 8 REGULATED SOURCES

Source Descriptions	***Emission Controls***
Paint Spray Booth #1 *Manufacturer: Binks, Accuspray* *Model: 1SL HVLP, 19 Series* *Type: All are HVLP* *Capacity Rating: 1.22 gal/hr* *Transfer Efficiency: Maximum of 65%*	*Filtration System* *HVLP Guns*
Paint Spray Booth #2 *Manufacturer: Binks, Accuspray* *Model: 1SL HVLP, 19 Series* *Type: All are HVLP* *Capacity Rating: 1.22 gal/hr* *Transfer Efficiency: Maximum of 65%*	*Filtration System* *HVLP Guns*
Paint Spray Booth #3 *Manufacturer: Paasche* *Model: FABF-6* *Type: All are HVLP* *Capacity Rating: 1.22 gal/hr* *Transfer Efficiency: Maximum of 65%*	*Filtration System* *HVLP Guns*
Space Heating and Furnaces *Manufacturer: Ruud (3)* *Model: Silhouette II* *Heat Input: 150,000 Btu/hr*	*None*

Source Descriptions	*Emission Controls*
Space Heating and Furnaces *Manufacturer: Lennox* *Model: LF3E* *Heat Input: 200,000 Btu/hr*	*None*
Space Heating and Furnaces *Manufacturer: Carrier (2)* *Model: 58 RAV* *Heat Input:: 140,000 Btu/hr*	*None*
Space Heating and Furnaces *Manufacturer: Power Flame, Inc. (2)* *Model: CX-30* *Heat Input: 600,000 Btu/hr*	*None*
Make-up Air Unit *Manufacturer: ARES* *Model: 1200* *Heat Input: 1.2 MMBtu/hr*	*None*

The revised condition includes the third paint booth. A description of each unit was also added.

Existing Permit Condition 2.1

The facility operates two bench-style paint booths, PB-1 and PB-2, for the application of various aerospace paints.

Revised Permit Condition 5

The facility operates three bench-style paint booths, PB-1, PB-2 and PB-3, for the application of various aerospace paints.

Again, the revised permit condition only incorporates the inclusion of paint booth #3.

Existing Permit Condition 2.2

Particulate matter emissions from painting operations are controlled by a filter stack consisting of three filters arranged back-to-back. Each paint booth is equipped with its own filter stack. Each filter stack has a capture efficiency of 99.99% for PM_{10} sized particulate.

Table 2.1 PB-1 AND PB-2 DESCRIPTION

Emissions Unit(s) / Process(es)	*Emissions Control Device*	*Emissions Point*
Paint booth PB-1	*Filter stack*	*PB-1 stack*
Paint booth PB-2	*Filter stack*	*PB-2 stack*

Revised Permit Condition 6

Particulate matter emissions from painting operations are controlled by a filter stack consisting of three filters arranged back-to-back. Each paint booth is equipped with its own filter stack. Each filter stack has a capture efficiency of 99.99% for PM_{10} sized particulate.

Table 9 PAINT BOOTHS DESCRIPTION

Emissions Units / Processes	Emission Control Devices	Emission Points
Paint Booth PB-1	Filtration System	PB-1 Stack
Paint Booth PB-2	Filtration System	PB-2 Stack
Paint Booth PB-3	Filtration System	PB-3 Stack

The third paint booth emissions unit and control device was added. Also, the table numbering was updated to reflect up-to-date template standards.

New Permit Condition 7

> *The emissions from the Paint Booth No. 1, No.2 and No. 3 stacks shall not exceed any emissions rate limit in the following table.*

Table 10 PAINT BOOTH 1 - 3 EMISSION LIMITS[a]

Emissions Unit	*VOC*	
	lb/hr[b]	*T/yr[c]*
Paint Booths 1-3	*2.65*	*11.63*

a) In absence of any other credible evidence, compliance is assured by complying with permit operating, monitoring, and record keeping requirements.
b) Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference method, or DEQ-approved alternative.
c) Tons per any consecutive 12-calendar month period.

This condition was added to incorporate VOC limits. These rates are based on an emissions inventory submitted by the applicant.

Existing Permit Condition 2.4

The permittee shall install, maintain and operate, according to manufacturers and O&M manual recommendations and specifications, a filter stack, as described in the permit application for paint booths PB-1 and PB-2.

New Permit Condition 9

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids into the atmosphere of such nature and duration and under such conditions as would be injurious to human health or welfare, to animal or plant life, or to property, or to interfere unreasonably with the enjoyment of life or property in accordance with IDAPA 58.01.01.776.

This condition was added to incorporate any odors associated with the facility and to maintain compliance with IDAPA 58.01.01.776.

New Permit Condition 10

The permittee shall monitor and record visible emissions from the spray booth filter system ***once per day*** *when operating (for any day that a coating operation is performed in the paint spray booths) to demonstrate compliance with the opacity limit Permit Condition. The inspection shall consist of a see/no see evaluation for the paint spray booth exhaust system. If any visible emissions are present from the paint spray booth exhaust system, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136.*

The permittee shall maintain records of the results of each visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and opacity test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

This condition was added to verify that the filter system associated with each booth is operating correctly. Should there be any visible emissions; corrective action needs to take places and appropriate records maintained.

Revised Permit Condition 11

The permittee shall install, maintain and operate, according to manufacturers and O&M manual recommendations and specifications, a filter stack, with 99.99% filters for booths PB-1, PB-2 and PB-3.

The modification to the condition was to incorporate paint booth #3 verbiage. This requires that the new paint booth must be operated in accordance with manufacturer's specifications and requires 99.99% control efficiency. See Appendix A for details as to how that efficiency was determined.

New Permit Condition 12

The permittee shall not use Methylene Chloride (MeCl) to remove paint at this facility.

Methylene Chloride is not allowed per NESHAP, subpart HHHHHH.

Removed Permit Condition 2.5

The permittee shall install, calibrate, maintain and operate, according to manufacturer's recommendations and specifications, a pressure drop monitoring device to measure the pressure drop across the filer stacks connected to paint booth PB-1 and paint booth PB-2.

The condition was removed because the DEQ no longer uses pressure differential as a measurement for demonstrating a filter system is operating proper. Opacity is used as a replacement; hence the new permit condition 10.

Removed Permit Condition 2.6

The permittee shall maintain the pressure drop across each respective filter stack within manufacturer's and O&M manual specifications whenever paint booth PB-1 or paint booth PB-2 is operating.

The condition was removed because the DEQ no longer uses pressure differential as a measurement for demonstrating a filter system is operating proper. Opacity is used as a replacement; hence the new permit condition 10.

Existing Permit Condition 2.7

Within 180 days after issuance of this permit, the permittee shall have developed an O&M manual for each filter stack which describes the procedures that will be followed to comply with General Provision 2 and the air pollution control device requirements contained in this permit. The manual shall remain onsite at all times and made available to DEQ representatives upon request.

Revised Permit Condition 13

If any changes or updates are made to the O&M manual which describes the procedures that will be followed to comply with the control equipment General Provision and the air pollution control device requirements contained in this permit, the permittee shall notify DEQ. The manual shall remain onsite at all times and made available to DEQ representatives upon request.

The language of this condition was modified to require notification to DEQ should there be changes or updates to the O&M manual.

Existing Permit Condition 2.8

Total HAPs content of paints used shall not exceed 12.48 tons per year

Revised Permit Condition 14

Emissions of HAPs from the metal parts and products coating process, including but not limited to HAPs emissions from thinner, reducer, primer, top coat, and clear coat, shall not exceed 10 T/yr for any one HAP. 12.48 T/yr for all HAPs combined shall also not be exceeded.

The previous condition was modified to state that no single one (1) HAP may exceed 10 T/yr. The combined HAP total remained unchanged.

New Permit Condition 15

Emissions of TAPs from the coating process, including but not limited to TAPs emissions from thinner, reducer, primer, top coat, and clear coat, shall not exceed either the EL (lb/hr) (for TAPs listed in both IDAPA 58.01.01.585 and 586) or the AAC (mg/m^3) (for TAPs listed in IDAPA 58.01.01.585) or the AACC ($\mu g/m^3$) (for TAPs listed in IDAPA 58.01.01.586).

This condition was added to ensure that all TAPs emissions remain below all ELs, or ambient concentrations.

Existing Permit Condition 2.10

For paint booths PB-1 and PB-2, the permittee shall maintain the purchase records of all paints. The purchase records shall remain on site for the most recent two year period and shall be made available to DEQ representatives upon request.

Revised Permit Condition 16

For paint booths PB-1, PB-2 and PB-3, the permittee shall maintain the MSDS' for the coatings that contain HAPs purchased pursuant to the Purchase Records permit condition. The MSDS' shall remain on site at all times and shall be made available to DEQ representatives upon request.

The modification to the condition was to incorporate paint booth #3 verbiage.

New Permit Condition 17

Unless an exemption from the EPA has been granted to this facility in accordance with 40 CFR 63.11170 (a)(2), in accordance with 40 CFR 63.11172(a)(2), on and after January 10, 2011 the permittee shall comply with the applicable emission limitations and requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH.

The permittee shall meet the requirements of 40 CFR 63.11173(e)(1). All painters must be certified that they have completed training in the proper spray application of surface coatings and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in 40 CFR 63.11173(f). The spray application of surface coatings is prohibited by persons who are not certified as having completed the training described in 40 CFR 63.11173(f).

All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the requirements of 40 CFR 63.11173(e)(2).

All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98% capture of paint overspray. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1.

Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.

Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.

All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, or air-assisted airless spray gun, in accordance with 40 CFR 63.11173(e)(3).

All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent, in accordance with 40 CFR 63.11173(e)(4). Spray gun cleaning may be done by using a fully enclosed spray gun washer.

Each owner or operator must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in 40 CFR 63.11180, are trained in the proper application of surface coatings as required by 40 CFR 63.11173(e)(1), in accordance with 40 CFR 63.11173(f). The training program must include, at a minimum:

A list of all current personnel by name and job description who are required to be trained;

Hands-on and classroom instruction that addresses, at a minimum, initial and refresher training in the following topics:

Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate;

Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke;

Routine spray booth and filter maintenance, including filter selection and installation; and

Environmental compliance with the requirements of 40 CFR 63, Subpart HHHHHH.

A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training.

All new and existing personnel at the facility, including contract personnel, who spray apply surface coatings, as defined in 40 CFR 63.11180, must be trained by the dates specified in 40 CFR 63.11173(g). Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

All personnel must be trained and certified no later than 180 days after hiring or no later than January 10, 2011, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in 40 CFR 63.11173(f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

Training and certification will be valid for a period not to exceed five years after the date the training is completed, and all personnel must receive refresher training that meets the requirements of this section and be re-certified every five years.

The parts of the General Provisions which apply to the permittee are specified in Table 4, in accordance with 40 CFR 63.11174(a).

Table 5 APPLICABILITY OF GENERAL PROVISIONS TO SUBPART HHHHHH OF PART 63

Citation	*Subject*	*Explanation*
40 CFR 63.1(a)(1)-(12)	*General Applicability*	
40 CFR 63.1(b)(1)-(3)	*Initial Applicability Determination*	*Applicability of subpart HHHHHH is also specified in 40 CFR 63.11170.*
40 CFR 63.1(c)(1)	*Applicability After Standard Established*	
40 CFR 63.1(c)(2)	*Applicability of Permit Program for Area Sources*	
40 CFR 63.1(c)(5)	*Notifications*	
40 CFR 63.2	*Definitions*	*Additional definitions are specified in 40 CFR 63.11180.*
40 CFR 63.3(a)–(c)	*Units and Abbreviations*	
40 CFR 63.4(a)(1)–(5)	*Prohibited Activities*	
40 CFR 63.4(b)–(c)	*Circumvention/Fragmentation*	
40 CFR 63.6(a)	*Compliance With Standards and Maintenance Requirements—Applicability*	
40 CFR 63.6(b)(1)-(7)	*Compliance Dates for New and Reconstructed Sources*	*40 CFR 63.11172 specifies the compliance dates.*
40 CFR 63.6(c)(1)-(5)	*Compliance Dates for Existing Sources*	*40 CFR 63.11172 specifies the compliance dates.*
40 CFR 63.6(e)(1)-(2)	*Operation and Maintenance*	
40 CFR 63.6(f)(1)	*Compliance Except During Startup, Shutdown, and Malfunction*	
40 CFR 63.6(f)(2)-(3)	*Methods for Determining Compliance*	
40 CFR 63.6(g)(1)-(3)	*Use of an Alternative Standard*	
40 CFR 63.6(i)(1)-(16)	*Extension of Compliance*	
40 CFR 63.6(j)	*Presidential Compliance Exemption*	
40 CFR 63.9(a)-(d)	*Notification Requirements*	*40 CFR 63.11175 specifies notification*

Citation	Subject	Explanation
		requirements.
40 CFR 63.9(i)	*Adjustment of Submittal Deadlines*	
40 CFR 63.9(j)	*Change in Previous Information*	*40 CFR 63.11176(a) specifies the dates for submitting the notification of changes report.*
40 CFR 63.10(a)	*Recordkeeping/Reporting—Applicability and General Information*	
40 CFR 63.10(b)(1)	*General Recordkeeping Requirements*	*Additional requirements are specified in 40 CFR 63.11177.*
40 CFR 63.10(b)(2)(xii)	*Waiver of recordkeeping requirements*	
40 CFR 63.10(b)(2)(xiv)	*Records supporting notifications*	
40 CFR 63.10(b)(3)	*Recordkeeping Requirements for Applicability Determinations*	
40 CFR 63.10(d)(1)	*General Reporting Requirements*	*Additional requirements are specified in 40 CFR 63.11176.*
40 CFR 63.10(d)(4)	*Progress Reports for Sources With Compliance Extensions*	
40 CFR 63.10(f)	*Recordkeeping/Reporting Waiver*	
40 CFR 63.12	*State Authority and Delegations*	
40 CFR 63.13	*Addresses of State Air Pollution Control Agencies and EPA Regional Offices*	
40 CFR 63.14	*Incorporation by Reference*	*Test methods for measuring paint booth filter efficiency and spray gun transfer efficiency in 40 CFR 63.11173(e)(2) and (3) are incorporated and included in 40 CFR 63.14.*
40 CFR 63.15	*Availability of Information/Confidentiality*	
40 CFR 63.16(a)	*Performance Track Provisions—reduced reporting*	

Cygnus is subject to 40 CFR 63, Subpart HHHHHH. Therefore, the facility is required meet a series of general compliance requirements as defined in the subpart. This condition identifies those requirements. The facility does have the ability to petition the EPA for exemption should they so desire.

New Permit Condition 18

The permittee shall maintain records of all odor complaints received to demonstrate compliance with the odors Permit Condition. The permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

This condition was added to accompany the odors PC. The permittee is required to maintain records of any and all valid odor complaints. This is to demonstrate compliance with the odors permit condition.

Removed Permit Condition 2.11

When operating, the permittee shall monitor and record once per day, the pressure differential across each filter stack.

The condition was removed because the DEQ no longer uses pressure differential as a measurement for demonstrating a filter system is operating proper. Therefore records are also not necessary.

Existing Permit Condition 2.9

For paint booths PB-1 and PB-2, the permittee shall maintain the purchase records of all paints. The purchase records shall remain on site for the most recent two year period and shall be made available to DEQ representatives upon request.

Revised Permit Condition 19

For paint booths PB-1, PB-2 and PB-3, the permittee shall maintain the purchase records of all coatings. The purchase records shall remain on site for the most recent five year period and shall be made available to DEQ representatives upon request.

This condition was modified to include verbiage relating to paint booth #3 and the amount of time the records must be maintained was increased from two (2) to five (5) to be consistent with the Recordkeeping general provision.

Existing Permit Condition 2.12

For paint booths PB-1 and PB-2, the permittee shall monitor and record monthly, the usage of each paint that contains HAPs. The usage records shall remain on site for the most recent two year period and shall be made available to DEQ representatives upon request.

Revised Permit Condition 20

The permittee shall monitor and record daily, in gallons, the usage of all materials used in the metal parts and products coating process including but not limited to thinner, reducer, primer, top coat and clear coat.

The modification to this condition was to incorporate paint booth #3 verbiage. The frequency was also update from monthly to daily to correspond with the Revised Permit Condition 22, TAP emission limit recordkeeping requirement.

Existing Permit Condition 2.13

The permittee shall monitor and record the monthly and annual HAP usage from paint booths PB-1 and PB 2 using the purchase records required by Permit Condition 2.9, the MSDS' required by Permit Condition 2.10, and the material usage records required by Permit Condition 2.12 to demonstrate compliance with Permit Condition 2.8. Annual HAP emissions shall be determined by summing monthly HAP emissions over the previous consecutive 12-month period. Records of this information shall be maintained on site for the most recent two year period and shall be made available to DEQ representatives upon request.

Revised Permit Condition 21

Using the purchase records, MSDSs, and material usage records, the permittee shall monitor and record the monthly and annual HAPs (as defined in IDAPA 58.01.01.006) emissions in tons from the metal parts and products coating process in order to demonstrate compliance with the HAPs emissions limits Permit Condition.

Monthly HAP emissions shall be determined by summing total HAP emissions of each material used. HAP emission of each material used shall be calculated as follows:

> *Total monthly HAPs emissions = [Percent HAP #1 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x monthly usage in gallons (material #1)] ÷ 2,000 pounds per ton + [Percent HAP #2 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x monthly usage in gallons (material #1)] ÷ 2,000 pounds per ton + ... + Percent HAP #n content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x monthly usage in gallons (material #1)] ÷ 2,000 pounds per ton + ... + [Percent HAP #1 content (material #n) ÷ 100 x Density in pounds per gallon (material #1) x monthly usage in gallons (material #1)] ÷ 2,000 pounds per ton + [Percent HAP #2 content (material #n) ÷ 100 x Density in pounds per gallon (material #1) x monthly usage in gallons (material #1)] ÷ 2,000 pounds per ton + ... + Percent HAP #n content (material #n) ÷ 100 x Density in pounds per gallon (material #n) x monthly usage in gallons (material #n)] ÷ 2,000 pounds per ton*

Annual HAPs emissions shall be determined by summing total monthly HAPs emissions over each previous consecutive 12-month period.

The modification to the condition was to incorporate an appropriate method for tracking and recording HAPs emissions each month and annually and demonstrating compliance with the HAPs permit condition. The equation discussed in the permit condition has been used in other Idaho DEQ issued paint booth permits. To maintain consistency this approach was included in the permit. Note that the emissions inventory submitted by Cygnus calculated HAPs emissions in this manner.

New Permit Condition 22

Using the purchase records, MSDSs, and material usage records, the permittee shall monitor and record the individual hourly TAPs (as specified in IDAPA 58.01.01.585 and 586) emissions from the metal parts and products coating process in order to demonstrate compliance with the TAPs emissions limits Permit Condition.

Each individual hourly TAPs emissions (except for chromium, lead, manganese, nickel, or cadmium because they are regulated by HHHHHH) shall be calculated for each material as follows:

> *Hourly TAPs emissions = [Percent TAP #1 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x daily usage in gallons (material #1) ÷ 24 hours/day]*

If any of the individual hourly TAPs emissions limits exceed the screening emissions level (EL) specified in IDAPA 58.01.01.585 and 586, a modeling demonstration, per IDAPA 58.01.01.210, shall be conducted to demonstrate compliance with the AAC (mg/m^3) (for TAPs listed in IDAPA 58.01.01.585) or the AACC ($\mu g/m^3$) (for TAPs listed in IDAPA 58.01.01.586).

This condition was added to demonstrate compliance with the TAPs emission limit permit condition. The non-carcinogenic TAPs ELs are based on a 24-hr average and the carcinogenic TAPs ELs are based on an annual average. However for simplicity sake when performing the calculations the carcinogenic TAPs will need to meet the 24-hr average as well. This will not be a problem for Cygnus as they submitted data in the application that demonstrated compliance with the emission levels using the 1-hr maximum. Also, this condition requires a modeling demonstration in accordance with IDAPA 58.01.01.210 should one of the ELs be exceeded.

New Permit Condition 23

Using the purchase records, MSDSs, and material usage records, the permittee shall monitor and record the monthly and annual VOC emissions in tons from the metal parts and products coating process in order to demonstrate compliance with the emissions limits Permit Condition.

Monthly VOC emissions shall be determined by summing total VOC emissions of each material used. VOC emission of each material used shall be calculated as follows:

> *Total monthly VOC emissions = [Percent VOC content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x monthly usage in gallons (material #1)] ÷ 2,000 pounds per ton + ... + [Percent VOC content (material #n) ÷ 100 x Density in pounds per gallon (material #n) x monthly usage in gallons (material #n)] ÷ 2,000 pounds per ton*

Annual VOC emissions shall be determined by summing total monthly VOC emissions over each previous consecutive 12-month period.

This new condition establishes that the permittee shall maintain monthly records of VOC emissions from the coating process. This was done to provide the permittee flexibility to use additional paints and still demonstrate compliance with the current VOC emissions limits.

New Permit Condition 24

Unless an exemption from the EPA has been granted to this facility in accordance with 40 CFR 63.11170 (a)(2), in accordance with 40 CFR 63.11172(a)(2), on and after January 10, 2011 the permittee shall comply with the applicable emission limitations and requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH.

> *The permittee shall keep the following records in accordance with 40 CFR 63.11177(a) through (d) and (h).*
>
> > *Certification that each painter has completed the training specified in 40 CFR 63.11173(f) with the date the initial training and the most recent refresher training was completed.*
> >
> > *Documentation of the filter efficiency of any spray booth exhaust filter material, according to the procedure in 40 CFR 63.11173(e)(2).*

Copies of any notification submitted as required by 40 CFR 63.11175 and copies of any report submitted as required by 40 CFR 63.11176.

Records of any deviation from the requirements in 40 CFR 63.11173, 63.11174, 63.11175, or 63.11176. These records must include the date and time period of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

Records of any assessments of source compliance performed in support of the initial notification, notification of compliance status, or annual notification of changes report.

The permittee shall maintain copies of the records specified in 40 CFR 63.11177 for a period of at least five years after the date of each record in accordance with 40 CFR 63.11178(a). Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period.

In accordance with 40 CFR 63.11178(a), the permittee shall maintain copies of the records specified in 40 CFR 63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period.

This condition outlines the recordkeeping requirements associated with 40 CFR 63, Subpart HHHHHH.

New Permit Condition 25

Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit of that document for the purposes of the reference, including any notes and appendices therein. Documents include, but are not limited to:

National Emission Standards for Hazardous Air Pollutants (NESHAP) Area Sources, 40 CFR Part 63, Subpart HHHHHH.

For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NESHAP), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation.

This condition states that should there be any discrepancy between this permit and the federal rule or there is confusion between the two; the federal rule takes precedence and should be followed.

New Permit Condition 26

The permittee shall comply with the recordkeeping requirements General Provision.

This condition was added to remind the permittee that all recordkeeping requirements must be done in accordance with the recordkeeping general provision.

New Permit Condition 27

Unless an exemption from the EPA has been granted to this facility in accordance with 40 CFR 63.11170 (a)(2), in accordance with 40 CFR 63.11172(a)(2), on and after January 10, 2011 the permittee shall comply with the applicable emission limitations and requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH.

Initial Notification. The permittee must submit the initial notification required by 40 CFR 63.9(b) in accordance with 40 CFR 63.11175(a). For this existing source, you must submit the Initial Notification no later than January 11, 2010. The initial notification must provide the following information.

The company name, if applicable;

The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official;

The street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

An identification of the relevant standard, such as 40 CFR part 63, Subpart HHHHHH;

A brief description of the type of operation. For all surface coating operations, indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation, and include the number of spray booths and preparation stations, and the number of painters usually employed at the operation.

A statement of whether the source is already in compliance with each of the relevant requirements of this subpart, or whether the source will be brought into compliance by the compliance date.

The permittee must certify in the initial notification whether the source is in compliance with each of the requirements of 40 CFR 63, Subpart HHHHHH. If the permittee is certifying in the initial notification that the source is in compliance with the relevant requirements of this subpart, then include also a statement by a responsible official with that official's name, title, phone number, e mail address (if available) and signature, certifying the truth, accuracy, and completeness of the notification, a statement that the source has complied with all the relevant standards of this subpart, and that this initial notification also serves as the notification of compliance status.

Notification of Compliance Status. The permittee is not required to submit a separate notification of compliance status in addition to the initial notification provided the permittee was able to certify compliance on the date of the initial notification as part of the initial notification, and the permittee's compliance status has not since changed in accordance with 40 CFR 63.11175(b). The permittee must submit a Notification of Compliance Status by March 11, 2011. The permittee is required to submit the following information with the Notification of Compliance Status:

The company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance. For surface coating operations, the relevant requirements are specified in 40 CFR 63.11173(e) through (g).

The date of the Notification of Compliance Status.

This condition outlines the notification requirements associated with 40 CFR 63, Subpart HHHHHH.

New Permit Condition 28

Unless an exemption from the EPA has been granted to this facility in accordance with 40 CFR 63.11170 (a)(2), in accordance with 40 CFR 63.11172(a)(2), on and after January 10, 2011 the permittee shall comply with the applicable emission limitations and requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH

Annual Notification of Changes Report. In accordance with 40 CFR 63.11176, the permittee is required to submit a report in each calendar year in which information previously submitted in either the initial notification required by 40 CFR 63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted has changed. Deviations from the relevant requirements in 40 CFR 63.11173(a) through (d) or 40 CFR 63.11173(e) through (g) on the date of the report will be deemed to be a change. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the following information.

The company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

Any notifications or reporting required by the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH or Subpart A – General Provisions shall be submitted to both of the following addresses in accordance with 40 CFR 63.13:

EPA Region 10
Director, Office of Air Quality
1200 Sixth Avenue
(OAQ–107)
Seattle, WA 98101

And,

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2210 Ironwood Parkway.
Coeur d'Alene, ID 83814
Phone: (208) 769-1422
Fax: (208) 769-1404

This condition outlines the reports requirements associated with 40 CFR 63, Subpart HHHHHH and where they need to be sent.

New Permit Condition 36

The permittee shall comply with the recordkeeping requirements General Provision.

This condition was added to remind the permittee that all recordkeeping requirements must be done in accordance with the recordkeeping general provision.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments on the application and there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

Emissions Inventory

Cygnus Inc. supplied the Idaho DEQ with an excel spreadsheet outlining all of the emissions associated with the paint booths and fuel-burning equipment. The spreadsheet data is included in this appendix in its entirely, but to help any interested parties better understand the calculations DEQ has prepared the following examples. This should provide the methods used by Cygnus to reach their emission estimates. All calculations are based on 2009 data and then expanded to 8,760 hours of operation.

The Cygnus spreadsheet contains a HAPs% tab. Information provided by this tab includes appropriate percentage by weight of each HAP/TAP within each paint used at the facility. This information is determined by manufacturer-developed MSDS sheets and the appropriate mixing ratio used by Cygnus. For example, paint BMS 10-11 10P8-10 is a mix between MSDS AA72/73 (as defined by Cygnus) with a ratio of 1:1. AA72 or Fluid Resistant Epoxy primer has an acetone percent by weight maximum of 30 while AA73, Expoxy Primer Cure Solution, has an acetone maximum weight percentage of 100%. However, if the maximum percentage of another component of 30% is applied, the acetone maximum is 70%. Again a 1:1 ratio was applied, thus the proper acetone percentage for the BMS 10-11 10P8-10 paint is the average of the two or 50%.

Following determination of the HAP/TAP% for each component of each paint, the annual usage in gallons was calculated. Each week workers determine the amount of each mix that was used. Cygnus employs a ladle system. A small ladle measures one (1) ounce of mixed paint and a large ladle measures four (4) ounces. The number of ladles used each week is converted into gallons. The weekly totals are summed to determine an annual amount of paint used in gallons. Each mixture also has a specific density in lb/gal.

The density is multiplied by the annual usage to obtain the total lb/yr of each paint emitted. The result is then multiplied by the HAP/TAP% to calculate the total lb/yr of acetone, for example. Each paint mixture that contains acetone is summed together and divided by 2080 hr. The 2080 hr is the amount of hours Cygnus operates in a given year. The result is the total amount of pounds of acetone (or any other TAP) on an hourly basis.

The lb/hr of all HAP/TAPs are compared to the EL in IDAPA 58.01.01.585-856. All volatile HAP/TAPs were shown to be below the ELs. Some non-volatile HAP/TAPs, specifically hexavalent chromate derivatives exceeded ELs when no filtration is applied. However, Cygnus paint booths contain a filtration system that includes both 99.95% and 99.8% filters. Also, by assuming a 60% transfer efficiency the non-volatile HAP/TAPs emissions rate was determined.

Paint Mist not arrested = (1-99.95%)*(1-99.8%)*(1-60%) = 0.00004% or 0.0000004

The following is a PTE TAPs example calculation for ethyl acetate.

HAP/TAP % by weight * (annual gallons used * density) = lb/yr

Paint #1 (DPM 5893) = 44.44% * (0.51 gal/yr * 9.14 lb/gal) = 2.06 lb/yr

Paint #2 (517x377 EMP) = 11.25% * (0.00 gal/yr * 8.25 lb/gal) = 0.00 lb/yr

Paint #3 (MIL-PRF-85285 36118) = 0.80% * (0.095 gal/yr * 9.35 lb/gal) = 0.01 lb/yr

Total Ethyl Acetate = Σ(paint #1, paint #2, paint #3) = 2.06 + 0.00 + 0.01 = **2.07 lb/yr**

Ethyl Acetate = 2.07 lb/yr ÷ 2080 hr/yr = 0.000994 lb/hr

Screening EL = 93.3 lb/hr

0.000994 lb/hr * 8760 hr/yr ÷ 2000 lb/T = 0.0044 T/yr

All HAP/TAPs are below ELs and the total summation of all TAPs is 2.65 lb/hr and 11.63 T/yr which is below the allowable limit of 12.48 T/yr. It should be noted that HAPs limit is greater than the VOC because several pollutants that contribute to the HAPs total are non-volatile in nature.

Fuel-Burning Equipment Emissions Calculations

Emissions per AP-42, for Space Heating and Process Furnaces

	Appliance	Nameplate Btu's/hr.	Btu's/hr., % of Total
1)	Ruud Silhouette II	150,000	4.50%
2)	Ruud Silhouette II	150,000	4.50%
3)	Lennox LF 3E	200,000	6.01%
4)	Ruud Silhouette II	150,000	4.50%
5)	Carrier 58 RAV	140,000	4.20%
6)	Carrier 58 RAV	140,000	4.20%
7)	ARES Model 1200	1,200,000	36.04%
8)	PowerFlame CX-30	600,000	18.02%
9)	PowerFlame CX-30	600,000	18.02%
		3,330,000	100.00%

Emission Estimate Calculations per AP-42, Vol. 1, CH 1.4 Natural Gas Combustion At Maximum Rated Capacity.

	emission factor	unit	Total lbs./hr	lbs./day	lbs./year	ton/year
CO, residential furnaces uncontrolled:	40	lbs./MMscf	0.131	3.13	767.86	0.38
SO2:	0.6	lbs./MMscf	0.002	0.05	11.52	0.006
PM, Total:	7.6	lbs./MMscf	0.025	0.60	145.89	0.073
NOx, residential furnaces uncontrolled:	94	lbs./MMscf	0.307	7.37	1804.47	0.90
VOC:	5.5	lbs./MMscf	0.018	0.43	105.58	0.053

Calculation Examples:

$$CO = \frac{40lb}{MMscf} * \frac{MMscf}{1{,}020MMBtu} * \frac{3.33MMBtu}{hr} = 0.131lb/hr$$

$$\frac{0.131lb}{hr} * \frac{5880hr}{yr} * \frac{ton}{2{,}000lb} = 0.38ton/yr$$

1 therm = 100,000 Btu

$$\frac{3{,}330{,}000Btu}{hr} * \frac{5880hr}{yr} * \frac{therm}{100{,}000Btu} = 195{,}804therm/yr$$

Cygnus Inc. Air Quality Emissions Summary

Year 2009 Data Calculated at Method 319 Filter Stack Efficacy

0.71

Filename: Emissions Calcs_2009_Recalc.xls

Pollutant	PTE (lb/hr)	Idaho Screening EL (lb/hr)	PTE (not Actual) % of Idaho Screening EL (lb/hr)	Actual Emissions: Total HAP lbs./ytd
Acetone	0.12078	119	0.10%	251.21
n-Butyl Acetate	0.12870	47.3	0.27%	267.69
Isobutyl Acetate	0.00000	46.7	0.00%	0.00
1-Methoxy 2-Propanol Acetate	0.00505	24	0.02%	10.51
sec-Hexyl Acetate	0.00292	20	0.01%	6.07
Ethyl Acetate	0.00099	93.3	0.00%	2.07
2-Methoxy Ethyl Acetate	0.00455	1.6	0.28%	9.47
Methyl Amyl Ketone	0.12286	15.7	0.78%	255.55
Methyl Ethyl Ketone	0.59700	39.3	1.52%	1241.75
Methyl Isobutyl Ketone	0.10533	13.7	0.77%	219.08
Methyl n-Propyl Ketone	0.02290	46.7	0.05%	47.64
Diisobutyl Ketone	0.00831	9.67	0.09%	17.29
Dipropylene Glycol, Monomethyl Ether	0.00001	40	0.00%	0.01
Toluene	0.14939	25	0.60%	310.72
Xylene	0.06127	29	0.21%	127.43
m-Xylene Diamine	0.00034	7.00E-04	48.97%	0.71
Ethylenediamine	0.00004	1.67	0.00%	0.08
Isopropanol	0.14428	65.3	0.22%	300.09
1-propanol (n-Propanol)	0.06327	33.3	0.19%	131.61
Cyclohexanone	0.03376	6.67	0.51%	70.23
Ethyl Benzene	0.02627	29	0.09%	54.65
n-Butyl Alcohol (n-Butanol)	0.04667	10	0.47%	97.08
2-Butoxyethanol	0.00316	8	0.04%	6.57
2-Butoxy Ethyl Acetate	0.00606	8.33	0.07%	12.59
sec-Butyl Alcohol (Isobutanol)	0.21073	20.3	1.04%	438.33
Diacetone Alcohol	0.01264	16	0.08%	26.29
Ethylene Glycol	0.00070	0.846	0.08%	1.45
Nitroethane	0.12736	20.7	0.62%	264.91
Naptha (all)	0.01997	3.33	0.60%	41.54
Trimethyl Benzene Isomers	0.00013	8.2	0.00%	0.27
Butyl Carbitol Acetate	0.00000	0.846	0.00%	0.00
Cumene	0.000102	16.30	0.00%	0.21
Ammonia (Proc. Room + Paint Booths)	0.00043	1.2	0.04%	0.73
Nitric Acid (Proc. Room)	0.05083	0.333	15.26%	
Fluorides (Proc. Room)	0.00017	0.167	0.10%	
Zirconium Compounds (Proc. Room)	0.00017	0.333	0.05%	
Sulfuric Acid (Proc. Room)	0.00857	0.067	12.79%	
Piperazine*	0.00000	0.333	0.00%	0.00
Silane Derivative (EL is for SiH4)	0.03958	0.467	8.48%	82.33
Silane Derivative Esters (EL is for SiH4)	0.00000	0.467	0.00%	0.00
Hexamethylene Diisocyanate	0.00050	0.002	24.84%	1.03
Methylenediphenyl Diisocyanate	0.02067	0.003	688.93%	42.99
Carbon Black	0.00206	0.23	0.90%	4.29
Crystalline Silica (Cristobalite)	0.00037	0.0033	11.26%	0.77
Crystalline Silica (Quartz)	0.04785	0.0067	714.11%	99.52
Silica, Amorphous	0.00011	0.667	0.02%	0.23
di-Butyltin di-Laurate (as Sn)	0.00000	0.007	0.00%	0.00
Phosphoric Acid	0.00002	0.067	0.03%	0.04
Barium Chromate (Barium %)	0.00420	0.033	12.72%	8.73
Barium Chromate (as Hexavalent Cr%)	0.00163	5.60E-07	291547%	3.40
Cadmium	0.00000	3.70E-06	0.00%	0.00
Calcium Chromate (as Hexavalent Cr)	0.00788	5.60E-07	1407351%	16.39
Lead Chromate (as Lead)	0.00448	(Equivalent to 5 E-05 microgram per cubic meter during booth operations, ctrl'd basis)**		
Lead Chromate (as Hexavalent Cr)	0.00113	5.60E-07	201862%	2.35
Zinc Chromate (as Hexavalent Cr)	0.00001	5.60E-07	1241%	0.01
Strontium Chromate (as Hexavalent Cr)	0.07361	5.60E-07	13144915%	153.11

MONTHLY AND CUMULATIVE DATA LOCATED HERE-->

Instructions:
On Paintsinfo, each week record the amounts of each paint, in terms of ladles, large and small, in the large area set aside for this out to the right side of the spreadsheet. Record only net ladles sprayed (e.g. please do subtract ladles dumped).
In the light green area, each month print out a record of paints purchased, in terms of kits, and record these amounts for each paint. In the HazMat Logbook, incoming haz-mats, keep a running total of gallons of paints dumped to both Oil-Based/MEK drum, and waterborne waste paint drum, and at the end of the year record the totals in the provided area, pale green portion of Paintsinfo.**At the end of each month**, on this "Totals' page, copy the data in Column F over to the Cumulat Total HAP Emiss column for the month (to the upper right of these instructns
IMPORTANT: Use Paste Special and paste the values only.

Nat Gas Consumpt (195804max)		Therms	Cumulative
1/19/2009	2/17/2009	3525	3525
2/18/2009	3/18/2009	2575	6100
3/19/2009	4/16/2009	1681	7781
4/17/2009	5/18/2009	1500	9281
5/19/2009	6/17/2009	1059	10340
6/18/2009	7/17/2009	1014	11354
7/18/2009	8/17/2009	957	12311
8/18/2009	9/16/2009	686	12997
9/17/2009	10/15/2009	1316	14313
10/16/2009	11/13/2009	1626	15939
11/14/2009	12/16/2009	2395	18334
12/17/2009	1/18/2010	2934	21268
			21268
			21268

YR 2009 DATA w/ Method 319 Efficacy
(Assuming 0.00004% of paint mist not arrested)

Actual Emiss lb/hr for Non-Vol HAPS

ROWS 46 - 60 are non-volatile HAPS, trapped on bag filters

Actual Emissions lbs./ytd	PTE lb./hr.	NET TOTALS, lb./hr.	
4.13E-07	1.99E-10	Actual Emissions lb./ytd	
1.72E-05	8.27E-09	Diisocyanate:	*1.76E-05*
1.72E-06	8.25E-10		
3.09E-07	1.49E-10		
3.98E-05	1.91E-08	Silica:	*4.02E-05*
9.26E-08	4.45E-11		
1.57E-10	7.53E-14	Tin:	*1.57E-10*
1.49E-08	7.18E-12		
3.49E-06	1.68E-09		
1.36E-06	6.53E-10	Barium:	*3.49E-06*
0.00E+00	0.00E+00	Cadmium:	*0.00E+00*
6.56E-06	3.15E-09		
9.41E-07	4.52E-10		
5.78E-09	2.78E-12		
6.12E-05	2.94E-08	Hex Chrome:	*7.01E-05*

(note that diisocyantes are calculated without allowing for any polymerization)

* Shown as the hydrochloride salt in List 585

PTE lb./hr. Cr+6 total: 3.37E-08
% of EL, PTE: 6.02% **%ofEL, ActEm** 1.43%

Column F, TOTAL (lbs./ytd): **4296.18 Does not include non-volatiles (rows 46 through 60)**

** 2 paint booths at 4450 cfm ea. = 8900 cfm = 534,000 cf/hr. = 15123 cubic meters per hour
lead emissions = 0.0381 lb/hr = 1.728 g/hr = 0.69 micrograms per hour at 0.00004% of paint mist not arrested
0.69 microgram per hour / 15123 cubic meters per hour = 5 E-05 microgram per cubic meter during booth operations, ctrl'd basis, calc'd 8 hr/d, 5 d/wk

VOC and HAPS Emissions From Paints

=m-xy diamine				Amount	Total Pounds			VOC	HAP	Gallons	Gallons Purchased
	Material		VISUAL	Used, gal.	Density	Used	VOC Content	Emissions	Emissions	per	in
MSDS	Type	VENDOR	PROD ID	in 2009	(lb/gal)	(lbs/yr)	(lbs/gal)	lbs/year	lbs/year	Kit	2009
A1/2	DMS 2143 DN 9374	TC Spec	P-00270-T	26.25	10.17	266.97	3.46	90.83	155.752	1.500	30.000
AA4/5	BMS 10-11 TY 1 YELLOW TC SPEC	TC Spec	FUTURE USE	0.00	9.96	0.00	4.68	0.00	0.000	1.000	0.000
A5/6	DMS 1786	TC Spec	P-00249-P	225.96	8.60	1943.21	5.30	1197.56	1797.473	2.000	144.000
A9/10/11	MMS 436 HT	PPG	FUTURE USE	0.00	7.99	0.00	5.83	0.00	0.000	1.500	0.000
A16/17	DMS 2433 DN 9710	TC Spec	P-00305-T	0.15	11.54	1.74	3.38	0.51	0.678	1.000	0.000
A12/13	DMS 2104 TY1	TC Spec	P-00257-P	0.59	11.50	6.84	2.84	1.69	2.512	1.000	1.000
A41/42	DMS 2144 COMP A	PPG	P-00254-P	48.94	8.97	438.70	5.40	264.25	438.705	2.000	60.000
AA7/8	DMS 1850/AMS-C-27725	PPG	P-01311-P	18.50	9.86	182.40	3.48	64.38	115.498	1.500	18.000
A7/8	44GN072	DEFT	P-00250-P	227.98	10.64	2425.67	2.89	658.85	663.177	0.375	106.125
A67/68	MIL-PRF-23377 TYPE 1 (OLD)	PPG	FUTURE USE	0.00	12.04	0.00	2.80	0.00	0.000	1.000	0.000
A18/19	DMS 2433 COMP C DN7507	TC Spec	P-00241-T	37.76	10.92	412.33	3.40	128.38	163.903	1.000	44.000
AA13/14	MIL-PRF-85285 36375 PPG	PPG	P-00308-T	1.89	10.57	20.02	3.50	6.63	12.114	1.000	2.000
A59/60	MIL-PRF-85285 17925 MMS 420	PPG	P-00244-T	26.35	10.64	280.41	3.30	86.97	147.214	2.000	48.000
A57	DPM 5948 DN 7469	TC Spec	P-00248-T	0.95	10.01	9.52	2.34	2.23	1.476	1.000	2.000
A58	DPM 5949 DN 9708	TC Spec	P-00247-T	10.46	9.18	96.04	2.34	24.48	14.887	1.000	4.000
A22/23	MIL-PRF-85285 36320 PPG	PPG	P-00245-T	5.40	10.54	56.89	3.50	18.89	34.277	1.000	6.000
A20/21	DMS 2433 DN 7803	TC Spec	P-00321-T	0.78	10.98	8.53	3.38	2.63	3.742	1.000	0.000
A34/36	DPM 5893	PPG	P-00259-P	0.51	9.14	4.64	5.42	2.75	4.584	2.250	4.500
AA54/56	BAC 5710 TYPE 60	PPG	P-00934-P	8.38	8.48	71.04	5.38	45.07	67.878	2.250	11.250
AA11/12	CA8211 37038 POLY	PPG	P-00311-T/P-2192	4.80	9.73	46.73	3.50	16.81	25.704	1.000	6.000
AA17/18	DMS 2115 DN 9907	DEFT	P-00465-T	0.13	9.27	1.25	3.50	0.47	0.454	1.000	0.000
A61/62	MIL-PRF-85285 36231 PPG	PPG	P-00333-T	16.16	10.38	167.75	3.50	56.56	104.846	1.000	24.000
AA48/49	MIL-PRF-85285 27925	DEFT	P-00666-T	0.10	11.26	1.07	3.07	0.29	0.242	1.000	2.000
AA52/53	CA8110/F37925 ANTICHAFE WHITE	PPG	P-00812-T	17.31	9.53	164.97	3.49	60.41	74.236	1.500	15.000
AA38/39	MIL-PRF-22750 36231	TC Spec	P-00769-T	0.00	12.56	0.00	2.66	0.00	0.000	1.000	0.000
AA43/44	MIL-PRF-22750 37038 EPOXY	TC Spec	P-00788-T	0.00	11.72	0.00	2.74	0.00	0.000	1.000	0.000
A65/66	DPM 5066 DN 3635 ANTICHAFE	TC Spec	P-00363-T	0.00	11.14	0.00	3.52	0.00	0.000	1.000	0.000
AA68/69	MS 461 37925	DEFT	P-01304-T	0.00	10.10	0.00	3.50	0.00	0.000	1.000	0.000
AA63/64	MS 424 TYPE 2	DEFT	P-01280-P	0.00	11.45	0.00	2.83	0.00	0.000	0.375	0.000
AA66/67	MS 461 37038	DEFT	P-01305-T	0.00	9.65	0.00	3.50	0.00	0.000	1.000	0.000
A-1 54/55	AMS-C-27725 TYPE 1	TC Spec	P-02189	1.63	10.68	17.44	3.50	5.71	9.155	1.000	0.000
AA50/51	MIL-PRF-23377 TY 2 CL C2	TC Spec	P-00854-P	0.00	11.73	0.00	2.88	0.00	0.000	1.000	0.000
AA-45	DPM 5949 WLS 413(Dupl of A58)		NOT USED	0.00	9.17	0.00	1.08	0.00	0.000	1.000	0.000
AA72/73	BMS 10-11 10P8-10	TC Spec	P-00375-P	52.39	9.59	502.43	3.40	178.13	329.092	2.000	44.000
AA61/62	MIL-PRF-23377 TY 1 CL C2	TC Spec	P-00252-P	2.54	12.18	30.98	2.80	7.12	10.532	1.000	2.000
AA84/86	MIL-C-8514	TC Spec	P-00336-P	0.16	7.07	1.12	6.22	0.99	1.183	2.250	2.250
AA79/81	MS-133	PPG	P-01337-P	0.00	8.59	0.00	4.97	0.00	0.000	2.250	4.500
AA-91/92	44GN098	DEFT	P-01461-P	14.20	11.80	167.60	2.59	36.79	56.817	0.375	7.125
A32/33	44GN011	DEFT	FUTURE USE	0.00	11.78	0.00	2.83	0.00	0.000	0.375	0.000
AA19/20	44GN054	DEFT	P-00591-P	0.00	11.45	0.00	2.84	0.00	0.000	0.375	0.000
AA35	TT-P-1757B	SW	P-00522-P	0.00	9.15	0.00	4.50	0.00	0.000	1.000	0.000
AA74/75	44Y022	DEFT	FUTURE USE	0.00	11.63	0.00	2.78	0.00	0.000	0.375	0.000
AA82/83	DMS 2433 DN 3635	TC Spec	P-01229-T	0.00	10.63	0.00	3.53	0.00	0.000	1.000	0.000
AA89/90	03 B 084 MIL-C 46168(SUPERCEDED)		SUPERCEDED	0.00	10.53	0.00	3.49	0.00	0.000	1.250	0.000
AA76/78	BMS 10-60 702 WHITE	TC Spec	P-00374-T	0.00	9.67	0.00	4.32	0.00	0.000	2.250	0.000
AA1/2	DMS 2143 DN 3635	TC Spec	P-00327-T	0.13	10.01	1.27	3.47	0.44	0.868	1.500	1.500
AA87/88	BMS 10-11 CL B BAC 702	TC Spec	P-01267-T	0.83	10.68	8.89	3.45	2.87	3.466	1.000	0.000
AA16	MIL-PRF-85285 37038 POLY CA 8212	PPG	POSS FUTURE	0.00	9.86	0.00	3.49	0.00	0.000	1.000	0.000
FF4	MIL-V-173C VARNISH	FARWEST	P-02013-V	0.19	7.270	1.38	3.57	0.68	0.707	0.25	0.000
A1-1/2/3	BMS 10-83 TY II 706 SW & TRI(02014)	SW	P-01544-T P-02014	0.75	7.91	5.96	5.84	4.40	3.945	2.25	2.250
A1-4/5	TT-P-2756 37038	DEFT	P-01554-T	0.00	9.49	0.00	3.54	0.00	0.000	1.00	0.000
A1-10/11	MIL-PRF-85285 36375 DEFT	DEFT	OWN	0.03	9.93	0.31	3.51	0.11	0.072	1.00	0.000
A1-12/13	CA8110/F36375 ANTICHAFE GRAY	PPG	P-00353-T	0.00	9.58	0.00	3.46	0.00	0.000	1.50	0.000
A1-14/15	BMS 10-11 TY 1 YELLOW PPG	PPG	P-01563-P	0.00	8.73	0.00	5.42	0.00	0.000	2.00	0.000
A1-16/17	MIL-PRF-85285 36320 DEFT	DEFT	OWN	0.00	9.95	0.00	3.50	0.00	0.000	2.00	0.000
A1-18/20	CA 8800/I02184 GRAY	PPG	P-01727-T	1.45	9.72	14.10	3.50	5.08	7.754	4.00	8.000
A24/25	MIL-PRF-85285 36440	PPG	P-01555-T	0.00	10.46	0.00	3.50	0.00	0.000	1.00	0.000
AA-94/95	MIL-PRF-85285 37925	PPG	P-01482-T	0.00	10.58	0.00	3.50	0.00	0.000	1.00	0.000
A-1 22	MIL-DTL-53039 37038	SW	P-01781-T	0.06	10.39	0.66	3.30	0.21	0.075	1.00	0.000
A-1 24/25	MIL-PRF-85285 17925	TC Spec	POSS FUTURE	0.00	10.01	0.00	3.50	0.00	0.000	2.00	0.000
A-1 26/28	BMS 10-83 TY 3 8925 TRIUMPH OR SHER WILL	SW	P-02166-T / P-00616-T	0.10	10.02	1.03	4.82	0.50	0.507	2.50	2.500
A-1 33	MIL-DTL-53039 37030 TY 1 BLK	SW	P-01900-T	0.00	10.11	0.00	3.51	0.00	0.000	1.00	0.000
A-1 35/36	LMA-MR008 BMS 10-86 BAC 700 37925	TC Spec	P-01963-T	1.87	11.05	20.67	2.43	4.55	9.095	1.00	2.000
A-1 37	MIL-DTL-53039 TY I 36231 GRAY	TC Spec	P-01998-T	0.00	10.50	0.00	3.20	0.00	0.000	1.00	0.000
AA59/60	MIL-PRF-85285 36231 T/C SPEC	TC Spec	P-02173-T	1.11	9.40	10.43	3.50	3.88	4.303	1.00	0.000
A-1 41/43	513X377 EMP	EMP	P-02169-P	0.00	8.75	0.00	5.67	0.00	0.000	2.25	0.000
A-1 19/39/40	CA8800/I1115	PPG	P-02171-T	0.10	9.80	1.01	3.47	0.36	0.555	4.00	0.500
A-1 46/47	9460 QUEST	TORGINOL	P-02042-T	0.36	9.59	3.42	4.14	1.48	0.889	2.00	0.000
A-1 44/45	513x384 QUEST	PPG	P-02004-P	2.04	8.40	17.18	5.34	10.92	18.466	2.00	0.000
A-1 48	MIL-PRF-85285 36118	SW	P-02047-T	0.10	9.35	0.89	2.88	0.27	0.192	1.25	0.000
A58	DPM 5949 DN9710	WLS	P-02174-T	4.30	9.18	39.44	2.34	10.05	6.113	1.00	0.000
A-1 51/52/53	PT 55-421 RED NAPA	NAPA	P-02162-T	0.09					0.000		
A-1 56/57/58	BMS 10-60 Ty 2 BAC 707 Gray	PPG	P-02193-T	0.04	10.23	0.41	3.51	0.14	0.000	4.00	0.000
A-1 61/62	BMS 10-86 Ty 1 Color 707	Akzo	P-02195-T	0.41	11.00	4.53	3.45	1.42	0.000	1.00	0.000
A-1 59/60	CA8211/F37925	PPG	P-02196-T	0.00	10.58	0.00	3.48	0.00	0.000	1.00	0.000
A-1 63/64/65	825 X 537 Urethane Primer Low Impact Re	PPG	P-02197-P	0.11	8.60	0.95	4.96	0.55	0.000	2.00	0.000
			P-02198-T								
	Sum, gal.			759.41		Total Emissions lb/year:		3007.29	4293.14		604.500
						Total Emissions tons/yea		1.50	2.15		

HAPS Emissions (lbs/yr)

NEW PAINTS SINCE 2001

MSDS Number:	A1/2	AA4/5	A5/6	A9/10/11	A16/17	A12/13	A41/42	AA7/8	A7/8	A67/68	A18/19	AA13/14	A59/60	A57	A58	A22/23	A20/21	A34/36	AA54/56	AA11/12	AA17/18	A61/62	AA48/49	AA52/53	AA38/39	AA43/44	A65/66
MATERIAL HAP COMPOSITION	DMS 2143 DN 9374	BMS 10-11	DMS 1786	MMS 436 425 HT	DMS 2433 DN 9710	DMS 2104	DMS 2144	DMS 1850	85582 MMS 423/ 425	MIL-P-23377 Type 1 PPG	DMS 2433 DN 7507	MP 85285 36375 POLY	MP 852851 7925 POLY	DPM 5948-7469	DPM 5949-9708	MP 85285 36320 POLY	DMS 2433 DN 7803 37038 EPOXY	DPM 5893	BAC 5710 Type 60	M P 85285 37038 POLY CA 8211	DMS 2115 DN 9907	M P 85285 36231	M P 85285 27925	37925 Anti chafe	M P 22750 36231	M P 22750 37038 Epoxy	DPM 5066 DN 3635
Acetone																											
n-Butyl Acetate	17.81		68.01				65.81	36.48				0.25	42.06			0.71				0.58		2.10	0.09	16.50			
Isobutyl Acetate																											
1-Methoxy 2-Propanol Acetate												0.75				2.13						6.29					
sec-Hexyl Acetate								6.07																			
Ethyl Acetate																		2.06									
2-Methoxy Ethyl Acetate																			9.47								
Methyl Amyl Ketone	80.09					0.51						6.01	42.06			17.07				14.02	0.31	50.33		32.99			
Methyl Ethyl Ketone	53.39		971.61		0.09		65.81	18.24			30.93	4.51				12.80	0.64	0.26	28.42	10.52		37.74					
Methyl Isobutyl Ketone			126.31		0.13	0.67		6.07			21.65		42.06				0.64	0.62	9.47				0.10	5.49			
Methyl n-Propyl Ketone								36.48					7.01										0.04				
Diisobutyl Ketone																						6.29		11.00			
Dipropylene Glycol, Monomethyl Ether																					0.01						
Toluene			97.16		0.13	0.94	131.61	6.07			61.85	0.35				0.85	0.64	0.10	2.37				0.00				
Xylene			97.16		0.07						15.46		7.01				0.45	0.10			0.06			5.49			
m-Xylene Diamine						0.17																					
Ethylenediamine																											
Isopropanol			291.48																								
1-propanol (n-Propanol)							131.61																				
Cyclohexanone							21.94											1.24	11.05								
Ethyl Benzene			48.58			0.05					3.09						0.10				0.06						
n-Butyl Alcohol (n-Butanol)			48.58		0.13		10.97				30.93						0.64		4.74								
2-Butoxyethanol					0.07									0.38	3.84		0.32										
2-Butoxy Ethyl Acetate																											
sec-Butyl Alcohol (Isobutanol)									404.36														0.00				
Diacetone Alcohol														0.57	5.76												
Ethyene Glycol														0.10	0.96												
Nitroethane									242.57																		
Naptha (all)	4.46				0.07				16.25			0.25	7.01	0.38	3.84	0.71	0.32	0.21		0.58	0.00	2.10	0.00	2.75			
Trimethyl Benzene Isomers																					0.00		0.00				
Butyl Carbitol Acetate																											
Cumene																											
Ammonia														0.05	0.48												
Piperazine																											
Silane Derivative			48.58			0.17	10.97	6.07											2.37								
Silane Derivative Esters																											
Hexamethylene Diisocyanate	0.88																										
Methylenediphenyl Diisocyanate								42.55										0.36									
Carbon Black																0.85		0.04	0.63			2.52					
Crystalline Silica (Cristobalite)																											
Crystalline Silica (Quartz)			9.72		0.78	1.54	65.81	2.43			3.09						3.84										
Silica, Amorphous																											
Di-Butyltin Di-Laurate (as Sn)																					0.00		0.00				
Phosphoric Acid																											
Barium Chromate (as Barium)									8.73																		
Barium Chromate (as Hexavalent Cr)									3.40																		
Cadmium																											
Calcium Chromate (as Hexavalent Cr)			16.19															0.21									
Lead Chromate (as Lead)			9.33																								
Lead Chromate (as Hexavalent Cr)			2.35																								
Zinc Chromate (as Hexavalent Cr)																											
Strontium Chromate (as Hexavalent Cr)			17.37			0.39	16.81	3.11	103.33										2.42								
Totals:	**155.75**	**0.00**	**1797.47**	**0.00**	**0.68**	**2.51**	**438.70**	**115.50**	**663.18**	**0.00**	**163.90**	**12.11**	**147.21**	**1.48**	**14.89**	**34.28**	**3.74**	**4.58**	**67.88**	**25.70**	**0.45**	**104.85**	**0.24**	**74.24**	**0.00**	**0.00**	**0.00**

NOTES:

SOURCE: VOC and HAP content information obtained from Manufacturer MSDSs.

Substances and values in shaded area are non-volatile or essentially non-volatile

All values are shown at the maximum of the range shown on the MSDS (or for some, at the actual value shown)

AA68/69	AA63/64	AA66/67	A-1 54/55	AA50/51	AA45	AA72/73	AA61/62	AA84/86	AA79/81	AA91/92	A32/33	AA19/20	AA35	AA74/75	AA82/83	AA89/90	AA76/78	AA1/2	AA87/8	AA16	FF-4	A1-1/2/3	A1-4/5	A1-10/11	A1-12/13	A1-14/15	A1-16/17	A1-18/20	A24/25	AA-94/95	A-1 22
Paints ADDED in 2004					Paints ADDED in 2005																	Paints ADDED in 2006 see also AD 130 a printable version										
MS 461 #37925	MS 424 Type 2	MS 461 #37038	AMS C 27725 Type 1	MIL P 23377 Type 2	DPM 5949 WLS 413	BMS 10-11 10P8-10	MIL P 23377 TCSpe	MIL C 8514	MS-133	44 GN 098	44-GN-011	44GN 054	TT-P 1757B	44-Y-022	446-21 3635 DMS 2433	03 B 084 MIL C 46168	ECL G-16 BMS 10 - 60	DMS 2143 DN 3635 24 F 40 106	446-22-1000 CompA BAC 702	MIL PRF 85285 37038 POLY OLD CA821 1	Farwest MIL-V-173C Varnish 6F266	BMS 10-83 Ty II	TT-P-2756 Color 37038	03-GY-292 MP 85285 TY1	CA8110 F36375 Anti chafe Gray PS13555	BMS 10-11 Ty1Yellow 513K009 DeSoto	MIL PRF 85285D 36320, Ty 1 POLY	CA 8800 / 2184 PRC DeSoto Colum Heli	CA 8211 / F36440 DeSoto MIL-P 85285	CA 8211 / F37925 DeSoto MIL-P 85285	MIL-DTL-53039/ 37038 08628 KUZ
						251.21																									
																		0.21				1.72		0.02				3.17			
																						0.21									
			3.92				2.32											0.38						0.05				2.11			0.03
																		0.25	0.47			0.99									
							2.32												0.67										2.11			
			3.92																												
			1.31				3.10												1.33			0.28									
							1.16															0.04						0.35			0.01
							0.54																								
							0.08																								
								0.73														0.13									
						32.66																0.57									
						2.51	0.23															0.01		0.00							
																			0.67												
																			0.33		0.05										
						12.56																									0.03
								0.45		33.52																					
						17.59																									
										22.34																					
																		0.02			0.66										
																								0.00							
										0.12														0.00							
						12.56	0.77			0.84																					
																		0.00				0.01									
																						0.08						0.14			0.00
																															0.09
			0.13			2.51	6.97												0.07												0.06
																						0.13									0.03
								0.04																0.00							
								0.01																							
			0.43			4.17	2.37																								
0.00	0.00	0.00	9.15	0.00	0.00	329.09	10.53	1.18	0.00	56.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	3.47	0.00	0.71	3.95	0.00	0.07	0.00	0.00	0.00	7.75	0.00	0.00	0.07

HAPS Per Paint (lb/yr)

A-1 24/25	A-1 26/28	A1-33	A1-35/36	A1-37	AA59/60	A-1 41/43	A-1 19/39/40	A-1 46/47	A-1 44/45	A-148	A58	A-1 51/53	A-1 56/58	A-1 61/62	A-1 59/60	A-1 63/65				
	2008											P-2162-T	P-2193-T	P-2195-T	P-2196-T	P-2197-P				
MIL-P 85285 17925 TC Spec Akzo White	BMS 10-83 Ty 3 #8925	MIL-DTL-53039B/ 37030 TY 1 BLK	LMA-MR008 37925	MIL-DTL-53039 TY 1 36231 GRAY	MIL-PRF-85285 36321 T/C SPEC	513X377 emp	DA8800/I1115	9460 QUEST	513X384 QUEST	MIL-PRF-36118	DPM 5949 DN 9710	PT55-421	BMS 10-60 Ty 2 BAC 707 Gray	BMS 10-86 Ty 1 Color 707	CA8211/ F37925	825 X 537 Urethane Primer Low Impact Resist			**Total per HAP (lbs/yr)**	Total per hour (lb/hr)
																			251.21	0.1207764
	0.19		7.23		0.39		0.23		2.58	0.02			0.07	1.47					**267.69**	0.128696
																			0.00	0.0000000
	0.04		0.52		0.39			0.01						0.17					**10.51**	0.005054
																			6.07	0.00292
										0.01									**2.07**	0.000994
																			9.47	0.004553
			1.34		1.17		0.15			0.16			0.06	0.44					**255.55**	0.122861
	0.13				2.35				2.58							0.04			**1241.75**	0.596997
							0.15						0.06			0.55			**219.08**	0.105327
								0.17					0.01						**47.64**	0.022902
																			17.29	0.008314
																			0.01	0.0000060
	0.03							0.01	2.58				0.00						**310.72**	0.149385
	0.01						0.03						0.01			0.02			**127.43**	0.061265
																			0.71	0.000343
																			0.08	0.0000372
	0.02								7.73										**300.09**	0.144276
																			131.61	0.063275
	0.08								2.58							0.13			**70.23**	0.033764
	0.00							0.01											**54.65**	0.026275
									0.43										**97.08**	0.046672
											1.58								**6.57**	0.003156
																			12.59	0.0060552
																			438.33	0.210735
											2.37								**26.29**	0.012637
											0.39								**1.45**	0.000697
																			264.91	0.12736
								0.34			1.58		0.01						**41.54**	0.019972
								0.26		0.01			0.01						**0.27**	0.000131
																			0.00	2.16E-06
								0.09											**0.21**	0.000102
											0.20								**0.73**	0.000349
																			0.00	0
																			82.33	0.039584
																			0.00	0
	0.00		0.10		0.03					0.00				0.01					**1.03**	0.000497
																0.07			**42.99**	0.020668
	0.00							0.00		0.00			0.00			0.01			**4.29**	0.002062
			0.52											0.17					**0.77**	0.0003717
									2.58	0.01									**99.52**	0.047845
								0.01		0.06									**0.23**	0.000111
																			0.00	1.88E-07
																			0.04	0.0000179
																			8.73	0.004198
																			3.40	0.001633
																			0.00	0
																			16.39	0.007881
																			9.33	0.004484
																			2.35	0.00113
																			0.01	0.0000070
									2.58							0.13			**153.11**	0.073612
0.00	**0.51**	**0.00**	**9.09**	**0.00**	**4.30**	**0.00**	**0.56**	**0.89**	**18.47**	**0.19**	**6.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**2.065473**

Total HAPS (lbs/yr): 4296.18

Total HAPS (tons/yr): 2.15

Percent HAPS In Paints

MSDS Number:	A1/2	AA4/5	A5/6	A9/10/11	A16/17	A12/13	A41/42	AA7/8	A7/8	A67/68	A18/19	AA13/14	A59/60	A57	A58	A22/23	A20/21	A34/36	AA54/56	AA11/12	AA17/18	A61/62	AA48/49	AA52/53	AA38/39	AA43/44	A65/66	AA68/69
																			New Paints, Relative to 2001 Inventory									
	HAPs (wt.%/gallon)																											
MATERIAL HAP COMPOSITION	DMS 2143 DN 9374	BMS 10-11 (OLD)	DMS 1786	MMS 436 425 HT	DMS 2433 DN 9710	DMS 2104	DMS 2144	DMS 1850	85582 MMS 423/ 425	MIL-P-23377 Type 1	DMS 2433 DN 7507	MP 85285 36375 POLY	M P 85285 17925	DPM 5948-7469	DPM 5949-9708	MP 85285 36320 POLY	DMS 2433 DN 7803 37038 EPOXY	DPM 5893	BAC 5710 Type 60	M P 85285 37038 POLY CA 8211	DMS 2115 DN 9907	M P 85285 36231	M P 85285 27925	F37925 Anti chafe	M P 22750 36231	M P 22750 37038 Epoxy	DPM 5066 DN 3635	MS 461 #37925
Acetone																												
n-Butyl Acetate	6.67		3.50	15.00			15.00	20.00				1.25	15.00			1.25				1.25		1.25	8.75	10.00			32.50	5.86
Isobutyl Acetate																												
1-Methoxy 2-propanol acetate												3.75				3.75						3.75					3.75	
sec-Hexyl Acetate								3.33																				
Ethyl Acetate																		44.44										
2-Methoxy Ethyl Acetate																			13.33									
Methyl Amyl Ketone	30.00			15.00		7.50				10.00		30.00	15.00			30.00				30.00	25.00	30.00		20.00		3.75	9.75	14.57
Methyl Ethyl Ketone	20.00	22.50	50.00	35.00	5.25		15.00	10.00		7.50	7.50	22.50				22.50	7.50	5.56	40.00	22.50		22.50			3.75	3.75		
Methyl isobutyl ketone		7.50	6.50		7.50	9.75		3.33		11.25	5.25		15.00				7.50	13.33	13.33				9.50	3.33	5.25	5.25		
Methyl n-propyl ketone								20.00					2.50										3.75					
Diisobutyl Ketone																						3.75		6.67				
Dipropylene Glycol Monomethyl Ether																					1.00							
Toluene			5.00	27.50	7.50	13.75	30.00	3.33		3.75	15.00	1.75				1.50	7.50	2.22	3.33				0.08		5.25			
xylene		22.50	5.00		3.75					3.75	3.75		2.50				5.25	2.22			5.00			3.33	8.63	12.75		
m-xylene diamine*						2.50																						
Ethylenediamine																												
Isopropanol		15.00	15.00	20.00																								
1-propanol							30.00																					
cyclohexanone		3.75					5.00			2.50								26.67	15.55									
Ethyl Benzene		7.00	2.50			0.75					0.75						1.13				5.00				1.75	1.75		0.20
n-butyl alcohol			2.50		7.50		2.50				7.50						7.50		6.67						3.25	3.25		
2-butoxyethanol					3.75									4.00	4.00		3.75								3.25	3.25		
2-Butoxy Ethyl Acetate																												
sec-butyl alcohol (isobutanol)									16.67														0.08					
Diacetone alcohol														6.00	6.00													
Ethylene glycol														1.00	1.00													
Nitroethane									10.00																			
Naptha (all)	1.67			2.50	3.75				0.67			1.25	2.50	4.00	4.00	1.25	3.75	4.44		1.25	0.20	1.25	0.25	1.67	3.75	3.75		
Trimethyl Benzene Isomers																					0.18		0.25					
Butyl Carbitol Acetate																												1.39
Cumene																												0.01
Ammonia														0.50	0.50													
Piperazine																									0.38	0.38		
Silane Derivative		1.25	2.50	3.33		2.50	2.50	3.33		1.25									3.33									
Silane Derivative Esters										1.25																		
Hexamethylene Diisocyanate	0.33																										0.25	
Methylenediphenyl Diisocyanate								23.33										7.78										
Carbon Black																1.50		0.89	0.89			1.50						
Crystalline Silica (Cristobalite)																											3.75	
Crystalline Silica (Quartz)		0.75	0.50		45.00	22.50	15.00	1.33			0.75						45.00								30.00	45.00		
Silica, Amorphous																												
Di-Butyltin Di-Laurate (as Sn)																					0.02		0.010					0.002
Phosphoric Acid																												
Barium Chromate (Barium %)									0.36																			
Barium Chromate (as Hexavalent Cr %)									0.14																			
Cadmium		0.75																										
Calcium Chromate (as Hexavalent Cr)			0.83															4.44										
Lead Chromate (as Lead)			0.48																									
Lead Chromate (as Hexavalent Cr)			0.12																									
Zinc Chromate (as Hexavalent Cr %)																												
Strontium Chromate (as Hexavalent Cr)		2.49	0.89	1.28		5.75	3.83	1.70	4.26	5.75									3.41									
Total %HAPS/gallon:	58.67	83.49	95.33	119.61	84.00	65	118.83	89.68	32.10	47	40.5	60.50	52.50	15.50	15.50	61.75	88.88	111.99	99.839	55.00	36.39	64.00	22.66	45.00	65.25	82.88	50.00	22.03

Source: VOC and HAP content information obtained from Manufacturer MSDSs.
Substances and values in shaded area are non-volatile or essentially non-volatile
All values are shown at the maximum of the range shown on the MSDS (or for some, at the actual value shown)

Percent HAPS In Paints

AA63/64	AA66/67	A-1 54/55	AA50/51	AA45	AA72/73	AA61/62	AA84/86	AA79/81	AA91/92	A32/33	AA19/20	AA35	AA74/75	AA82/83	AA89/90	AA76/78	AA1/2	AA87/8	AA16	FF-4	A1-1/2/3	A1-4/5	A1-10/11	A1-12/13	A1-14/15	A1-16/17	A1-18/20
Paints ADDED IN 2004					Paints ADDED in 2005																Paints New in '06		see also AD 129 a printable version -- also needs editing v				
MS 424 Type 2	MS 461 #37038	AMS C 27725 Type 1	MIL P 23377 Type 2	DPM 5949 WLS 413	BMS 10-11 10P8-10	MIL P 23377 TCSpe	MIL C 8514	MS-133	44 GN 098	44-GN-011	44GN 054	TT-P 1757B	44-Y-022	446-21 3635 DMS 2433	03 B 084 MIL C 46168	ECL G-16 BMS 10 - 60	DMS 2143 DN 3635 24 F 40-106	446-22-1000 CompA BAC 702	MIL PRF 85285 37038 POLY OLD CA8212	Farwest MIL-V-173C Varnish 6F266	BMS 10-83 Ty II	TT-P-2756 Color 37038	03-GY-292 MP 85285 TY1	CA8110 F36375 Anti chafe Gray PS13555	BMS 10-11 Ty1Yellow 513K009 DeSoto	MIL PRF 85285D 36320, Ty 1 POLY	CA 8800 / 2184 PRC DeSoto Colum Heli
					50.00																						
	1.61													1.13	3.19	2.00	16.67				28.80	18.75	5.72	10.00		8.33	22.50
												5.00															
																			5.00		3.50						
	21.52	22.50	7.50			7.50								3.75		36.00	30.00		30.00			3.75	15.43	20.00		20.00	15.00
								7.78						7.50			20.00	5.25	10.00		16.70				17.50		
			9.75			7.50		57.77							22.16			7.50							3.33	15.00		15.00
		22.50																									
																			5.00					6.67			
		7.50	10.00			10.00						4.00		7.50				15.00			4.70	0.67		1.33			
			3.75			3.75		2.22			0.01	1.00		5.25							0.60	0.25		3.33	45.00		2.50
			1.75			1.75																					
						0.25																					
							65.55														2.10				15.00		
					6.50			13.33								24.00					9.60						
			0.75		0.50	0.75						0.20		1.13							0.24	0.07	0.17			0.67	
														7.50				7.50									
				4.00														3.75		3.40							
					2.50																						
14.90							40.00		20.00	13.33	14.87	4.00	13.33														
				6.00	3.50																						
10.01									13.33	10.00	10.02		10.00														
										0.67	0.07	7.00	0.67	3.75	0.34		1.67			47.70				1.67			
											0.09															0.50	
	1.47																						1.43			3.33	
0.01	0.01								0.07		0.01				0.35								0.01			0.33	
				0.50																							
			2.50		2.50	2.50			0.50																		
																0.20	0.33				0.10	0.13					
								7.78																			
								0.89											5.00		1.40					0.67	1.00
		0.75	30.00		0.50	22.50								3.75				0.75						20.00			
																					2.10						
	0.002																					0.08	0.02			0.07	
							3.33																				
0.31																											
0.12																											
																									2.50		
							1.29					5.57															
4.78		2.49	5.75		0.83	7.66		3.40		5.11	4.90		4.26														
30.13	24.61	55.74	71.75	10.50	16.83	64.16	110.17	93.17	33.90	29.11	29.97	26.77	28.26	41.25	26.05	62.20	68.67	39.75	55.00	51.10	69.84	23.70	22.78	66.33	95.00	33.90	56.00

Percent HAPS In Paints

A24/25	AA-94/95	A-1 22	A-1 24/25	A-1 26/28	A-1 33	A-1 35/36	A-1 37	AA59/60	A-1 41/43	A-1 19/39/40	A-1 46/47	A-1 44/45	A-1 48	A58	A-1 51/53	A-1 56/58	A-1 61/62	A-1 59/60	A-1 63/65
when new paints are added																			
															P-2162-T	P-2193-T	P-2195-T	P-2196-T	P-2197-P
CA 8211 / F36440 DeSoto MIL-P 85285	CA 8211 / F37925 DeSoto MIL-P 85285	MIL-DTL-53039/ 37038 08628 KUZ	MIL-P 85285 17925 TC Spec Akzo White	BMS 10-83 Ty 3 #8925	MIL-DTL-53039B/3 7030 TY 1 BLK	LMA-MR008 37925	MIL-DTL-53039 TYI 36231 GRAY	MIL-PRF-85285 36321 T/C Spec	517x377 EMP	CA8800/I1115	9460 QUEST	513X384 QUEST	MIL-PRF-85285 36118	DPM 5949 DN9710	PT 55-421	BMS 10-60 Ty 2 BAC 707 Gray	BMS 10-86 Ty 1 Color 707	CA8211/ F37925	825X537 Urethane Primer Low Impact Resist
															3.46				
2.50	2.50			18.10	10.00	35.00		3.75	30.00	22.50		15.00	1.80		3.08	16.25	32.5	1.25	
2.50	2.50			4.20		2.50		3.75			0.25						3.75	3.75	
									11.25				0.80						
30.00	30.00	5.15	45.00			6.50		11.25		15.00			18.40			15	9.75	30	
15.00	15.00			12.50			25.15	22.50				15.00			3.31			22.5	4.45
					5.00		4.49			15.00						15			57.79
											5.00					2.5			
				3.30	4.00				28.75		0.25	15.00				1		1.5	
		1.01	0.75	1.30	9.00					2.50					18.46	2.5			2.22
				2.10					22.50			45.00							
				7.50					5.00			15.00							13.34
			0.50	0.10	2.00						0.25				5.54				
												2.50							
														4.00	1.23				
		5.18																	
														6.00					
														1.00					
2.50	2.50										10.00			4.00		1.25		1.25	
											7.50		0.60			1.25			
											2.75								
														0.50					
				0.10		0.50		0.25					0.04		0.06		0.25		
																			7.77
		0.75		0.07	6.00		0.29				0.04		0.32		0.62	1.00			0.89
		13.13			10.00	2.50	13.33										3.75		
		8.63			14.00		0.36		15.00			15.00	0.80						
5.00	5.00	5.16									0.25		7.20						
															3.91				
															0.98				
									15.00			15.00							13.34
57.50	57.50	39.01	46.25	49.27	60.00	47.00	43.62	41.50	127.50	55.00	26.29	137.50	29.96	15.50	40.65	55.75	50.00	60.25	99.80

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on August 19, 2010:

Facility Comment #1: Table 1: Regulated Sources. The first booth in the table should be Paint Spray Booth #1. The Manufacturer for Paint Spray Booth #3 is Paasche Model FABF-6.

DEQ Response #1: These changes were made.

Facility Comment #2: Condition 11 Filter Stack Operations: 99.99% efficiency is correct for the full stack. It was noticed in the review process that our application lists the efficiency at 99.95%. Does this need to be changed in our application?

DEQ Response #2: DEQ requested that Cygnus submit an email requesting a change to the application. The email was submitted and included in the project file should it need to be referenced in the future.

Facility Comment #3: Condition 17: Reference to Table 5 is actually Table 4.

DEQ Response #3: The requested change was made.

Facility Comment #4: Condition 18 Odor Complaints: This refers to both internal and external, correct? Is there a required level of formality of the complaint i.e. if somebody in the room next to the painting area says something stinks is this considered formal enough to register? Is there a formal method of validating complaints?

DEQ Response #4: Odors can be internal or external, however it be considered an odor, per the rule, it must be emitted considered air pollution and be affecting someone outside the facility boundary. The facility can use their own methods for validating the complaints. However, should a DEQ employee come out to investigate the complaint the odor must pass the odor determination test. See link for details.
http://www.deq.idaho.gov/about/policies/pm00_6.cfm

Facility Comment #5: Condition 21: Replace "trailer" with "metal parts and products for consistency with Conditions 22 & 23. Change TAP to HAP. (TAPs are covered in Condition 22.).

DEQ Response #5: Both requested changes were made.

Facility Comment #6: Condition 31 Opacity for gas-fired equipment: Is this also a see/no see daily visual observation as is the paint stacks?

DEQ Response #6: Yes, the opacity requirement is a see/no see visual observation.

Facility Comment #7: Condition 32 Grain-loading: Would we be required to bring in outside confirmation for this? Would this be a continuous monitoring test? The sampling train described in Method 5 appears to be expensive to purchase/build as well as maintain and calibrate.

DEQ Response #7: Source testing or continuous monitoring is not necessary. You would only need to calculate the grain-loading for each unit by using the emission rate of each unit, the corresponding flow rate in acfm and the conversion of 7,000 grains to lb you can calculate the grain loading in gr/acfm. The variation between dry and actual, especially for natural gas should not be an issue. The highest emission rate and slowest flow rate were applied to a calculation to determine the maximum grain-loading rate in grains per actual cubic foot per minute. The result was not anywhere near the threshold. Please see the Regulatory Review Section of this SOB for further details. This is evidence that the facility is demonstrating compliance with the grain-loading standard.

Facility Comment #8: Condition 35 Heat Input Capacity Monitoring: Is our current method of including this information in the emissions spreadsheet acceptable or is a separate report required?

DEQ Response #8: The current methodology used by the facility is appropriate.

Facility Comment #9: Condition 41 Notifications: What notification would be required? The booth is currently operating BRC under very restricted conditions. Would it be a matter of notification of going to the full spectrum of paints? Our intent is to utilize our full spectrum upon permit approval.

DEQ Response #9: The notification is more of a general overview of the facility. Because the facility is already up and running it's really no more than a paragraph or two lying out the requested information. Portions of the condition may not apply. For any further questions please contact the CDA Regional Office. They can provide

with specifics as to what they would like in the notification. It may be that they already have that info and do not need you to send anything more. The condition is in each of the Permit to Constructs that are issued as it is part of the general provisions.

APPENDIX C – PROCESSING FEE

PTC Fee Calculation

Instructions:
Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Cygngus Inc.
Address: 122 Emerald Industrial Park Road
City: Ponderay
State: Idaho
Zip Code: 83852
Facility Contact: Abraham Dale
Title: Environmental Compliance Manager

AIRS No.: 017-00051

N	Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
Y	Did this permit require engineering analysis? Y/N
N	Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO_X	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	**0.0**
Fee Due	**$ 1,000.00**		

Comments: The processing fee of $1,000 is in accordance with IDAPA 58.01.01.225 as there is a total change of annual permitted emissions of 0.0 T/yr, which is less than 1 T/yr.