

Department of Environmental Quality
Air Quality Division

OREGON TITLE V OPERATING PERMIT APPLICATION REVIEW REPORT

Northwest Region
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Source Information:

SIC	3711
NAICS	336120

Source Categories (Part and code)	
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Compliance and Emissions Monitoring Requirements:

Unassigned emissions	Yes
Emission credits	
Compliance schedule	
Source test [date(s)]	
COMS	

CEMS	
PEMS	
Ambient monitoring	

Reporting Requirements

Annual report (due date)	2/15
Emission fee report (due date)	2/15
SACC (due date)	7/31
Quarterly report (due dates)	

Monthly report (due dates)	
Excess emissions report	
Other reports	

Air Programs

NSPS (list subparts)	
NESHAP (list subparts)	MMMM, PPPP
CAM	
Regional Haze (RH)	
Synthetic Minor (SM)	
Part 68 Risk Management	
CFC	
RACT	Yes
TACT	

Title V	Yes
ACDP (SIP)	
Major HAP source	Yes
Federal major source	
NSR	
PSD	
Acid Rain	

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LIST OF ABBREVIATIONS USED IN THIS REVIEW REPORT

AQMA	Air Quality Management Area
ASTM	American Society of Testing and Materials
BDT	bone dry ton
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	continuous monitoring system
CO	carbon monoxide
COMS	continuous opacity monitoring system
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic feet
EF	emission factor
EPA	United State Environmental Protection Agency
EU	emissions unit
FCAA	Federal Clean Air Act
gr/dscf	grains per dry standard cubic feet
HAP	hazardous air pollutant
ID	identification code
I&M	inspection and maintenance
MB	material balance
Mlb	1000 pounds
MM	million
NA	not applicable
NESHAP	National Emission Standard for Hazardous Air Pollutants
NO _x	oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
O ₂	oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	operation and maintenance
Pb	lead
PCD	pollution control device
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in size
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
SO ₂	sulfur dioxide
ST	source test
VE	visible emissions
VMT	vehicle mile traveled
VOC	volatile organic compound

INTRODUCTION

1. This is a renewal of existing Title V permit 26-2197 that was issued on 12/30/2005 and originally scheduled to expire on 7/1/2011. A timely permit application was submitted to renew the existing permit so it remains in force until final action is taken on the renewal application.
2. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

FACILITY DESCRIPTION

3. Daimler Trucks North America, LLC. operates a heavy-duty truck manufacturing plant (TMP) located at 6936 North Fathom Street, Portland, and a parts manufacturing plant (PMP) located at 5400 North Basin Avenue, Portland. The primary source of emissions at these facilities is the application of surface coatings.
4. Air contaminant emitting processes at the facility may include the following:

4.a. 1-AC (All Coating Application at TMP) –

This emissions unit includes Volatile Organic Compound (VOC) and Particulate Matter (PM) emissions from the application of coatings at the Truck Manufacturing Plant (TMP). These coatings are applied by spray gun to chassis, cabs, fairings and other parts and assemblies of heavy duty trucks. The emissions from these operations are subject to Reasonably Available Control Technology (RACT) requirements, which limit the daily average VOCs emitted per gallon of coating used. Because the RACT requirement does not limit the quantity of VOCs emitted by the facility, the VOC emissions from this emissions unit are also included in emissions unit 7-VOC for monitoring compliance with the Plant Site Emission Limits (PSELs) for VOCs.

This emissions unit also includes PM emissions resulting from spray-gun paint application in all paint booths at the facility. Particulate emissions from the paint booths are controlled by dry or wet filters located in the spray booths, and are included in the Facility Total PSELs.

4.b. 2-AC (All Coating Application at PMP) –

This emissions unit includes Volatile Organic Compound (VOC) and Particulate Matter (PM) emissions from the application of coatings at the Parts Manufacturing Plant (PMP). These coatings are applied by spray gun to parts and assemblies of heavy duty trucks. The emissions from these operations are subject to Reasonably Available Control Technology (RACT) requirements, which limit the daily average VOCs emitted per gallon of coating used. Because the RACT requirement does not limit the quantity of VOCs emitted by the facility, the VOC emissions from this emissions unit are also included in emissions unit 7-VOC for monitoring compliance with the Plant Site Emission Limits (PSELs) for VOCs.

This emissions unit also includes PM emissions resulting from spray-gun paint application in all paint booths at the facility. Particulate emissions from the paint booths are controlled by dry or wet filters located in the spray booths, and are included in the Facility Total PSELs.

4.c. 5-BO (Natural Gas Combustion Devices) –

This emissions unit includes emissions from the combustion of Natural Gas in boilers, drying ovens, air make-up units, and other devices. These emissions are included in the Facility Total PSELs.

4.d. 6-CUT (Metal Cutting Operations) –

This emissions unit includes emissions from cutting metal at the PMP using various cutting machines.

4.e. 7-VOC (Non-Combustion VOC) –

This emissions unit includes emissions of VOCs from all VOC emitting activities except for VOCs from the combustion of natural gas, and from those activities which are categorically insignificant. This includes but is not limited to solvents, coatings (including emissions unit 1-AC and 2-AC) and adhesives used in the various operations associated with truck and parts preparation, manufacturing and assembly. This emissions unit is subject to a daily PSEL. Annual Emissions from this unit are included in the Facility Total PSELs.

5. Daimler Trucks North America, LLC. has the following aggregate insignificant activities onsite:

- 5.a. Metal grinding
- 5.b. Fugitive dust from vehicle traffic on unpaved areas
- 5.c. Heat cleaning oven used to clean stainless steel paint filters
- 5.d. Spray paint can use

Emissions Unit	EU ID	Source Classification Code
All Coating Applications at TMP	1-AC	40202501
All Coating Applications at PMP	2-AC	40202510
Natural gas combustion devices	5-BO	NG use 3-09-900-03
Metal Cutting Operations	6-CUT	30904600, 30904700
Non-Combustion VOCs	7-VOC	30988806
Aggregate Insignificant Activities	8-AGG	30900199
RACT Coatings		4-02-025-01

6. Some of the following categorically insignificant activities are present at the facility:

- Constituents of a chemical mixture present at less than 1% by weight of any chemical or compound regulated under OAR Chapter 340, Divisions 200 through 268, excluding Divisions 248 and 262, or less than 0.1% by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year
- Evaporative and tail pipe emissions from on-site motor vehicle operation
- Distillate oil, kerosene, and gasoline fuel burning equipment rated at less than or equal to 0.4 million Btu/hr
- Natural gas and propane burning equipment rated at less than or equal to 2.0 million Btu/hr
- Office activities
- Food service activities
- Janitorial activities
- Personal care activities
- Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance
- Instrument calibration
- Maintenance and repair shop
- Automotive repair shops or storage garages

- Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment
- Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems
- Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities
- Temporary construction activities
- Warehouse activities
- Air vents from air compressors
- Air purification systems
- Continuous emissions monitoring vent lines
- De-mineralized water tanks
- Pre-treatment of municipal water, including use of deionized water purification systems
- Electrical charging stations
- Fire brigade training
- Instrument air dryers and distribution
- Process raw water filtration systems
- Fire suppression
- Blueprint making
- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment
- Pressurized tanks containing gaseous compounds
- Vacuum sheet stacker vents
- Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities
- Storm water settling basins
- Fire suppression and training
- Paved roads and paved parking lots within an urban growth boundary
- Hazardous air pollutant emissions of fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils
- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency as determined by the Department
- Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems
- Non-contact steam condensate flash tanks
- Non-contact steam vents on condensate receivers, deaerators and similar equipment
- Boiler blowdown tanks
- Industrial cooling towers that do not use chromium-based water treatment chemicals
- Ash piles maintained in a wetted condition and associated handling systems and activities
- Oil/water separators in effluent treatment systems
- Combustion source flame safety purging on startup

APPLICABLE REQUIREMENTS (EMISSIONS LIMITS AND STANDARDS)

7. The following state and federally enforceable rule requirements have been determined to be applicable to this facility:

- 7.a. Division 208: 0110;* establishes a visible emissions limit.
0210; establishes requirements to prevent particulate matter from becoming airborne.
- 7.b. Division 228: 0210**; establishes particulate concentration emissions limits for non fuel burning equipment.
- 7.c. Division 222: 0020; requires Plant Site Emission Limits.

*OAR 340-208-0110 is included because it is federally enforceable for all air contaminant sources, and because OAR 340-208-0600 only applies to non-fuel burning equipment and is only enforceable by the State. OAR 340-208-0600 is a county specific rule for non-fuel burning equipment which is more stringent than the general opacity rule (OAR 340-208-0110).

**OAR 340-228-0210 is included because it is federally enforceable and because OAR 340-208-0610 is only enforceable by the State. OAR 340-208-0610 is a county specific rule which is equally as stringent as OAR 340-228-0210 in this case.

8. The following state only enforceable rule requirements have been determined to be applicable to this facility:

- 8.a. Division 208: 0600; establishes a visible emissions limit.
0300; establishes nuisance controls
0450; establishes a particulate size limitation
0610; establishes a particulate concentration emissions limit.
0630; establishes SO₂ emissions limit

9. Compliance Assurance Monitoring (CAM) applicability:
This facility is not subject to the requirements of 40 CFR Part 64 because the source does not employ any control devices.

CHANGES TO THE PERMIT

- 10. The permit condition language has been revised in some conditions. This has been done to make the conditions more clear. These changes do not affect applicability or standards.
- 11. Since the last permit renewal, two administrative amendments have been issued to correct the excess emission reporting requirements in the permit. This permit renewal will incorporate those changes.

PLANT SITE EMISSION LIMIT

12. The TMP and PMP facilities were both in operation in and before 1978 and therefore both have Baseline Emission Rates (BER). The separate BERs for the facilities have been summed together to determine a single BER for this (combined) source. The (combined) source is also subject to a single Plant Site Emission Limit (PSEL) for each pollutant. The BERs and PSELs are detailed in the tables below.
13. The normal operating schedule for the plant is different from the baseline year and is 24 hrs/day x 5 days/wk x 50 wks/yr = 6000 hrs/yr.
14. OAR 340-222-0041(1) states for sources with potential to emit less than the SER, that request a source specific PSEL, an initial source specific PSEL will be set equal to the Generic PSEL. The requested PSELs for sulfur dioxide (SO₂) and carbon monoxide (CO) are less than the Generic PSEL level, and have been adjusted upwards to the Generic PSEL levels of 39 tons per year for SO₂ and 99 tons per year for CO.

Summary of Emission Changes, in Tons Per Year (tpy):

Pollutant	Baseline Emission Rate (BER), tpy		PSEL as of July, 2001, tpy		Combined and Corrected BER as of July, 2001, tpy	Combined PSEL from previous permits, tpy	Proposed PSEL for TMP+PMP, July, 2001, tpy
	TMP	PMP	TMP	PMP	TMP+PMP	TMP+PMP	TMP+PMP
PM/PM ₁₀	20.8	0	35	0	29	35	42
SO ₂	2.3	0	0.8	0	4	0.8	39 *
NO _x	7.0	4.4	30	4.6	33	34.6	53
CO	11.2	0.9	6.2	1.1	14	7.3	99 *
VOC	330.8	111.0	367	99.9	444	466.9	469

NOTES:

Baseline is from year 1973 and is based on 7023 trucks/year

TMP only is based on Title V permit 26-2197, issued 4/9/96

PMP only is based on ACDP 26-3106, issued Nov. 12, 1998

TMP + PMP includes revised baseline emissions for PMP from the PMP Title V permit application from May, 1995

* Requested PSEL is 2 tons per year, but the PSEL has been increased to the Generic PSEL level

** Requested PSEL is 9 tons per year, but the PSEL has been increased to the Generic PSEL level

PM/PM₁₀ Baseline Emission Rate, Baseline Year 1973:

EU ID	EU Description	Operating Parameter	Emission Factor	Reference	Pounds per Year	Tons per Year
5-BO TMP	Natural Gas Combustion Devices	78,757 MMBtu/yr (e)	0.012 lb/MMBtu	(f)	945.1	0.47
6-SB TMP	Spray Booths, Particulate	859,615 lb paint solids per year (a)	0.0375 lb/lb paint solids	(b)	32,235.6	16.12
9-INC TMP	Incinerator	2,068 tons of refuse per year (d)	3.1 lb/ton	Source test	6,409.8	3.20
1-AC PMP	All coating operations	448,800 lb paint solids per year	0.030 lb/lb paint solids	PMP Title V permit app. May, 1995	13,464	6.7
2-NG PMP	Natural Gas Combustion	124,700 MMBtu/yr	0.012 lb/MMBtu	(f)	1,496.4	0.75
5-CUT PMP	Metal Cutting	---	94.3 lb/month	PMP Title V permit app. May, 1995	1,131.6	0.56
8-AGG	Aggregate Insignificant Activities	n/a	n/a	n/a	n/a	1
Total						29

NOTES:

- (a) The annual paint solids usage is estimated by the source using 17 gals/truck with an average solids content of 7.2 lbs/gal, and an annual production of 7023 trucks/year.
- (b) This emission factor was taken from the Title V application and is based on a transfer efficiency of 25% and a control efficiency of 95% for the paint booth filters.
- (c) This EF was taken from the Title V Application, AP-42 as a reference.
- (d) The baseline throughput for the incinerator was estimated from 1980 reported incinerator throughput, adjusted to 7023 truck/year production. 1980 Incinerator throughput was reported as 1445 tons with production at 4908 trucks per year.
- (e) The baseline natural gas use was estimated using 1980 reported use, adjusted to baseline year truck production (7023 truck/year). 1980 natural gas use was reported as 550,390 therms (55,039 MMBtu) with production at 4908 trucks per year.
- (f) See AP-42, Sec. 1.4.
- (g) The baseline annual VOC emissions is taken from Permit Addendum #2, June 20, 1994. This quantity is the 1973 annual VOC use (346.4 ton/year) reduced for the surface coating RACT.

SO₂ Baseline Emission Rate, Baseline Year 1973:

EU ID	EU Description	Operating Parameter	Emission Factor	Reference	Pounds per Year	Tons per Year
5-BO TMP	Natural Gas Combustion Devices	78,757 MMBtu/yr (e)	0.0026 lb/MMBtu	DEQ Emission Factor	204.8	0.10
6-SB TMP	Spray Booths	n/a	n/a	n/a	n/a	n/a
9-INC TMP	Incinerator	2,068 tons of refuse per year (d)	2.1 lb/ton	AP-42 (c)	4,342.2	2.17
2-NG PMP	Natural Gas Combustion	124,700 MMBtu/yr	0.0026 lb/MMBtu	DEQ Emission Factor	324.2	0.16
8-AGG	Aggregate Insignificant Activities	n/a	n/a	n/a	n/a	1
Total						4

NOTES:

- (a) The annual paint solids usage is estimated by the source using 17 gals/truck with an average solids content of 7.2 lbs/gal, and an annual production of 7023 trucks/year.
- (b) This emission factor was taken from the Title V application and is based on a transfer efficiency of 25% and a control efficiency of 95% for the paint booth filters.
- (c) This EF was taken from the Title V Application, AP-42 as a reference.
- (d) The baseline throughput for the incinerator was estimated from 1980 reported incinerator throughput, adjusted to 7023 truck/year production. 1980 Incinerator throughput was reported as 1445 tons with production at 4908 trucks per year.
- (e) The baseline natural gas use was estimated using 1980 reported use, adjusted to baseline year truck production (7023 truck/year). 1980 natural gas use was reported as 550,390 therms (55,039 MMBtu) with production at 4908 trucks per year.
- (f) See AP-42, Sec. 1.4.
- (g) The baseline annual VOC emissions is taken from Permit Addendum #2, June 20, 1994. This quantity is the 1973 annual VOC use (346.4 ton/year) reduced for the surface coating RACT.

NO_x Baseline Emission Rate, Baseline Year 1973:

EU ID	EU Description	Operating Parameter	Emission Factor	Reference	Pounds per Year	Tons per Year
5-BO TMP	Natural Gas Combustion Devices	78,757 MMBtu/yr (e)	0.1 lb/MMBtu	(f)	7,875.7	3.94
6-SB TMP	Spray Booths	n/a	N/a	n/a	n/a	n/a
9-INC TMP	Incinerator	2,068 tons of refuse per year (d)	3 lb/ton	AP-42 (c)	6,203.1	3.10
2-NG PMP	Natural Gas Combustion	124,700 MMBtu/yr	0.1 lb/MMBtu	AP-42	12,470	6.23
5-CUT PMP	Metal Cutting	---	3093 lb/month	PMP Title V permit app. May, 1995	37,116	18.55
8-AGG	Aggregate Insignificant Activities	n/a	n/a	n/a	n/a	1
Total						33

NOTES:

- (a) The annual paint solids usage is estimated by the source using 17 gals/truck with an average solids content of 7.2 lbs/gal, and an annual production of 7023 trucks/year.
- (b) This emission factor was taken from the Title V application and is based on a transfer efficiency of 25% and a control efficiency of 95% for the paint booth filters.
- (c) This EF was taken from the Title V Application, AP-42 as a reference.
- (d) The baseline throughput for the incinerator was estimated from 1980 reported incinerator throughput, adjusted to 7023 truck/year production. 1980 Incinerator throughput was reported as 1445 tons with production at 4908 trucks per year.
- (e) The baseline natural gas use was estimated using 1980 reported use, adjusted to baseline year truck production (7023 truck/year). 1980 natural gas use was reported as 550,390 therms (55,039 MMBtu) with production at 4908 trucks per year.
- (f) See AP-42, Sec. 1.4.
- (g) The baseline annual VOC emissions is taken from Permit Addendum #2, June 20, 1994. This quantity is the 1973 annual VOC use (346.4 ton/year) reduced for the surface coating RACT.

CO Baseline Emission Rate, Baseline Year 1973:

EU ID	EU Description	Operating Parameter	Emission Factor	Reference	Pounds per Year	Tons per Year
5-BO TMP	Natural Gas Combustion Devices	78,757 MMBtu/yr (e)	0.021 lb/MMBtu	(f)	1,653.9	0.83
6-SB TMP	Spray Booths	n/a	N/a	n/a	n/a	n/a
9-INC TMP	Incinerator	2,068 tons of refuse per year (d)	10 lb/ton	AP-42 (c)	20,676.9	10.34
2-NG PMP	Natural Gas Combustion	124,700 MMBtu/yr	0.021 lb/MMBtu	AP-42	2,618.7	1.31
8-AGG	Aggregate Insignificant Activities	n/a	n/a	n/a	n/a	1
Total						14

NOTES:

- (a) The annual paint solids usage is estimated by the source using 17 gals/truck with an average solids content of 7.2 lbs/gal, and an annual production of 7023 trucks/year.
- (b) This emission factor was taken from the Title V application and is based on a transfer efficiency of 25% and a control efficiency of 95% for the paint booth filters.
- (c) This EF was taken from the Title V Application, AP-42 as a reference.
- (d) The baseline throughput for the incinerator was estimated from 1980 reported incinerator throughput, adjusted to 7023 truck/year production. 1980 Incinerator throughput was reported as 1445 tons with production at 4908 trucks per year.
- (e) The baseline natural gas use was estimated using 1980 reported use, adjusted to baseline year truck production (7023 truck/year). 1980 natural gas use was reported as 550,390 therms (55,039 MMBtu) with production at 4908 trucks per year.
- (f) See AP-42, Sec. 1.4.
- (g) The baseline annual VOC emissions is taken from Permit Addendum #2, June 20, 1994. This quantity is the 1973 annual VOC use (346.4 ton/year) reduced for the surface coating RACT.

VOC Baseline Emission Rate, Baseline Year 1973:

Emission Unit (EU)	EU Description	Operating Parameter	Emission Factor	Reference	Pounds per Year	Tons per Year
5-BO TMP	Natural Gas Combustion Devices	78,757 MMBtu/yr (e)	0.0073 lb/MMBtu	(f)	574.9	0.29
7-VOC TMP	Plant-Wide VOC Usage	327.4 ton/yr	n/a	n/a	654,8000	327.4
9-INC TMP	Incinerator	2,068 tons of refuse per year (d)	3 lb/ton	AP-42 (c)	6,203.1	3.10
2-NG PMP	Natural Gas Combustion	124,700 MMBtu/yr	0.0073 lb/MMBtu	Ap-42	910.3	0.46
3-VOC PMP	VOC usage	111 ton/yr	n/a	n/a	222,000	111
8-AGG	Aggregate Insignificant Activities	n/a	n/a	n/a	n/a	1
Total						444

NOTES:

- (a) The annual paint solids usage is estimated by the source using 17 gals/truck with an average solids content of 7.2 lbs/gal, and an annual production of 7023 trucks/year.
- (b) This emission factor was taken from the Title V application and is based on a transfer efficiency of 25% and a control efficiency of 95% for the paint booth filters.
- (c) This EF was taken from the Title V Application, AP-42 as a reference.
- (d) The baseline throughput for the incinerator was estimated from 1980 reported incinerator throughput, adjusted to 7023 truck/year production. 1980 Incinerator throughput was reported as 1445 tons with production at 4908 trucks per year.
- (e) The baseline natural gas use was estimated using 1980 reported use, adjusted to baseline year truck production (7023 truck/year). 1980 natural gas use was reported as 550,390 therms (55,039 MMBtu) with production at 4908 trucks per year.
- (f) See AP-42, Sec. 1.4.
- (g) The baseline annual TMP VOC emissions is taken from Permit Addendum #2, June 20, 1994, permit no. 26-2197. This quantity is the 1973 annual VOC use (346.4 ton/year) reduced for the surface coating RACT.

Current Plant Site Emission Limits:

Pollutants	EU IDs								Total PSEL (tpy)	
	1-AC		5-BO		6-CUT (c)		7-VOC			8-AGG
PM/PM ₁₀	OP: 2,234,750 lb paint solids/year (a)	lbs: 72,629	OP: 704,430 MMBtu/yr (e)	lbs: 8,453	OP: ---	lbs: 1,027.2	N/A		1 tpy	42
	EF: 0.0325 lb/lb paint solids (b)	tpy: 36.3	EF: 0.012 lb/MMBtu (d)	tpy: 4.2	EF: 85.6 lb/month (g)	tpy: 0.5				
CO	N/A		OP: 704,430 MMBtu/yr (e)	lbs: 14,793	N/A		N/A		1 tpy	9*
			EF: 0.021 lb/MMBtu (d)	tpy: 7.4						
SO ₂	N/A		OP: 704,430 MMBtu/yr (e)	lbs: 1,831.5	N/A		N/A		1 tpy	2*
			EF: 0.0026 lb/MMBtu (f)	tpy: 0.9						
NO _x	N/A		OP: 704,430 MMBtu/yr (e)	lbs: 70,443	OP: ---	lbs: 33,384	N/A		1 tpy	53
			EF: 0.1 lb/MMBtu (d)	tpy: 35.2	EF: 2,782 lb/month (g)	tpy: 16.7				
VOC	N/A		OP: 704,430 MMBtu/yr	lbs: 5,142	N/A		OP: 466 ton/yr	lbs: 932,000	1 tpy	470
			EF: 0.0073 lb/MMBtu (d)	tpy: 2.6			EF: N/A	tpy: 466		

*Actual PSEL set at the Generic PSEL level

OP = Operating Parameter; EF = Emission Factor

NOTES:

- (a) The annual TMP paint solids usage is estimated by the source using 9.75 gals/truck with an average solids content of 7.2 lbs/gal, and an annual production of 26,250 trucks/year. The PMP paint solids usage is from the May, 1995, Title V permit application for the PMP.
- (b) This emission factor was taken from the Title V application and is based on a transfer efficiency of 35% and a control efficiency of 95% for the paint booth filters.
- (c) 6-CUT was named 5-CUT in the PMP TV permit application, name changed to 6-CUT for combined facility permit issued in 2001.
- (d) See AP-42, Sec. 1.4.
- (e) Natural gas usage for the TMP is taken from the detail sheets for the initial Title V permit for the TMP. Natural gas usage for the PMP is taken from the Title V permit applications, 1995.
- (f) DEQ Emission Factor
- (g) PMP Title V permit application, May, 1995

POTENTIAL TO EMIT:

15. The normal operating schedule of the plant forecasted for CY 2007 and beyond is 5058 yearly hours, which is based on 3 shifts a day and 5 days/week less 14 days for Holidays

Coating Applications:

16. The maximum output forecasted for the facility for CY 2007 and beyond is 5 trucks per hour, the current rate of trucks off the Chassis Line, or 25,290 trucks per year. The number of trucks with clear coat top coating is estimated at 70%, or 17,703 trucks. Current clear coating percentage is 60% for Western Star Trucks and 34% for Freightliner Truck Line, totaling 45% in all. The clear coating percentage is based on the approximate sustained high during production and is expected to increase to the estimated 70% due to customer demand in the future. By assuming this shift in demand for more clear coated trucks, the calculations provide a worst case scenario for the VOC content per truck. Clear coat data for these estimates are included in the Plant Site Emission Limit Detail Sheets.
17. The maximum VOC emissions for all coating applications for CY 2007 and beyond for the facility are 605.7 tons per year. The VOC PTE is based on an estimated 8 gallons of paint per truck, 3 gallons of clear coat/truck, and 3 gallons of solvent/truck; gallon estimate includes offline paint activities. There is an average 3.25 lb VOC/gallon of paint, 4.00 lb VOC/gallon of clear coat, and 4.50 lb VOC/gallon of solvent based on current paint product mix. Thus, maximum VOC emissions are 328.8 tons VOC from painting operations, 106.2 tons VOC from clear coating operations, and 170.7 tons VOC from cleaning solvent usage, totaling 605.7 tons of potential VOC emissions with regards to coating applications for the facility.
18. The maximum Particulate Matter (PM) emissions for all coating applications for CY 2007 and beyond for the facility are 18.4 tons per year. The PM PTE is based on an estimated 5.50 lbs solid per gallon of paint, which the average solids content of paint material. Based on a maximum truck output of 25,290 and 8 gallons of paint/truck, the maximum lbs solid used are 1,112,760. This calculation does not include clear coat or solvent since neither contributes significantly to solids content.

Natural Gas:

19. The facility estimates a total operating parameter of 263,016 MMBtu/year from a total maximum forecasted truck output of 25,290 trucks/year and 10.4 MMBtu/truck, as calculated from the gas usage over CY 2005 and YTD 2006. Using the emission factors as set out in Table 3 of the permit, the facility estimates a total of 3,156.2 lbs or 1.58 tons of PM/PM₁₀ emissions per year, 683.8 lbs or 0.34 tons of SO₂ emissions/year, 26,301.6 or 13.15 tons of NO_x emissions/year, 5523.3 lbs or 2.76 tons of CO/year, and 1920.0 lbs or 0.96 tons of VOC/year.

The 12-month PTE (tons/year) for CY 2007 and beyond: [OAR 340-222-0045 and 340-222-0020]

EU IDs	PM/PM ₁₀	SO ₂	NO _x	CO	VOC
1-AC/2-AC	18.4	N/A	N/A	N/A	605.7
5-BO	1.58	0.34	13.15	2.76	0.96
6-CUT	0.5	N/A	16.7	N/A	N/A
7-VOC	N/A	N/A	N/A	N/A	Included*
8-AGG	1	1	1	1	1
Total	21.5	1.3	30.9	3.8	607.7

*VOC emissions for EU ID 7-VOC are included in the VOC estimates for EU ID 1AC/2-AC.

Potential emissions for CY 2007 and beyond for EU IDs 6-CUT, 7-VOC, and 8-AGG are not expected to change and therefore, no further calculations were needed.

Calculations are included in the Plant Site Emissions Detail Sheets.

20. The PSELs in this permit renewal are shown in the table below. All PSELs remain the same as in the prior permit. PM_{2.5} is being added as a regulated pollutant and the assumption that all PM is PM_{2.5} has been made. PM_{2.5} is not a new pollutant being emitted, only a recognition that it exists from this source.

Pollutant	Netting Basis	PSEL		Difference from Netting Basis and PSEL		Unassigned emissions	SER
		Previous	Proposed	Previous	Proposed		
*PM/PM ₁₀	29	24	*24	[5]	[5]	5	25/15
**PM _{2.5}	29	NA	24	NA	[5]	5	10
SO ₂	4	39	39	+35	+35	0	40
NO _x	33	39	39	+6	+6	0	40
CO	14	99	99	+85	+85	0	100
VOC	444	470	470	+26	+26	0	40
***GHG	NA	NA	74,000	NA	74,000	0	75,000

Note:

Decreases in brackets

*Since the actual amount of PM₁₀ emissions is unknown, the PM Generic PSEL level of 24 tons/12 months is being set as the facility's total particulate matter PSEL for the facility, which includes both PM₁₀ and PM.

**All PM in the Netting Basis and PSEL are assumed to be PM_{2.5}. This assumption may be revisited in the next permit renewal.

*** The Greenhouse gas PSEL is set at the Generic level of 74,000 tons/yr CO_{2e} because Daimler emits GHG over the DEQ de minimis rate of 2,756 tons/yr. Daimler's actual GHG emission for 2011 were around 3,100 tons/yr CO_{2e}.

Facility Wide Compliance Monitoring Requirements

21. A log of complaints will be used to monitor for odor nuisance conditions and the particulate fallout size standard. The permittee shall maintain a log recording all written complaints, or complaints received via telephone or in person by the responsible official or a designated appointee, that specifically refer to a complaint of odor or particulate fallout nuisance conditions caused by this facility. The permittee will also record the permittee's actions to investigate, make a determination as to the validity of the complaint, and resolve the nuisance problem, if possible, within two working days of receiving the complaint, but no later than 10 days after receiving the complaint. The log will be submitted to the Department annually, along with the annual report.

Compliance Monitoring for the PSELs

22. The Plant Site Emission Limits regulate VOC emissions from emission unit VOC-A and includes PM, PM₁₀ and PM_{2.5} emissions from the aggregate insignificant activities. Compliance will be demonstrated by recordkeeping of the quantities and styrene contents of resins as well as the type of use and any emissions reduction methods employed, and also recordkeeping of Miscellaneous VOC use at the facility. The emissions from aggregate insignificant activities are included in the Plant Site Emission Limits at the aggregate insignificant emissions limit of 1.0 ton per year.

HAZARDOUS AIR POLLUTANT EMISSIONS

23. The Potential to Emit Hazardous Air Pollutants (HAPs) for Calendar Year 2011 and beyond is:

CAS Number	Pollutant	Emission in Tons
100414	Ethyl Benzene	0.43
108101	Methyl Isobutyl Ketone (MIBK)	0.01
67561	Methanol	2.31
108883	Toluene	0.56
1330207	Xylene	6.06
NA	Chromium Compounds	2.50
Total HAPs:		11.87

ADDITIONAL REQUIREMENTS

24. The source is required to submit reports to the Department semi-annually.
25. This source is not subject to federal regulations for New Source Review.
26. This source is not subject to federal regulations for Prevention of Significant Deterioration (PSD).
27. This source is now subject to federal regulations for National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for surface coating of miscellaneous metal parts and products, 40 CFR PART 63 Subpart MMMM, and 40 CFR Part 63 Subpart PPPP for surface coating of plastic parts and products. Both NESHAP MACT standards were promulgated in 2004. As outlined in the definition of military munitions under 40 CFR 260.10, the facility does not qualify for any exemption under 40 CFR 63.3881(c)(4) or 40 CFR 63.4480(c)(3).
28. The NESHAP Subpart MMMM applies to each new or existing affected source at that uses 946 liters (250 gallons) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products and that is a major source of emissions of HAP. [40 CFR 63.3881(b)]
- 28.a. The facility is located at a major source of HAP emissions. Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and number other industrial, household, and consumer products. [40 CFR 63.3881(a)]
- 28.b. The permittee performs general use coating operations.
- 28.c. The affected source consists of all coating operations as defined in 40 CFR 63.3981; all storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed; all manual and automated equipment and containers used for conveying coatings, thinners, and/or other additives, and cleaning materials; and all storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation. [40 CFR 63.3882(b)(1-4)]
- 28.d. For the purposes of the NESHAP, an existing affected source is any affected source that is not a new or reconstructed source. [40 CFR 63.3882(e)]
29. The NESHAP for Subpart PPPP applies to each new or existing affected source that uses 378 liters (100 gallons) per year, or more of coatings that contain hazardous air pollutants (HAP) in the surface

coating of plastic parts and products and that are a major source of emissions of HAP. [40 CFR 63.4481(b)]

- 29.a. The facility is located at a major source of HAP emissions. Plastic parts and products include, but are not limited to, plastic components of the following types of products as well as the products themselves: motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; and sporting and recreational goods. [40 CFR 63.4481(a)]
- 29.b. The permittee's performs general use coating operations.
- 29.c. The affected source consists of all coating operations as defined in 40 CFR 63.4581; all storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed; all manual and automated equipment and containers used for conveying coatings, thinners, and/or other additives, and cleaning materials; and all storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation. [40 CFR 63.4482(b)(1-4)]
- 29.d. For the purposes of the NESHAP, an existing affected source is any affected source that is not a new affected source. [40 CFR 63.4482(e)]

GENERAL BACKGROUND INFORMATION

- 30. A Land Use Compatibility Statement was signed by the City of Portland on July 22, 1993.
- 31. The permittee was last inspected on 09/29/2008 and 09/15/2010 and was found to be in compliance with all permit conditions.
- 32. Numerous odor complaints pointed at this source have been received by the Department. All of these complaints have been referred to Daimler for logging and follow-up. Daimler is investigating the possible sources of these odors, and if they are associated with the Daimler process, what they are able to do to minimize them.
- 33. The permit is a renewal Oregon Title V Operating Permit.

PUBLIC NOTICE

- 34. This permit was put on public notice from January 31, 2013 to April 15, 2013, and a public hearing was held on March 7, 2013. Comments were received and are summarized in DEQ's response to comments. The permit was sent to EPA Region 10 for review on June 28, 2013, with a request for expedited (5-day) review. EPA notified DEQ that the permit was eligible for issuance on July 9, 2013.

If EPA does not object in writing, any person may petition the EPA within 60 days after the expiration of EPA's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in OAR 340-218-0210, unless the petitioner demonstrates it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.