Louisville Metro Air Pollution Control District
850 Barret Ave., Louisville, Kentucky 40204
xx 2015

PAL Statement of Basis

Company: Ford Motor Company - Kentucky Truck Plant

Plant Location: 3001 Chamberlain Lane, Louisville, KY 40241

Date Application Received: 15 July 2013 **Application Number:** 57268

Date of Revised Permit: xx 2015

District Engineer: Shannon Hosey **Permit No:** 30043-11-C(R1)

Plant ID: 0073 **SIC Code:** 3711 **AFS:** 00073

Introduction:

This permit will be issued pursuant to: (1) APCD Regulations 2.05 and 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO_2), carbon monoxide (CO), 1 hr. and 8 hr. ozone (O_3), and particulate matter less than 10 microns (PM_{10}); is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM2.5) and is a unclassifiable area for the 2012 standard for particulate matter less than 2.5 microns (PM2.5). Part of the county is non-attainment for sulfur dioxide (SO_2). This facility is in part of the county designated attainment for SO_2.

Application Type/Permit Activity:

[ ] Initial Issuance
[X] Permit Revision
    [ ] Administrative
    [ ] Minor
    [X] Significant
[ ] Permit Renewal
[ ] Construction

Compliance Summary:

[X] Compliance certification signed
[ ] Source is out of compliance
[ ] Compliance schedule included
[X] Source is operating in compliance

I. Source Information

1. Product/Process Description: The company manufactures automobiles, light- and medium-duty trucks.

2. Project Description: The company manufactures automobile, light- and medium-duty truck bodies in a body shop. These bodies are transferred to the Paint department for application of corrosion protection and paint. From the Paint shop, the bodies are shipped to the Final Assembly area.

3. Site Determination: There are no other facilities that are contiguous or adjacent and under common control.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U-00	Natural Gas Boilers
U-11	Volatile Organic Liquid Storage Tanks
U-12	Plant-wide Product Fueling and Plant Vehicle Refueling
U-15	Phosphate System
U-16	E-Coat Operation
U-17	Sealer
U-18	Guidecoat Operation
U-19	Topcoat/Final Repair Operations
U-20	Black-Out and Wax
U-22	Cleaning Operations
U-28	Aluminum Scrap System
U-30/U-33	Two (2) Windshield Installation Operations
U-32	Blank Wash Process Operation
U-34	Natural Gas-Fired Combustion Equipment - Non-Boiler
U-35	Emergency Generators
U-50 – Pretreatment System	Receives white-metal bodies from Body shop, cleans the metal with detergent solutions, applies a pretreatmentcoating in a large dip tank, and rinses excess material from the body prior to e-coat.
U-51 – E-Coat System	Receives bodies from pretreatmentand applies an electro-deposited anti-corrosion coating to the body in a large dip tank. Rinses excess material from the body and sends it to the e-coat oven to be cured. Exhaust from the e-coat oven is directed to an RTO for VOC control. After the oven, the surface is lightly sanded to remove small surface defects. Particulates from this operation are controlled by dry air filters in the exhaust plenum.
U-53 – Sealer	Body seams are closed by manual application of a variety of sealing materials and the sealer is partially cured in the sealer-gel oven. VOCs are emitted from these operations, but they are emitted to the atmosphere without control.
U-54 – PVC Antichip	A PVC material is robotically sprayed on the lower rocker panel of the vehicle to provent body damage from road debris. Particulate emissions are controlled with dry air filters.
U-55 – 3-Wet System Guidecoat	This is the first section of the paint spraybooths where a guidecoat to provide a smooth surface and promote adhesion between the e-coat and topcoat materials is applied robotically. The application is 100% robotic, however a manual

Emission Unit	Equipment Description
	application station is provided to add backup material when required or take over for robot malfunctions. Air is recirculated within this portion of the booth, with a portion bled off to be exhausted through a carbon adsoorption system and, ultimately, a regenerative thermal oxidizer. Particulate control is through an air-suspended limestone bed under the booth.
U-56 – 3-Wet Topcoat System	This is the second section of the paint spraybooths where a colored base-coat and clear or tinted clearcoat are applied over the still wet guidecoat. The application is 100% robotic, however a manual application station is provided after both the basecoat and clearcoat sections to add backup material when required or take over for robot malfunctions. Air is recirculated within this portion of the booth, with a portion bled off to be exhausted through a carbon adsoorption system and, ultimately, a regenerative thermal oxidizer. Particulate control is through an air-suspended limestone bed under the booth. After the paint is applied, the vehicle body in cured in the paint oven. Exhaust from this oven is directed to the same RTO as that used to abate the e-coat oven. The "Paint Kitchen" where paint is stored, cut with solvents to the proper viscosity, and circulated to the spraybooths is also part of this emission unit. The spot repair area, where small paint defects found after the painting process are corrected, is after the oven and also included in this emission unit.
U-58 – Blackout	A black coating material is sprayed into the rear wheel wells of the body for cosmetic purposes. VOC emissions are negligible and not controlled. PM emissions are controlled by dry plenum air filters.
U-59 – Purge and Clean	This emission unit covers the processes of equipment purging of residual paint between color changes and cleaning of the equipment. Storage of the materials used to complete these tasks is covered in another emission unit.
U-60 – Storage tanks	Two (2) 6,000 gallon storage tanks used to store bulk zirconium oxide and bulk cleaner materials for the pretreatment system. and a tank used to hold purge solvent before use and the tank which holds used solvent before it is picked up for recycling.

5. Permit Revisions

Revision No.	Permit No.	Issue Date	Public Notice Date	Type	Page No.	Description
N/A	30043-11-C	05/17/2012	02/22/2012	Initial	Entire Permit	PAL, STAR TAC requirements, RO change, construction permits 63-04-C, 65-04-C, 118-04-C, 119-04-C, 210-05-C, 211-05-C, 157-07-C, 158-07-C, 479-08-C, 567-08-C and 583-08-C
R1	30043-11-C(R1)		10/11/2015	Significant Revision	Entire Permit	Incorporate PSD construction permit TV-13-1016(R1) VOC limit

6. Plant-wide Emission Summary:

Pollutant	Actual Emissions (tons/year) 2013 Data	Pollutant that triggered Major Source Status (based on PTE)	Increase in pollutant from construction permit TV-13-1016(R1)	Pollutant subject to PSD regulation (increase>SIL)
VOC	832.34	Yes	424.4	Yes
CO	60.15	No	15.4	No
NO_x	53.66	No	18.3	No
SO_2	0.43	No	.11	No
PM/PM_{10}	22.10	No	8.5	No
$PM_{2.5}$	21.32	No	8.5	No
GHG	N/A	No	N/A	N/A
Single HAP > 1 tpy	Glycol ethers 33.93	Yes	Ethylbenzene 4.3	No
Total HAPs	44.28	Yes	<10	No

7. Plant-wide Applicability Limits:

Plant-wide Applicability Limits		
Pollutant	**Tons/Year[1] (Before Construction Permit TV-13-1016(R1) Commences Operation)**	**Tons/Year[1] (After Construction Permit TV-13-1016(R1) Commences Operation)**
VOC[2]	920.35	1344.75
PM	50.5	50.5
PM_{10}[3]	50.5	50.5
$PM_{2.5}$	45.05	45.05
NO_X	99.0	99.0
SO_2	39.58	39.58
CO	180.66	180.66
GHG CO_2e	-	180,661

8. Applicable Requirements:

[X] PSD [ ] NSPS [X] SIP [ ] MACT
[ ] NSR [ ] NESHAPS [X] District-Origin [ ] BACT

9. Referenced Federal Regulations in Permit:

1 Represents a 12-month rolling total

2 VOC emissions will increased from 920.35 tons per year to 1344.75 tons per year when construction permit TV-13-1016(R1) commences operation.

3 The PM_{10} limit is considered a limit on PM.

40 CFR 52.21 – *Prevention of Significant Deterioration of Air Quality*

II. Regulatory Analysis

1. Acid Rain Requirements:

The source is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements:

This source does not manufacture, sell, or distribute any of the chemicals listed in title VI of the CAAA. Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. Prevention of Accidental Releases 112(r):

The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount. If the source becomes subject to 40 CFR 68 and Regulation 5.15, the source shall comply with the Risk Management Program and Regulation 5.15 and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA 22116-3346

4. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Type
2.03	Permit Requirements – Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements	SIP
2.05	Prevention of Significant Deterioration of Air Quality	SIP
40 CFR 52.21	Prevention of Significant Deterioration of Air Quality	Federal

b. Prevention of Significant Deterioration

The potential increase in VOC emissions from construction permit TV-13-1016 is 424.4 tons per year. Because that increase was greater than the significant increase level of 40 tons per year, that permit was subject to PSD regulation. The permittee has satisfactorily submitted the required BACT analysis [40 CFR 52.21(j)(3)], source impact analysis [§52.21(k)], air quality model and analysis [§§52.21(l) and (m)], the required source information [§52.21(n)], the additional impact analysis [§52.21(o)], and the Class I area impact analysis [§52.21(p)]. The appropriate BACT technology has been incorporated into construction permit TV-13-1016(R1), and based on the various analyses and models, no adverse impacts to the surrounding region are anticipated.

c. Plant-wide Limits

i. **Standards**

a) The source is subject to a PAL limit of 1344.75 tons of VOC during any consecutive 12-month period. Per Regulation 2.05, PSD construction permit TV-13-1016(R1) increases the VOC PAL limit from 920.35 to 1344.75 tons per year.

b) The source is subject to a PAL limit of 50.5 tons of PM/PM_{10} during any consecutive 12-month period. Per Regulation 2.05, the 10-year actuals PM/PM_{10} PAL limit was determined by adding the baseline actual emissions from 2000/2001 (35.6) to the PSD significance level for PM/PM_{10} emissions (14.9) resulting in 50.5 tons per year PM/PM_{10}.

c) The source is subject to a PAL limit of 45.05 tons of $PM_{2.5}$ during any consecutive 12-month period. Per Regulation 2.05, the 10-year actuals $PM_{2.5}$ PAL limit was determined by adding the baseline actual emissions from 2000/2001 (35.15) to the PSD significance level for $PM_{2.5}$ emissions (9.9) resulting in 45.05 tons per year $PM_{2.5}$.

d) The source is subject to a PAL limit of 99 tons of NOx during any consecutive 12-month period.

e) The source is subject to a PAL limit of 39.58 tons of SO_2 during any consecutive 12-month period. Per Regulation 2.05, the 10-year actuals SO_2 PAL limit was determined by adding the baseline actual emissions from 2000/2001 (0.58) to the PSD significance level for SO_2 emissions (39) resulting in 39.58 tons per year.

f) The source is subject to a PAL limit of 180.66 tons of CO during any consecutive 12-month period. Per Regulation 2.05, the 10-year actuals CO PAL limit was determined by adding the baseline actual emissions from 2000/2001 (81.66) to the PSD significance level for CO emissions (99) resulting in 180.66 tons per year.

g) The source is subject to a PAL limit of 180,661 tons of GHG CO_2e during any consecutive 12-month period. Per Regulation 2.05, the 10-year actuals GHG CO_2e PAL limit was determined by adding the baseline actual emissions from 2003/2004 (105,662) to the PSD significance level for GHG CO_2e emissions (74,999) resulting in 180,661 tons per year.

ii. **Monitoring and Recordkeeping**

District Regulation 2.16, section 4.1.9.1 and 4.1.9.2 requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

iii. **Reporting**

District Regulation 2.16, section 4.3.5, requires stationary sources for which a Title V is issued shall submit an annual compliance certification by April 15. In addition, as required by District Regulation 2.16, section 4.1.9.3, the source shall submit compliance reports at least every six months to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per District Regulation 2.16, section 3.5.11.

III. Other Requirements

1. Temporary Sources: The source did not request to operate any temporary facilities.

2. Short Term Activities: The source did not report ant short term activities.

3. Emissions Trading: N/A

4. Operational Flexibility: The source did not request any operational flexibility for the facility.

5. **Compliance Status:** The source signed and submitted a Title V compliance certification.

6. **Permit Fee:** This permit is subject to the increase of a PAL during the PAL effective period permit fee of $5,084.79, set forth on the most recent version of APCD regulation 2.08, Schedule of Fees.

7. **Insignificant Activities:** Various activities are listed as insignificant activities and are explicitly cited in the IA Table in permit 150-97-TV(R2) and in permit TV-13-1016(R1).