# Iowa Department of Natural Resources
# Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 22.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

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The Iowa Department of Natural Resources (DNR) finds that:

1. Titan Tire Corporation, located at 2345 East Market Street, Des Moines, Iowa 50317 has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Mr. Lester Brewer, General Manager, telephone # (515) 265-9404.
2. Titan Tire Corporation is a manufacturer of Tire and Inner Tubes, SIC 3011. This facility consists of 315 significant emission units with potential emissions of:

| **Pollutant** | **Abbreviation** | **Potential Emissions** (Tons per Year) |
|---|---|---|
| Particulate Matter (≤ 10 μm) | $PM_{10}$ | 318.57 |
| Particulate Matter | PM | 318.57 |
| Sulfur Dioxide | $SO_2$ | 1,226.58 |
| Nitrogen Oxides | $NO_x$ | 221.02 |
| Volatile Organic Compounds | VOC | 698.45 |
| Carbon Monoxide | CO | 46.29 |
| Hazardous Air Pollutants [(1)] | HAP | 82.01 |

[(1)] May include the following: Refer to Titan Tire Corporation's Title V Renewal application Form 1.4.

3. Titan Tire Corporation submitted a Title V Operating Permit renewal application on March 27, 2013 and any additional information describing the facility on July 23, 2013. Based on the information provided in these documents, DNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 22.107.
4. DNR has complied with the procedures set forth in 567 IAC 22.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

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DNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the proposed permit will run from March 14, 2016 through April 13, 2016. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period. During this time, anyone may submit written comments on the permit. Mail signed comments to Jeff Gabby at the Polk County address shown below.
2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. DNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Jeff Gabby at the Polk County address shown below.
3. DNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, DNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

   Mr. Jeffrey M. Gabby
   Polk County Public Works
   Air Quality Division
   5885 NE 14th Street
   Des Moines, Iowa 50313
   Phone: (515) 286-3389
   E-mail: jeffrey.gabby@polkcountyiowa.gov

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DNR concludes that:

1. DNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-31, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
2. DNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-31.
4. DNR is required to comply with 567 IAC Chapter 22 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the DNR from pursuing enforcement action for any violation.

| Worksheet of Air Operating Permit | Manufacturer of Tires and Inner Tubes<br>SIC 3011 |
|---|---|

Applicant: Titan Tire Corporation
EIQ Number: 92-6802
Facility File Number: 77-01-003

Review Engineer:
Jeff Gabby

**Application Evaluation**

A. Project Briefing:

This project regards a Part 70 Title V permit renewal application to operate the following significant emission units: #27 Banbury Mixer with Pulse-Air baghouse: (EP 1 / CE-01 / EU 122, 122A, 122B, 122C, 122D, 122E, 123, 123A, 123B, and 124); Pellet Dip Mixing & Rotary Cooling with Airtrol 360AW-10 Baghouse: (EP 2 / CE-02 / EU 002, 125A); #27D Banbury: Hand weighing Chemicals: (EP 3 / EU 121); #1 Banbury with Micropeel Baghouse: (EP 4 / CE-04 / EU 101, 103, 103A, 103B, 103C, and 103D); #2 Banbury Mixer (Building 4) with Mikro Pulsaire 238 STRH-12-20 Baghouse: ( EU 102, 104, 104A, 104B, 104C, 104D / CE-05 / EP 5 ); #4 Banbury Mixer with Airtrol Pulse Type Baghouse: ( EU 110, 111, 111A, 111B, 111C, and 111R / CE-06 / EP 6); #5 Banbury Mixer with Built Engineering Baghouse: ( EU 114, 116, 116A, 116B, 116C, 116R, 117, 119, 119A, and 127D / CE-07 / EP 7); #6 Banbury Mixer with Sly Baghouse, Model 11/A: (EU 115, 127, 127A, 127B, 127C, and 127R / CE-08 / EP 8); 60 kW Kohler Model 60RZ282 Natural Gas Emergency Generator (EU 12 / EP 9); 2325 $ft^3$/hr Onan Model F1197GU Natural Gas Emergency Generator (EU 13 / EP 10); Ferrel Tandem Calender (EU 317 / EP 13); Bead Dipping Tank: (EU 405 / EP 17); Bead Dipping and Drying Station (EU 406 / EP 17A); Bias Tire Curing Presses (21), Bag-O-Matic Radial Tractor Tire 75" Curing Press (1), McNeil Akron Radial Tractor Tire 100" Curing Press (1), and Radial Tractor Tire Curing Presses (6); (EU 567, 607, 608, 608A / EP 24); NRM (3- 55"), (4- 60") Dual Cavity Curing Presses, McNeil (2- 63.5") Dual Cavity Curing Presses, NRM (1- 62.5") Large Farm Tire Curing Press, and NRM (1- 62.5") Implement Tire Curing Press ( EU 603, 603A, 604, and 604A / EP 25); Curing Presses, Bldg. 5, (8) McNeil Duals (# 615- 630), (27) Singles (#505- 531), Curing Press, McNeil (1- 55") Dual Cavity, Bldg. 5, (#613- 614), Curing Presses (5), McNeil, Bldg. 5 (#501- 504, 535), Curing Presses (2), McNeil, Bldg. 5 (#536- 537) ( EU 606, 606S, 606A, and 606B / EP 26 ); 111 tire curing presses of various makes and sizes (602A-277) – (602A-337), (602B-175) – (602B-201), (602B-211) – (602B-233), (602B-243) – (602B-273), *(previous four series include all inclusive with odd numbered last 3 digits only, i.e., last 3 digit even numbers excluded from list),* 609 – 612, and 615- 649 *(previous 2 series include all EU numbers within range, both odd and even)* / EP 27 ); Tractor Tire Buffing and Repair Booth, Bldg 12, with a Composite Dry Filter Bank: ( EU 711 / CE-28 / EP 28); Passenger Tire Buffing and Repair Station , Bldg 22, with Torrit Cyclone Dust Collector, Model 24 (EU 712 / CE-29 / EP 29); Tractor Tire Repair Booth, Bldg 18, with McMaster-Carr 2119K23 Hi-Volume Cyclone (EU 554 / CE-34C / EP 34C); five (5) Tire Mold Repair Welding Stations (EU 913, 913A, 913B, 913C, and 913D / EP 35); Tire Mold Cleaning Station (3 Mold Cleaning Sand Blasting Units) with Cyclone Separator and Baghouse (EU 826 / CE-36 / EP 36); Boiler #1 and Boiler #2, 18.39 MM BTU/ Hr. (each), dual fuel: Natural Gas and No. 6 Residual Oil (EU 820 and 821 / EP 38); Boiler #3, 43.88 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 822 / EP 39); Boiler #4, 31.34 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 823 / EP 40); Two, (2), Slab Dip Mixers (EU 007, 008 / EP 41); #1 and #2 Banbury Drop Mills with Sly 11A Baghouse (EU 105 / CE-43 / EP 43); #4 Banbury 36" Ferrell Shaping Mill, #4 Slab Dip Applicator, and #8 Rubber Extruder (EU 111D, 111E, and 221 / EP 45); #1 and #2 Banbury Shaping Mill (EU 106 / EP 46); Carbon Black Unloading Station with Bulk Lift Bag Filter (EU 001 / CE-47 / EP 47); Rubber Hot Rooms (5), each with 150,000 BTU Natural Gas Furnaces (5) (EU 825 / EP 50); Breakdown Mills (2), Holding Mills (2), Feed Mills (2), 4 Roll Z Calendar, (EU 307-313 / EP 52); Tire Assembly Machines, (various makes and models), (36), (EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders, and 1 Spray booth (7) (EU 560, 587, 589, 595, 597, 599, 600 / CE 560, 587, 589, 595, 597, 599, 600 / EP 52); Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE-596 / EP 52); 1- Tire Assembly Machine, NRM Model 60, 3- Tire Assembly Machines, NRM Model 59, 1- Tire Assembly Machines, NRM Model 89, and 2- Tire Assembly Machines, NRM Model 59H, (EU 523, 559, 561, 562, 572, 584, 585 / EP 53);

Fourteen (14) NRM Model 61 Tire Assembly Machines, one (1) NRM Model 40 Tire Assembly Machine, and one Tire Assembly Machine, NRM Model 61C (#413) (EU 534 – 536, 538 – 541, 545 – 550, 565, 566A, 573 / EP 54); Tire Assembly Machine, Akron Standard Model 336 (#420) (EU 537 / EP 54); Tire Assembly Machine, NRM Model 610 (#418) (EU 566 / EP 54); Three (3)- Tire Assembly System with Extruder (1), Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 542 / CE-542 / EP 54); (EU 543 / CE-543 / EP 54); (EU 552 / CE-552 / EP 54); Rubber Pellet Storage (EU 126 / EP 55); Bead Former #7, NRM 2 ½ Rubber Extruder 22.1 L/D (EU 407 / EP 56); (3) Wasik Associates, Inc. 400 kV 100 mA Electron Beam Scanners, (EU 316 / EP 58); one (1) 15,000 gallon Fixed Roof Dustene Storage Tank (EU 908 / EP 62); one (1) 15,000 gallon Fixed Roof Hardite Storage Tank (EU 907 / EP 63); and (4) Bead Formers, #1, #5, #6, #3 (EU 401, 402, 403, 408 / EP 64), Solvent Wash of Bead Filler (EU 404 / EP 64), (26) Tire Assembly Machines, various models (EU 528- 533, 571, 582, 591 – 594, 713 – 715, 717 - 727 / EP 64), (3) Bead Flipping Machines (EU 909 – 911 / EP 64).

The following emission units are insignificant, per 567 IAC 22.102- 103: two (2) marking applicators, one (1) Zinc Stearate Applicator (dry powder additive), two (2) Marking Applicators Z Calendar, two (2) Safety Kleen Stations: 30 gallon capacity, four (4) Safety Kleen Stations: 9 gallon capacity, three (3) Tomene Storage Tanks: 12,000 gallon capacity (each), two (2) #6 Fuel Oil Storage Tanks: 87,000 gallon capacity (each), and one (1) Tomene Storage Tank: 20,000 gallon capacity. The two (2) #6 Fuel Oil Storage Tanks are not subject to NSPS Subparts K and Ka because these specifically exclude #2 through #6 Fuel Oil storage. They are not subject to NSPS Subpart Kb because it doesn't apply to organic liquid storage for liquids with vapor pressures less than 3.5 kPa. #6 Fuel Oil has a vapor pressure of <10 mm Hg, which converts to ~<1.33 kPa.

#5 Banbury: Pellet Charging and #6 Banbury: Pellet Charging with Cartridge Filter Bank: (EU 917, 918 / CE-10 / EP 10) is no longer in the Title V Permit. Titan removed CE-10, (a cartridge filter bank), and EP 10, (its associated emission point), at some point in time during the initial Title V Permit cycle. Emissions associated with pellet charging are now accounted for as part of the associated Banbury emissions.

Bead Cement Mixing (EU 011 / EP 42) has been removed from the facility and is no longer in the application and permit.

#7 Extruder Breakdown Mill (3), #7 Extruder Feed Mill (2), #7 Extruder, #7 Extruder Undertread Cement, and #7 Extruder Treadend Cement, with cartridge filter bank (EU 210, 211, 212, 213, 214, 215, 218, and 219 / CE-51 / EP 51) were removed from the facility. The associated Polk County AQD Construction Permit #0385 was voided on 3/16/2010.

L Calendar Operation: Breakdown Mills (2), Feed Mills (2), Ferrel Calendar, and Ferrel Inverted "L" Calendar: (EU 301, 302, 303, 304, 305, and 306 / EP 12) was originally grandfathered. The equipment was removed from the facility.

B. Applicable rules and regulations:

1. Emission limits and conditions: Polk County Construction Permit # 0578 MODIFIED limits $PM_{10}$ emissions to 3.29 lbs./ hr, 14.4 tons per 12-month period rolled monthly, and 0.0214 gr./ dscf; Opacity to no visible emissions; VOC to 7.90 lbs./ hr., 34.6 TPY; HAPs (Combined) (Subset of VOCs) to 2.70 lbs./hr., 11.8 TPY from the #27 Banbury Mixer with Pulse-Air baghouse: (EP 1 / CE 01 / EU 122, 122A, 122B, 122C, 122D, 122E, 123, 123A, 123B, and 124).

Polk County Construction Permit # 0547 limits PM to 0.825 lbs./ hr, 3.61 TPY, and 0.10 gr./dscf from Pellet Dip Mixing & Cooling with Airtrol 360AW-10 Baghouse: (EP 2 / CE-02 / EU 002, 125A).

(EU121 / EP 3) is grandfathered.

Polk County Construction Permit #1386 limits PM emissions to 6.831 lbs./ hr, 29.92 tons per 12-month period rolled monthly, and 0.10 gr./ dscf; Opacity to no visible emissions; and VOC/ HAP to 7.53 lbs./ hr., 33.3 TPY; from the #1 Banbury Mixer with Micropeel Baghouse, Model 1005-8-20: (EP 4 / CE-04 / EU 101, 103, 103A, 103B, 103C, and 103D).

Polk County Construction Permit #0558A limits $PM_{10}$ emissions to 8.71 lbs./ hr, 38.15 tons per 12-month period rolled monthly, and 0.10 gr./ dscf; Opacity to no visible emissions; VOC to 7.60 lbs./ hr., 33.30 TPY; HAPs (Combined) to 2.40 lbs./hr., 10.50 TPY from the #2 Banbury Mixer (Building 4) with Mikro Pulsaire 238 STRH-12-20 Baghouse: : ( EU 102, 104, 104A, 104B, 104C, 104D / CE-05 / EP 5 ).

Polk County Construction Permit #0682 limits $PM_{10}$ emissions to 4.32 lbs./ hr, 18.92 tons per 12-month period rolled monthly, and 0.05 gr./ dscf; and Opacity to no visible emissions from the #4 Banbury Mixer with Airtrol Pulse Type Baghouse: ( EU 110, 111, 111A, 111B, 111C, and 111R / CE-06 / EP 6).

Polk County Construction Permit #0619 limits PM emissions to 10.285 lbs./ hr. and 0.10 gr./ scf from the #5 Banbury Mixer with Built Engineering Baghouse: ( EU 114, 116, 116A, 116B, 116C, 116R, 117, 119, 119A, and 127D / CE-07 / EP 7).

Polk County Construction Permit #1385 limits PM emissions to 11.1 lbs./ hr, 48.62 tons per 12-month period rolled monthly, and 0.10 gr./ dscf; Opacity to no visible emissions; and VOC/ HAP to 7.53 lbs./ hr., 33.3 TPY; from the #6 Banbury Mixer with Sly Baghouse, Model 11/A: (EU 115, 127, 127A-C, 127R / CE-08 / EP 8).

Polk County Construction Permit #2156 limits PM/ $PM_{10}$ emissions to 0.02 lbs./hr, 0.08 tons per 12-month period rolled monthly; Opacity to <20%; SOx to 0.5 lbs./MMBtu; NOx to 2.73 lbs./hr, 11.94 tons per 12-month period rolled monthly; VOC to 0.11 lbs./hr, 0.49 tons per 12-month period rolled monthly; and CO to 0.38 lbs./hr, 1.68 tons per 12-month period rolled monthly from the 60 kW Kohler Model 60RZ282 Natural Gas Emergency Generator (EU 12 / EP 9).

Polk County Construction Permit #2155 limits PM/ $PM_{10}$ emissions to 0.05 lbs./hr, 0.20 tons per 12-month period rolled monthly; Opacity to <20%; SOx to 0.01 tons per 12-month period rolled monthly, 0.5 lbs./MMBtu; NOx to 6.60 lbs./hr, 28.92 tons per 12-month period rolled monthly; VOC to 0.27 lbs./hr, 1.18 tons per 12-month period rolled monthly; and CO to 0.93 lbs./hr, 4.06 tons per 12-month period rolled monthly from the 2325 $ft^3$/hr Onan Model F1197GU Natural Gas Emergency Generator (EU 13 / EP 10).

Polk County Construction Permit #2312 limits Opacity to no visible emissions; VOC to 1.21 lbs./hr, 5.31 tons per 12-month period rolled monthly; and HAP to 0.16 lbs./hr, 0.70 tons per 12-month period rolled monthly from the Ferrel Tandem Calender (EU 317 / EP 13).

Bead Dipping Tank: (EU 405 / EP 17) & Bead Dipping and Drying Station (EU 406 / EP 17A) are grandfathered.

Polk County Construction Permit #0818A limits VOC emissions to 1.17 lbs./ hr and 5.12 tons per 12-month period rolled monthly, and HAPs to 0.24 lbs./ hr and 1.04 tons per 12-month period rolled monthly from the Bag-O-Matic Radial Tractor Tire 75” Curing Press (1): (EU 607 / EP 24).

Polk County Construction Permit #0736 MODIFIED limits VOC emissions to 1.67 lbs./ hr and 7.31 tons per 12-month period rolled monthly, and HAPs to 0.34 lbs./ hr and 1.49 tons per 12-month period rolled monthly from the McNeil Akron Radial Tractor Tire 100” Curing Press (1): (EU 608 / EP 24).

(EU 567 and 608A / EP 24) are grandfathered.

Polk County Construction Permit #0818B limits VOC emissions to 4.68 lbs./ hr and 20.48 tons per 12-month period rolled monthly, and HAPs to 0.95 lbs./ hr and 4.17 tons per 12-month period rolled monthly from the NRM (1- 62.5") Large Farm Tire Curing Press, and NRM (1- 62.5") Implement Tire Curing Press ( EU 604 and 604A / EP 25). (EU 603 and 603A / EP 25) are grandfathered.

Curing Presses, Bldg. 5, (8) McNeil Duals (# 615- 630), (27) Singles (#505- 531), Curing Press, McNeil (1-55") Dual Cavity, Bldg. 5, (#613- 614), Curing Presses (5), McNeil, Bldg. 5 (#501- 504, 535), Curing Presses (2), McNeil, Bldg. 5 (#536- 537) ( EU 606, 606S, 606A, and 606B / EP 26 ): EU 606, 606A, and 606B are grandfathered. EU 606S is permitted under Polk County Construction Permit 1342. This permit limits opacity to no visible emissions; VOC to 2.338 lbs./ hr. and 10.240 TPY; and HAPs (Combined) to 0.476 lbs./ hr. and 2.085 TPY.

111 tire curing presses of various makes and sizes (602A-277) – (602A-337), (602B-175) – (602B-201), (602B-211) – (602B-233), (602B-243) – (602B-273), *(previous four series include all inclusive with odd numbered last 3 digits only, i.e., last 3 digit even numbers excluded from list)*, 609 – 612, and 615- 649 *(previous 2 series include all EU numbers within range, both odd and even)* / EP 27 ) are permitted under Polk County Construction Permit #0855 Modified #21. This permit limits opacity to no visible emissions; VOC to 10.92 lbs./ hr. and 47.83TPY; HAPs (single) to 0.80 lbs./ hr. and 3.50 TPY, and HAPs (Combined) to 3.00 lbs./ hr. and 13.16 TPY.

Polk County Construction Permit #0911 Modified limits PM/ $PM_{10}$ emissions to 1.30 lbs./ hr., 5.68 TPY, and 0.01 grain/ dscf; Opacity to no visible emissions allowed; and VOC to 0.26 TPY from the Tractor Tire Buffing and Repair Booth, Bldg 12, with a Composite Dry Filter Bank: ( EU 711 / CE-28 / EP 28).

Polk County Construction Permit #2260 limits PM/ $PM_{10}$ emissions to 0.26 lbs./ hr., 1.13 TPY, and 0.01 grain/ dscf (for the tire painting operation); 1.29 lbs./ hr., 5.63 TPY, and 0.05 grain/ dscf (for the tire buffing operation); Opacity to no visible emissions allowed; and VOC to 0.51 TPY from the Passenger Tire Buffing and Repair Booth, Bldg 22, with a Torrit Cyclone Dust Collector, Model 24: (EU 712 / CE-29 / EP 29) .

Polk County Construction Permit 1032 Modified #3 limits PM/ $PM_{10}$ emissions to 0.33 lbs./ hr., 1.43 TPY, and 0.01 grain/ dscf (for the tire painting operation); 1.63 lbs./ hr., 7.13 TPY, and 0.05 grain/ dscf (for the tire buffing operation); Opacity to no visible emissions allowed; and VOC to 0.36 TPY from the Tractor Tire Repair Booth, Bldg 18, with McMaster-Carr 2119K23 Hi-Volume Cyclone (EU 554 / CE-34C / EP 34C).

Five (5) Tire Mold Repair Welding Stations (EU 913, 913A, 913B, 913C, and 913D / EP 35) are grandfathered.

Polk County Construction Permit 0919 limits $PM_{10}$ emissions to 2.57 lb./hr., 11.26 TPY, and 0.10 gr./ scf for the Tire Mold Cleaning Station (3 Mold Cleaning Sand Blasting Units) with Cyclone Separator and Baghouse (EU 826 / CE-36 / EP 36).

Boiler #1 and Boiler #2, 18.39 MM BTU/ Hr. (each), dual fuel: Natural Gas and No. 6 Residual Oil (EU 820 and 821 / EP 38) are grandfathered. Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-12 (2) limits PM to 0.52 lb./ MM BTU and Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27: (2) (a) and (5) limits $SO_2$ to 2.5 lb./ MM BTU and 500 parts per million by volume.

Boiler #3, 43.88 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 822 / EP 39) is grandfathered. Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-12 (2) limits PM to 0.425 lb./ MM BTU and Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27: (2) (a) and (5) limits $SO_2$ to 2.5 lb./ MM BTU and 500 parts per million by volume.

Boiler #4, 31.34 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 823 / EP 40) is grandfathered. Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-12 (2) limits PM to 0.460 lb./ MM BTU and Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27: (2) (a) and (5) limits $SO_2$ to 2.5 lb./ MM BTU and 500 parts per million by volume.

Two, (2), Slab Dip Mixers (EU 007,008 / EP 41) are grandfathered.

#1 and #2 Banbury Drop Mills with Sly 11A Baghouse (EU 105 / CE-43 / EP 43) are permitted under Polk County Construction Permit 0558B, which limits $PM_{10}$ emissions to 8.03 lbs/hr., 35.16 TPY, and 0.10 grains/ scf; opacity to no visible emission; VOC to 7.6 lbs./ hr. and 33.30 TPY; and combined HAPs to 2.40 lbs./ hr. and 10.50 TPY.

#4 Banbury 36" Ferrell Shaping Mill, #4 Slab Dip Applicator, and #8 Rubber Extruder (EU 111D, 111E, and 221 / EP 45) are grandfathered. All VOC & HAP PTE from EU 111D and EU 111E are assigned as being emitted from EU 111, since it is located before EU 111D and EU 111E, and the process material is cooling down after coming out of EU 111.

#1 and #2 Banbury Shaping Mill (EU 106 / EP 46) is grandfathered. The emissions for EU 106 are VOC emissions. These emissions are accounted for in EU 103 and 104. When the rubber goes through EU 106 it is cooling down, therefore there is no additional VOC emissions occur.

Carbon Black Unloading Station with Bulk Lift Bag Filter (EU 001 / CE-47 / EP 47) is grandfathered.

Rubber Hot Rooms (5), each with 150,000 BTU Natural Gas Furnaces (5) (EU 825 / EP 50) is permitted under Polk County Construction Permit 0916. Limits are $PM_{10}$: 0.002 lbs./hr.; 0.007 TPY, no visible emissions; $SO_x$: 0.00009 lbs./hr., 0.0004 TPY, 500 ppmv; $NO_x$: 0.0141 lbs./ hr., 0.062 TPY; VOC: 0.002 lbs./ hr., 0.007 TPY; and CO: 0.006 lbs./ hr., 0.03 TPY. These permitted values were verified as being correct and they have current emission factors utilized, with the exception of $PM_{10}$, which went from 11.17 lb./ MMCF to 7.6 lb./ MMCF. Maximum throughput was utilized in permitting this source, and this indicates that the permitted values will not be exceeded.

Breakdown Mills (2), Holding Mills (2), Feed Mills (2), 4 Roll Z Calendar, (EU 307-313 / EP 52) are grandfathered.

Tire Assembly Machines, (various makes and models), (36), (EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52) are permitted under Polk County Construction Permit 2081 Modified #4. Limits are opacity to no visible emission; VOC to 18.03 lbs./ hr. and 79.02 TPY.

Tire Assembly System with 1 Extruder, 2 Stripwinders, and 1 Spray booth (7), each with dry filters (EU 560, 587, 589, 595, 597, 599, 600 / CE 560, 587, 589, 595, 597, 599, 600 / EP 52) are permitted under Polk County Construction Permit 2047 Modified. Limits are opacity to no visible emission; (EU 560): 0.33 lbs./ hr, 1.45 TPY, 0.01 gr/ dscf PM/ $PM_{10}$, VOC to 0.71 TPY; (EU 587, 589, 595, 597, 599, 600): 0.33 lbs./ hr, 1.45 TPY, 0.01 gr/ dscf PM/ $PM_{10}$, VOC to 1.47 TPY [per each emission unit]; and (EU 560, 587, 589, 595, 597, 599, 600): 10.15 TPY, 0.01 gr/ dscf PM/ $PM_{10}$, VOC to 9.53 TPY [emission units combined total allowable].

Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE-596 / EP 52) is permitted under Polk County Construction Permit Number 1363. Limits are $PM_{10}$: 0.137 lbs./hr., 0.598 TPY, 0.01 gr./ dscf; no visible emissions; VOC: 0.787 lbs./ hr., 3.447 TPY; and combined HAPs: 0.339 lbs./hr., 1.484 TPY.

1- Tire Assembly Machine, NRM Model 60, 3- Tire Assembly Machines, NRM Model 59, 1- Tire Assembly Machines, NRM Model 89, and 2- Tire Assembly Machines, NRM Model 59H, (EU 523, 559, 561, 562, 572, 584, 585 / EP 53) is permitted under Polk County Construction Permit Number 0942 Modified. It limits opacity to no visible emissions; VOC (per unit) to 0.49 lbs./ hr. and 2.15 TPY; VOC (all units combined) to 14.47 TPY.

Fourteen (14) NRM Model 61 Tire Assembly Machines, one (1) NRM Model 40 (#407) Tire Assembly Machine, and one Tire Assembly Machine, NRM Model 61C (#413) (EU 534 – 536, 538 – 541, 545 – 550, 565, 566A, & 573 / EP 54) are grandfathered.

Tire Assembly Machine, Akron Standard Model 336 (#420) (EU 537 / EP 54) is permitted under Polk County Construction Permit 1417. Limits are: no visible emissions and 3.67 TPY VOC.

Tire Assembly Machine, NRM Model 610 (#418) (EU 566 / EP 54) is permitted under Polk County Construction Permit 1414. Limits are: no visible emissions and 3.67 TPY VOC.

Three (3)- Tire Assembly System with Extruder (1), Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 542 / CE-542 / EP 54); (EU 543 / CE-543 / EP 54); (EU 552 / CE-552 / EP 54) are permitted under Polk County Construction Permit Number 2131. Limits are PM/ $PM_{10}$: 4.35 TPY, 0.01 gr./ dscf, no visible emissions, and VOC: 9.96 TPY.

Rubber Pellet Storage (EU 126 / EP 55) is grandfathered.

Bead Former #7, NRM 2 ½ Rubber Extruder 22.1 L/D (EU 407 / EP 56) is permitted under Polk County Construction Permit Number 1403. Limits are: no visible emissions, VOC: 0.016 lbs./ hr. and 0.07 TPY, and HAPs: 0.011 lbs./ hr. and 0.05 TPY.

(3) Wasik Associates, Inc. 400 kV, 100 mA Electron Beam Scanners, (EU 316 / EP 58), is permitted by Polk County Construction Permit Number 2064. Limits are: no visible emissions, and Ozone: 2.66 lbs./ hr. and 11.65 TPY.

One (1) 15,000 gallon Fixed Roof Dustene Storage Tank (EU 908 / EP 62) is permitted under Polk County Construction Permit 1420. Limits are no visible emissions and 0.01 TPY VOC.

One (1) 15,000 gallon Fixed Roof Hardite Storage Tank (EU 907 / EP 63) is permitted under Polk County Construction Permit 1422. Limits are no visible emissions and 0.03 TPY VOC.

(4) Bead Formers, #1, #5, #6, #3 (EU 401, 402, 403, 408 / EP 64), Solvent Wash of Bead Filler (EU 404 / EP 64), (26) Tire Assembly Machines, various models (EU 528- 533, 571, 582, 591 – 594, 713 – 715, 717 - 727 / EP 64), (3) Bead Flipping Machines (EU 909 – 911 / EP 64) is permitted under Polk County Construction Permit 2015 Modified #6. Limits are no visible emissions (EP 64); 3.35E-04 lbs./ hr., 0.001 TPY VOC and 0.001 TPY HAP from (EU 401 / EP 64); 8.39E-04 lbs./ hr., 0.004 TPY and 0.005 TPY HAP from (EU 402 / EP 64); 5.03E-04 lbs./ hr., 0.002 TPY VOC and 0.003 TPY HAP from (EU 403 / EP 64); 8.39E-04 lbs./ hr., 0.004 TPY VOC, 0.005 TPY HAP from (EU 408 / EP 64); 0.91 lbs./ hr., 3.986 TPY VOC from (EU 404 / EP 64); 0.47 lbs./ hr., 2.06 TPY VOC (per unit), 12.22 lbs./ hr., 53.56 TPY VOC (all TAMs combined); 2.04E-03 lbs./ hr., 0.01 TPY VOC, 1.99E-03 lbs./ hr., 0.01 TPY HAP from (3) Bead Flipping Machines (EU 909 – 911 / EP 64); and 57.59 TPY VOC, 0.044 TPY HAP from all EP 64 EUs.

2. Opacity for the facility: Less than 20% opacity- Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9.

No visible émissions allowed: EP 1, EP 4, EP 5, EP 6, EP 8, EP 13, EP 26, EP 27, EP 28, EP 29, EP 34C, EP 36, EP 43, EP 50, (EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52), (EU 560, 587, 589, 595, 597, 599, 600 / CE 560, 587, 589, 595, 597, 599, 600 / EP 52), (EU 596 / CE-596 / EP 52), (EP 53), (EU 537 / EP 54), (EU 566 / EP 54), (EU 542 / CE-542 / EP 54), (EU 543 / CE-543 / EP 54), (EU 552 / CE-552 / EP 54), (EU 407 / EP 56), (EU 316 / EP 58), (EU 908 / EP 62), (EU 907 / EP 63), and EP 64.

3. NSPS: 1- 15,000 gallon Dustene storage tank, and 1- 15,000 gallon Hardite storage tank were subject to NSPS Subpart Kb when their construction permits were issued. The tanks are permitted under Polk County Construction permits 1420, and 1422, respectively. NSPS Subpart Kb was revised, and no longer applies to tanks with volumes less than 20,000 gallons. Conditions placed in the construction permits were originally written as Subpart Kb requirements. The construction permits have not been modified, and the conditions now have PC Construction Permits 1420 and 1422 as the authority for requirement, but no longer NSPS Subpart Kb.

   The facility shall comply with all applicable requirements of 40 CFR Part 60 Subpart BBB-Standards of Performance for the Rubber Tire Manufacturing Industry. NSPS Subpart BBB applies to EU 542, 543, 552, 560, 587, 589, 595, 597, 599, and 600 which are permitted under Polk County Construction Permit 2131 and 2047 Modified. These construction permits contains the appropriate Subpart BBB requirements. See Appendix A for the web link to NSPS BBB.

4. NESHAP:

   40 CFR 63, Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The following EU are subject to this regulation. Applicable requirements have been placed into the Title V permit.
   - (EU 12 / EP 9) 60 kW Kohler Model 60RZ282 Natural Gas Emergency Generator;
   - (EU 13 / EP 10) 2325 $ft^3$/hr Onan Model F1197GU Natural Gas Emergency Generator

   40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The facility has 4 grandfathered boilers, EU 820, 821, 822, and 823, subject to this NESHAP. As of the issuance of this permit, Iowa DNR and Polk County have not adopted this rule. However, the Titan boilers are affected sources and the facility must comply with all applicable requirements of Subpart DDDDD.

   The facility is subject to the Rubber Tire Manufacturing NESHAP, Subpart XXXX, promulgated July 9, 2002. Titan Tire has chosen emission limit Option 1- HAP constituent option, in order to comply with Subpart XXXX. It will be annotated in the plantwide conditions as being applicable to the facility, and placed in its entirety, with technical correction, in Appendix A of the Title V Permit. NESHAP XXXX: This subpart covers 4 types of operation - tire production, tire cord production, puncture sealant application, and rubber processing. The draft permit includes limits for tire production only. This facility does not produce tire cord, therefore the tire cord production sections of NESHAP Subpart XXXX are not applicable to this facility. This facility does not have a puncture sealant application booth operation, therefore the puncture sealant application section of NESHAP Subpart XXXX is not applicable to this facility. This facility does have rubber processing operations, but NESHAP Subpart XXXX states that rubber processing operations have no emission limitations or other requirements. Subpart XXXX requirements are placed in Appendix A of the Title V permit. They are also found in Polk County Construction Permit # 0911 Modified for (EU 711 / CE 28 / EP 28); Polk County Construction Permit # 2260 for (EU 712 / CE 29 / EP 29); Polk County Construction Permit 1032 Modified #3 for (EU 554 / CE-34C / EP 34C); Polk County Construction Permit 2081 Modified #4 for (EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52), and Polk County Construction Permit # 0942 Modified for EP 53.

5. PSD: Source is currently major (PSD) for PM, $PM_{10}$, $SO_2$, and VOCs. If the facility makes any future qualifying changes, then they will need to submit a PSD permit application, i.e., applying for a significant increase for any pollutant.

6. NAAQS: Facility is located in an attainment area. Air modeling is not required at this time.

7. Title IV: Not applicable.

8. Stratospheric ozone: the only ozone depleting chemicals (regulated by 40 CFR 82) at the facility are those used for air conditioning, dehumidifying, and an ice machine. 40 CFR 82, Subpart F, applies to the disposal of appliances containing Class I or Class II substances (i.e. air conditioners).

9. PM-10: Polk County Construction Permit # 0578 Modified limits $PM_{10}$ emissions to 3.29 lbs./ hr, 14.4 tons/ year, and 0.0214 gr./ dscf from the #27 Banbury Mixer with Pulse-Air baghouse: (EP 1).

   Polk County Construction Permit # 0547 limits PM emissions to 0.825 lbs./ hr., which equates to 3.61 TPY, from the Pellet Dip Mixing & Cooling with Airtrol 360AW-10 Baghouse: (EP 2). For purposes of reporting, regulating, and fee payment, it is being assumed that all PM is $PM_{10}$ from EP 2.

   Polk County Construction Permit #1386 limits PM emissions to 6.831 lbs./ hr, 29.92 tons per 12-month period rolled monthly, and 0.10 gr./ dscf; from the #1 Banbury Mixer with Micropeel Baghouse, Model 1005-8-20: (EP 4).

   Polk County Construction Permit #0558A limits $PM_{10}$ emissions to 8.71 lbs./ hr, 38.15 tons per 12-month period rolled monthly, and 0.10 gr./ dscf from the #2 Banbury Mixer with Mikro Pulsaire 238 STRH-12-20 Baghouse: (EP 5).

   Polk County Construction Permit #0682 limits $PM_{10}$ emissions to 4.32 lbs./ hr, 18.92 tons per 12-month period rolled monthly, and 0.05 gr./ dscf; from the #4 Banbury Mixer with Airtrol Pulse Type Baghouse: (EP 6).

   Polk County Construction Permit #0619 limits PM emissions to 10.285 lbs./ hr, and 0.10 gr./ scf from the #5 Banbury Mixer with Built Engineering Baghouse: (EP 7).

   Polk County Construction Permit #1385 limits PM emissions to 11.1 lbs./ hr, 48.62 tons per 12-month period rolled monthly, and 0.10 gr./ dscf; from the #6 Banbury Mixer with Sly Baghouse, Model 11/A: (EP 8).

   Polk County Construction Permit #2156 limits PM/ $PM_{10}$ emissions to 0.02 lbs./hr, 0.08 tons per 12-month period rolled monthly from the 60 kW Kohler Model 60RZ282 Natural Gas Emergency Generator (EU 12 / EP 9).

   Polk County Construction Permit #2155 limits PM/ $PM_{10}$ emissions to 0.05 lbs./hr, 0.20 tons per 12-month period rolled monthly from the 2325 $ft^3$/hr Onan Model F1197GU Natural Gas Emergency Generator (EU 13 / EP 10).

   Polk County Construction Permit #0911 Modified limits PM/ $PM_{10}$ emissions to 1.30 lbs./ hr., 5.68 TPY, and 0.01 grain/ dscf from the Tractor Tire Buffing and Repair Booth, Bldg 12, with a Composite Dry Filter Bank: ( EU 711 / CE-28 / EP 28).

Polk County Construction Permit #2260 limits PM/ $PM_{10}$ emissions to 0.26 lbs./ hr., 1.13 TPY, and 0.01 grain/ dscf (for the tire painting operation); 1.29 lbs./ hr., 5.63 TPY, and 0.05 grain/ dscf (for the tire buffing operation) from the Passenger Tire Buffing and Repair Booth, Bldg 22, with a Torrit Cyclone Dust Collector, Model 24: (EU 712 / CE-29 / EP 29) .

Polk County Construction Permit 1032 Modified #3 limits PM/ $PM_{10}$ emissions to 0.33 lbs./ hr., 1.43 TPY, and 0.01 grain/ dscf (for the tire painting operation); 1.63 lbs./ hr., 7.13 TPY, and 0.05 grain/ dscf (for the tire buffing operation) from the Tractor Tire Repair Booth, Bldg 18, with McMaster-Carr 2119K23 Hi-Volume Cyclone (EU 554 / CE-34C / EP 34C).

Polk County Construction Permit 0919 limits $PM_{10}$ emissions to 2.57 lb./hr., 11.26 TPY, and 0.10 gr./ scf for the Tire Mold Cleaning Station (3 Mold Cleaning Sand Blasting Units) with Cyclone Separator and Baghouse (EU 826 / CE-36 / EP 36).

#1 and #2 Banbury Drop Mills with Sly 11A Baghouse (EU 105 / CE-43 / EP 43) are permitted under Polk County Construction Permit 0558B, which limits $PM_{10}$ emissions to 8.03 lbs/hr., 35.16 TPY, and 0.10 grains/ scf.

Rubber Hot Rooms (5), each with 150,000 BTU Natural Gas Furnaces (5) (EU 825 / EP 50) is permitted under Polk County Construction Permit 0916. Limits are $PM_{10}$: 0.002 lbs./hr.; 0.007 TPY. PM is limited to 0.10 gr./ scf. All PM is expected to be $PM_{10}$.

Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 560 / CE-560 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 587 / CE-587 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 589 / CE-589 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 595 / CE-595 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 597 / CE-597 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 599 / CE-599 / EP 52); and Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 600 / CE-600 / EP 52) are permitted under Polk County Construction Permit Number 2047 Modified. Limits are PM/ $PM_{10}$: 0.33 lbs./ hr., 1.45 TPY, and 0.01 gr./dscf for each individual EU, and PM/ $PM_{10}$: 10.15 TPY, and 0.01 gr./dscf for combined total of all EU in this permit group. All PM is expected to be $PM_{10}$ or smaller.

Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE-596 / EP 52) is permitted under Polk County Construction Permit Number 1363. Limits are $PM_{10}$: 0.137 lbs./hr., 0.598 TPY, and 0.01 gr./ dscf. All PM is expected to be $PM_{10}$ or smaller.

Three (3)- Tire Assembly System with Extruder (1), Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 542 / CE-542 / EP 54); (EU 543 / CE-543 / EP 54); (EU 552 / CE-552 / EP 54) are permitted under Polk County Construction Permit Number 2131. Limits are PM/ $PM_{10}$: 4.35 TPY, and 0.01 gr./ dscf. All PM is expected to be $PM_{10}$ or smaller.

C. Monitoring consideration:

PM:
#27D Banbury Mixer with Pulse-Air baghouse: (EP 1 / CE 01 / EU 122, 122A, 122B, 122C, 122D, 122E, 123, 123A, 123B, and 124) is uncontrolled major for PM / $PM_{10}$, 288.0 TPY, and controlled minor, 14.4 TPY. The EU has a short-term limit for $PM_{10}$ of 3.29 lb./ hr. Under DNR's Monitoring Guidance Policy, a Facility O&M Plan and one stack test are required. The stack test was required by Polk County Construction Permit # 0578 MODIFIED, and an extension was granted. The Method 201A and 202 tests were performed on May 17, 2001, and were satisfactorily completed. Method 17 and 202 tests were also performed on November 22, 2010 for the R1 permit, and were satisfactorily completed. Max emission rate during the test runs were 0.55 lb./ hr (16.72% of limit) and 0.0043 gr/dscf (20.09% of limit). A CAM Plan is indicated, because of PTE, and will be required in lieu of the Facility O&M Plan. USEPA Method 201A and 202 stack tests will be required one time during the R2 permit term, in order to show continued compliance with the limits. Titan's CAM Plan consists of daily checks for VEs, with corrective actions within 8 hours if any VEs are observed. This, along with the semi-annual requirement to thoroughly inspect and maintain the Airtrol 435 AW12 Pulse-Air Baghouse from Polk County Construction Permit # 0578 MODIFIED, will assure compliance with the intent of CAM. Note: #27D Banbury (EU 122, 122A, 122B, 122C, 122D, 122E, 123, 123A, 123B, and 124 / CE-01 / EP 01) was indefinitely idle as of the time of issuance of 02-TV-013R2. The CAM Plan is required to be implemented and complied with immediately upon resumption/ start-up of #27D Banbury operations. The stack test is required to be administered within 6 months of the first day of start-up.

Pellet Dip Mixing & Cooling with Airtrol 360AW-10 Baghouse: (EP 2) is uncontrolled significant, (72.2 TPY), controlled minor for PM, 3.61 TPY. Under DNR's Monitoring Guidance Policy, a Facility O&M Plan and no stack tests are required. CAM does not apply, based on PTE.

#27D Banbury: Handweighing Chemicals: (EP 3 / EU 121) is grandfathered and uncontrolled. It has a maximum expected emissions of 3.55 TPY PM, per AP-42 EF's (uncontrolled minor). Per Chapter V, Section 5-14(b), it can legally emit up to 29.92 TPY PM, but would not realistically approach this value. Based on the low expected emissions, no monitoring will be required at this time. CAM does not apply, based on no control equipment.

#1 Banbury with Micropeel Baghouse: (EP 4 / CE-04 / EU 101, 103, 103A, 103B, 103C, and 103D), is uncontrolled major, (598.4 TPY), controlled significant for PM, 29.92 TPY. Under DNR's Monitoring Guidance Policy, an Agency O&M Plan and one stack test are required. A CAM Plan is indicated, because of PTE, and will be required in lieu of the Agency O&M Plan. A 40 CFR 60, Appendix A, Method 5 and 40 CFR 51 Appendix M Method 202- PM test will be required. The PM test required in the R1 permit was not performed, because the last date that the #1 Banbury was used was in December 2008. This Banbury has been sitting completely idle since that time. If the business conditions are appropriate, this Banbury will be put into production in the future. Titan's CAM Plan consists of daily checks for VEs, with corrective actions within 8 hours if any VEs are observed. Parts of the Agency O& M Plan for EP 4, from the original Title V Permit, were incorporated into the proposed CAM Plan, in order to enhance it and ensure compliance with the PM limits. Note: #1 Banbury (EP 4 / CE-04 / EU 101, 103, 103A, 103B, 103C, and 103D) was indefinitely idle as of the time of issuance of 02-TV-013R2. The CAM Plan is required to be implemented and complied with immediately upon resumption/ start-up of #1 Banbury operations. The stack test is required to be administered within 6 months of the first day of start-up.

#2 Banbury Mixer with Mikro Pulsaire 238 STRH-12-20 Baghouse: (EU 102, 104, 104A, 104B, 104C, 104D / CE-05 / EP 5), is uncontrolled major (255.38 TPY), and controlled significant, by permit, (38.15 TPY) for $PM_{10}$. Under DNR's Monitoring Guidance Policy, an Agency O&M plan and one stack test are required. A 40 CFR Part 51, Appendix M, Method 202 in conjunction with a Method 201A test will be required. All PM is considered to be $PM_{10}$ or smaller, and so a separate PM test is not warranted. Method 17 and 202 tests were performed on November 23, 2010 for the R1 permit, and were satisfactorily completed. Max emission rate during the test runs were 0.27 lb./ hr (3.10% of limit) and 0.0037 gr/dscf (3.70% of limit). A CAM Plan is indicated, because of PTE, and will be required in lieu of the Agency O&M Plan. Note: #2 Banbury (EU 102, 104, 104A, 104B, 104C, 104D / CE-05 / EP 5) was indefinitely idle as of the time of issuance of 02-TV-013R2. The CAM Plan is required to be implemented and complied with immediately upon resumption/ start-up of #2 Banbury operations. The stack test is required to be administered within 6 months of the first day of start-up.

#4 Banbury Mixer with Airtrol Pulse Type Baghouse: ( EU 110, 111, 111A, 111B, 111C, and 111R / CE-06 / EP 6) is uncontrolled major (378.40 TPY), and controlled significant, by permit, (18.92 TPY) for $PM_{10}$. Under DNR's Monitoring Guidance Policy, an Agency O&M plan and one stack test are required. A 40 CFR Part 51, Appendix M, Method 202 in conjunction with a Method 201A test will be required. All PM is considered to be $PM_{10}$ or smaller, and so a separate PM test is not warranted. Three Method 17 and 202 tests were performed on September 16-17, 2010 for the R1 permit, and were satisfactorily completed. Max emission rate during the test runs were 0.4165 lb./ hr (9.64% of limit) and 0.0046 gr/dscf (9.20% of limit). A CAM Plan is indicated, because of PTE, and will be required in lieu of the Agency O&M Plan. Titan's CAM Plan consists of daily checks for VEs, with corrective actions within 8 hours if any VEs are observed. Parts of the Agency O& M Plan for EP 6, from the original Title V Permit, were incorporated into the proposed CAM Plan, in order to enhance it and ensure compliance with the PM limits.

#5 Banbury Mixer with Built Engineering Baghouse: ( EU 114, 116, 116A, 116B, 116C, 116R, 117, 119, 119A, and 127D / CE-07 / EP 7) is uncontrolled major, (901.0 TPY), controlled significant by permit, for PM, (45.05 TPY). Under DNR's Monitoring Guidance Policy, an Agency O&M Plan and one stack test are required. A CAM Plan is indicated, because of PTE, and will be required in lieu of the Agency O&M Plan. A 40 CFR Part 60 App. A, Method 5 and 40 CFR Part 51 App. M, Method 202- PM test will be required. Three Method 17 and 202 tests were performed on September 15, 2010 for the R1 permit, and were satisfactorily completed. Max emission rate during the test runs were 0.4424 lb./ hr (4.30% of limit) and 0.0039 gr/dscf (3.90% of limit). Titan's CAM Plan consists of daily checks for VEs, with corrective actions within 8 hours if any VEs are observed. Parts of the Agency O& M Plan for EP 7, from the original Title V Permit, were incorporated into the proposed CAM Plan, in order to enhance it and ensure compliance with the PM limits.

#6 Banbury Mixer with Sly Baghouse, Model 11/A: (EU 115, 127, 127A, 127B, 127C, and 127R / CE-08 / EP 8) is uncontrolled major, (972.4 TPY), controlled significant for PM, (48.62 TPY). Under DNR's Monitoring Guidance Policy, an Agency O&M Plan and one stack test are required. A CAM Plan is indicated, because of PTE, and will be required in lieu of the Agency O&M Plan. A 40 CFR Part 60 App. A, Method 5 and 40 CFR Part 51 App. M, Method 202- PM test will be required. Three Method 17 and 202 tests were performed on September 16, 2010 for the R1 permit, and were satisfactorily completed. Max emission rate during the test runs were 0.2780 lb./ hr (2.50% of limit) and 0.0041 gr/dscf (4.10% of limit). Titan's CAM Plan consists of daily checks for VEs, with corrective actions within 8 hours if any VEs are observed. Parts of the Agency O& M Plan for EP 8, from the original Title V Permit, were incorporated into the proposed CAM Plan, in order to enhance it and ensure compliance with the PM limits.

Polk County Construction Permit #2156 limits PM/ $PM_{10}$ emissions to 0.02 lbs./hr, 0.08 tons per 12-month period rolled monthly (uncontrolled minor) from the 60 kW Kohler Model 60RZ282 Natural Gas Emergency Generator (EU 12 / EP 9). The unit is subject to NESHAP ZZZZ, which will assure compliance with limits when followed. Nothing further is required.

Polk County Construction Permit #2155 limits PM/ $PM_{10}$ emissions to 0.05 lbs./hr, 0.20 tons per 12-month period rolled monthly (uncontrolled minor) from the 2325 $ft^3$/hr Onan Model F1197GU Natural Gas

Emergency Generator (EU 13 / EP 10). The unit is subject to NESHAP ZZZZ, which will assure compliance with limits when followed. Nothing further is required.

Ferrel Tandem Calender (EU 317 / EP 13) is a VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Bead Dipping Tank: (EU 405 / EP 17) is grandfathered. It is a VOC source only. Under DNR's Monitoring Guidance Policy, nothing is required. CAM does not apply.

Bead Dipping and Drying Station: (EU 406 / EP 17A) is grandfathered. It is a VOC source only. Under DNR's Monitoring Guidance Policy, nothing is required. CAM does not apply.

Bias Tire Curing Presses (21), Bag-O-Matic Radial Tractor Tire 75" Curing Press (1), McNeil Akron Radial Tractor Tire 100" Curing Press (1), and Radial Tractor Tire Curing Presses (6); (EU 567, 607, 608, 608A / EP 24) are VOC/ HAP VOC sources only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

NRM (1- 62.5") Large Farm Tire Curing Press, and NRM (1- 62.5") Implement Tire Curing Press (EU 604 and 604A / EP 25), and (EU 603 and 603A / EP 25) are VOC/ HAP VOC sources only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Curing Presses, Bldg. 5, (8) McNeil Duals (# 615- 630), (27) Singles (#505- 531), Curing Press, McNeil (1-55") Dual Cavity, Bldg. 5, (#613- 614), Curing Presses (5), McNeil, Bldg. 5 (#501- 504, 535), Curing Presses (2), McNeil, Bldg. 5 (#536- 537) ( EU 606, 606S, 606A, and 606B / EP 26 ) are VOC/ HAP VOC sources only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

111 tire curing presses of various makes and sizes (602A-277) – (602A-337), (602B-175) – (602B-201), (602B-211) – (602B-233), (602B-243) – (602B-273), *(previous four series include all inclusive with odd numbered last 3 digits only, i.e., last 3 digit even numbers excluded from list)*, 609 – 612, and 615- 649 *(previous 2 series include all EU numbers within range, both odd and even)* / EP 27 ) are VOC/ HAP VOC sources only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Tractor Tire Buffing and Repair Booth, Bldg 12, with a Composite Dry Filter Bank: (EU 711 / CE-28 / EP 28) is uncontrolled significant (56.80 TPY), and controlled minor, by permit, (5.68 TPY) for PM/ $PM_{10}$. Under DNR's Monitoring Guidance Policy, a Facility O&M plan and no stack tests are required. All PM is considered to be $PM_{10}$ or smaller, and so the same monitoring requirements applies for PM. CAM does not apply, based on PTE. EP 28 is required to have an Agency O&M Plan in a NOV dated 4/10/2008, as a result of violations of visible emission checks not being performed, as required in 02-TV-013-M001. Weekly VE checks required and Agency O&M Plan are placed into the permit.

Passenger Tire Buffing and Repair Booth, Bldg 22, with a Torrit Cyclone Dust Collector, Model 24: (EU 712 / CE-29 / EP 29) is uncontrolled minor (11.26 TPY), and controlled minor, by permit, (5.63 TPY) for PM/ $PM_{10}$. Under DNR's Monitoring Guidance Policy, no O&M Plan and no stack tests are required. An Iowa Method 5- PM test was required for this EU in the initial Title V Permit, and was performed on 4/6-7/2004. The average results of the EP 29 tests were 0.002 gr./dscf and 0.016 lb./ hr. This test was required in the original Title V Permit because the previous PTE calculations were much higher for this EU. CAM does not apply, based on PTE. EP 29 was required to have an Agency O&M Plan in a NOV dated 4/10/2008, as a result of violations of visible emission checks not being performed, as required in 02-TV-013-M001. Weekly VE checks required and Agency O&M Plan are placed into the permit. Polk County Construction Permit #2260 limits PM/ $PM_{10}$ emissions to 0.26 lbs./ hr., 1.13 TPY, and 0.01 grain/ dscf (for the tire painting operation); 1.29 lbs./ hr., 5.63 TPY, and 0.05 grain/ dscf (for the tire buffing operation). Tire buffing and painting cannot be conducted simultaneously, so PTE is based on the higher permitted function, tire buffing, with a PTE of 5.63 TPY (controlled). EU 712 was originally grandfathered, but went through permitting in 12/2010 because of a change to a higher VOC content paint.

Polk County Construction Permit 1032 Modified #3 limits PM/ $PM_{10}$ emissions to 0.33 lbs./ hr., 1.43 TPY, and 0.01 grain/ dscf (for the tire painting operation); 1.63 lbs./ hr., 7.13 TPY, and 0.05 grain/ dscf (for the tire buffing operation) from the Tractor Tire Repair Booth, Bldg 18, with McMaster-Carr 2119K23 Hi-Volume Cyclone (EU 554 / CE-34C / EP 34C). It is uncontrolled minor (14.26 TPY), and controlled minor, by permit, (7.13 TPY) for PM/ $PM_{10}$. Under DNR's Monitoring Guidance Policy, no O&M Plan and no stack tests are required. CAM does not apply, based on PTE. Tire buffing and painting cannot be conducted simultaneously, so PTE is based on the higher permitted function, tire buffing, with a PTE of 7.13 TPY (controlled).

Five (5) Tire Mold Repair Welding Stations (EU 913, 913A, 913B, 913C, and 913D / EP 35) are grandfathered. The PM PTE (0.03 TPY) is uncontrolled minor, based on maximum throughput. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Polk County Construction Permit 0919 limits $PM_{10}$ emissions to 2.57 lbs/hr., 11.26 TPY (controlled minor), and 0.10 grains/ scf for the Tire Mold Cleaning Station (3 Mold Cleaning Sand Blasting Units) with Cyclone Separator and Baghouse (EU 826 / CE-36 / EP 36). Uncontrolled $PM_{10}$ PTE is 112.6 TPY, (uncontrolled major). Under DNR's Monitoring Guidance Policy, a Facility O&M Plan and one stack test are indicated. A CAM Plan is indicated, because of PTE, and will be required in lieu of the Facility O&M Plan. A 40 CFR Part 51, Appendix M, Method 202 in conjunction with a Method 201 A test will be required. All PM is considered to be $PM_{10}$ or smaller, and so a separate PM test is not warranted. An Iowa Method 5, in conjunction with a Method 202 and 201A tests were held 12/5-8/2003, with a resulting PM/ $PM_{10}$ emission average concentration of 0.017 gr./scf. Three (3) Method 17 with Method 202 back-half catch tests runs were performed on 10/21/2010, with a maximum concentration of 0.0058 gr/ dscf (5.8% of limit) and 0.0840 lb./ hr PM (3.27% of limit).

Boiler #1 and Boiler #2, 18.39 MM BTU/ Hr. (each), dual fuel: Natural Gas and No. 6 Residual Oil (EU 820 and 821 / EP 38) are grandfathered. Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-12 (2) limits PM to 0.52 lb./ MM BTU. This equates to an enforceable PTE of 41.89 TPY PM. Since this uncontrolled source's PM PTE is significant, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 1.3 emission factors yield an estimate that, at most, 10.74 TPY PM would be emitted. Given this level of confidence that the enforceable PTE will not be approached, no PM stack test is warranted, and will not be required. CAM does not apply, since the source is uncontrolled.

Boiler #3, 43.88 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 822 / EP 39) is grandfathered. Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-12 (2) limits PM to 0.425 lb./ MM BTU. This equates to an enforceable PTE of 81.69 TPY PM. Since this uncontrolled source's PM PTE is significant, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 1.3 emission factors yield an estimate that, at most, 12.81 TPY PM would be emitted. Given this level of confidence that the enforceable PTE will not be approached, no PM stack test is warranted, and will not be required. CAM does not apply, since the source is uncontrolled.

Boiler #4, 31.34 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 823 / EP 40) is grandfathered. Polk County Board of Health Rules and Regulations Chapter V, Article V, Section 5-12 (2) limits PM to 0.460 lb./ MM BTU. This equates to an enforceable PTE of 63.11 TPY PM. Since this uncontrolled source's PM PTE is significant, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 1.3 emission factors yield an estimate that, at most, 9.15 TPY PM would be emitted. Given this level of confidence that the enforceable PTE will not be approached, no PM stack test is warranted, and will not be required. CAM does not apply, since the source is uncontrolled.

Two, (2), Slab Dip Mixers (EU 007, 008 / EP 41) are grandfathered. They are subject to 0.10 gr/scf, which yields a PTE of 37.40 TPY. Since this uncontrolled source's PM PTE is significant, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 11.24 emission factors yield an estimate that, at most, 0.11 TPY PM (each), would be emitted. Given this level of confidence that the enforceable PTE will not be approached, no PM stack test is warranted, and will not be required. CAM does not apply, since the source is uncontrolled.

#1 and #2 Banbury Drop Mills with Sly 11A Baghouse (EU 105 / CE-43 / EP 43) are permitted under Polk County Construction Permit 0558B, which limits $PM_{10}$ emissions to 8.03 lbs/hr., 35.16 TPY, and 0.10 grains/ scf. The unit is controlled significant, (35.16 TPY), and uncontrolled major, (703.2 TPY). Under DNR's Monitoring Guidance Policy, an Agency O&M Plan and one stack test are indicated. RMA emission factors* yield an estimate that, at most, 10.50 TPY PM would be emitted. All PM is expected to be $PM_{10}$ or smaller. Given this level of confidence that the enforceable PTE will not be approached, no PM stack test is warranted, and will not be required. A CAM Plan is indicated, because of PTE, and will be required in lieu of the Agency O&M Plan.

#4 Banbury 36" Ferrell Shaping Mill, #4 Slab Dip Applicator, and #8 Rubber Extruder (EU 111D, 111E, and 221 / EP 45) is grandfathered. It is a VOC/ HAP source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

#1 and #2 Banbury Shaping Mill (EU 106 / EP 46) is grandfathered. It is a VOC source only. These emissions are accounted for in EU 103 and 104. When the rubber goes through EU 106 it is cooling down, therefore there is no additional VOC emissions occur. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Carbon Black Unloading Station with Bulk Lift Bag Filter (EU 001 / CE-47 / EP 47) is grandfathered. It is subject to 0.10 grains/ scf., which gives it a controlled PTE for PM of 0.50 TPY, and an uncontrolled PM PTE of 10.0 TPY. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Rubber Hot Rooms (5), each with 150,000 BTU Natural Gas Furnaces (5), (EU 825 / EP 50), is permitted under Polk County Construction Permit 0916. Limits are $PM_{10}$: 0.002 lbs./hr.; 0.007 TPY. PM is limited to 0.10 gr./ scf. All PM is expected to be $PM_{10}$. Permit limit is based on maximum uncontrolled PTE. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Breakdown Mills (2), Holding Mills (2), Feed Mills (2), 4 Roll Z Calendar, (EU 307-313 / EP 52) are grandfathered. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Tire Assembly Machines, (various makes and models), (36), (EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52) are VOC/ HAP VOC sources only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 560 / CE-560 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 587 / CE-587 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 589 / CE-589 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 595 / CE-595 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 597 / CE-597 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 599 / CE-599 / EP 52); and Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 600 / CE-600 / EP 52) are permitted under Polk County Construction Permit Number 2047 Modified. Limits are PM/ $PM_{10}$: 0.33 lbs./ hr., 1.45 TPY, and 0.01 gr./dscf for each individual EU, and PM/ $PM_{10}$: 10.15 TPY (controlled minor), and 0.01 gr./dscf for combined total of all EU in this permit group. All PM is expected to be $PM_{10}$ or smaller. Uncontrolled PM/ $PM_{10}$ PTE is 14.5 TPY individually (uncontrolled significant) and 101.50 TPY combined total (uncontrolled major). DNR's Monitoring Guidance Policy calls for a Facility O&M Plan and one PM test. DNR-AQB common practice, however, is to require an Agency O&M Plan for spray booths, in order to have consistency with spray booth maintenance requirements at facilities throughout the state. The Agency O&M Plan has been inserted and required for CE-560, CE-587, CE-589, CE-595, CE-596, CE-597, CE-599, and CE-600. No stack test will be required, because emissions from stripwinder and extruder operations are fugitive emissions, emissions from the spray booth operations are internally vented. All emissions are assigned to EP 52 which is a series of roof vents. CAM does not apply because the individual EUs are uncontrolled significant (<100 tons per year).

Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE-596 / EP 52) is permitted under Polk County Construction Permit Number 1363. Limits are $PM_{10}$: 0.137 lbs./hr., 0.598 TPY, (controlled minor), and 0.01 gr./ dscf. All PM is expected to be $PM_{10}$ or smaller. The EU vents internally, prior to venting out roof vents. Uncontrolled PTE is 5.98 TPY, (uncontrolled minor). Under DNR's Monitoring Guidance Policy and CAM, nothing would be required. DNR-AQB common practice, however, is to require an Agency O&M Plan for spray booths, in order to have consistency with spray booth maintenance requirements at facilities throughout the state. The Agency O&M Plan has been inserted and required for CE-560, CE-587, CE-589, CE-595, CE-596, CE-597, CE-599, and CE-600.

1- Tire Assembly Machine, NRM Model 60, 3- Tire Assembly Machines, NRM Model 59, 1- Tire Assembly Machines, NRM Model 89, and 2- Tire Assembly Machines, NRM Model 59H, (EU 523, 559, 561, 562, 572, 584, 585 / EP 53) are VOC sources only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Fourteen (14) NRM Model 61 Tire Assembly Machines, one (1) NRM Model 40 (#407) Tire Assembly Machine, and one Tire Assembly Machine, NRM Model 61C (#413) (EU 534 – 536, 538 – 541, 545 – 550, 565, 566A, & 573 / EP 54) are grandfathered. They are VOC only sources. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Tire Assembly Machine, Akron Standard Model 336 (#420) (EU 537 / EP 54) is permitted under Polk County Construction Permit 1417. It is a VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Tire Assembly Machine, NRM Model 610 (#418) (EU 566 / EP 54) is permitted under Polk County Construction Permit 1414. It is a VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Three (3)- Tire Assembly System with Extruder (1), Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 542 / CE-542 / EP 54); (EU 543 / CE-543 / EP 54); (EU 552 / CE-552 / EP 54) are permitted under Polk County Construction Permit Number 2131. Limits are PM/ $PM_{10}$: 4.35 TPY (controlled minor), and 0.01 gr./ dscf. All PM is expected to be $PM_{10}$ or smaller. Uncontrolled PTE is 43.5 TPY, (uncontrolled significant). Under DNR's Monitoring Guidance Policy, a Facility O&M plan and no stack tests are indicated. DNR-AQB common practice, however, is to require an Agency O&M Plan for spray booths, in order to have consistency with spray booth maintenance requirements at facilities throughout the state. The Agency O&M Plan has been inserted and required for CE-542, CE-543, and CE-552. A CAM Plan is not indicated.

Rubber Pellet Storage (EU 126 / EP 55) is grandfathered. PTE is based on an AP-42 emission factor for autoweighed chemicals, 6.3 lbs./ ton, and actual 1999 material usage, scaled up to full allowable plantwide usage of 150xE6 lbs./ yr. From this calculation, uncontrolled PM PTE is 1.50 TPY, (uncontrolled minor). Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

Bead Former #7, NRM 2 ½ Rubber Extruder 22.1 L/D (EU 407 / EP 56) is permitted under Polk County Construction Permit Number 1403. It is a VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

(3) Wasik Associates, Inc. 400 kV, 100 mA Electron Beam Scanners, (EU 316 / EP 58), is permitted by Polk County Construction Permit Number 2064. It is an ozone source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

One (1) 15,000 gallon Fixed Roof Dustene Storage Tank (EU 908 / EP 62) is permitted under Polk County Construction Permit 1420. Limits are no visible emissions and 0.01 TPY VOC. It is a VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

One (1) 15,000 gallon Fixed Roof Hardite Storage Tank (EU 907 / EP 63) is permitted under Polk County Construction Permit 1422. Limits are no visible emissions and 0.03 TPY VOC. It is a VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

(4) Bead Formers, #1, #5, #6, #3 (EU 401, 402, 403, 408 / EP 64), Solvent Wash of Bead Filler (EU 404 / EP 64), (26) Tire Assembly Machines, various models (EU 528- 533, 571, 582, 591 – 594, 713 – 715, 717 - 727 / EP 64), (3) Bead Flipping Machines (EU 909 – 911 / EP 64) is permitted under Polk County Construction Permit 2015 Modified #6. Limits are no visible emissions (EP 64); 3.35E-04 lbs./ hr., 0.001 TPY VOC and 0.001 TPY HAP from (EU 401 / EP 64); 8.39E-04 lbs./ hr., 0.004 TPY and 0.005 TPY HAP from (EU 402 / EP 64); 5.03E-04 lbs./ hr., 0.002 TPY VOC and 0.003 TPY HAP from (EU 403 / EP 64); 8.39E-04 lbs./ hr., 0.004 TPY VOC, 0.005 TPY HAP from (EU 408 / EP 64); 0.91 lbs./ hr., 3.986 TPY VOC from (EU 404 / EP 64); 0.47 lbs./ hr., 2.06 TPY VOC (per unit), 12.22 lbs./ hr., 53.56 TPY VOC (all TAMs combined); 2.04E-03 lbs./ hr., 0.01 TPY VOC, 1.99E-03 lbs./ hr., 0.01 TPY HAP from (3) Bead Flipping Machines (EU 909 – 911 / EP 64); and 57.59 TPY VOC, 0.044 TPY HAP from all EP 64 EUs. It is a VOC and HAP VOC source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

<u>Opacity:</u>
EP 1 is subject to no visible emissions. This EP will be required to be visually checked for observable emissions once every day by a designated observer, in order to verify compliance, as part of the EP's CAM Plan.

EP2, EP 3, and EP 47 are subject to <20 % opacity under Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9. These EPs will be required to be visually checked for observable emissions once every week by a designated observer, in order to verify compliance. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity ≥20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from observation of the violation.

EP 4 is subject to no visible emissions from Polk County Construction Permit 1386. Daily VE readings will be taken by the facility, as part of the EP 4 CAM Plan. Corrective measures will be taken within 8 hours, if any VEs are observed.

EP 5 is subject to no visible emissions from Polk County Construction Permit 0558A. Daily VE readings will be taken by the facility, as part of the EP 5 CAM Plan. Corrective measures will be taken within 8 hours, if any VEs are observed.

EP 6 is subject to no visible emissions from Polk County Construction Permit 0682. Daily VE readings will be taken by the facility, as part of the EP 6 CAM Plan. Corrective measures will be taken within 8 hours, if any VEs are observed.

EP 7 is subject to <20 % opacity under Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9. Titan's CAM Plan consists of daily checks for VEs, with corrective actions within 8 hours if any VEs are observed. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity ≥20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from observation of the violation.

EP 8 is subject to no visible emissions from Polk County Construction Permit 1385. Daily VE readings will be taken by the facility, as part of the EP 8 CAM Plan. Corrective measures will be taken within 8 hours, if any VEs are observed.

EP 9 is a natural gas fired emergency generator subject to <20% opacity under Polk County Construction Permit #2156. No visible emissions are expected from natural gas combustion and therefore no monitoring will be required.

EP 10 is a natural gas fired emergency generator subject to <20% opacity under Polk County Construction Permit #2155. No visible emissions are expected from natural gas combustion and therefore no monitoring will be required.

Ferrel Tandem Calender (EU 317 / EP 13) is limited to no visible emissions by Polk County Construction Permit #2312. It is a VOC/ HAP VOC source only and no VEs are expected. Checking for observable emissions will not be required.

EP 17 and EP 17A have no applicable limits. These EPs are VOC sources only, and VEs are not expected. The EP will not be required to be visually checked for observable emissions.

EP 24 is a VOC/ HAP VOC source only, no VEs are expected, and checking for observable emissions will not be required.

EP 25 is a VOC/ HAP VOC source only, no VEs are expected, and checking for observable emissions will not be required.

EP 26 is subject to no visible emissions limit for EU 606S only. Since these are VOC/ HAP VOC sources only, no VEs are expected, and checking for observable emissions will not be required.

EP 27 is subject to no visible emissions. Since these EUs are VOC/ HAP VOC sources only, no VEs are expected, and checking for observable emissions will not be required.

EP 28, EP 29, EP 34C, and EP 36 are subject to no visible emissions. These EPs will be required to be visually checked for observable emissions once every week by a designated observer, in order to verify compliance.

EP 35 is subject to <20 % opacity under Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9. These EU are welding stations, and VEs are not expected. The EP will not be required to be visually checked for observable emissions. The weld stations are vented internally, and then escape through door, window, and roof vents. VE monitoring is not warranted.

EP 36 shall be visually checked for observable emissions once every day by a designated observer, on days when EU 826 is in operation. The observation shall be taken while the Tire Mold Cleaning Station (3 Mold Cleaning Sand Blasting Units) (EU 826) with Cyclone Separator and Baghouse (CE-36) are operating. The observation shall be noted in a log book, which shall state the date, time, observer's signature, and whether any emissions were observed. If an opacity is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions.

EP 38 shall be visually checked for observable emissions once a day by a designated observer, on days when EU 820 or 821 is combusting No. 6 Residual Oil. The observation shall be taken while the Boiler #1 (EU 820) or Boiler #2 (EU 821) are operating. Opacity shall be observed to ensure that no visible emissions occur during the operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The observation shall be noted in a log book, which shall state the date, time, observer's signature, and whether any emissions were observed. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than or equal to 20% opacity is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The once a day check, (when combusting #6 F.O.), will ensure compliance with opacity limits for this fuel stream. Natural gas fuel is not expected to produce any visible emissions, and hence VE checks will not be required when burning this fuel.

EP 39 shall be visually checked for observable emissions once a day by a designated observer, on days when EU 822 is combusting No. 6 Residual Oil. The observation shall be taken while the Boiler #3 (EU 822) is operating. Opacity shall be observed to ensure that no visible emissions occur during the operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The observation shall be noted in a log book, which shall state the date, time, observer's signature, and whether any emissions were observed. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than or equal to 20% opacity is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The once a day check, (when combusting #6 F.O.), will ensure compliance with opacity limits for this fuel stream. Natural gas fuel is not expected to produce any visible emissions, and hence VE checks will not be required when burning this fuel.

EP 40 shall be visually checked for observable emissions once a day by a designated observer, on days when EU 823 is combusting No. 6 Residual Oil. The observation shall be taken while the Boiler #4, (EU 823), is operating. Opacity shall be observed to ensure that no visible emissions occur during the operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The observation shall be noted in a log book, which shall state the date, time, observer's signature, and whether any emissions were observed. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than or equal to 20% opacity is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The once a day check, (when combusting #6 F.O.), will ensure compliance with opacity limits for this fuel stream. Natural gas fuel is not expected to produce any visible emissions, and hence VE checks will not be required when burning this fuel.

EP 41 shall be visually checked for observable emissions once every week by a designated observer. The observation shall be taken while the Slab Dip Mixers (EU 007 and 008) are operating. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed, corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. The observation shall be noted in a log book, which shall state the date, time, observer's signature, and whether any emissions were observed. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity greater than or equal to 20% opacity is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions.

EP 43 shall be visually checked for observable emissions once every day by a designated observer, on days when EU105 is operating. The observation shall be taken while the #1 and #2 Banbury Drop Mills (EU 105) with Sly 11A Baghouse (CE-43) are operating. The observation shall be noted in a log book, which shall state the date, time, observer's signature, and whether any emissions were observed. If an opacity is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions.

EP 50 is subject to no visible emissions. Since these are natural gas combustion sources only, no VEs are expected, and checking for observable emissions will not be required.

(EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52) are subject to no visible emissions by PC AQD Construction Permit #2081 Modified #4. They are VOC/ HAP VOC sources only and no VEs are expected. Checking for observable emissions will not be required for these EU.

Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 560 / CE-560 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 587 / CE-587 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 589 / CE-589 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 595 / CE-595 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 597 / CE-597 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 599 / CE-599 / EP 52); and Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 600 / CE-600 / EP 52) are permitted under Polk County Construction Permit Number 2047 Modified. Opacity limits are: no visible emissions. CE-560, CE-587, CE-589, CE-595, CE-597, CE-599 and CE-600 are dry filters which vent internal to the building. EP 52 is a series of roof vents and no VEs are expected. Checking for observable emissions will not be required.

Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE 596 / EP 52) is permitted under Polk County Construction Permit Number 1363, which limits the EU to no visible emissions. CE-596 is a dry filter, which vents internal to the building. EP 52 is a series of roof vents and no VEs are expected. Checking for observable emissions will not be required.

1- Tire Assembly Machine, NRM Model 60, 3- Tire Assembly Machines, NRM Model 59, 1- Tire Assembly Machines, NRM Model 89, and 2- Tire Assembly Machines, NRM Model 59H, (EU 523, 559, 561, 562, 572, 584, 585 / EP 53) is subject to no visible emissions under Polk County Construction Permit Number 0942 Modified. It is a VOC source only, and no VEs are expected. Checking for observable emissions will not be required.

Tire Assembly Machine, Akron Standard Model 336 (#420) (EU 537 / EP 54) is subject to no visible emissions under Polk County Construction Permit 1417. It is a VOC source only and no visible emissions are expected. Checking for observable emissions will not be required.

Tire Assembly Machine, NRM Model 610 (#418) (EU 566 / EP 54) is subject to no visible emissions under Polk County Construction Permit 1414. It is a VOC source only and no visible emissions are expected. Checking for observable emissions will not be required.

Tire Assembly System with Extruder(1), Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 542 / CE-542 / EP 54) is subject to no visible emissions under Polk County Construction Permit Number 2131. CE-542 is a dry filter, which vents internal to the building. EP 54 is a roof vent and no VEs are expected. Checking for observable emissions will not be required.

Tire Assembly System with Extruder, Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 543 / CE-543 / EP 54) is subject to no visible emissions under Polk County Construction Permit Number 2131. CE-543 is a dry filter, which vents internal to the building. EP 54 is a roof vent and no VEs are expected. Checking for observable emissions will not be required.

Tire Assembly System with Extruder, Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 552 / CE-552 / EP 54) is subject to no visible emissions under Polk County Construction Permit Number 2131. CE-552 is a dry filter, which vents internal to the building. EP 54 is a roof vent and no VEs are expected. Checking for observable emissions will not be required.

EP 55 is subject to the fugitive dust rule under Polk County Board of Health Rules and Regulations Chapter V, Article IX, Section 5-24. EU 126 vents internally, and VEs are not expected from EP 55. The EP will not be required to be visually checked for observable emissions.

Bead Former #7, NRM 2 ½ Rubber Extruder 22.1 L/D (EU 407 / EP 56) is permitted under Polk County Construction Permit Number 1403, which limits it to no visible emissions. Since this is a VOC/ HAP source only, no VEs are expected, and checking for observable emissions will not be required.

(3) Wasik Associates, Inc. 400 kV, 100 mA Electron Beam Scanners, (EU 316 / EP 58), is permitted by Polk County Construction Permit Number 2064. Limits are: no visible emissions, and Ozone: 2.66 lbs./ hr. and 11.65 TPY. Since this is an ozone source only, no VEs are expected, and checking for observable emissions will not be required.

One (1) 15,000 gallon Fixed Roof Dustene Storage Tank (EU 908 / EP 62) is permitted under Polk County Construction Permit 1420, which limits it to no visible emissions. Since this is a VOC source only, no VEs are expected, and checking for observable emissions will not be required.

One (1) 15,000 gallon Fixed Roof Hardite Storage Tank (EU 907 / EP 63) is permitted under Polk County Construction Permit 1422, which limits it to no visible emissions. Since this is a VOC source only, no VEs are expected, and checking for observable emissions will not be required.

(4) Bead Formers, #1, #5, #6, #3 (EU 401, 402, 403, 408 / EP 64), Solvent Wash of Bead Filler (EU 404 / EP 64), (26) Tire Assembly Machines, various models (EU 528- 533, 571, 582, 591 – 594, 713 – 715, 717 - 727 / EP 64), (3) Bead Flipping Machines (EU 909 – 911 / EP 64) is permitted under Polk County Construction Permit 2015 Modified #6, which limits EP 64 to no visible emissions. It is a VOC and HAP VOC source only. No VEs are expected, and checking for observable emissions will not be required.

VOC:

#27 Banbury Mixer with Pulse-Air baghouse: (EP 1 / CE 01 / EU 122, 122A, 122B, 122C, 122D, 122E, 123, 123A, 123B, and 124) is uncontrolled minor for VOC, (34.6 TPY). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 1, (baghouse), most are emitted fugitively, from #27D Banbury's various loading and transfer points. VOC/ HAP PTE from PC 0578 MODIFIED is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Polk County Construction Permit #1386 limits VOC/ HAP to 7.53 lbs./ hr., 33.3 TPY; (uncontrolled minor) from the #1 Banbury Mixer with Micropeel Baghouse, Model 1005-8-20: (EP 4 / CE-04 / EU 101, 103, 103A, 103B, 103C, and 103D). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 4, (baghouse), most are emitted fugitively, from #1 Banbury's various loading and transfer points. VOC/ HAP PTE from PC 0578 MODIFIED is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

#2 Banbury Mixer with Mikro Pulsaire 238 STRH-12-20 Baghouse: (EU 102, 104, 104A, 104B, 104C, 104D / CE-05 / EP 5), is uncontrolled minor, 33.30 TPY, for VOCs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 5, (baghouse), most are emitted fugitively, from #2 Banbury's various loading and transfer points. VOC/ HAP PTE from PC 0558A is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Polk County Construction Permit #1385 limits VOC/ HAP to 7.53 lbs./ hr., 33.3 TPY (uncontrolled minor); from the #6 Banbury Mixer with Sly Baghouse, Model 11/A: (EU 115, 127, 127A-C, 127R / CE-08 / EP 8). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 8, (baghouse), most are emitted fugitively, from #6 Banbury's various loading and transfer points. VOC/ HAP PTE from PC 1385 is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Polk County Construction Permit #2156 limits VOC to 0.11 lbs./hr, 0.49 tons per 12-month period rolled monthly (uncontrolled minor) from the 60 kW Kohler Model 60RZ282 Natural Gas Emergency Generator (EU 12 / EP 9). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Hours of operation records will ensure compliance with this emission limit.

Polk County Construction Permit #2155 limits VOC to 0.27 lbs./hr, 1.18 tons per 12-month period rolled monthly (uncontrolled minor) from the 2325 $ft^3$/hr Onan Model F1197GU Natural Gas Emergency Generator (EU 13 / EP 10). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Hours of operation records will ensure compliance with this emission limit.

Polk County Construction Permit #2312 limits VOC to 1.21 lbs./hr, 5.31 tons per 12-month period rolled monthly (uncontrolled minor) from the Ferrel Tandem Calender (EU 317 / EP 13). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Material throughput records will ensure compliance with this emission limit.

Bag-O-Matic Radial Tractor Tire 75" Curing Press (1): (EU 607 / EP 24) is uncontrolled minor for VOCs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore, emission testing and daily/ monthly emission calculations are not warranted.

McNeil Akron Radial Tractor Tire 100" Curing Press (1): (EU 608 / EP 24) is uncontrolled minor for VOCs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore, emission testing and daily/ monthly emission calculations are not warranted.

NRM (1- 62.5") Large Farm Tire Curing Press, and NRM (1- 62.5") Implement Tire Curing Press (EU 604 and 604A / EP 25) are uncontrolled minor (20.48 TPY) for VOCs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore, emission testing and daily/ monthly emission calculations are not warranted.

Curing Presses, Bldg. 5, (8) McNeil Duals (# 615- 630), (27) Singles (#505- 531), Curing Press, McNeil (1- 55") Dual Cavity, Bldg. 5, (#613- 614), Curing Presses (5), McNeil, Bldg. 5 (#501- 504, 535), Curing Presses (2), McNeil, Bldg. 5 (#536- 537) ( EU 606, 606S, 606A, and 606B / EP 26 ): EU 606, 606A, and 606B are grandfathered, with a maximum unregulated VOC PTE of 11.89 TPY. EU 606S is permitted under Polk County Construction Permit 1342. This permit limits VOC from EU 606S to 2.338 lbs./ hr. and 10.240 TPY (uncontrolled minor). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore emission testing and daily/ monthly emission calculations are not warranted.

111 tire curing presses of various makes and sizes (602A-277) – (602A-337), (602B-175) – (602B-201), (602B-211) – (602B-233), (602B-243) – (602B-273), *(previous four series include all inclusive with odd numbered last 3 digits only, i.e., last 3 digit even numbers excluded from list)*, 609 – 612, and 615- 649 *(previous 2 series include all EU numbers within range, both odd and even)* / EP 27 ) are permitted under Polk County Construction Permit #0855 Modified #21. This permit limits VOC to 10.92 lbs./ hr. and 47.83TPY (uncontrolled significant). These limits are based on RMA emission factors* and maximum design capability. The overall project consists of 111 uncontrolled curing presses emitting out of 53 roof vents, which are identified as EP 27. There is no feasible way to test compliance with this limit, unless a collection hood were to be placed over the 53 roof vents. This would be extraordinarily expensive and is not warranted, since the permit limits are based on extensive testing that RMA has performed. Further, the 47.83 TPY VOC permit limit equates to an average of 0.43 TPY VOC PTE per curing press, which indicates that no stack test is warranted, per curing press. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP. These are uncontrolled EU, hence CAM does not apply.

Tractor Tire Buffing and Repair Booth, Bldg 12, with Composite Dry Filter Bank (EP 28 / CE-28 / EU 711) is uncontrolled minor, 0.26 TPY, for VOC. Material throughput limits in PC # 0911 Modified ensures compliance with the VOC emission limit. CAM and additional monitoring are not required.

#1 and #2 Banbury Drop Mills with Sly 11A Baghouse (EU 105 / CE-43 / EP 43) are permitted under Polk County Construction Permit 0558B, which limits VOC to 7.6 lbs./ hr. and 33.30 TPY, (uncontrolled minor). Under DNR's Monitoring Guidance Policy, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 43, (baghouse), most are emitted fugitively, from #1 and #2 Banbury Drop Mills' various loading and transfer points. VOC/ HAP PTE from PC 0558B is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP. CAM is not indicated, since EU 105 is not controlled for VOCs.

Rubber Hot Rooms (5), each with 150,000 BTU Natural Gas Furnaces (5), (EU 825 / EP 50), is permitted under Polk County Construction Permit 0916. Limits are VOC: 0.002 lbs./ hr., 0.007 TPY. Permit limit is based on maximum uncontrolled PTE. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

(EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52) are permitted by PC AQD Construction Permit #2081 Modified #4. Limits are VOC: 18.03 lbs./ hr., 79.02 TPY (uncontrolled significant). Under DNR's Monitoring Guidance Policy and CAM, one stack test is indicated. Permit limits are based on mass balance and material throughput limits and is a surrogate function of the facility wide rubber and solvent processed limits placed on the facility. Compliance with the permit operating limits ensures compliance with the emission limits, and therefore a stack test will not be required. Rubber throughput and solvent use record keeping currently required will ensure compliance.

Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 560 / CE-560 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 587 / CE-587 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 589 / CE-589 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 595 / CE-595 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 597 / CE-597 / EP 52); Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 599 / CE-599 / EP 52); and Tire Assembly System with 1 Extruder, 2 Stripwinders and 1 Spraybooth, with Dry Filters on the spraybooth (EU 600 / CE-600 / EP 52) are permitted under Polk County Construction Permit Number 2047 Modified. VOC limits are: 0.71 TPY (EU 560), 1.47 TPY each for (EU 587, 589, 595, 597, 599, and 600), and 9.53 TPY for the total of all of these EUs (uncontrolled minor). PTE for these is a surrogate function of the facility wide rubber processed and solvent use limits placed on the facility in Polk County Construction Permit Number 2047 Modified. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Rubber throughput and Inside spray record keeping currently required will ensure compliance with the VOC emission limits for this EP group.

Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE 596 / EP 52) is permitted under Polk County Construction Permit Number 1363. Limits are: VOC: 0.787 lbs./ hr., 3.447 TPY, (controlled = uncontrolled minor). VOC PTE of EU 596 is from maximum throughput, utilizing VOC content from the vendor. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

1- Tire Assembly Machine, NRM Model 60, 3- Tire Assembly Machines, NRM Model 59, 1- Tire Assembly Machines, NRM Model 89, and 2- Tire Assembly Machines, NRM Model 59H, (EU 523, 559, 561, 562, 572, 584, 585 / EP 53) is permitted under Polk County Construction Permit Number 0942 Modified. It limits VOC (per unit) to 0.49 lbs./ hr. and 2.15 TPY; VOC (all units combined) to 14.47 TPY; (uncontrolled minor). PTE is based on maximum throughput of allowable raw materials, and, under DNR's Monitoring Guidance Policy and CAM, nothing is required. Additionally, the record keeping required under the plantwide throughput limit on the raw materials used in these EU's accomplishes monitoring.

Tire Assembly Machine, Akron Standard Model 336 (#420) (EU 537 / EP 54) is permitted under Polk County Construction Permit 1417. Limits are: no visible emissions and 3.67 TPY VOC, (uncontrolled minor). PTE is based on maximum throughput of allowable raw materials, and, under DNR's Monitoring Guidance Policy and CAM, nothing is required. Additionally, the record keeping required under the plantwide throughput limit on the raw materials used in this EU accomplishes monitoring.

Tire Assembly Machine, NRM Model 610 (#418) (EU 566 / EP 54) is permitted under Polk County Construction Permit 1414. Limits are: no visible emissions and 3.67 TPY VOC, (uncontrolled minor). PTE is based on maximum throughput of allowable raw materials, and, under DNR's Monitoring Guidance Policy and CAM, nothing is required. Additionally, the record keeping required under the plantwide throughput limit on the raw materials used in this EU accomplishes monitoring.

Three (3)- Tire Assembly System with Extruder (1), Stripwinders (2), and Spraybooth (1) with Dry Filter on the Spraybooth (EU 542 / CE-542 / EP 54); (EU 543 / CE-543 / EP 54); (EU 552 / CE-552 / EP 54) are permitted under Polk County Construction Permit Number 2131. VOC limit is 9.96 TPY (uncontrolled minor). PTE of EU 542, 543, and 552 is a surrogate function of the facility wide rubber processed limit placed on the facility in Polk County Construction Permit Number 0578 MODIFIED. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Rubber throughput record keeping currently required will ensure compliance with the VOC emission limit for this EP.

Bead Former #7, NRM 2 ½ Rubber Extruder 22.1 L/D (EU 407 / EP 56) is permitted under Polk County Construction Permit Number 1403. Limits are based on a plant wide rubber throughput limit of 150xE6 lbs./ 12 month rolling period and are as follows: VOC: 0.016 lbs./ hr. and 0.07 TPY (uncontrolled minor). It is a VOC/ HAP source only. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

(3) Wasik Associates, Inc. 400 kV, 100 mA Electron Beam Scanners, (EU 316 / EP 58), is permitted by Polk County Construction Permit Number 2064. Limits are: no visible emissions, and Ozone: 2.66 lbs./ hr. and 11.65 TPY. Limits are based on maximum operating conditions of the three scanners, and ozone is the only pollutant. Under DNR's Monitoring Guidance Policy and CAM, nothing is required.

(4) Bead Formers, #1, #5, #6, #3 (EU 401, 402, 403, 408 / EP 64), Solvent Wash of Bead Filler (EU 404 / EP 64), (26) Tire Assembly Machines, various models (EU 528- 533, 571, 582, 591 – 594, 713 – 715, 717 - 727 / EP 64), (3) Bead Flipping Machines (EU 909 – 911 / EP 64) is permitted under Polk County Construction Permit 2015 Modified #6. Limits are: 3.35E-04 lbs./ hr., 0.001 TPY VOC from (EU 401 / EP 64) (uncontrolled minor); 8.39E-04 lbs./ hr., 0.004 TPY VOC from (EU 402 / EP 64) (uncontrolled minor); 5.03E-04 lbs./ hr., 0.002 TPY VOC from (EU 403 / EP 64) (uncontrolled minor); 8.39E-04 lbs./ hr., 0.004 TPY VOC from (EU 408 / EP 64) (uncontrolled minor); 0.91 lbs./ hr., 3.986 TPY VOC from (EU 404 / EP 64) (uncontrolled minor); 0.47 lbs./ hr., 2.06 TPY VOC (per unit) (uncontrolled minor), 12.22 lbs./ hr., 53.56 TPY VOC (all TAMs combined) (uncontrolled significant); 2.04E-03 lbs./ hr., 0.01 TPY VOC (uncontrolled minor) from (3) Bead Flipping Machines (EU 909 – 911 / EP 64); and 57.59 TPY VOC (uncontrolled significant) from all EP 64 EUs. Throughput limits and recordkeeping ensure compliance with the permitted emission limits. Under DNR's Monitoring Guidance Policy and CAM, no additional periodic monitoring or CAM will be required.

The following EP's either: a) do not emit VOCs or b) do not have short term limits for VOCs, and therefore will not have monitoring or CAM requirements: EP 2, EP 3, EP 6, EP 7, EP 17, EP 17A, (EU 567, 608A / EP 24), (EU 603, 603A / EP 25), EP 28, EP 29, EP 34C, EP 35, EP 36, EP 38, EP 39, EP 40, EP 41, EP 45, EP 46, EP 47, (EU 307-313 / EP 52), (EU 534 – 536, 538 – 541, 545 – 550, 565, 566A, & 573 / EP 54), EP55, EP 62, and EP 63.

HAPs:
#27 Banbury Mixer with Pulse-Air baghouse: (EP 1 / CE 01 / EU 122, 122A, 122B, 122C, 122D, 122E, 123, 123A, 123B, and 124) is uncontrolled minor for HAPs (11.8 TPY combined HAPs). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 1, (baghouse), most are emitted fugitively, from #27D Banbury's various loading and transfer points. VOC/ HAP PTE from PC 0578 MODIFIED is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Polk County Construction Permit #1386 limits VOC/ HAP to 7.53 lbs./ hr., 33.3 TPY; from the #1 Banbury Mixer with Micropeel Baghouse, Model 1005-8-20: (EP 4 / CE-04 / EU 101, 103, 103A, 103B, 103C, and 103D). HAP PTE is a percentage of the VOC PTE, and equals 2.85 TPY, (uncontrolled minor). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, HAP testing is not practical. Although assigned to EP 4, (baghouse), most are emitted fugitively, from #1 Banbury's various loading and transfer points. VOC/ HAP PTE from PC 0578 MODIFIED is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

#2 Banbury Mixer with Mikro Pulsaire 238 STRH-12-20 Baghouse : ( EU 102, 104, 104A, 104B, 104C, 104D / CE-05 / EP 5 ), is uncontrolled minor, 10.50 TPY, for HAPs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, VOC/ HAP testing is not practical. Although assigned to EP 5, (baghouse), most are emitted fugitively, from #2 Banbury's various loading and transfer points. VOC/ HAP PTE from PC 0558A is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Polk County Construction Permit #1385 limits VOC/ HAP to 7.53 lbs./ hr., 33.3 TPY; from the #6 Banbury Mixer with Sly Baghouse, Model 11/A: (EU 115, 127, 127A-C, 127R / CE-08 / EP 8). HAP PTE is a percentage of the VOC PTE, and equals 3.11 TPY, (uncontrolled minor). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, HAP testing is not practical. Although assigned to EP 8, (baghouse), most are emitted fugitively, from #6 Banbury's various loading and transfer points. VOC/ HAP PTE from PC 1385 is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Polk County Construction Permit #2312 limits HAP to 0.16 lbs./hr, 0.70 tons per 12-month period rolled monthly (uncontrolled minor) from the Ferrel Tandem Calender (EU 317 / EP 13). Under DNR's Monitoring Guidance Policy and CAM, nothing is required. Further, HAP testing is not practical. VOC/ HAP PTE from PC 2312 is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Bag-O-Matic Radial Tractor Tire 75" Curing Press (1): (EU 607 / EP 24) is uncontrolled minor for HAPs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore, emission testing and daily/ monthly emission calculations are not warranted. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

McNeil Akron Radial Tractor Tire 100" Curing Press (1): (EU 608 / EP 24) is uncontrolled minor for HAPs. Under DNR's Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore, emission testing and daily/ monthly emission calculations are not warranted. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

NRM (1- 62.5”) Large Farm Tire Curing Press, and NRM (1- 62.5”) Implement Tire Curing Press (EU 604 and 604A / EP 25) are uncontrolled minor (4.17 TPY) for HAPs. Under DNR’s Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore, emission testing and daily/ monthly emission calculations are not warranted. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

Curing Presses, Bldg. 5, (8) McNeil Duals (# 615- 630), (27) Singles (#505- 531), Curing Press, McNeil (1-55”) Dual Cavity, Bldg. 5, (#613- 614), Curing Presses (5), McNeil, Bldg. 5 (#501- 504, 535), Curing Presses (2), McNeil, Bldg. 5 (#536- 537) ( EU 606, 606S, 606A, and 606B / EP 26 ): EU 606, 606A, and 606B are grandfathered, with a maximum unregulated combined HAP PTE of 3.22 TPY. EU 606S is permitted under Polk County Construction Permit 1342. This permit limits HAPs (Combined) from EU 606S to 0.476 lbs./ hr. and 2.085 TPY (uncontrolled minor). Under DNR’s Monitoring Guidance Policy and CAM, nothing is required. PTE is based on maximum curing press throughput capacity and RMA emission factors*. Therefore emission testing and daily/ monthly emission calculations are not warranted. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP.

111 tire curing presses of various makes and sizes (602A-277) – (602A-337), (602B-175) – (602B-201), (602B-211) – (602B-233), (602B-243) – (602B-273), *(previous four series include all inclusive with odd numbered last 3 digits only, i.e., last 3 digit even numbers excluded from list)*, 609 – 612, and 615- 649 *(previous 2 series include all EU numbers within range, both odd and even)* / EP 27 ) are permitted under Polk County Construction Permit #0855 Modified #21. This permit limits HAPs (single) to 0.80 lbs./ hr. and 3.50 TPY, and HAPs (Combined) to 3.00 lbs./ hr. and 13.16 TPY (uncontrolled minor). These limits are based on RMA emission factors* and maximum design capability. The overall project consists of 111 uncontrolled curing presses emitting out of 53 roof vents, which are identified as EP 27. There is no feasible way to test compliance with this limit, unless a collection hood were to be placed over the 53 roof vents. This would be extraordinarily expensive and is not warranted, since the permit limits are based on extensive testing that RMA has performed. Further, the 13.16 TPY combined HAP permit limit equates to an average of 0.12 TPY HAP per curing press, which indicates that no stack test is warranted, per curing press. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP. These are uncontrolled EU, hence CAM does not apply.

#1 and #2 Banbury Drop Mills with Sly 11A Baghouse (EU 105 / CE-43 / EP 43) are permitted under Polk County Construction Permit 0558B, which limits combined HAPs to 2.40 lbs./ hr. and 10.50 TPY, (uncontrolled minor). Under DNR’s Monitoring Guidance Policy, nothing is required. Further, HAP testing is not practical. Although assigned to EP 43, (baghouse), most are emitted fugitively, from #1 and #2 Banbury Drop Mills’ various loading and transfer points. VOC/ HAP PTE from PC 0558B is based on the plantwide facility throughput limit of 150xE6 pounds of rubber processed per 12-month period and RMA emission factors*. Rubber throughput record keeping currently required will ensure compliance with the VOC/ HAP emission limits for this EP. CAM is not indicated, since EU 105 is not controlled for HAPs.

Upstairs Tire Spray Booth with Dry Filters (EU 596 / CE-596 / EP 52) is permitted under Polk County Construction Permit Number 1363. Limits are: combined HAPs: 0.339 lbs./hr., 1.484 TPY, (controlled = uncontrolled minor). HAP PTE of EU 596 is from maximum throughput, utilizing HAP content from the vendor. Under DNR’s Monitoring Guidance Policy and CAM, nothing is required.

Bead Former #7, NRM 2 ½ Rubber Extruder 22.1 L/D (EU 407 / EP 56) is permitted under Polk County Construction Permit Number 1403. Limits are: HAPs: 0.011 lbs./ hr. and 0.05 TPY, (uncontrolled minor), based on a material balance of the VOC allowable value of 0.07 TPY. Under DNR’s Monitoring Guidance Policy and CAM, nothing is required.

(4) Bead Formers, #1, #5, #6, #3 (EU 401, 402, 403, 408 / EP 64), Solvent Wash of Bead Filler (EU 404 / EP 64), (26) Tire Assembly Machines, various models (EU 528- 533, 571, 582, 591 – 594, 713 – 715, 717 - 727 / EP 64), (3) Bead Flipping Machines (EU 909 – 911 / EP 64) is permitted under Polk County Construction Permit 2015 Modified #6. Limits are: 0.001 TPY HAP from (EU 401 / EP 64); 0.005 TPY HAP from (EU 402 / EP 64); 0.003 TPY HAP from (EU 403 / EP 64); 0.005 TPY HAP from (EU 408 / EP 64); 1.99E-03 lbs./ hr., 0.01 TPY HAP from (3) Bead Flipping Machines (EU 909 – 911 / EP 64); and 0.044 TPY HAP from all EP 64 EUs (uncontrolled minor). Throughput limits and recordkeeping ensure compliance with the permitted emission limits. Under DNR's Monitoring Guidance Policy and CAM, no additional periodic monitoring is required.

The following EP's either: a) do not emit HAPs or b) do not have short term limits for HAPs, and therefore will not have monitoring or CAM requirements: EP 2, EP 3, EP 6, EP 7, EP 9, EP 10, EP 17, EP 17A, (EU 567, 608A / EP 24), (EU 603, 603A / EP 25), (EU 606, 606A, and 606B/ EP 26), EP 28, EP 29, EP 34C, EP 35, EP 36, EP 38, EP 39, EP 40, EP 41, EP 45, EP 46, EP 47, EP 50, (EU 307-313 / EP 52), (EU 500-520, 524-527, 564, 568-570, 574-578, 728, 729 / EP 52), (EU 560, 587, 589, 595, 597, 599, and 600 / EP 52), (EP 53), (EU 534 – 543, 545 – 550, 552, 565, 566, 566A, & 573 / EP 54), EP 55, EP 58, EP 62, and EP 63.

<u>CO, $NO_x$, and $SO_2$</u>
All EU's, (with the exceptions listed below), which emit CO, $NO_x$, and $SO_2$ have Potentials To Emit that indicate they are minor for these pollutants, or do not have enforceable short term limits. Under DNR's Monitoring Guidance Policy and CAM, no additional monitoring is warranted other than material use and emission inventory calculations.

Boiler #1 and Boiler #2, 18.39 MM BTU/ Hr. (each), dual fuel: Natural Gas and No. 6 Residual Oil (EU 820 and 821 / EP 38) are grandfathered. Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27: (2) (a) and (5) limits $SO_2$ to 2.5 lb./ MM BTU and 500 parts per million by volume. This equates to an enforceable PTE of 201.37 TPY $SO_2$ (each). Since this uncontrolled source's $SO_2$ PTE is major, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 1.3 emission factors yield an estimate that, at most, 201.41 TPY $SO_2$ (each) could be emitted. The AP-42 calculation is made using a maximum sulfur content of 2.8%, (from Air Pollution Engineering Manual), in the No. 6 Residual Oil. Instead of an USEPA Method 6C test being required, Titan will be required to obtain sulfur content analysis with each shipment from the vendor, and perform 12 month rolling calculations to show that the enforceable limit is not exceeded. Sulfur content shall be limited to 2.389% by weight. CAM does not apply, since the source is uncontrolled.

Boiler #3, 43.88 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 822 / EP 39) is grandfathered. Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27: (2) (a) and (5) limits $SO_2$ to 2.5 lb./ MM BTU and 500 parts per million by volume. This equates to an enforceable PTE of 480.49 TPY $SO_2$. Since this uncontrolled source's $SO_2$ PTE is major, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 1.3 emission factors yield an estimate that, at most, 480.52 TPY $SO_2$ could be emitted. The AP-42 calculation is made using a maximum sulfur content of 2.8%, (from Air Pollution Engineering Manual), in the No. 6 Residual Oil. Instead of an USEPA Method 6C test being required, Titan will be required to obtain sulfur content analysis with each shipment from the vendor, and perform 12 month rolling calculations to show that the enforceable limit is not exceeded. Sulfur content shall be limited to 2.389% by weight. CAM does not apply, since the source is uncontrolled.

Boiler #4, 31.34 MM BTU/ Hr. dual fuel: Natural Gas and No. 6 Residual Oil (EU 823 / EP 40) is Grandfathered. Polk County Board of Health Rules and Regulations: Chapter V, Article IX, Section 5-27: (2) (a) and (5) limits $SO_2$ to 2.5 lb./ MM BTU and 500 parts per million by volume. This equates to an enforceable PTE of 343.17 TPY $SO_2$. Since this uncontrolled source's $SO_2$ PTE is major, under DNR's Monitoring Guidance Policy, one stack test is indicated. AP-42 § 1.3 emission factors yield an estimate that, at most, 343.23 TPY $SO_2$ could be emitted. The AP-42 calculation is made using a maximum sulfur content of 2.8%, (from Air Pollution Engineering Manual), in the No. 6 Residual Oil. Instead of an USEPA Method 6C test being required, Titan will be required to obtain sulfur content analysis with each shipment from the vendor, and perform 12 month rolling calculations to show that the enforceable limit is not exceeded. Sulfur content shall be limited to 2.389% by weight. CAM does not apply, since the source is uncontrolled.

D. Plant wide Limits:
Plant wide limit of the following amounts and maximum percent constituents of materials processed in the facility per twelve (12) month rolling period. Twelve month rolling records of the material processed in the facility shall be maintained on site for five (5) years and be made available to the representatives of Polk County AQD upon request.

- Tire Wash Solvent: (100% VOC, 0% HAP): 813,527 lbs./ 12- month period

These material limits were requested in order to limit PTE for EU's 405, 406, 500- 520, 524 – 527, (EU 523, 559, 561, 562, 572, 584, 585 / EP 53), 534 - 541, 545- 550, 554, 560, 564, 565, 566, 566A, 568 - 570, 573 – 578, 587, 589, 595, 597, 599, 600, 711, 712, 728, 729 inclusive.

Plant wide limit of 150,000,000 pounds of master rubber processed in the facility per twelve (12) month rolling period. Twelve month rolling records of rubber processed in the facility shall be maintained on site for five (5) years and be made available to the representatives of Polk County AQD upon request.

Authority for Requirement: Polk County Construction Permit 0578 MODIFIED, 0855 Modified #21, 0911 Modified, 0942 Modified, 1032 Modified #3, 1386, 1403, 0558A, 0558B, 1385, 2047 Modified, 2081 Modified #4, 2131, 2260, and 2312

This limits PTE on all rubber used at the facility. All rubber EU PTE values were derived from this limit and Rubber Manufacturer's Association (RMA) emission factors. In all cases, the most conservative RMA emission factors* were chosen.

Breakdown mills, holding mills, and drop mills were presented as having zero emissions by Titan, as a result of being entirely mechanical processes, without heat input. Potential emissions were only assigned to feed mills and shaping mills.

Orbco Tread Cement, Drum Cement, and Breakdown Solvent were in previous Title V and construction permits, but are no longer used in any raw materials at the facility and have been removed from all applicable construction permits and the R2 Title V Operating Permit.

E. Responsible Official: Mr. Lester Brewer, General Manager, is in charge of a principle business function, that of making products for Titan Tire Corporation's plant to sell and make profit. He is the highest ranking official in charge of overall operations at the Des Moines plant, and makes the key decisions for the Des Moines facility. The Des Moines facility employs 550 workers.

F. Titan used an application methodology that may appear to complicate the permit appearance. They took each major piece of process equipment, such as a Banbury Mixer, and divided it into many EU's. The logic is that there are multiple processes, material use rates, and emission types occurring within the mixer, and that the many EU identifiers are required in order to fully account for all of the possible scenarios that may occur. The Title V permit approach has been to group all of the EU's from each major piece of process equipment and have a separate section for each EP, rather than for each EU.

RMA emission factors*. PTE limits found in the majority of Titan's Polk County AQD Construction Permits rely on RMA emission factors and the plant-wide rubber throughput limit. RMA EFs are also the basis for VOC/HAP compliance demonstrations for most of the emission units, as well as for calculating controlled vs. uncontrolled PTE for monitoring determinations. The Rubber Manufacturer's Association Emission Factors (RMA EFs) have been proposed to EPA and are found in AP-42 Section 4.12 – Manufacture of Rubber Products (drafted in 2008, but not finalized as of 2/18/2016).