

M4780
MANILADEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

M478037872

FACILITY: ROUSH INDUSTRIES		SRN / ID: M4780
LOCATION: 36630 COMMERCE, LIVONIA		DISTRICT: Detroit
CITY: LIVONIA		COUNTY: WAYNE
CONTACT: Robert Mullenax , Manager		ACTIVITY DATE: 11/16/2016
STAFF: Terseer Hemben	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Engine test cells-Criteria pollutants and HAP		
RESOLVED COMPLAINTS:		

INSPECTED BY : Terseer Hemben, MDEQ
PERSONNEL PRESENT : Robert Mullenax, RI
Jeff Carter, RI
FACILITY PHONE NUMBER : (734)-779-7647
FACILITY FAX : (734) - 779-7915
DATE OF INSPECTION : 11/16/2016
SRN: M4780
ROP# MI-ROP-M4780-2016

FACILITY BACKGROUND: ROUSH INDUSTRIES

Roush Industries (RI) is an engineering and development company specializing in the area of high-performance engines and related components, such as powertrains, and instrumentation. In addition, Roush owns and operates, produces, and markets merchandise associated with the automobile racing team.

The details of RI operations are on files and originated from past inspections and permitting activities. The facility still operates 22 internal combustion engine test cell in Bldg1. These test cells are operated under permit exempt R 285(g), and the process operation is not restricted by new source review permit conditions. The test cells in buildings 15 and 16 (which contain 12 and 7 internal combustion test cells, respectively) are restricted by the New Source Review permits. Currently, the test cells in building 15 and 16 operate per terms and conditions put forth in Renewable Operating Permit MI-ROP-M4780-2016.

The Bldg15 test cells use gasoline with Octane Numbers 87 and 93 with typical run time of 4 hrs. These cells are run with or without catalyst conversion technology. The test cells are equipped with analyzers for emissions tracking. The Bldg16 carries out durability testing that last 4-6 hours long. The Bldg15 shares two 12,000 gallon fuel tanks with Bldg16. The engines share gasoline from below ground fuel tanks among Bldg1 and Bldg16. There is 1 above ground tank. The tank system is equipped with vapor recovery and regulated by NESHAP. Throughputs of the tanks range between 10,000 gallons and less than 100,000 gallons. MAERS reports from RI filed with AQD over the years confirm the data.

Details of the 11 tanks with holding capacities and installation dates located on site are in AQD files. Bldg1 engines are used for durability tests only. Roush replaces the engines in Bldg1 with reconditioned engines only.

INSPECTION NARRATIVE

I arrived at the premises of Roush Industries on November 16, 2016 at 1220 hours for a scheduled inspection at Roush Industries facility. Purpose of the inspection was to determine annual compliance with the source's ROP conditions and operational limits. Temperature at the hour was 57 F; wind speed was Calm and humidity 59%. I met with Robert Mullenax and Jeff Carter. Robert, Jeff and I went through pre-inspection conference in Roberts's office. Mr. Mullenax informed the many test engines at the facility were idle due to business downturn. We walked through the entire facility to inspect test cells. I confirmed that test cells were idle. We went on the roof of buildings15 and 16 and inspected the stacks and vents. We came down from the building roofs and walked to below ground fuel storage tanks to inspect. There were no rain caps on the stacks located above the roofs; and the fuel storage area was free of fuel odors. We held a post-inspection conference in Mullenax's office. I left the area at 1300 hours.

COMPLAINT/COMPLIANCE HISTORY:

Roush Industries has not been a source of citizen air quality complaints since the last

inspection.

OUTSTANDING CONSENT ORDERS:

None.

OUTSTANDING LOV'S:

None

OPERATING SCHEDULE/PRODUCTION RATE:

The facility is capable of operating 24 hours per day, 365 days per year. At the time of this inspection, the facility was operating at lesser hours a day than usual (for Bldg 15 & 16) with several test cells setting idle. Bldg 1 was less active compared to the past visits.

EQUIPMENT AND PROCESS CONTROLS:

Roush operates engine test cells in the three buildings: 1, 15 and 16. Some of the engine test cells use catalytic converter for emission reduction.

APPLICABLE RULES/PERMIT # MI-ROP-M4780-2016 CONDITIONS:

Permit # MI-ROP-M4780-2016 special conditions require the following fulfillment by Roush Industries (RI) in respective buildings:

FG-BLDG15TCells

1. Roush Inc. (RI) stated there have not been any changes made to equipment or process in the FG-BLD15TCells in the recent 2 years [Rule 201(1)]. Written response from RI stated no changes have occurred in Bldg15 that would modify emissions for the building. Staff verified this submission during inspection.
2. In compliance – RI demonstrated the maximum NOx emissions from FG-BLD15TCells did not exceed 3.71 tpy based on a 12-month rolling time period as determined at the end of each calendar month (40 CFR 52.21 (c) & (d)) [SC. I.1]. Response from RI stated that Roush complied with the limit on NOx emissions by not exceeding 3.71 tpy based on a 12-month rolling time period as shown in Attachment - Doc #1. Doc #1 indicates the maximum emission of NOx in FG-BLD15Tcells was 0.980 tpy at the end of September 2016, and compared less than the limit of 3.71tpy.
3. In compliance- RI demonstrated the maximum CO emissions from the FG-BLD15TCells did not exceed 952.0 pounds per consecutive 8-hours (R 336.1205 (1)(a) and (3), 40 CFR 52.21 (d)) [SC. I.2]. Response from RI stated Roush complied with the limit on CO emissions by not exceeding 952 pounds per consecutive 8 hours as shown in Attachment - Doc #2. Doc #2 indicates the maximum emission of CO in FG-BLD15Tcells was 689 pounds per consecutive 8 hours on March 22, 2016, and compared less than the limit of 952 pounds per consecutive 8 hours.
4. In compliance – RI demonstrated the maximum CO emissions from FG-BLD15TCells did not exceed 83.3 tpy based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1)(a) and (3)) [SC. I.3]. Response from RI stated Roush complied with the limit on CO emissions by not exceeding 83.3 tpy based on a 12-month rolling time period as shown in Attachment - Doc #1. Doc #1 indicates the maximum emission of CO in FG-BLD15Tcells was 24.46 tpy at the end of September 2016, and compared less than the limit of 83.3 tpy.
5. In compliance - RI demonstrated the maximum 1, 3 - Butadiene emissions from FG-BLD15TCells did not exceed 0.054 tpy based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1225 (3)(b)) [SC. I.4]. Response from RI stated Roush complied with the limit on 1, 3-Butadiene emissions by not exceeding 0.054 tpy based on a 12-month rolling time period as shown in Attachment - Doc #1. Doc #1 indicates the maximum emission of 1, 3-Butadiene in FG-BLD15TCells was 0.0024 tpy at the end of September, and October 2016, and compared less than the limit of 0.054 tpy.
6. In compliance – RI stated the maximum Lead emissions from FG-BLD15TCells did not exceed 0.132 tpy based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1205 (1)(a) and (3), 40 CFR 52.21 (d)) [SC. I.5]. Response from RI stated leaded fuel had not been delivered or used at FG-BLD15TCells since October of 2005.

7. In compliance – RI demonstrated the maximum fuel used in FG-BLD15TCells did not exceed 1,200 gal/day for uncontrolled engines, on a daily basis (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. II.1]. Response from RI stated the facility complied with the maximum limit of 1200 gal/day for uncontrolled engines fuel usage based on a daily basis as shown in Attachment - Doc #2. Doc #2 indicates the maximum fuel usage in FG-BLD15Tcells was 256 gal/day on March 22, 2016, and compared less than the limit of 1,200 gal/day.
8. In compliance – RI demonstrated the maximum fuel used in FG-BLD15TCells did not exceed 3,815 gal/day for controlled engines, on a daily basis (R336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d))[SC. II.2]. Response from RI stated the facility complied with the maximum limit of 3,815 gal/day for fuel usage in controlled engines based on a daily basis as shown in Attachment - Doc #2. Doc #2 indicates the maximum controlled fuel usage in FG-BLD15Tcells was 505 gal/day on July 26, 2016, and compared less than the limit of 3,815 gal/day.
9. In compliance – RI demonstrated the maximum fuel used in FG-BLD15TCells did not exceed 70,000 gals. /yr. for uncontrolled engines based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. II.3]. Response from RI stated Roush complied with the maximum limit of 70,000 gal/yr. of fuel usage for uncontrolled engines based on a 12-month rolling time period as shown in Attachment - Doc #1. Doc #1 indicates the maximum fuel usage in FG-BLD15Tcells was 13,233 gal/yr. at the end of September 2016, and compared less than the limit of 70,000 gal/yr.
10. In compliance - RI demonstrated the maximum fuel used in FG-BLD15TCells did not exceed 166,000 gal/yr. for controlled engines based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. II.4]. Response from RI stated Roush complied with the maximum limit of 166,000 gal/yr. of fuel usage for controlled engines based on a 12-month rolling time period as shown in Attachment - Doc #1. Doc #1 indicates the maximum fuel usage in FG-BLD15Tcells was 23,291 gal/yr. at the end of September 2016, and compared less than the limit of 166,000 gal/yr.
11. In compliance - RI demonstrated the maximum leaded fuel used in FG-BLD15TCells did not exceed 30,000 gal/yr. based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. II.5]. Response from RI stated Roush complied with the maximum limit of 30,000 gal/yr. of leaded fuel usage based on a 12-month rolling time period as shown in Attachment - Doc #1. Doc #1 indicates the maximum fuel usage in FG-BLD15Tcells was 0.0 gal/yr. at the end of October 2016, and compared less than the limit of 30,000 gal/yr.
12. In compliance – RI demonstrated the permittee did not use leaded gasoline in any of FG-BLD15TCells that are controlled by catalytic converters. (R 336.1205 (1)(a) and (3), R 336.1910, 40 CFR 52.21 (c) & (d)) [SC. III.1]. Response from RI stated leaded fuel has not been delivered or used at FG-BLD15TCells since October of 2005.
13. In compliance – RI demonstrated permittee performed at least once per ROP term, verification of NOx, CO, and 1, 3-Butadiene emission rates from a representative number of test cells in FG-BLD15TCells by testing, at owner's expense, in accordance with Department requirements, as required. A representative number of test cells means several test cells operating in various testing modes, equipped with and without catalytic converters, and using gasoline. No less than 60 days prior to testing, a complete test plan was submitted to the AQD. The final plan was approved by the AQD prior to testing. Verification of emission rates included the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1205 (1)(a) and (3), R 336.2001, R 336.2003, R 336.2004) [SC. V.1]. Response from RI stated Roush evaluated emission rates for NOx, CO, and 1, 3- Butadiene and results were submitted June 13, 2016 in "Compliance of the Renewable Operating Permit (ROP)" as shown in Attachment – Doc # 9. AQD evaluated the results and determined the emission rates for 1, 3- Butadiene did not meet the AQD or EPA acceptable significant standards because the samples collected in the tubes had very low spike recovery. The samples collected in canisters did not have a comparable QA check. AQD did not accept the results from the samples as valid outcomes. RI is yet to verify the emission rate for 1, 3-Butadiene within the ROP active term as required in the ROP SC. VI.1 condition.
14. In compliance – RI demonstrated the permittee monitored, in a satisfactory manner, the fuel usage

for controlled and uncontrolled engines in FG-BLD15TCells on a daily basis. (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. VI.1]. Response from RI stated Roush complied with recording fuel usage on a daily basis as shown in Attached – Doc #2.

15. In compliance - RI demonstrated the permittee kept, in a satisfactory manner, monthly and previous 12-month NOx emission calculation records for FG-BLD15TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (40 CFR 52.21 (c) & (d)) [SC. VI.2]. Response from RI stated Roush complied with recording NOx emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #1.

16. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly and a previous 12-month CO emission calculation records for FG-BLD15TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3)) [SC. VI.3]. Response from RI stated Roush complied with recording CO emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #1.

17. In compliance – RI demonstrated the 8-hour CO emission rate was calculated based upon daily records, prorated to an 8-hour rate. Should the prorated emission rate exceed 90 percent of the limit, the permittee kept 8-hour records for a minimum of two months until the emission rate fell below 90 percent of the limit. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3), 40 CFR 52.21 (d)) [SC. VI.4]. Response from RI stated Roush complied with calculating an 8-hour CO emissions rate based on daily records prorated to an 8-hour rate as shown in Attached – Doc #2.

18. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly and a previous 12-month lead emission calculation records for FG-BLD15TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3), 40 CFR 52.21 (d)) [SC. VI.5]. Response from RI stated Roush complied with recording lead emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #1.

19. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly and a previous 12-month 1, 3-butadiene emission calculation records for FG-BLD15TCells. All records were kept on file for a period of at least five years and made available to the Department upon request (R 336.1225 (3)(b)) [SC. VI.6]. Response from RI stated Roush complied with recording 1, 3- Butadiene emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #1.

20. In compliance - RI demonstrated the permittee kept, in a satisfactory manner, daily fuel use records for FG-BLD15TCells. The records specified the fuel usage for engines equipped with catalytic converters and the fuel usage for uncontrolled engines. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3), R 336.1225, R336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. VI.7]. Response from RI stated Roush complied with recording fuel usage on a daily basis for FG-BLD15TCells as shown in Attached – Doc #2. The records show specific fuel usage for engines equipped with catalytic converters and the fuel usage for uncontrolled engines. Staff inspected the auto-fuel use accounting system and observed each test engine had fuel data acquisition algorithm for verification.

21. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly fuel use records for FG-BLD15TCells. The records specified the fuel usage for engines equipped with catalytic converters and the fuel usage for uncontrolled engines. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. VI.8]. Response from RI stated Roush complied with recording fuel usage on a monthly basis for FG-BLD15TCells as shown in Attached – Doc #1. The records show specific fuel usage for engines equipped with catalytic converters and the fuel usage for uncontrolled engines. Staff verified the real-time fuel use data acquisition.

22. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly leaded fuel use records for FG-BLD15TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), R 336.1213(3), 40 CFR 52.21 (c) & (d)) [SC. VI.9]. Response from RI stated leaded fuel has not been delivered or used at FG-BLD15TCells since October of 2005.

23. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, records of the maximum lead content in the leaded fuel for each delivery. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1)(a) and (3), 40 CFR 52.21 (d)) [SC. 10]. Response from RI stated leaded fuel has not been delivered or used at FG-BLD15TCells since October of 2005.

24. In compliance – RI demonstrated permittee did prompt reporting of deviations in FG-BLD15TCells pursuant to Special Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) [SC. VII.1]. Response from RI stated there were no deviations to report.

25. In compliance – RI demonstrated permittee did Semiannual reporting of monitoring and deviations in FG-BLD15TCells pursuant to Special Condition 23 of Part A. Report was received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30 (R 336.1213(3)(c)(i)) [SC. VII.2]. Response from RI stated Yes, the report was submitted. See document #5.

26. In compliance – RI demonstrated permittee did Annual certification of compliance in FG-BLD15TCells pursuant to Special Conditions 19 and 20 of Part A. Report was received by appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c)) [SC. VII.3]. Response from RI stated Yes, the report was submitted. See document #6.

27. In compliance – RI stated the permittee did not need to notify the Department if a change in land use occurred for property classified as Industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). [SC. VII.4]. Response from RI stated no change occurred in land usage. The assessment was verified from the property Map on file.

28. In compliance – RI demonstrated the exhaust gases from the stacks in FG-BLD15TCells listed in the table below were discharged unobstructed vertically upwards to the ambient air unless otherwise noted (SC. VIII) through verification:

SV-TCeIB15A Max. ID = 6", height = 32' (R 336.1225 and 40 CFR 52.21 (c) & (d))[SC. VIII.1]

SV-TCeIB15B/C1* & SV-TCeIB15BC2 Max. ID = 6", height = 32' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.2].

SV-TCeIB15D Max. ID = 6", height = 32', (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.3]

SV-TCeIB15E/F Max. ID = 6", height = 32' (336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.4]

SV-TCeIB15G/H Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.5]

SV-TCeIB15I/J Max. ID = 6", height = 32' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.6]

SV-TCeIB15K/L Max. ID = 6", height = 32' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.7].

SV-TCeIB15M1* & SV-TCeIB15M2 Max. ID = 8", height = 33' (R336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.8]

SV-TCeIB15N/O1* & SV-TCeIB15N/O2 Max. ID = 6", height = 32' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.9]

SV-TCeIB15P/Q1* & SV-TCeIB15P/Q2 Max. ID = 6", height = 32' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.10]

SV-TCeIB15R1* & SV-TCeIB15R2 Max. ID = 8", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.11]

SV-TCeIB15S1* & SV-TCeIB15S2 Max. ID = 8", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC.VIII.12]

Response from RI stated exhaust gases are discharged from stacks unobstructed vertically upwards to the ambient air as verified during inspection. Staff climbed and walked on the roofs of buildings #15 in company of Jeff Carter and Robert Mullenax and inspected the discharge points for gases. There were no rain caps or elbows in the stacks. The gases were discharged unobstructed vertically through each associated stack.

FG-BLD16TCells: EU-TCeIB16A1, EU-TCeIB16B2, EU-TCeIB16C3, EU-TCeIB16D4, EU-TCeIB16E5,EU-TCeIB16F6/G7 & EU-TCeIB16H8/I9 using catalytic converter for all emission units control except EU-TCeIB16F6/G7 and EU-TCeIB16H8/I9.

29. In compliance - RI demonstrated maximum NOx emissions in FG-BLD16TCells did not exceed 6.0 tpy based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1) (a) and (3), 40 CFR 52.21 (c) & (d)) [SC I.1]. Response from RI stated Roush complied with the limit on NOx emissions by not exceeding 6.0 tpy based on a 12-month rolling time period as shown in

Attachment - Doc #3. Doc #3 indicates the maximum emission of NOx in FG-BLD16Tcells was 2.89 tpy at the end of January 2015, and compared less than the limit of 6.0 tpy.

30. In compliance - RI demonstrated maximum CO emissions in FG-BLD16TCells did not exceed 1,510 pounds per consecutive 8-hours, based on 8-hour (R 336.1205(1)(a) and (3), 40 CFR 52.21(d)) [SC. I.2] Response from RI stated Roush complied with the limit on CO emissions by not exceeding 1,510 pounds per consecutive 8 hours as shown in Attachment - Doc #4. Doc #4 indicates the maximum emission of CO in FG-BLD16Tcells was 403 pounds per consecutive 8 hours on February 10, 2016, and compared less than the limit of 1,510 pounds per consecutive 8 hours.

31. In compliance – RI demonstrated the maximum CO emissions from the FG-BLD16TCells did not exceed 65.3 tpy, based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205(1)(a) and (3)) [SC. I.3]. Response from RI stated Roush complied with the limit on CO emissions by not exceeding 65.3 tpy based on a 12-month rolling time period as shown in Attachment - Doc #3. Doc #3 indicates the maximum emission of CO in FG-BLD16Tcells was 30.09 tpy at the end of January 2015, and compared less than the limit of 65.3 tpy.

32. In compliance - RI demonstrated the maximum 1, 3 – Butadiene emissions from FG-BLD16TCells did not exceed 0.423 tpy, based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1225(3)(b)) [SC. I.4]. Response from RI stated Roush complied with the limit on 1, 3-Butadiene emissions by not exceeding 0.423 tpy based on a 12-month rolling time period as shown in Attachment - Doc #3. Doc #3 indicates the maximum emission of 1, 3-Butadiene in FG-BLD16Tcells was 0.0050 tpy at the end of January 2015, and compared less than the limit of 0.423 tpy.

33. In compliance – RI demonstrated the maximum fuel used in EU-TCellB16F6/G7 and EU-TCellB16H8/19 did not exceed 20,000 gal/yr. based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702((a), 40 CFR 52.21(c) & (d)) [SC. II.1]. Response from RI stated Roush complied with the maximum limit of 20,000 gal/yr. of fuel usage based on a 12-month rolling time period as shown in Attachment - Doc #3. Doc #3 indicates the maximum fuel usage in EU-TcellBldg16F6/G7 and EU-TcellBldg16H8/19 was 15,672 gal/yr. at the end of September, and October, 2016, and compared less than the limit of 20,000 gal/yr.

34. In compliance – RI demonstrated the maximum fuel used in FG-BLD16TCells did not exceed 3,748 gal/day, Daily (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702((a), 40 CFR 52.21(c) & (d)) [SC. II.2]. Response from RI stated Roush complied with the maximum limit of 3,748 gal/day of fuel usage based on a daily basis as shown in Attachment - Doc #4. Doc #4 indicates the maximum fuel usage in FG-BLD16Tcells was 915 gal/day on February 10, 2016, and compared less than the limit of 3,748 gal/day.

35. In compliance - RI demonstrated the maximum fuel used in FG-BLD16TCells did not exceed 160,000 gal/yr. based on a 12-month rolling time period as determined at the end of each calendar month (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702((a), 40 CFR 52.21(c) & (d)) [SC. II.3]. Response from RI stated Roush complied with the maximum limit of 160,000 gal/yr. of fuel usage based on a 12-month rolling time period as shown in Attachment - Doc #3. Doc #3 indicates the maximum fuel usage in FG-BLD16Tcells was 78,003 gal/yr. at the end of January 2015, and compared less than the limit of 160,000 gal/yr.

36. In compliance - RI demonstrated the permittee equipped and maintained each emission unit in FG-BLD16TCells, except for EU-TCellB16F6/G7 and EU-TCellB16H8/I9, with a catalytic converter. (R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), R 336.1910, 40 CFR 52.21 (c) & (d)) [SC. IV.1]. Response from RI stated Roush equips and maintains catalytic converters in each emission unit in FG-BLD16Tcells, except EU-TcellBldg16F6/G7 and EU-TcellBldg16H8/I. Attachment - Doc #4 demonstrates daily monitoring operation records for FG-BLD16Tcells.

37. In compliance - RI demonstrated within 180 days after permit issuance, verification of NOx, CO, and 1, 3-Butadiene emission rates from a representative number of test cells in FG-BLD16TCells by testing, at owner's expense, in accordance with Department requirements as required. A representative number of test cells means several test cells operating in various testing modes and using gasoline. No less than 60 days prior to testing, permittee submitted a complete test plan to the AQD. The final plan must have been approved by the AQD prior to testing. Verification of emission rates included the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R

336.1205 (1)(a) and (3), R 336.2001, R 336.2003, R 336.2004) [SC. V.1]. Response from RI stated Roush evaluated emission rates for NOx, CO, and 1,3-Butadiene and results were submitted June 13, 2016 in "Compliance of the Renewable Operating Permit (ROP)" as shown in Attachment – Doc # 9. It was noted AQD evaluated the emission rate for 1, 3-Butadiene and determined the 1,3 Butadiene samples collected in the tubes had very low spike recovery so AQD did not accept them as valid samples. The samples collected in the canisters did not have a comparable QA check. Hence the emission rate results did not meet the AQD and EPA standards. RI is yet to verify the emission rate for 1, 3-Butadiene.

38. In compliance - RI demonstrated the permittee monitored in a satisfactory manner, the fuel usage for FG-BLD16Tcells on a daily basis. (R 336.1205 (1) (a) and (3), 40 CFR 52.21 (c) & (d)) [SC. VI.1]. Response from RI stated Roush complied with recording fuel usage on a daily basis as shown in Attached – Doc #4. Data listed in Doc#4 support compliance.

39. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly and a previous 12-month NOx emission calculation records for FG-BLD16TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (40 CFR 52.21 (c) & (d)) [SC. VI.2]. Response from RI stated Roush complied with recording NOx emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #3. Data listed in Doc#3 support compliance.

40. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly and a previous 12-month CO emission calculation records for FG-BLD16TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1) (a) and (3)) [SC. VI.3]. Response from RI stated Roush complied with recording CO emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #3. Data listed in Doc#3 format support compliance.

41. In compliance – RI demonstrated the 8-hour CO emission rate was calculated based upon daily records, prorated to an 8-hour rate. Should the prorated emission rate exceed 90 percent of the limit, the permittee kept 8-hour records for a minimum of two months until the emission rate fell below 90 percent of the limit. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1) (a) and (3), 40 CFR 52.21 (d)) [SC. VI.4]. Response from RI stated Roush complied with calculating an 8-hour CO emissions rate based on daily records prorated to an 8-hour rate as shown in Attached – Doc #4. Data listed in Doc#4 support compliance.

42. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, monthly and a previous 12-month 1, 3-Butadiene emission calculation records for FG-BLD16TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1225 (3) (b)) [SC. VI.5]. Response from RI stated Roush complied with recording 1, 3- Butadiene emissions on a monthly basis and a previous 12-month as shown in Attached – Doc #3. Data listed in Doc#3 support compliance.

43. In compliance – RI demonstrated the permittee kept, in a satisfactory manner, daily fuel use records for FG-BLD16TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1) (a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. VI.6]. Response from RI stated Roush complied with recording fuel usage on a daily basis for FG-BLD16TCells as shown in Attached format – Doc #4. Data listed in Doc#4 support compliance.

44. In compliance- RI demonstrated the permittee kept, in a satisfactory manner, monthly fuel use records for FG-BLD16TCells. All records were kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205 (1) (a) and (3), R 336.1225, R 336.1702 (a), 40 CFR 52.21 (c) & (d)) [SC. VI.7]. Response from RI stated Roush complied with recording fuel usage on a monthly basis for FG-BLD16TCells as shown in Attached format – Doc #3. Data listed in Doc#3 support compliance.

45. In compliance - RI demonstrated permittee did Prompt reporting of deviations In FG-BLD16TCells pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) [SC. VII.1]. Response from RI stated there were no deviations to report.

46. In compliance demonstrated permittee did Semiannual reporting of monitoring and deviations In FG-BLD16TCells pursuant to General Condition 23 of Part A. Report was received by appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) [SC. VII.2]. Response from RI stated Yes, the reporting was timely made. See documents # 5 and #6. Full data is located in MACES files.

47. In compliance – RI demonstrated permittee did Annual certification of compliance in FG-BLD16TCells pursuant to General Conditions 19 and 20 of Part A. Report was received by appropriate AQD district office by March 15 for the previous calendar year. (R 336.1213(4)(c)) [SC. VII.3]. Response from RI stated, Yes, the reporting was timely made. See document # 7.

48. In compliance – RI did not need to notify the Department if a change in land use occurred for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). (R 336.1225 (4)) [SC. VII.4]. Response from RI stated no change in land usage occurred. Site Map verified no construction or reconstruction of site was made since the last permitting process on file.

49. In compliance - RI demonstrated the exhaust gases from the stacks in FG-BLD16TCells listed in the table below were discharged unobstructed vertically upwards to the ambient air unless otherwise noted [SC. VIII]:

SV-TCelB16A1 Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.1]

SV-TCelB16B2 Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.2]

SV-TCelB16C3 Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.3]

SV-TCelB16D4 Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.4]

SV-TCelB16E5 Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.5]

SV-TCelB16F6/G7* & SV-TCelB16F6/G7a Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.6]

SV-TCelB16H8/I9* & SV-TCelB16H8/I9a Max. ID = 6", height = 33' (R 336.1225 and 40 CFR 52.21 (c) & (d)) [SC. VIII.7]*

Only one stack is used at a time Response from RI stated exhaust gases discharge from stacks unobstructed vertically upwards to the ambient air, and was verified during inspection. Staff climbed and walked on the roof of Building 16 inspecting associated stacks. All gas discharge points were unobstructed. There were no rain caps over the stacks.

FGMACT6C: This flexible group includes existing and new/reconstructed stationary gasoline dispensing facilities (GDFs) located at an area source of hazardous air pollutants (HAPs) that have a maximum monthly gasoline throughput of less than 100,000 gallons. GDF means any stationary source which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine use solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on-and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment- Emission Units: EU-GASTANK1 through EU-GASTANK11. The AQD has not accepted delegation to enforce this area source MACT. The area was included into the ROP for EPA to the regulatory responsibility of EPA.

Regulatory Summary

R 336.1901 – Addresses operation of equipment in a manner that does not cause emission of air contaminant that causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of the property. Staff observed RI kept records of operating practices and reports of deviations that would cause injurious effects to the environment well. There were no unusual odors, fallouts, opacity from stacks or nuisance to the environment at the time of inspection.

Rule 910 requires air cleaning devices to be installed and operating properly in accordance with rules and laws. A special condition in the ROP requiring the catalytic converter associated with a test cell installed and operating properly during operation ensures adequate regulatory limits. All gases discharged from test cells are required to be vertically unobstructed vented to the ambient. Roush

maintained free flow of gases exiting the stacks.

R-336.1225- Emissions modeling for 1, 3-Butadiene in gasoline on a neighboring property identified the screening equation did not meet 1, 3-Butadiene ambient impact compliance. However, Roush was able to utilize Rule 225(3) to show compliance, provided the property remains industrial. Visual inspection observed RI had not modified the property for any other use except for industrial processes.

R 336.1301 – regulates visible emissions from a stationary source. RI discharged exhaust gases from the test cells vertically unobstructed to the ambient air through stacks.

R 336.1284(g)(iii) exempts equipment exclusively serving dynamometer facilities for gasoline and/or gasoline/ethanol blends storage and handling, or for diesel storage and handling. RI installed gasoline tanks on the facilities with capacities less than 20,000 gallons per day to exclusively serve dynamometers. Most of these tanks are below ground with concealed caps, valves, flanges and fittings whose load transporting systems are connected to a vapor recovery unit. The facility is in status with the exempt rule.

NSPS Subpart Kb did not apply to gasoline storage tanks at the RI facility based on storage capacity. Though the gasoline storage tanks were installed after July 23, 1984 (1986 through 1999) for storage of volatile liquids, the tanks have design capacities less than 19,800 gal. Hence the 40 CFR Subpart Kb did not apply.

R 336.1285 limit substitution of fuels for those permitted. RI stated there has been no fuel substitution of fuels at the facility. Some fuels such as leaded gasoline has been eliminated from use.

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS:

This facility does not have nor is in need of a fugitive dust plan.

MAERS REPORT REVIEW:

Roush's 2016 MAERS is yet to be submitted

FINAL COMPLIANCE DETERMINATION:

Based on the 2016 inspection, the Roush Industries facility was determined to be in compliance with the applied air pollution rules and regulations as listed in permit #MI-ROP-M4780-2016. RI operated the facility in compliance in with the permit conditions during the reporting period.

NAME *file*

DATE 2/15/2017 SUPERVISOR *JK*