



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

December 22, 2017

CERTIFIED MAIL

Ray Brooks
Senior Vice President, Refining
Marathon Petroleum Company LP
2408 Gambrinus Avenue SW
Canton, Ohio 44706-2365

Re: Final Findings and Orders for air pollution
violations

Dear Mr. Brooks,

Transmitted herewith are the Final Findings and Orders ("Orders") of the Director of Ohio EPA concerning the above-referenced matter.

Please note that the effective date of the Orders is the date that the Orders were entered into the Ohio EPA Director's journal, which is the date that is stamped on the first page of the Orders.

Sincerely,

A handwritten signature in black ink, appearing to read "James Kavalec", is written over a horizontal line.

James Kavalec, Manager
Compliance/Enforcement Section
Division of Air Pollution Control

ec: James Lee, PIC
Lee Tullis, DAPC
Drew Bergman, Legal
Terri Dzienis, Canton

By: Michelle N. Miller Date: 12-22-17

BEFORE THE

OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

Ohio EPA DEC 22 '17
Entered Directors Journal

Marathon Petroleum Company LP : **Director's Final Findings**
2408 Gambrinus Avenue SW : **and Orders**
Canton, Ohio 44706-2365 :

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to Marathon Petroleum Company LP ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 3704.03 and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent and successors in interest liable under Ohio law. No change in ownership of Respondent or of the facility (as hereinafter defined) shall in any way alter Respondent's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3704 and the rules promulgated thereunder.

IV. FINDINGS

The Director of Ohio EPA ("Director") makes the following findings. These Findings are those of the Director. Nothing stated in these Findings is, or shall be construed as, an admission by Respondent:

1. Respondent operates a sweet and sour crude oil refinery located in Canton, Ohio (facility id #1576002006). The facility is classified as major source for New Source Review ("NSR") and the Title V permit programs. Among other operations

at the facility, Respondent operates a fluidized catalytic cracking unit (“FCCU”) (identified by Ohio EPA as emissions unit P002).

2. The FCCU “cracks” (i.e., breaks) high-boiling, high-molecular weight hydrocarbon fractions of petroleum crude oils into smaller, lighter products through a series of steps that “crack” the larger molecules into small, lighter molecules. Heat and fluidized catalyst are used to optimize the cracking process. The FCCU includes, among other equipment, a reactor, catalyst regenerator and regenerator equipment for controlling air pollutant emissions and for heat recovery. During the catalytic cracking process “coke” from the feedstock is deposited on the surface of the catalyst. For the catalyst to retain its effectiveness, the coke must be burned off at elevated temperature in the catalyst regenerator before it can be returned to the reactor. The removal of coke generates heat for the process and releases, among other air pollutants, particulate matter emissions (“PM”) and metal PM hazardous air pollutants (“HAP”) including nickel and vanadium. The flue gas from the regenerator is sent through a third-stage separator system (“TSS”) that removes catalyst fines (small particles) and other PM emissions from the gas stream through the use of multiple swirl tube cyclones designed to remove most of the larger PM emissions. The finer PM emissions exit the top of cyclones (“overflow”) where they are emitted to the atmosphere through the FCCU flue stack. The larger PM emissions are discharged as underflow and are further processed by a fourth-stage separator system (“FSS”) which uses a baghouse configuration to capture the fines from TSS bottom before the gas stream is exhausted through the same FCCU flue stack (i.e., egress point P002STK) and combined with the TSS overflow gas stream. The captured particulate is stored in a hopper prior to disposal.

3. The PM emissions from Respondent’s FCCU exhaust are subject to the following regulatory requirements:

- New Source Performance Standards (NSPS): Standard of Performance for Petroleum Refineries (“Subpart J”). Subpart J, 40 CFR section 60.102 limits the PM (i.e., filterable particulate) emitted from the FCCU catalyst regenerator exhaust to 1 pound of PM per 1000 pounds of coke-burn-off.
- National Emission Standards for Hazardous Air Pollutants (NESHAP) for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (“Subpart UUU”). As a surrogate for metal HAPs, Subpart UUU, 40 CFR section 63.1564 limits the PM emissions from Respondent’s catalyst regenerator flue gas vent to the PM emission limitation specified in NSPS Subpart J, 40 CFR section 60.102. Subpart UUU, 40 CFR section 63.1570(a) requires that the FCCU regenerator exhaust be in compliance with the applicable standard at all times.
- Permit-to-Install P0120677. PTI P0120677 limited Respondent's PM (filterable particulate) emissions from the FCCU catalyst regenerator

exhaust to 0.9 pound of PM per 1000 pounds of coke burn-off. This limit originated from the now terminated USEPA Consent Decree (Global Settlement Agreement Civil Case No. 01-40119-PVG as filed on March 31, 2008) ("USEPA Consent Decree "). This is the most stringent PM emission limitation.

All applicable requirements are incorporated in Respondent's permits which includes PTI P0120677, issued on October 18, 2016. PTI P0120677 specifies the governing FCCU regenerator exhaust PM emission limitation as 0.9 pounds per 1000 pounds of coke burn-off, averaged over three hours.

4. ORC § 3704.05(C) prohibits any person from violating any terms or conditions of any permit issued by the Director of Ohio EPA.

5. Pursuant to Subpart UUU, and as incorporated into PTI P0120677, Respondent is required to conduct periodic PM emissions performance testing once every 5 years. The first periodic test to demonstrate continuous compliance was required to be conducted before August 1, 2017. Previous to this, Respondent performed emissions performance testing that demonstrated compliance with the 0.9 pounds per 1000 pounds of coke burn-off emission limitation on February 4, 2014 and August 17, 2006.

6. On June 28, 2017, Respondent, using a third-party contractor, conducted the PM emissions performance test required by the revised Subpart UUU and PTI P0120677. Preliminary test results indicated that the average emission rate measured during the test was 2.93 pounds of PM per 1000 pounds of coke burn-off.

7. Respondent collected and analyzed samples from the FCCU gas at various locations. On July 19, 2017, the sampling results were received and showed a high percentage of large particulate emissions in the TSS's overflow flue gas (e.g., 35 percent of the particles were greater than 20 microns and 80 percent of the particles were greater than 2 microns). Normally, a sizable percentage of these particles would be contained in the TSS's underflow not in the overflow. Therefore, Respondent concluded that more than likely mechanical problems within the TSS's swirl vane cyclones were causing the TSS to lose its efficiency to remove the larger PM emissions from the FCCU's regenerator exhaust gas stream. Specifically, the problems are believed to be associated with thermal and abrasion erosion associated with the FCCU process which may have caused holes, cracks or other damage within the TSS.

8. Until a permanent solution can be implemented, Respondent adjusted the FCCU's operating conditions to lower the FCCU's flue stack PM emissions.

9. On July 25, 2017, Respondent received the results of the June 28, 2017 emissions performance test confirming the average PM emission rate of 2.93 pounds per 1000 pounds of coke burn-off. Respondent failed to comply with the applicable PM emission limitations, in violation of NSPS Subpart J, NESHAP Subpart UUU, the terms and conditions of Respondent's permits, and ORC 3704.05(C). On August 24, 2017, Canton City Health Department Air Pollution Control Division (Canton), the contractual agent for Ohio EPA in Stark County, sent Respondent a Notice of Violation letter detailing the violations associated with the June 28, 2017 FCCU emissions performance test failure.

10. On July 29, 2017, Respondent, using a third-party contractor, conducted a diagnostic test on the FCCU flue stack to determine the impact of the operational changes mentioned in Finding 8. On July 30, 2017, Respondent received the preliminary results from the diagnostic testing conducted on July 29, 2017 which indicated the operational changes reduced the FCCU's flue gasses from 2.93 pounds of PM emission per 1000 pounds of coke burn-off to 1.7 pounds of PM emissions per 1,000 pounds of coke burn-off.

11. Respondent ordered new internal components for the TSS on or around April 25, 2017, with the intent to complete upgrades on the TSS during the next scheduled maintenance outage. However, at least 40 weeks were needed to complete the manufacturing of the new TSS components. At a later date, Respondent determined that the most efficient means of upgrading the TSS is to replace the existing TSS vessel with a new vessel that contains the new and upgraded components. The new TSS will incorporate upgrades to the metallurgy to enhance its hardness and a redesign of the swirl vane pattern to lower velocity for improved TSS performance.

12. On August 16, 2017, Respondent received the final results for the diagnostic testing conducted on July 29, 2017 which showed the average PM emission rate was 1.1 pounds of PM emissions per 1,000 pounds of coke burn-off.

13. During a meeting on August 14, 2017, Ohio EPA requested Respondent provide air dispersion modeling for Ohio EPA to evaluate any possible health effects associated with the excess PM emissions and HAPs. On August 25, 2017, Respondent provided Ohio EPA with air dispersion modeling results which show that the modeled maximum ground level impacts of estimated air toxic emission rates were less than the corresponding maximum acceptable ground level concentration ("MAGLC") which Ohio EPA uses to evaluate short-term (1-hour) health impacts. The identification and concentration of each air toxic pollutant was estimated by Respondent and based on laboratory analyzes of the composition of the PM emissions collected on the filters used during the July 29, 2017 diagnostic testing (i.e., after optimization of operating conditions mentioned in Finding 8. were implemented). Each air toxic pollutant emission rate was estimated using four different PM emission rate scenarios: (1) the

July 29, 2017 preliminary diagnostic test PM rates; (2) the July 29, 2017 final diagnostic test PM emission rates; (3) the June 28, 2017 emissions performance test average PM emission rate; and (4) a theoretical upper boundary rate of 4.4 pounds of PM emissions per 1000 pounds of coke burn-off, which is four times the final diagnostic test PM emission rate. Each emissions rate estimate assumed a coke burn-off rate of 12,000 pounds per hour. During each operating scenario, the modeled results indicate that the maximum ground level impact of each toxic air pollutant is below its corresponding MAGLC.

14. Ohio EPA uses USEPA's Integrated Risk Information System ("IRIS") to evaluate human lifetime exposure health risks to a substance. An "acceptable" lifetime cancer risk is considered to be 1 in 1,000,000 (1E-6) or less. Respondent conservatively multiplied the maximum annual modeled impacts of nickel by the IRIS long term unit risk for nickel subsulfide (4.8E-04 per $\mu\text{g}/\text{m}^3$) and determined that the lifetime cancer risk (i.e., 3.5E-7 at the 0.0016 pounds of Nickel per 1000 pounds of coke burn-off from the 4.4 pounds of PM emissions per 1000 pounds of coke burn-off scenario) is below the acceptable risk level (i.e., 1E-6).

15. On September 7 and 8, 2017, Respondent, using a third-party contractor, conducted another emissions performance test on the FCCU flue gas stack for PM and Nickel at the adjusted operating conditions specified in Finding 8 and Order 2. On October 5, 2017, Respondent reported the results of the test as an average PM emission rate of 1.51 pounds per 1000 pounds of coke burn-off and an average Nickel emission rate of 0.0011 pounds per 1000 pounds of coke burn-off. Respondent again failed to comply with the applicable PM emission limitations, in violation of NSPS Subpart J, NESHAP Subpart UUU, the terms and conditions of Respondent's permits, and ORC 3704.05(C). On November 15, 2017, Canton sent Respondent a Notice of Violation letter detailing these violations.

16. The best environmental option is for Respondent to install the new TSS during the FCCU's scheduled maintenance downtime due to (a) concerns with possible PM increases and other problems associated with the use of TSS cyclones parts (i.e., ill-fitted and designed parts) provided by non-OEM fabricators; (b) anticipated increase in plant-wide emissions associated with the FCCU and other integral emissions units flaring excess gaseous emissions during the shutdown and startup of the FCCU and other integral emissions units, without their associated air pollution control equipment operating or properly operating, if an additional FCCU shutdown is necessary to install non-OEM fabricated parts; (c) the environmental modeling results of the excess emissions not indicating short or long term health effects; and (d) the installation of non-OEM fabricated parts only being a temporary solution and which would result in the same increases in flared gaseous emissions as with installation of new OEM cyclone technology.

17. The Director has given consideration to, and based his determination on, evidence relating to the technical feasibility and economic reasonableness of complying with the following Orders and their relation to benefits to the people of the State to be derived from such compliance.

V. ORDERS

The Director hereby issues the following Orders:

1. Respondent shall bring and maintain the FCCU flue gas vent into compliance with the 0.9 pound of PM per 1000 pounds of coke burn-off rate limitation as soon as possible but no later than the compliance schedule contained in Order 3. By July 31, 2018, Respondent shall begin shut-down procedures in accordance with Order 3 and shall not operate the FCCU until the installation of the new TSS has been completed. Prior to the installation of the new TSS, Respondent will continue to develop and implement measures to keep the three-hour average PM emission rate at, or as close as possible to, the 0.9 pounds of PM per thousand pounds of coke burn-off rate limitation; including, but not limited to, the measures listed in Order 2 and/or the successful measures established in accordance with Order 7. In addition to the requirements of Order 7, Respondent shall periodically and in good faith review its efforts to lower the PM emission rate and to expedite the installation of the new TSS.

2. Upon the effective date of these Orders and until Respondent demonstrates compliance with the emissions limitations established in its Permits, Respondent shall implement and/or maintain the following PM and metal HAP emission minimization procedures and operational restrictions:

- Respondent shall maintain the superficial velocity in the FCCU Regenerator at less than or equal to 2.4 actual feet per second on a 7-day rolling average basis. Respondent shall continuously record and compute the monthly average superficial velocity determined from instruments in the FCCU control room.
- Respondent shall operate the north and south FSS baghouses in parallel when the FCCU is operating. Respondent shall take steps to minimize service outage during inspections, maintenance or repairs, and shall operate and maintain the baghouses in accordance with the manufacturing recommendations and Respondent's operation, maintenance, and monitoring plan. Respondent shall maintain appropriate spare parts including bags on site and shall promptly authorize overtime or off-shift labor to expedite repairs.
- Respondent shall not use fresh catalyst or equilibrium catalyst (aka, "e-cat") with fines content (i.e., small particles between 0-40 μm in size) greater than 5 percent by weight.

- Respondent shall utilize fresh catalyst with an attrition index equal to or less than ten (10) utilizing the Davidson Method.
 - Respondent shall maintain the coke burn rate in the FCCU Regenerator at less than or equal to 12,000 pounds per hour on a 30-day rolling average basis.
 - In accordance with Order 7, if more restrictive or additional minimization procedures and operational restrictions are determined to be necessary to lower the FCCU's PM emission rate, Respondent shall implement such procedures and operational restrictions as specified in Order 7.
3. Respondent shall comply with the following compliance schedule:

Compliance Schedule	
Schedule	Milestones
No later than January 31, 2018	Respondent shall submit permit applications via eBusiness: Air Services, if applicable, to Canton for the installation, modified, and/or replacement associated with the installation of the new TSS and other changes to FCCU.
No later than July 31, 2018	The FCCU shall begin shut-down procedures in accordance with all applicable regulatory requirements and in manner which minimizes emissions.
No later than September 15, 2018	Installation of new control technology equipment including all duct and pipe, and connection shall be completed. The FCCU shall begin start-up procedures in accordance with all applicable regulatory requirements and in manner which minimizes emissions.
No later than November 15, 2018	PM emissions performance test shall be conducted on FCCU flue stack in accordance with applicable regulatory requirements and/or in accordance with the Ohio EPA approved requirements.
No later than December 15, 2018 or 30 days after the emissions performance test, whichever comes first.	Results of the emissions performance tests shall be submitted per Order 10. Submit report required by Order 11.

4. Within fourteen (14) days after each listed completion date referenced in Order 3, Respondent shall submit progress reports, via eBusiness: Air Services, that shall include a narrative description of whether the requirement has been completed and how they were accomplished, with any documentation necessary to demonstrate that the requirements were completed. If a requirement has not been completed, the report shall include an explanation of the reasons for the missed completion date, a

description of all actions to be taken or have been taken to complete the requirement and a proposed schedule to complete the requirement for the Ohio EPA and Canton approval. In the event of a missed completion date, a follow-up progress report shall be submitted every fourteen (14) days, via eBusiness: Air Services, after the initial report of non-completion until the requirement is completed.

5. Respondent may request that adjustments be made to the requirements and schedules specified in Order 3 by submitting written justification, via eBusiness: Air Services, for Ohio EPA and Canton's approval.

6. Respondent shall conduct quarterly PM and nickel emissions performance tests. The first quarterly test shall be conducted no later than January 12, 2018. Thereafter, until the installation of the new TSS, emissions performance tests shall be conducted no later than 90 days following the proceeding test. Respondent may request that adjustments be made to the testing schedules by submitting written justification, via eBusiness: Air Services, to the Chief of DAPC for approval.

All emissions performance tests shall use USEPA Reference test methods in 40 CFR, Part 60, Appendix A, specifically Method 5B to determine PM emissions and Method 29 to determine Nickel emissions. The test shall consist of at least three separate test runs and shall be conducted under conditions representative of the worst-case PM and/or Nickel generation that the FCCU intends to operate during the compliance schedule period while operating between 90-100% of the operating parameters referenced in Order 2 or as modified in Order 7. The operating conditions planned during the test shall be specified in the "Intent to Test" notification required by Order 9. Personnel from Ohio EPA and/or Canton shall be permitted to witness the above tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

7. If the average pounds of PM emissions per 1000 pounds of coke burn-off rate are determined to have increased by 0.25 pounds of PM emissions per 1000 pounds of coke burn-off rate or more over the highest average rate from an emissions performance test since September 7, 2017, Respondent shall immediately commence an investigation into the cause of the increase, and within seven (7) days of receipt of the final test results, evaluate and adjust, as necessary, the PM and metal HAP emission minimization procedures and/or operational restrictions required by Order 2 to its lowest possible level while maintaining stable operating conditions and not causing a possible exceedance of other regulatory emission limitations and/or requirements. In the event that a quarterly performance test indicates a PM emission rate of greater than 3.0 pounds of PM per 1000 pounds of coke burn-off, Respondent, in the investigation, must also analyze the feasibility of (1) reducing operations as a means of reducing PM emissions from the FCCU and (2) any other measures that will reduce PM emissions

from the FCCU while maintaining stable operating conditions. A report of the investigation and corrective action(s) implemented shall be submitted to Ohio EPA and Canton, via eBusiness: Air Services, within ten (10) days of the completion of the investigation.

8. In addition to collecting data required by a USEPA Reference Method and/or other applicable regulation, the following operating parameter data, at a minimum, shall also be recorded during each emissions performance test:

- feedstock rate and type, in average barrels per day;
- air rate to the FCC regenerator, in standard cubic feet per second;
- wet air sent to the regenerator through main air blower (in standard cubic feet per minute)
- catalyst circulation rate, in tons per minute;
- FCCU regenerator temperature, in degrees Fahrenheit using an average of the flue gas temperature indicators;
- Opacity (%);
- whether the feedstock during the test was "hydrotreated;"
- differential pressure across the regenerator cyclones (psi) using current instrumentation. In the event of an instrument failure, a single gauge manual dP will be measured during the emissions performance test;
- differential pressure between the reactor and regenerator (psi) using current instrumentation. In the event of an instrument failure, a single gauge manual dP will be measured during the emissions performance test; and
- data representing all operating conditions for items listed in Order 2 or as modified in Order 7.

9. Not later than thirty (30) days prior to each emissions performance test required in Orders 3 and 6. Respondent shall submit an "Intent to Test" notification via eBusiness: Air Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units' operating parameters, the time of test run, the time(s) and date(s) of the test, the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in Ohio EPA's refusal to accept the results of the emissions performance test.

10. A comprehensive written report on the results of the emissions performance tests required in Orders 3 and 6 as well as the data recorded in Order 8, shall be signed by the person or persons responsible for the test and submitted via eBusiness: Air Services within thirty (30) days following completion of the test. Respondent may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA.

11. By no later than December 15, 2018, Respondent shall prepare and submit to Ohio EPA, via eBusiness: Air Services, a report as described in OAC Rule 3745-15-06(B)(3) that identifies a program to prevent, detect and correct as expeditiously as practicable similar future failures or breakdowns of the TSS. The OM&M plan shall be updated to reflect this program, and the revised OM&M plan shall also be submitted via eBusiness: Air Services. Any identified preventative measures shall be incorporated into your permit prior to termination of these orders.

12. Respondent shall conduct an annual emissions performance test on EU P002 for PM by November 15, 2019 and each subsequent year after. This requirement shall be incorporated into Respondent's permit prior to termination of these orders.

13. Respondent shall ensure that the excess emissions are reported in the Title V fee emission reports and thereafter pay the fees established by those reports in accordance with the invoices received from Ohio EPA. This should be not construed to negate other regulatory reporting of excess emissions, including, but not limited to, the requirements of 40 CFR Part 63, Section 63.1512(a)(2).

14. No requirement contained herein shall be construed to allow noncompliance or to supersede Respondent's responsibility to comply with Federal, State or local laws and/or regulations.

15. If any measured or estimated emission rates, monitoring parameters or any credible evidence indicates that PM, metal HAP (including Nickel), or any other air pollutants or condition are causing or have the potential to cause a negative impact on human health or environment, Ohio EPA reserves the right to revoke, modify, and/or terminate these Orders or take any applicable action to mitigate or to reduce the impact.

16. Respondent shall pay the amount of two hundred fifty thousand dollars (\$250,000) in settlement of Ohio EPA's claims for civil penalties, which may be assessed pursuant to ORC Chapter 3704. Within thirty (30) days after the effective date of these Orders, payment to Ohio EPA shall be made by an official check made payable to "Treasurer, State of Ohio" for two hundred fifty thousand dollars (\$250,000). The official check shall be submitted to Carol Butler, or her successor, together with a letter identifying the Respondent, to:

Ohio EPA
Office of Fiscal Administration
P.O. Box 1049
Columbus, Ohio 43216-1049

VI. TERMINATION

Respondent's obligations under these Orders shall terminate when Respondent certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent has performed all obligations under these Orders, and the Chief of Ohio EPA's Division of Air Pollution Control acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondent to Ohio EPA and shall be signed by a responsible official of Respondent. For purposes of these Orders, a responsible official is as defined in OAC Rule 3745-33-03(D)(1) for a corporation, or a corporate officer who is in charge of a principal business function of Respondent.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to, operations by Respondent.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent.

IX. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

X. NOTICE

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Canton City Health Department
Air Pollution Control Division
420 Market Avenue North
Canton, Ohio 44702-1544
Attn: Terri A. Dzienis

and to:

Ohio EPA
Division of Air Pollution Control
P.O. Box 1049
Columbus, Ohio 43216-1049
Attention: Jim Kavalec

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XI. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges and causes of action, except as specifically waived in Section XII of these Orders.

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or liability, and in lieu of further enforcement action by Ohio EPA for only the violations specifically cited in these Orders, Respondent consents to the issuance of these Orders and agrees to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for Respondent's liability for the violations specifically cited herein.

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

XIII. EFFECTIVE DATE


The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

XIV. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

ORDERED AND AGREED:

Ohio Environmental Protection Agency



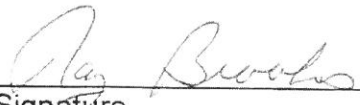
Craig W. Butler
Director

12/22/17

Date

AGREED:

**Marathon Petroleum Company LP
By: MPC Investment LLC, its General Partner**



Signature

12-21-17

Date

Ray Brooks

Printed or Typed Name

Senior Vice President, Refining

Title



