U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

August 10, 2015

Exemption No. 12387
Regulatory Docket No. FAA–2015–1797

Mr. Keith Robson
Corporate Safety, Security and
Emergency Preparedness Manager
Marathon Petroleum Company LP
539 South Main Street
Findlay, OH 45840

Dear Mr. Robson:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated May 8, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Marathon Petroleum Corporation LP (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial imaging to assist in rapid mitigation of emergencies.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom 2 Vision+.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria

provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Marathon Petroleum Company LP is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

Conditions and Limitations

In this grant of exemption, Marathon Petroleum Company LP is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2 Vision+ when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and

limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on August 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/
John S. Duncan
Director, Flight Standards Service

Enclosures

May 8, 2015

U.S. Department of Transportation, Docket Operations
West Building Ground Floor, Room w12-140
1200 New Jersey Ave., SE
Washington, DC 20590

Re: Exemption Request under Section 333 of the FAA Reform Act and Part 11 of the Federal Aviation Regulations

Dear Madam or Sir,

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 C.F.R. Part 11, Marathon Petroleum Corporation LP ("MPC"), petitions for an exemption from the Federal Aviation Regulations ("FARs") listed below:

- 14 C.F.R. Part 21 Subpart H
- Sections of 14 C.F.R. Part 45 (specifically §§45.23, 45.27, and 45.29)
- Sections of 14 C.F.R. Part 61 (specifically §§61.3, 61.23)
- Sections of 14 C.F.R. Part 91 (specifically §§91.7 (a), 91.9, 91.109 (a), 91.119, 91.121, 91.151 (b), 91.203 (a) & (b), 91.401, 91.403, 91.405, 91.407, 91.409, and 91.417).

The requested exemption would authorize MPC's Ohio Refining Division ("Canton, OH Refinery") to operate the unmanned aircraft system ("UAS") – DJI Phantom 2 Vision+ Quadcopter ("the Phantom") – to support emergency response efforts within the Canton refinery and surrounding Stark County, OH. These emergency response operations will be subject to strict safety requirements set forth by MPC to ensure an equivalent level of safety is met to align with current regulations governing the use of manned aircraft.

A detailed overview of the exemption requests and equivalent safety initiatives can be found in Appendix A of this document.

Background on Marathon Petroleum Corporation LP

MPC, headquartered in Findlay, OH, is one of the largest petroleum product refiners, marketers and transporters in the United States. MPC is the nation's fourth-largest refiner and the largest refiner in the Midwest. MPC's refining, marketing and transportation operations are concentrated primarily in the Midwest, Southeast, Northeast and Gulf Coast regions of the U.S.

MPC is a leader in the Health, Environment, Safety and Security ("HES&S") field within the oil and gas industry. The company has the highest regard for the health and safety of the employees, contractors and neighboring communities. In addition, MPC is committed to Environmental Stewardship by conducting business practices with the goal of minimizing the company's environmental impact. MPC is an American Chemistry Council "Responsible Care"

company. Responsible Care companies are committed to worker safety. They are nearly six times safer than the average of the U.S. manufacturing sector as a whole, and three times as safe as the business of chemistry overall. Responsible Care companies have reduced process safety incidents by 55 percent over the past 19 years.

Specifications of the DJI Phantom 2 Vision+ Quadcopter ("the Phantom")

- Lightweight, multi-functional integrated aircraft and camera (approximately 5 lbs.)
- Electric Powered
- FPV HD Video Camera
- Camera remote-control by DJI VISION APP
- Firmware installed to prevent UAS from entering airport airspace and government buildings
- Range Extender increases Wi-Fi distance to 300m
- Anti-vibration camera platform with single axis stabilization
- Low-voltage protection
- Virtual Radar aircraft locator on mobile device
- Range of camera tilt options
- Multiple, continuous and timed capture options
- HD Video Recording
- Max Flight Speed 15m/s

Application of the Phantom for the Canton Refinery

UAS is becoming a desirable tool to assist in emergency response efforts, and MPC's Canton Refinery must leverage the new technology to the company and community's advantage. The Canton Refinery provides resources and is a major partner in the Stark County Incident Management Team. This team consists of several local Fire Chiefs and Emergency Managers, including the Canton Refinery Fire Chief. The team responds to emergencies throughout the region to provide Incident Command System (ICS) assistance to agencies as needed. The Canton Refinery Fire Department mobile Command Unit #3 responds with every Incident Management Assistance Team (IMAT) call and serves as the command post for the team and other emergency response government agencies.

MPC will use the Phantom to provide an aerial image to assist in rapid mitigation of emergencies within the Canton Refinery and surrounding Stark County. Emergency response activities include but are not limited to – fire, rescue and hazardous materials (HAZMAT) incidents. The aerial camera will be operated from the mobile Command Unit #3.

Emergency Response Incident Command can use the Phantom to gain better situational awareness during an emergency. Firefighters could use the Phantom to scout fires, including looking for hotspots in structure fires. The Phantom video capabilities could also assist in hazmat release response by giving emergency responders a better idea of the source or the release, and the extent and magnitude of a spill. By monitoring hazardous incidents remotely, emergency response personnel are less likely to be exposed to unseen dangers.

Once the Phantom is in the air, it can provide real-time data back to emergency response personnel. This data can assist the incident commander in making decisions by detailing the current status of the incident, where potential hazard expansion may occur, and risks to personnel and property. As a result, the intelligence gathered from the Phantom will ensure cost effective mitigation options are assessed.

The nearest major airport, Akron – Canton Regional Airport, is located in Green, OH within Summit County. The airport is approximately 12 miles from the Canton Refinery.

Maps of the Canton Refinery and Stark County are provided in Appendix C.

Standard Operating Procedures and Safety Programs

MPC's Canton Refinery requires any potential users to obtain initial safe operations training and require annual refresher training. The Canton Refinery requires training on all operation systems as well as safe operation of the unit based on the manufacturer's recommendations and FAA regulations prior to anyone operating the unit. Additional requirements include a detailed safety review of hazards while operating over an emergency scene.

A pre-flight checklist and standard operating procedures are included in Appendix D.

Conclusion

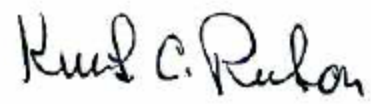
MPC is a leader in the HES&S field within the oil and gas industry. By allowing MPC's Canton, OH Refinery to utilize the DJI Phantom 2 Vision+ for emergency response purposes, this will improve safety within the refinery and the surrounding Stark County. The Phantom will enhance hazard mitigation efforts by providing better situational awareness during an incident. In addition, the Phantom will be utilized to support the Stark County Incident Management Team, adding another resource to help improve safety in the community.

To ensure an equivalent level of safety is maintained during operation of the Phantom, MPC will require employees to be trained before deploying the unit. In addition Standard Operating Procedures will be developed and reviewed on an annual basis.

As UAS technology continues to evolve, it will be essential for MPC to adapt and utilize these innovations to support HES&S efforts across the company. By developing robust operating

procedures and comprehensive training programs, combined with the overall benefit derived from deploying the UAS for emergency response, MPC can adequately justify the request for exemptions from the FAA pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the "Reform Act") and 14 C.F.R. Part 11.

Regards,



Keith Robson

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Appendix A: Exemption Requests and Equivalent Level of Safety Initiatives

14 C.F.R Part 21, Subpart H: Airworthiness Certificates
14 C.F.R. § 91.203(a)(1)

Section 91.203 requires all civil aircraft to have a certificate of airworthiness. Part 21, Subpart H, entitled Airworthiness Certificates, establishes the procedural requirements for the issuance of airworthiness certificates as required by FAR 14 C.F.R. § 91.203(a). Given the size of the Phantom, being very light weight (approximately 5 pounds), and the limited operating area associated with its utilization, it is unnecessary to go through the certificate of airworthiness process under Part 21 Subpart H in order to achieve or exceed current safety levels.

Such an exemption meets the requirements of an equivalent level of safety under Part 11 and Section 333 of the Reform Act. The Federal Aviation Act and Section 333 of the Reform Act both authorize the FAA to exempt aircraft from the requirement for an airworthiness certificate, upon consideration of the size, weight, speed, operational capability, and proximity to airports and populated areas of the UAS involved. An analysis of these different criteria demonstrates that the Phantom, operating without an airworthiness certificate under the conditions proposed in that exemption, will be at least as safe, or safer, than a conventional aircraft with an airworthiness certificate. MPC has developed safety procedures that will be enforced before bringing the Phantom into service. The Phantom will be operated in the presence of private and local municipality emergency responders, including police officers. MPC has developed safety procedures, including pre-flight checklist that will be followed before operating the Phantom.

14 C.F.R. §§ 45.23, 45.27, and 45.29: Display of Marks; Location of Marks; Nonfixed-Wing Aircraft; Size of Marks

These regulations provide that each aircraft must display an "N" (denoting U.S. registration) and the aircraft's registration number in letters at least 12 inches high for rotorcraft. It is also required that each operator of a rotorcraft must display markings on that rotorcraft horizontally on both surfaces of the cabin, fuselage, boom, or tail the marks required by §45.23.

Given the size of the Phantom (13.7 inches diagonal), and small size of the airframe and components, this requirement is impossible to match.

The equivalent level of safety will be achieved by having the markings of the MPC Canton Refinery Fire Department on the aircraft. In addition, the aircraft will not be operated at altitudes that exceed 400 feet, and the aircraft will stay in visual line of sight by all personnel operating the aircraft, therefore being identifiable at all times.

14 C.F.R. § 61.3: Requirements for Certificates, Ratings and Authorizations

The regulation provides that no person may serve as a required pilot flight crewmember of a civil aircraft of the United States, unless that person:

(1) Has a pilot certificate or special purpose pilot authorization issued under this part in that person's physical possession or readily accessible in the aircraft when exercising the privileges of that pilot certificate or authorization. However, when the aircraft is operated within a foreign country, a pilot license issued by that country may be used.

Given the safety features of the Phantom, including the firmware installed that prevents the Phantom from entering airport airspace or near government buildings, MPC proposes that operators of the Phantom should not be required to hold a commercial or private pilot certification. Instead, operators will be required to adhere to the Phantom safety standards set by MPC, and keep the Phantom in visual line of sight (VLOS) at all times.

14 C.F.R. §61.23 Medical Certificates: Requirement and Duration

The regulation referenced above provides that a person:

(1) Must hold a first-class medical certificate:
- When exercising the pilot-in-command privileges of an airline transport pilot certificate;
- When exercising the second-in-command privileges of an airline transport pilot certificate in a flag or supplemental operation in part 121 of this chapter that requires three or more pilots; or
- When serving as a required pilot flight crew member in an operation conducted under part 121 of this chapter if the pilot has reached his or her 60th birthday.

(2) Must hold at least a second class medical certificate when exercising:
- Second-in-command privileges of an airline transport pilot certificate in part 121 of this chapter (other than operations specified in paragraph (a)(1)(ii) of this section); or
- Privileges of a commercial pilot certificate

The lightweight Phantom will not carry a pilot or passengers. The operator on the ground in control of the Phantom will be a member of an emergency response team. The unmanned flights support emergency response operations. These flights provide safety benefits while reducing health and safety risk to humans. Emergency response team members have their own medical surveillance requirements to ensure they are fit for duty (see 29 C.F.R 1910.120(f)). Operation of the Phantom by a ground operator without the medical certificate described above does not pose any safety risk to the operator or to the public. MPC will allow operation of the Phantom only by emergency response team members who have valid driver's license to provide a level of safety equivalent to the requirements of the Federal Aviation Administration in 14 C.F.R. 61.23.

14 C.F.R. § 91.7(a): Civil Aircraft Airworthiness

This regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. Should the exemption be granted allowing operation of the Phantom without an airworthiness certificate, no standard will exist for airworthiness of the Phantom. MPC will ensure that the Phantom operators are emergency responders also trained to use and adhere to the user manual provided by the manufacturer of the Phantom. An equivalent level of safety will be

achieved by insuring compliance with the Phantom user manual for flight operations.

Please note that this is not the first company to seek and obtain an exemption from the FAA to operate the same UAS model. The FAA has previously granted the following company an exemption to operate the Phantom:

- Saratoga Aerial Video and Photo, Exemption No. 11218, Regulatory Docket No. FAA−2014−0953

14 C.F.R. § 91.9: Civil Aircraft Flight Manual, Marking, and Placard Requirements.

This regulation provides that no person may operate an aircraft unless a current, approved flight manual is in the aircraft. MPC assumes that the intent of this requirement is to ensure that flight manual information is available to the aircrew while operating the aircraft. MPC requests an exemption to this requirement since the aircraft is not only too small to carry documentation, but the documentation would not be available to the crew, as there is no flight crew on board.

MPC will achieve an equivalent level of safety by keeping a hard copy of the Phantom user manual with the operator during all flights, and with the Phantom when not in flight.

14 C.F.R. § 91.109(a): Flight Instruction

The regulation provides that "No person may operate a civil aircraft that is being used for flight instruction unless that aircraft has fully functioning dual controls."

Flight instruction will be accomplished through a training program as required by MPC's safety procedures. The Phantom does not have dual controls, but has a trainer port on the remote control that can be connected to the computer to simulate flight and practice skills. Through safety procedures, on-ground training and flight simulation, MPC will achieve an equivalent level of safety for operator flight instruction.

14 C.F.R. § 91.119: Minimum Safe Altitudes

The regulation provides that over sparsely populated areas, the aircraft cannot be operated closer than 500 feet to any person, vessel, vehicle, or structure. The Phantom will be utilized for emergency response purposes around MPC's refineries, terminals, pipelines, and other structures. Start County emergency response incident command may use it near other structures, but only during closely supervised training and actual emergency response operations. Therefore, MPC cannot comply with this requirement. MPC seeks an exemption to this requirement to allow the Phantom to be flown closer than 500 feet to a person, vessel, vehicle, or structure during emergency response training and actual emergency response incidents.

The equivalent level of safety will be achieved because the Phantom will only fly over areas outside MPC's property by obtaining the proper permits. Before every flight within MPC airspace, an MPC operator or official will assess the working area, and advise the emergency response team regarding safety hazards in the area. Where Stark County emergency response

officials request MPC to use the Phantom outside of MPC's property, the emergency responders will ensure that landowners and the persons who may be on the ground in the flight area are briefed of the expected route of flight and the associated risks to persons and property on the ground. Due to the small size of the Phantom, the material with which the Phantom is built and its specific safety procedures (firmware), the hazard to persons, vessels, vehicles, and structures is small and not comparable to hazards to persons or property posed by larger manned aircraft. In addition, the Phantom will most likely not be operated over congested areas as the general population will be evacuated during major incidents.

14 C.F.R. 91.121 – Altimeter Settings

This section requires that each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set, when operating below 18,000 feet MSL to:

- The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
- If there is no station within the area prescribed in paragraph (a)(1)(i) of this section, the current reported altimeter setting of an appropriate available station;
- In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure.

To provide an equivalent level of safety, MPC will need to keep the Phantom in VLOS at all times. In addition, MPC can utilize the radar function provided with the Phantom to help restrict the aircraft altitude during operation. Keeping the Phantom air operations to less than 400 feet in altitude greatly reduces the risk as compared to other larger aircraft operating at higher altitudes.

14 C.F.R. § 91.151(b): Fuel Requirements for Flight in Visual Flight Rules (VFR) Conditions

The regulation provides that no person may begin a flight in a rotorcraft under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed, to fly after that for at least 20 minutes.

Given the area of operation for the Phantom, MPC believes that an equivalent level of safety is already achieved due to the fact that MPC will ensure the battery is properly charged before each use. In addition, the Phantom has a max flight time of 25 minutes, and this time limit and battery life will be monitored by the pilot in command and other ground personnel.

14 C.F.R. § 91.203(a) & (b): Carrying Civil Aircraft Certification and Registration

This regulation provides as follows:

- No person may operate a civil aircraft unless it has an appropriate and current airworthiness certificate.
- No person may operate a civil aircraft unless the airworthiness certificate required by

paragraph (a) of this section or a special flight authorization issued under §91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

The Phantom is too small, has insufficient payload capacity, and no place to carry certification and registration documents or to display them on the aircraft. In addition, there is no pilot on board the aircraft.

To obtain an equivalent level of safety and meet the intent of 91.203, MPC proposes that documents deemed appropriate for this aircraft by the FAA (e.g. the operating manual) will be co-located with the operator and available for inspection upon request. In order to identify the aircraft, the Canton Refinery Fire Department can place a logo on the Phantom in order to identify the aircraft and its owner.

14 C.F.R. Subpart E (91.401 - 91.417) - Maintenance, Preventive Maintenance, and Alterations

The regulation provides that the operator is primarily responsible for maintaining the aircraft in an airworthy condition, including compliance with Parts 39 and 43. Paragraphs 91.407 and 91.409 require the aircraft to be "approved for return to service by a person authorized under 43.7" after maintenance and inspection. Section 91.409 requires an annual inspection for the issuance of an airworthiness certificate. Section 91.417 requires the owner or operator to keep records showing certain maintenance work that has been accomplished by certificated mechanics, under Part 43.
MPC proposes that the maintenance of the Phantom will be accomplished by the Canton Refinery Fire Department according to the Phantom user manual. An equivalent level of safety will be achieved because the Phantom is small in size, it is not a complex mechanical device and does not carry any external payload other than the camera. Moreover, the Canton Refinery Fire Department will be most familiar with the aircraft and is best suited to maintain the aircraft in an airworthy condition to ensure an equivalent level of safety is met. In addition, maintenance could also be performed by experienced professionals at a Remote Control Vehicle repair shop (or similar) that are trained to perform maintenance. Emergency response team members or other qualified persons authorized by MPC will inspect the Phantom to ensure it is capable of operations before returning it to service after maintenance. These measures provide an equivalent level of safety as the FAA regulations specified above.

Appendix B: Summary to publish in the Federal Register

Pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 and 14 C.F.R. Part 11, Marathon Petroleum Corporation LP ("MPC"), petitions for an exemption from the Federal Aviation Regulations listed below:

- 14 C.F.R. Part 21 Subpart H
- Sections of 14 C.F.R. Part 45 (specifically §§45.23, 45.27, and 45.29)
- Sections of 14 C.F.R. Part 61 (specifically §§61.3, 61.23)
- Sections of 14 C.F.R. Part 91 (specifically §§91.7 (a), 91.9, 91.109 (a), 91.119, 91.121, 91.151 (b), 91.203 (a) & (b), 91.401, 91.403, 91.405, 91.407, 91.409, and 91.417).

The requested exemption would authorize MPC's Ohio Refining Division ("Canton, OH Refinery") to operate the unmanned aircraft system ("UAS") – DJI Phantom 2+ Quadcopter ("The Phantom") – to support emergency response efforts within the refinery and surrounding Stark County, OH. MPC will use the Phantom to provide an aerial image to assist in rapid mitigation of emergencies, including but not limited to – fire, rescue and hazardous materials (HAZMAT) incidents.

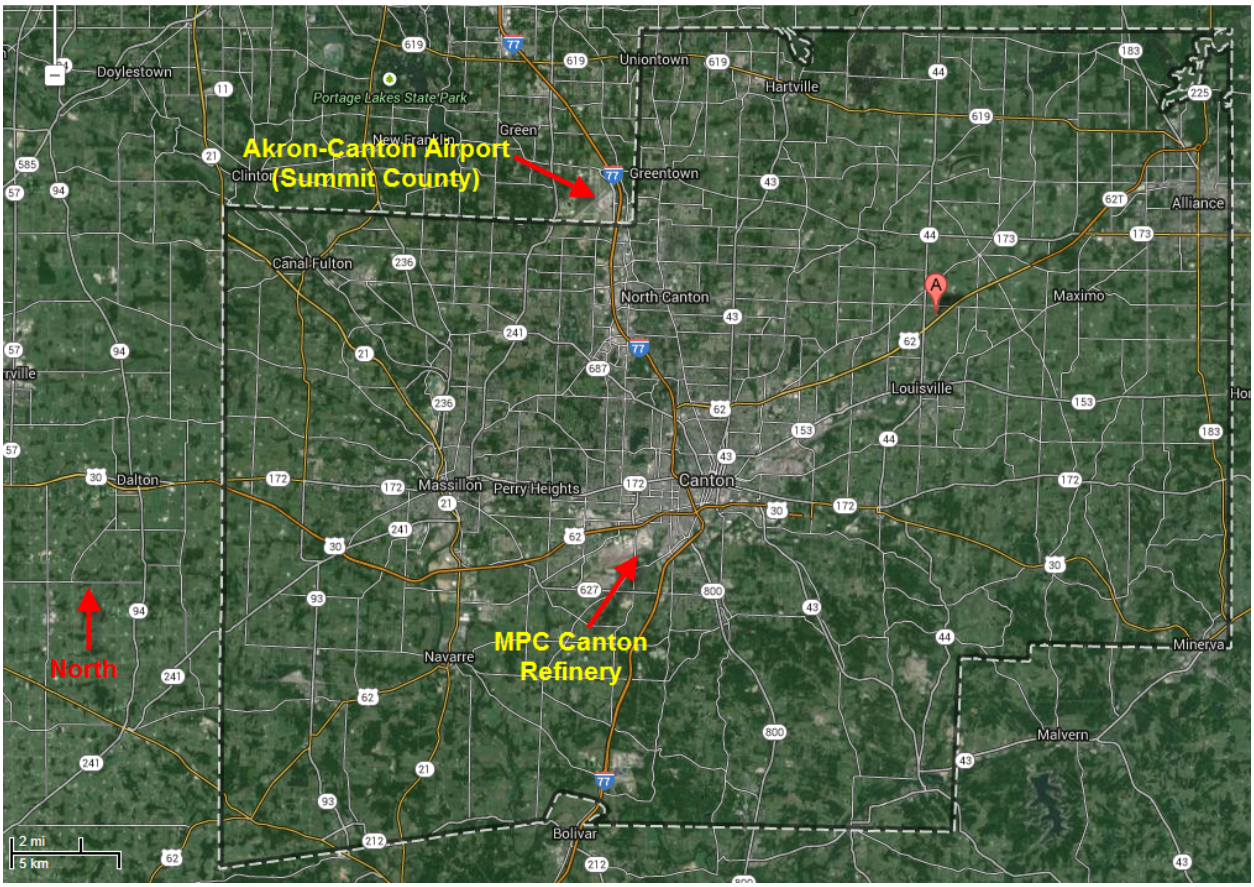
These emergency response operations will be subject to strict safety requirements set forth by MPC to ensure an equivalent level of safety is met to align with current regulations governing the use of manned aircraft.

Appendix C: Maps of the Marathon Petroleum Canton Refinery and Stark County

Please see below for maps of the Canton Refinery and surrounding Stark County. As indicated in Map A, the tallest refining unit is the Continuous Catalyst Reformer ("CCR") at approximately 250 ft. Map B shows the location of the Canton Refinery within Stark County. In addition, the nearest major airport, Akron – Canton Regional Airport, is indicated on Map B. This airport is approximately 12 miles from the Canton Refinery.

Map A – MPC Canton, OH Refinery

Map B - Stark County, OH



Appendix D: Pre-Flight Checklist and Standard Operating Procedures

Marathon Petroleum Canton Refinery Fire Department UAS Pre-Flight Checklist

Crew Member Responsibilities

Pilot- Responsible for turning on all equipment, and making sure the UAS is prepped and ready to operate.

Co-Pilot- Responsible for all checklists, and ensures all equipment is functioning.

Crew Member- Maintains flight logs, gathers extra equipment needed for pilot/co-pilot, monitors radios, accesses any other items needed to fly.

Pre-Flight Checklist -Incident

Crew members will confer with the Incident Commander ("IC") as to what type of incident the drone is to be utilized at. Depending on the incident, the UAS may be utilized in an emergent fashion, or it may be utilized in a non-emergent fashion, where there is more time to plan the flight, and log it.

Weather Conditions- Verify the weather conditions are adequate for flight operations. (i.e. Wind, Time of Day, Daylight, Precipitation, Area of Flight)

Flight Plan- Crew members will prepare a flight plan for the flight. The area, direction, altitude, speed, and any other factors will be recorded by either the co-pilot, or the crew member. The pilot's main job is to operate and control the aircraft.

Objectives- Depending on the type of incident, the objective of the flight may vary. The aircraft could be utilized as a homing beacon of sorts, for rescue personnel to find and rescue a missing or trapped person.

Pre-Flight Checklist – The Phantom

The pilot and co-pilot will check the Phantom out to ensure the following are attached properly and functioning properly.

1. Landing Gear
2. Camera/Gimbal
3. Propeller Guards
4. Propellers
5. Controller and equipment
6. iPhone/iPad

Verify there are multiple batteries charged and ready with the Phantom, also ensure Canton Refinery Fire Department stickers are placed on the Phantom. If a flight plan is to be used, all members will be briefed on the path, as well as the home spot, which will be marked by a landing spot. The Phantom will be calibrated to land at that spot if any emergencies occur.

The Phantom battery will alert when it gets to the Point of Safe Return ("PSR"). The Phantom will automatically return when reaching this point.

Flight Checklist - Preparing To Operate the Phantom

When the pilot is ready to operate the Phantom, complete the following checklist:

Action	Complete	Not Complete	Comments
1. Turn on GPS Tracker (an automatic email will be sent to the UAS flight duration folder)			
2. Turn on Wi-Fi Extender, and connect phone to be used to Wi-Fi signal.			
3. Turn on Controller			
4. Turn on the Phantom			
5. Verify the Phantom responds appropriately to controls			
6. Verify iPhone/iPad is connected to the Phantom application system			

The pilot and co-pilot mobile phone should be showing all the flight parameters of the Phantom, as well as the live video feed.

After completing these procedures, the pilot can begin the mission.

Marathon Petroleum Canton Refinery Fire Department Unmanned Aircraft System Standard Operating Guidelines

Scope of Operation: These standard operating guidelines will provide for the safety of Marathon Petroleum Canton Fire Fighters when operating an unmanned aircraft system **(UAS).**

I. Fire fighters will not deploy and fly UAS until:

A. Preflight checklist has been completed, weather conditions evaluated and approved by IC.
B. A minimum of two firefighters have had both pilot and co-pilot training for UAS.
C. An event emergency or non-emergency arises in which the UAS is needed.
D. A written list is completed that outlines scope of flight and reasoning for flight (to support Stark County emergency response efforts only)
E. The proper permits are obtained and notifications are made when using the UAS outside of MPC property to support Stark County emergency response efforts. This includes, but not limited to:
    - Ensuring private landowners and the persons who may be on the ground in the flight area are briefed of the expected route of flight and the associated risks to persons and property on the ground.
    - Ensuring all airports within 5 miles are briefed of the flight area, and permission is obtained to operate the UAS.

II. All personnel engaged in UAS operations shall record at minimum but not limited to:

A. Time
B. Date
C. Operational Personnel
D. Unit number
E. Flight plan
F. Altitudes
G. Distance Flown
H. Weather Conditions/ Visibility
I. Wind Direction/Speed
J. Take off, Departure points
K. Pre/Post Battery Life

III. Takeoff, in flight, and landing:

A. Pilot and Co-pilot must agree on objectives, flight plan, and capabilities of UAS.
B. Memory cards must be blanked prior to take off.
C. Scene survey for takeoff paying special attention to overhead obstructions.
D. Height restrictions are to not exceed 400 feet and shall be determined

prior to flight.

E. Distance restrictions shall be no further than visual line of sight from Pilot, Co-pilot or Spotter.
F. If staffing permits, a third trained person will be recording updates to flight log as well as maintaining communication with the staging officer.
G. In the event of a search and rescue mission, if the Pilot, Co-pilot, or anyone reviewing the aerial footage spots a clue a "Hands Off" will be called and further investigation will ensue.
H. Person responsible with documentation of flight log will note times, locations, and what was seen to further facilitate the search.
I. Prior to landing, the UAS Pilot and Co-pilot will agree on landing zone ("LZ").
J. Immediately after landing UAS the crew will replace batteries, upload aerial footage, and get UAS back into working order.
K. A flight log with minimum requirements will be completed with every takeoff and every landing. If the UAS is landing for a battery switch a new flight log needs to be started.

IV. Conditions in which flight may be grounded

A. Any weather deemed hazardous by the IC.
B. Winds in excess of 20mph.
C. Insufficient man power.
D. Insufficient number of qualified Pilots and Co-pilots.
E. Temperatures under 32 degrees Fahrenheit
F. Visibility is too low hindering Co-pilots line of sight of UAS.
G. Any reason deemed unsafe by IC or other emergency response personnel.

UAS Crew Member

1. Ensure all equipment is available and pull equipment as requested by pilot/co-pilot
2. Check weather reports for
    a. Temperature
    b. Wind speed and direction
    c. Humidity
3. Monitor radios to be used
4. Secure charging spot for batteries
5. Form perimeter at least 10 feet around launch site
6. Announce over radio when UAS is taking flight
7. Announce anything found over the radio
8. Announce when the UAS is at "bingo" fuel, and is returning to the helispot
9. Gather extra batteries/equipment as needed while the UAS is on the ground
10. When the UAS is ready to fly, return to step 6
11. Post flight, assist with breaking down UAS/equipment, and finish flight logs

Flight Crew - Emergency Situation

UAS pre-flight

1. Determine fly/no-fly
2. Set up landing zone
3. Check UAS
    a. Remove gimbal/camera cover
    b. Attach propellers
    c. Insert battery
4. Turn on GPS tracker and attach to UAS
5. Turn on Wi-Fi
6. Turn on controller
7. Turn on UAS
8. Contact ground crew when ready
9. Ground crew will call out
    a. Battery % of UAS battery
    b. Battery %of Wi-Fi
    c. Number of satellites
    d. Flight direction
    e. Weather
10. Flight crew will call out "UAS flying"
11. Upon return, flight crew will
    a. Turnoff UAS
    b. Replace battery and SD card
    c. Return to step 7

Ground Crew - Emergency Situation

1. Unpack equipment to be used
2. Start iPad- open applications
3. Verify weather conditions
4. Connect Wi-Fi to iPad
5. Callout
    a. Battery % of
        i. UAS battery
        ii. Wi-Fi battery
    b. Satellites
    c. Weather
6. When flight is started
    a. Video record flight
    b. Monitor iPad for
        i. Battery %
        ii. Satellites
        iii. Location, direction, speed of UAS
    c. Call out to flight crew any adjustments needed

Flight Crew

UAS Pre-Flight

1. Determine fly/no-fly based upon conditions
2. Check UAS
    a. Propellers/propeller guards
    b. Landing gear
    c. Gimbal/camera covers removed
    d. Gimbal/camera free-spinning when off
    e. GPS tracker and battery secured
3. Check controller
    a. GPS unit charged
    b. Batteries inserted in controller
    c. S1 and S2 switches both up
    d. Both control sticks return to neutral
4. Find suitable "helispot" for UAS
    a. Check for obstructions/hazards in the vicinity of the flight area

UAS Flight Checklist

1. Turn on GPS tracker
2. Turn on Wi-Fi extender
3. Turn on controller
4. Turn on UAS
5. Connect to device, and verify "home point"
6. Create flight path if applicable
7. Notify members that the UAS is going airborne

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