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1.0 INTRODUCTION

1.1 Purpose

Small Unmanned Aerial Systems (sUAS) are capable of safely and effectively providing information to support operations at the Anacortes Refinery. sUAS can quickly provide aerial photos, videos, and other remote sensing data to help inform decision making. To take advantage of sUAS it is important that all applicable regulations are followed and that operations are conducted in a safe manner.

1.2 Scope

This policy is intended to describe how sUAS can be incorporated into refinery operations in a safe manner and in accordance with applicable regulations. Included are applicable regulations, operational procedures, training, maintenance, and recordkeeping related to the use of sUAS in and near the Anacortes Refinery.

Contractors owning/operating sUAS on refinery property or to support refinery operations must meet all regulations and are responsible for operational procedures outlined within this document. Contractors are responsible for recordkeeping and training associated with their operations.

2.0 REFERENCES

2.1 Marathon Standards, Policies & Procedures

- R-11-001, Photographic Guidelines
- R-30-016, Notification and Control of Entry into Operating Units

2.2 Government Regulations

- CFR 14 Chapter I Subchapter F Part 107:

  The use of sUAS at the refinery will occur in accordance with the FAA Part 107 regulations (CFR 14 Chapter I Subchapter F Part 107).

- Currently there are no County or State restrictions that apply to the operation of sUAS at the refinery

3.0 DEFINITIONS

The following definitions are applicable to this procedure.

Table 1 Definitions

Term	Description
Area Operations Team Leader	The operations person with ultimate responsibility of the operating area. (aka Operations Superintendent)
FAA	Federal Aviation Administration-enforces rules associated with airspace and aircraft.

Table 1 Definitions

Term	Description
Flight Plan	Plan for safe conduct of flight based on consideration of aircraft performance, other operating limitations and expected conditions to meet flight objectives.
Remote Pilot in Command (RPIC)	Holds FAA certificate and has final authority and responsibility for the operation and safety of a sUAS operation under FAA regulations.
sUAS	Small unmanned aircraft system. Often referred to as a drone.
sUAS Operator	The person who manipulates the flight controls of a remotely-piloted aircraft.
Visual Line of Sight	Unaided (corrective lenses and/or sunglasses excepted) visual contact between a sUAS operator and the sUAS to maintain safe operational control and avoid other air traffic or objects.
Visual Observer (VO)	Person acting as flight crew member who assists the pilot in avoiding other air traffic or objects in the air or on the ground.

4.0 ROLES AND RESPONSIBILITES

4.1 Remote Pilot in Command

In accordance with FAA Part 107 requirements all operations will be conducted under the direct supervision of a Remote Pilot in Command (RPIC). The RPIC must have a current remote pilot certification on file before conducting any flight operations. RPIC in many cases is also the sUAS Operator. The RPIC is responsible for all decisions related to flight operations under their control.

4.2 sUAS Operator

sUAS operators can be used to operate aircraft as long as they are under direct supervision of a RPIC. Before anyone operates a specific sUAS they must be trained on the operation of that aircraft, even if they are a RPIC. sUAS Operators must remain current on training requirements outlined in this document. sUAS Operators report to the RPIC in charge of the specific flight operations.

4.3 Visual Observer

Visual Observers (VO) may be used to support sUAS operations at the refinery to maintain visual sight of the aircraft. VO must be familiar with the operations being conducted and their responsibilities in the flight operation. VO must be briefed on their responsibilities during the pre-flight briefing.

4.4 Area Operations Team Leader

Approver of all sUAS operations being conducted within the zones.

4.5 Unit Operator

It is the unit operator's responsibility to notify other area operators and shift supervisor of a sUAS flight and to ensure that the Area Operations Team Leader or designee has approved of the flight.

5.0 SUAS OPERATING GUIDELINES

5.1 FAA Part 107 Regulations

Below are the pertinent regulations when operating under FAA Part 107 regulations:

- sUAS must weigh less than 55 lbs.
- sUAS must remain in visual line of sight at all times
- sUAS may not operate over any persons not directly participating in the operation
- Daylight operations only
- Maximum ground speed of 100 mph
- Maximum altitude of 400' above ground level
- Minimum weather visibility of 3 miles from control station
- Operate only in class G airspace (Anacortes Refinery is located in class G airspace)
- If operations are needed in Class B, C, D, or E airspace permission must be granted by Air Traffic Control in charge of that airspace
- All operations will be conducted under the direct supervision of a Remote Pilot in Command (RPIC).
- No person may operate as a Remote Pilot in Command (RPIC) for more than one aircraft at a time
- No operations from a moving aircraft or vehicle, operations from a boat are allowed if performed away from others
- Preflight inspection must occur before each flight
- Report to the FAA within 10 days any serious injury or property damage of at least $500 that results from the sUAS operations
- Make available to the FAA upon request the sUAS for inspection and any associated records involved in the program

5.2 Anacortes Refinery Guidelines

In addition to FAA regulations, operations of sUAS must conform to Company guidelines. Currently there are no corporate guidelines for the use of sUAS however operations at the Anacortes Refinery must also adhere to the following:

- Must adhere to operational procedures within this document
- No operations in hazardous environments (flammable atmospheres, etc.) unless the sUAS is specifically designed to operate in those environments

- Operation must occur within the capabilities of the sUAS and consider weather (precipitation and winds). Refer to the sUAS manufacturers manual for information on operational limitations. The RPIC is responsible for making final call on flight decisions.
- No sUAS data is to be used for non-business purposes unless approved by the Operations Manager or Maintenance Manager.
- Any operations outside of Refinery property or outside the immediate vicinity of the wharf must be approved by the Operations Manager or Maintenance Manager.
- sUAS operators must fly within their skill level. There are a variety of flying environments at the refinery and the RPIC will have the final say whether it is safe for operations to take place.

6.0 SUAS TRAINING REQUIREMENTS

Training and obtaining FAA certifications for company employees involved in the operation of a sUAS will be provided by the refinery. The Zone C Area Team Leader will authorize company employees to be involved in the sUAS program.

All training records for company employees will be maintained in the Anacortes Learning Management System.

Contractors will provide their own certifications and training per applicable regulations and must meet or exceed the requirements outlined in this document.

All personnel involved in the sUAS program will complete the required training and/or certifications before conducting any operations applicable to their role.

6.1 Remote Pilot in Command Training

All RPIC's will go through the FAA certification process before conducting any operations at the refinery. RPIC certification is good for 2 years and current paperwork for company employees must be submitted to the training department for tracking. Certification renewal will need to take place prior to the expiration of the RPIC certification.

6.2 sUAS Operator Training

Before anyone operates a specific sUAS they must become familiar with the aircraft even if they are a RPIC. sUAS Operator training can involve both classroom and field time operating a sUAS. Every operator must demonstrate their ability to safely operate an sUAS and operate in accordance with all regulations and guidelines. Training and qualifications will include simulator training and a field demonstration of safe operations.

6.3 Visual Observer Training

Visual Observers (VO) are not required to be certified by the FAA but must be familiar with the operations being conducted and their responsibilities in the flight operation. No formal training is required but the RPIC must provide the VO any required information during the pre-flight briefing.

7.0 SUAS OPERATIONAL PROCEDURES

7.1 Pre-Flight Approvals

- Area Operations Team Leader Approval

  Verbal approval must be granted by the Area Operations Team Leader or designee for the area where the sUAS will be flown. Zone C Team Leader will approve flights outside of the operating areas.

- POI to Refinery

  Unless operating as part of an emergency or spill response, a "Point of Interest" must be conveyed to refinery employees prior to operating a sUAS within refinery property. The POI must include the time, area, and contact info for the RPIC. See attachment 1 for an example.

  Note: Contact info is provided for general questions prior to flight operations. However, in most cases the RPIC is not directly available for contact during flight operations.

- Photography Authorization

  All operators must comply with the Photographic Guidelines outlined in R-11-001. This requires that contractors need addition approvals if photos or videos will be taken.

- Unit Entry & Permitting

  Personnel must check in with operations per R-30-016 prior to entry to the operating areas. Discussions with the unit operator will determine if any permitting is required. Typically, sUAS operation will not require a permit. If the unit operator has any concerns, the flight may be delayed or cancelled.

  Note: It is the unit operator's responsibility to notify other area operators and shift supervisor of a sUAS flight and to ensure that the Area Operations Team Leader or designee has approved of the flight.

7.2 Pre-Flight Checklist

A pre-flight checklist and mission/flight plan must be completed before flying the sUAS and this process must be overseen by the RPIC. A pre-flight checklist is included as attachment 2 and a mission/flight plan is included in attachment 3.

7.3 Pre-Flight Briefing

The RPIC will provide a pre-flight briefing to anyone involved in the sUAS operation. If the RPIC is the only person involved in the sUAS operation, no pre-flight briefing is required. The pre-flight briefing will review the specific roles & responsibilities of everyone involved. The visual observer, if utilized, will be given specific instructions to maintain visual sight of the aircraft during operation.

7.4 Conduct Flight

An initial hover check must be completed at approximately 15 to 20 feet of altitude to ensure the aircraft is stable and responsive to controls. Once complete, the flight may be conducted in accordance with the guidelines within this document.

7.5 Post-Flight Documentation

Flights must be documented using the mission/flight log which can be found in Attachment 3.

Records associated with the operation of the sUAS including the pre-flight checklists and the mission/flight log must be maintained by owner/controller of the sUAS for a minimum of one year.

8.0 MAINTENANCE AND SOFTWARE UPDATES

Maintenance must occur according to manufacturer's specifications. Records associated with the maintenance of the sUAS will be maintained by owner/controller of the sUAS for the life of the sUAS. A maintenance log is provided in attachment 4.

The sUAS owner/controller is responsible for ensuring that sUAS software is kept up-to-date and that the sUAS is kept in a state of readiness.

The sUAS owner/controller is responsible for ensuring that proper identification/registration of the sUAS is maintained.

Table 2 Refinery Owned sUAS and Associated Owner/Controller

sUAS Name	Owner/Controller	Registration Number
Spill Response 1-P4P (Phantom 4)	Gary Mattson	FA3KWYWWYF
Spill Response 2-M2Z (Mavic 2)	Conor Keeney	FA39MKAF4E

9.0 REVIEW AND REVISION HISTORY

Revision #	Preparer	Date	Description
0	Mark Willand	10/24/2021	Reformatted and Numbered per Document Control Policy, R-63-001.

10.0 ATTACHMENT 1 – POI EXAMPLE

SMALL UNMANNED AIRCRAFT SYSTEM (DRONE) FLIGHT

Date: January 15

Time: 10:00 am

Location: Tank Farm by 9th and E Street

RPIC Contact Name: Conor Keeney

RPIC Contact Phone #: ext. 644

11.0 ATTACHMENT 2 – PRE-FLIGHT CHECKLIST SAMPLE (R-11-003-F01)

Marathon Petroleum Company	REFINERY-WIDE	R-11-003-F01
ANACORTES REFINERY	Pre-Flight Checklist	Page 1 of 1
		REVISION: 0

Mission #:_____

Pre-Mission

☐	Verbal approval from Area Team Leader	☐	Firmware up-to-date	☐	All equipment packed in case
☐	Batteries Charged (controller, drone, tablet)	☐	MicroSD Card formatted	☐	Point of Interest sent out to refinery (unless emergency)

Launch Site Checklist

☐	Verify Weather is OK to Fly		☐	Check for obstacles, potential interference
	Temperature:		☐	Check for nearby human activity/dangerous situations
	Wind Speed:		☐	Check in with Unit Operator
	Wind Direction:		☐	**Complete Mission/Flight Plan**
	Precipitation:		☐	**Pre-Flight Briefing with all who will participate in the mission**

Equipment Checklist

☐	Airframe/Landing Gear Inspected	☐	SD Card Installed	☐	Gimbal/Lens Protector Removed
☐	Propellers Inspected/Attached	☐	Battery Installed		

Pre-Flight Checklist

☐	Aircraft Placed on Launch Pad	☐	Check RC Battery Level
☐	Turn on Remote Controller/Tablet/DJI Pilot App	☐	Check Aircraft Battery Level
☐	Turn on Aircraft	☐	Check Camera Settings
☐	Check the Aircraft Status LEDs	☐	Verify RTH Location and Height

Take-Off Checklist

☐	Check launch site is clear for take off	☐	Make sure the aircraft is stable while hovering
☐	Take off and hover at 15'-20'	☐	Check flight controls, make sure they respond as expected

Post Flight Checklist

☐	Remove Battery from Aircraft	☐	Install Gimbal Guard	☐	Repack all Equipment
☐	**Complete the Flight Log**				

12.0 ATTACHMENT 3 – MISSION PLAN AND FLIGHT LOG SAMPLE (R-11-003-F02)

Marathon Petroleum Company	REFINERY-WIDE	R-11-003-F02
ANACORTES REFINERY	Mission Plan and Flight Log	Page 1 of 1 REVISION: 0

Mission #: _____

Mission/Flight Plan

Pilot Name:		RP Cert. #:	
Address:		Phone:	
Visual Observer(s):			
Location:			
Date:		Aircraft Type/Name:	
Planned Time:		Aircraft Certificate #:	
Estimated Mission Duration:		Mission Type (VFR, IFR):	
Mission Description/Route:			

Mission/Flight Log

Flight 1	Takeoff Loc:	Launch Time:	Flight Notes:
	Landing Loc:	Landing Time:	
		Elapsed Time:	
Flight 2	Takeoff Loc:	Launch Time:	Flight Notes:
	Landing Loc:	Landing Time:	
		Elapsed Time:	
Flight 3	Takeoff Loc:	Launch Time:	Flight Notes:
	Landing Loc:	Landing Time:	
		Elapsed Time:	
Flight 4	Takeoff Loc:	Launch Time:	Flight Notes:
	Landing Loc:	Landing Time:	
		Elapsed Time:	
Mission Notes:			

SAMPLE

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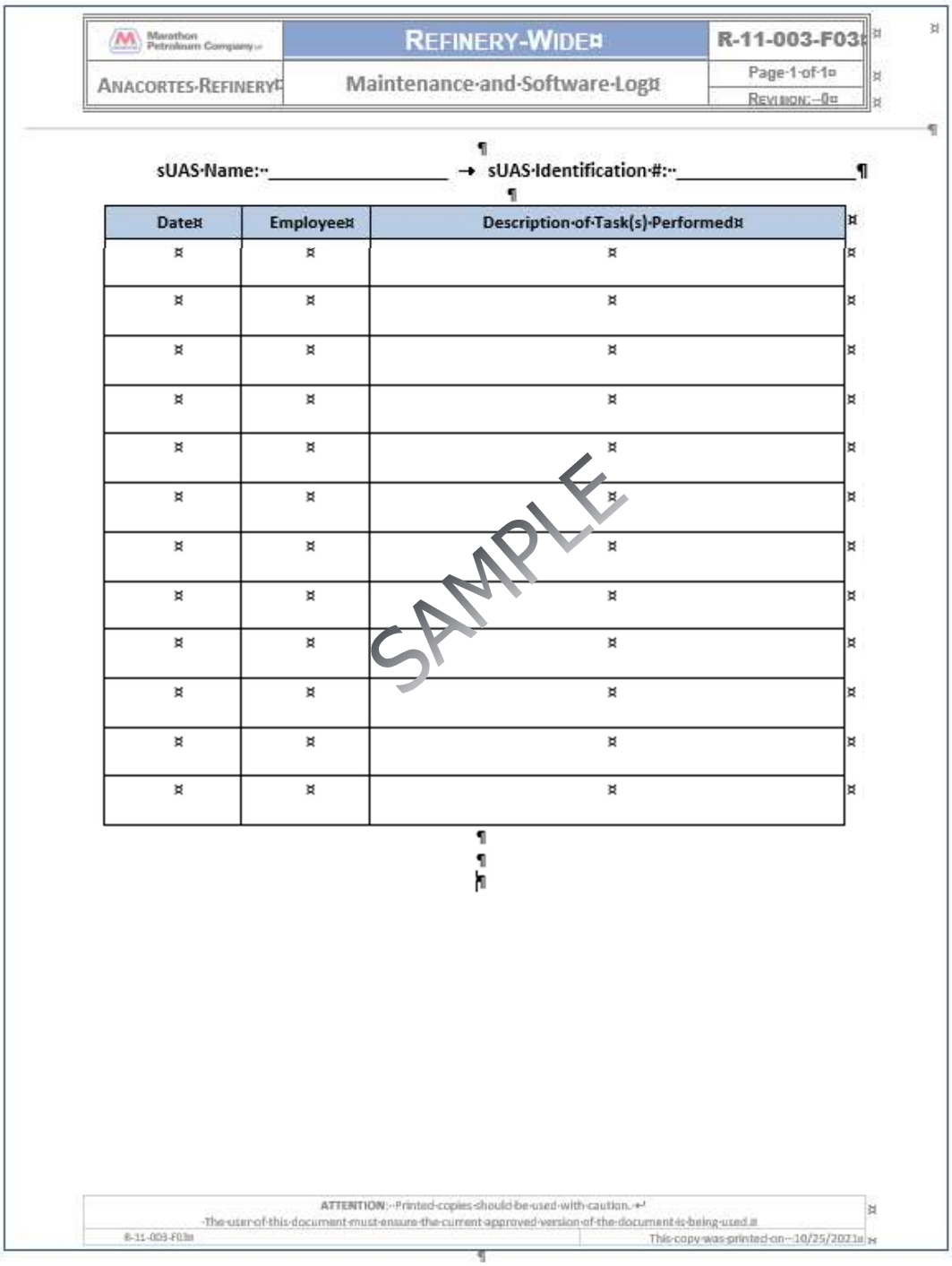
R-11-003-F02 This copy was printed on 10/25/2021

13.0 ATTACHMENT 4 – MAINTENANCE AND SOFTWARE LOG SAMPLE (R-11-003-F03)



Marathon Petroleum Company	REFINERY-WIDE	R-11-003-F03
ANACORTES REFINERY	Maintenance and Software Log	Page 1 of 1
		REVISION: 0

sUAS Name: _____ → sUAS Identification #: _____

Date	Employee	Description of Task(s) Performed

SAMPLE

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