

| Marathon Petroleum Company LP               |   |                                    |                |
|---|---|------------------------------------|----------------|
| Tank Gauging/Sampling –<br>IDLH Atmospheres | Document No.: <b>RSW-SAF-033-DT</b>                           | Approval Date: <b>01-28-20</b>     | Page<br>1 of 4 |
|   | Revision No.: <b>10</b>                                       | Next Revision Date: <b>1-28-25</b> |                |
|   | Document Custodian: <b>Environmental, Safety and Security</b> |                                    |                |

## 1.0 PURPOSE

- 1.1 This procedure provides minimum guidelines for safely gauging tanks that may have an atmosphere near the gauging hatch, which is Immediately, Dangerous to Life or Health (IDLH). This includes all tanks containing sour crude oil, sour products, sour water, and tanks equipped with a nitrogen blanket.

## 2.0 SCOPE

- 2.1 This procedure applies to all persons, including all visitors and contractors, working on Michigan Refining Division property.
- 2.2 This procedure is in accordance with Occupational Safety and Health Administration Final Rules 29 CFR, Part 1910.134 (Respiratory Protection)
- 2.3 This procedure applies to all tanks that are in sour service as well as nitrogen blanketed tanks. This covers tanks in the following services:
- Crude Oil
  - Sour Gas Oil
  - Sour Naphtha
  - Sour Distillate
  - Asphalt
  - Refinery Slop
  - Sour Water
  - Coker Distillate
  - Coker Naphtha
- 2.4 This procedure also applies when persons go onto the roof of a floating roof tank that is in any of the services described above, for reasons other than tank gauging.

## 3.0 PROCEDURE

### 3.1 Personnel

- 3.1.1 Gauging tanks that may have an IDLH atmosphere near the gauging hatch requires two people: a gauger and an attendant.
- 3.1.2 The attendant must keep the gauger in view at all times.
- 3.1.3 The attendant must maintain effective continuous communication with the gauger and with other plant personnel in case of an emergency.

**NOTE:** An attendant must never attempt a rescue without back up and without notifying other plant personnel.

**NOTE:** Attendant must leave the SCBA on and hooked up until gauger returns to top platform.

### 3.2 External Floating Roof Tanks with Top Gauge Tube, Cone Roof and Internal Floating Roof Tanks - Hydrogen Sulfide (H<sub>2</sub>S)

- 3.2.1 The attendant remains at ground level and continuously observes the gauger. An SCBA

must be available in case of an emergency.

- 3.2.2 The gauger puts on a SCBA at ground level and proceeds up the stairway and dons mask at top platform before going to the gauge hatch.

### 3.3 Nitrogen Blanketed Tanks

- 3.3.1 Reference appropriate Operations procedure for Nitrogen Blanketed Tanks.
- 3.3.2 Turn off the Nitrogen first.
- 3.3.3 The attendant remains at ground level and continuously observes the gauger. An SCBA must be available in case of an emergency.
- 3.3.4 The gauger puts on a SCBA at ground level, dons mask, and proceeds up the stairway to the gauge hatch. The gauger must continue to wear the SCBA while gauging the tank and descending the stairway.

## 4.0 DEFINITIONS

- 4.1 Attendant - Maintains continuous communication with personnel performing work in a potentially IDLH atmosphere and will perform necessary action in the event of an emergency.
- 4.2 Gauger - Performs necessary work to gauge tank.
- 4.3 IDLH - Immediately dangerous to life or health concentrations (IDLHs) represent the maximum concentration from which, in the event of respirator failure, one could escape within 30 minutes without a respirator and without experiencing any escape-impairing (e.g., severe eye irritation) or irreversible health effects.

## 5.0 REFERENCES

5.1 OSHA's 29 CFR, Part 1910.134 (Respiratory Protection)

## 6.0 ATTACHMENTS

6.1 Attachment A: [IDLH Hazard Tanks](#)

## 7.0 REVISION HISTORY

| Revision number | Description of change  | Written by   | Checked by                            | Effective date |
|-----------------|--|--------------|---------------------------------------|----------------|
| 6               | Updated Document Number  | Emily Dvorak | Luke Mazur                            | 1/5/2010       |
| 7               | 3 Year review, updated Appendix A  | Jeff Wolfe   | Luke Mazur                            | 12/12/2011     |
| 8               | Added Complex 6  | S. Windom    | Safety Steering Committee             | 12/21/12       |
| 9               | 5 year review, linked CX 5 Fresh Air list, Updated Appendix A per Operations guidance, Added 3.4.1 & 3.4.2   | S. Kumpar    | Safety/Operations<br>(Sparks, Taylor) | 1/7/2015       |
| 10              | Fixed Complex 5 Mitigation List, Removed section on External Floating Roof Tanks with No Gauge Tube. Removed Tank 120 and added Tank 52 for sour water in Attachment A | J. Taggart   | A. Morales                            | 1/28/2020      |

Attachment A

**IDLH HAZARD TANKS**

*Tanks can change service so double check the [Complex 5 Mitigation List!](#)*

| <b><u>Primary Hazard - H<sub>2</sub>S</u></b> | <b><u>Tank Number</u></b>   |
|---|---|
| Crude Oil                                     | 112<br>113<br>114<br>115<br>129<br>130  |
| Flux Tanks                                    | 30<br>31<br>59<br>60<br>133<br>134<br>314<br>315<br>316<br>317<br>318<br>319<br>320 |
| Crude Unit Sour Gas Oil                       | 50, 105,106,107   |
| Crude Unit Naphtha                            | 101   |
| Crude Plant Slop                              | 23 and/or 508   |
| Sour Water Storage                            | 51, 52, 216   |
| Coker Naphtha, Coker Distillate and LCO       | 104,  |
| Crude Unit Sour Distillate                    | 103   |
| Wash Tanks                                    | 63, 324   |

**Primary Hazard - N<sub>2</sub> Blanket**

|                         |                 |
|-------------------------|-----------------|
| Pretreated Naphtha      | 19, 57          |
| Combined Distillate     | 103, 104        |
| Sour Kerosene           | 24, 27          |
| Sour Gasoil             | 105, 106, 107   |
| Crude Unit Naphtha      | 101             |
| Crude Unit Sour Gas Oil | 50, 105,106,107 |