 Marathon Petroleum Company LP		REFINERY-WIDE		R-11-031
ANACORTES REFINERY		Electrical Storm Precautions		Page 1 of 5
RESPONSIBLE DEPT.	CONTENT CUSTODIAN	APPROVED BY	LEGACY NUMBER:	
HES&S	Andrew Johnson	Shannon Logan	SR-58	
REVISION APPROVAL DATE: 11/21/2023		NEXT REVIEW DATE: 11/21/2028		MOC: N
				REVISION: 1

Contents

1.0 INTRODUCTION.....2 1.1 Purpose.....2 1.2 Scope.....2 2.0 DEFINITIONS2 3.0 REFERENCES.....2 4.0 RESOURCES2	5.0 PROCEDURE.....2 6.0 INITIAL DETECTION AND NOTIFICATION PROTOCOL.....3 7.0 TRAINING5 8.0 REVIEW AND REVISION HISTORY5
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

List of Tables

Table 1	Definitions	2
---------	-------------------	---

 Marathon Petroleum Company LP	REFINERY-WIDE	R-11-031
ANACORTES REFINERY	Electrical Storm Precautions	Page 2 of 5

1.0 INTRODUCTION

1.1 Purpose

This procedure is to define requirements for all Marathon Anacortes Refinery employees, contractors, and visitors to follow to ensure their safety when working during an electrical storm.

1.2 Scope

This document contains electrical storm safety precautions to detect and reduce risks of personnel injury by lightning storms during normal operations, construction, and turnaround work.

2.0 DEFINITIONS

The following definitions are applicable to this procedure.

Table 1 Definitions

Term	Description
Essential Work	Essential Work is outdoor work that must occur to prevent an imminent process safety event, critical maintenance/turnaround work that poses a greater personal safety or process safety risk by terminating, or to complete critical plant functions that pose a greater personal safety or process safety risk by terminating
Non-Essential Work	Is any work without Overhead Protection that can be delayed without creating the hazard of imminent personnel or process safety event.
Overhead Protection	Overhead Protection is any fixed structure with proper grounding.
Protective Shelter	Protective Shelter is any substantial structure such as a zone/maintenance shop, operators' shelter, BRM, work trailer or fully enclosed metal vehicles (windows closed).
Protective Space	Protective Space is any Protective Shelter or location with adequate Overhead Protection to provide protection from lightning.

3.0 REFERENCES

- NFPA - 780, Standard for the Installation of Lightning Protection Systems
- NLSI - Recommendations from National Lightning Safety Institute
- RSP-1706-000, Lightning Safety

4.0 RESOURCES

- Storm Geo Server Weather Early Warning Detection System

5.0 PROCEDURE

When severe weather is expected in the area, Storm Geo Server Weather Early Warning Detection System will notify our Main Gate Security to alert them of storm conditions that may impact the facility along with forecasted time durations.

ATTENTION: Printed copies should be used with caution.	
The user of this document must ensure the current approved version of the document is being used.	
R-11-031.docx	This copy was printed on 11/7/2024

 Marathon Petroleum Company LP	REFINERY-WIDE	R-11-031
ANACORTES REFINERY	Electrical Storm Precautions	Page 3 of 5

- Examples of Essential Work that may continue during a Lightning Warning
 - Responding to a process unit upset with potential of PSE consequences,
 - Completing a Hot Tap, stopple job, or clamping job already in progress,
 - Responding to a plant emergency event,
 - Work activities required to safe the unit to prevent eminent PSE consequences,
 - Ground-level movement to or between protective shelters (e.g. building to building, building to vehicle), and
 - Evacuation
- Exceptions
 - The Operations Shift Foreman/Supervisor and Maintenance/Turnaround Coordinator in cooperation with the Safety Supervisor are responsible for determining work activities, not in Protective Spaces, meet the definition of "Essential Work" that may continue during a lightning warning.

6.0 INITIAL DETECTION AND NOTIFICATION PROTOCOL

When lightning is detected at a range of six miles from the site, a notification is provided to the site Security Department from the Early Warning Detection Service. Security shall notify remaining plant personnel via an announcement over the facility radio channels, annunciation system, etc. An example of such announcement is below:

"Attention all personnel, lightning has been detected in the area. All Non-Essential Work without overhead protection shall cease until further notice."

- Examples of work that is allowed to continue during a lightning warning and work that is not allowed and must cease:
 - Allowed
 - Work on pumps, compressors, equipment with overhead protection.
 - Removal of a blind from a scaffold that is below the pipe rack.
 - Work on the structures that are not on the upper most level.
 - Work in an Analyzer Building.
 - Loading activities under the Truck Loading Rack with covered areas and overhead protection (i.e. LPG, Asphalt, Iso)
 - Travel to and from work location.
 - Not Allowed
 - Load Work on the upper most level of platforms or structures.
 - Painting or Stack Testing on a heater stack above the pipe rack.
 - Tank entry or work on the roof of a tank.
 - Pulling wire in the cable tray of the top level in the pipe rack.
 - Crane/picker operations shall be stopped and booms lowered to less than thirty (30) feet above grade when possible. If a lightning warning is made during a lift, it is acceptable to continue the lift until the load is in a safe position.



- Elevated loading activities on loading racks where no overhead protection is provided (i.e. Ethanol).
- Work in open areas with no overhead protection.

Employees may resume normal activities after Security Control announces that the lightning warning has been terminated. Example below:

"Attention all personnel. No lightning is detected in the area. All personnel may resume normal work activities."

The following Guidance Drawing is from RSP-1706-000. (For the most up-to-date, working copy of this section see: [MPC Connect; Refining Standards and Specifications; Standards and Specifications Library](#))

Marathon Petroleum Company LP	Refining Standard Practice	
Lightning Safety	Doc Number: RSP-1706-000	Rev No: 1

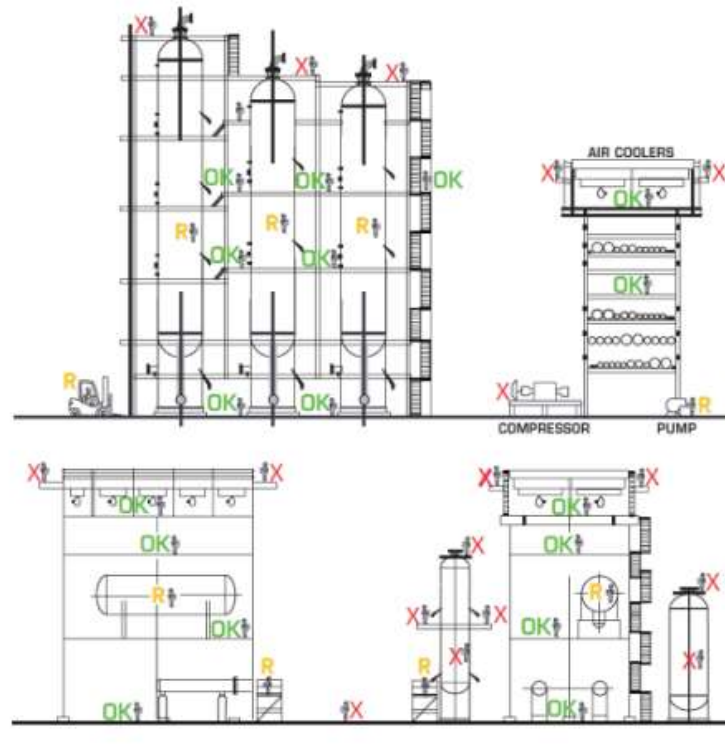
Appendix B: Lightning Safety Guidance Drawing

B.1 Drawing

The following drawings are provided as guidance for approved work during a lightning alert. Sites should develop site specific drawing or plot plans of safe locations based on this appendix.

X	Work that shall be stopped in a Lightning Warning if not deemed Essential Work.
R	<ul style="list-style-type: none"> • Review for adequate Overhead Protection for hole watch and emergency responders for confined space to continue. • Review equipment manufacture requirements necessary before proceeding.
OK	Work allowed to continue in a Lightning Warning.

Note: Overhead Protection for confined space attendant and emergency responders shall be confirmed if work is allowed within a confined space during a lightning alert.



ATTENTION: Printed copies should be used with caution.

The user of this document must ensure the current approved version of the document is being used.

 Marathon Petroleum Company LP	REFINERY-WIDE	R-11-031
ANACORTES REFINERY	Electrical Storm Precautions	Page 5 of 5

7.0 TRAINING

All employees shall receive procedure training upon initial hire.

8.0 REVIEW AND REVISION HISTORY

Revision #	Preparer	Date	Description
0	Mark Willand	12/3/2021	Reformatted and Numbered per Document Control Policy, R-63-001.
1	Jeff Wood	11/21/2023	Conducted a line by line Gap Assessment of R-11-031 to RSP-1706-000