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1.0 INTRODUCTION

1.1 Purpose

The purpose of the SWI is to establish Life Critical Safety Rules and employee and contractor responsibility and accountability for complying with the Life Critical Safety for the Salt Lake City Refinery

1.2 Scope

The scope of this SWI is to establish requirements of the Life Critical Safety Rules Program and the accountability for not following these rules.

It is intended to ensure that employees and contractors are held consistently accountable for compliance with the Life Critical Rules including the following:

a) **Safe Work Permit** – Obtaining and working under a valid Safe Work Permit when one is required.

b) **Fall Protection** – Protect themselves from a fall from elevated locations.

c) **Confined Space Entry** – Entering a confined space only after receiving a valid Safe Work Permit and following all requirements of the Safe Work Permit while working in and around the confined space.

d) **Energy Isolation** – Complying with the site's Control of Hazardous Energy policy by ensuring that all energy sources have been identified, isolated, de-energized, and locked out and tagged when required prior to opening equipment or performing maintenance activities.

e) **Hot Work** – Conducting Hot Work only after a Safe Work Permit has been completed, the area has been gas tested and all fire prevention requirements of the Safe Work Permit have been implemented.

f) **Process Safety** – Never bypass critical process safety equipment without following the established procedure and obtaining the proper authorization.

g) **Alky Unit Personal Protective Equipment** – Strict adherence to PPE requirements is required to prevent serious injuries and illnesses as a result of exposure to the acid catalysts used in alky units.

h) **Cranes and Lifting** – Comply with refinery crane and rigging safe work practices.

i) **Electrical Safe Work Practices** – Strict adherence to Electrical Safe Work Practices in RSP-1162-000, PPE requirements, and required Work Permits when working on or operating energized electrical equipment.

1.3 References

1.3.1 RSP-1700-000, Life Critical Safety Rules and Accountability

1.3.2 RSP-1162-000, Electrical Safe Work Practices

1.3.3 HS-SWI-011 Control of Hazardous Energy

1.3.4 HS-SWI-001 Safe Work Permit

1.3.5 HS-SWI-033 Fall Protection

1.3.6 HS-SWI-036 Confined Space Entry Authorization

1.3.7 HS-SWI-024 Hot Work Authorization

1.3.8 HS-SWI-039 Safe Lift Instruction

1.3.9 HS-SWI-040 Safe Rigging

2.0 DEFINITIONS

Table 1 Terms and Definitions

Term	Definition
Deliberate	Done with or marked by full consciousness of the nature and effects; intentional.
Life Critical	Failure to comply or malfunction of equipment may result in: a. Death or serious injury to people b. Loss or severe damage to equipment, or c. Environmental harm
Willful	Said or done on purpose; deliberate.

3.0 PRACTICES

3.1 Safe Work Permit

3.1.1 Safe Work Permits serve as a critical tool at the refinery to ensure that work is well planned, and the hazards of the work have been identified.

3.1.2 This SWI does not change or supersede in any way the site's Safe Work Permit SWI.

3.1.3 This Life Critical SWI expects the following from affected employees and contractors and therefore refinery programs and systems are to be modified to emphasize them:

3.1.3.1 No employee or contractor will perform work in the refinery that requires a Safe Work Permit without first obtaining a Safe Work Permit from the Marathon employee or designee having responsibility for the area where the work will be performed.

3.1.3.2 Affected employee and contractor representative will attend the Joint Job Site Visit (JJSV) and will then brief their employees on the content of the JJSV.

3.1.3.3 Employees and contractors are expected to comply with all requirements specified on the Safe Work Permit in effect for that job.

3.2 Fall Protection

3.2.1 Falls from even short distances can cause serious injuries. All employees and contractors must use an approved form of fall protection when exposed to the following situations:

3.2.1.1 Performing maintenance or construction activities (including truck unloading) 6 feet or higher and are not on a designed work surface or platform, or

3.2.1.2 On elevated working surfaces (e.g., unit platform, loading dock, etc.) 4 or more feet above grade and not protected with guardrails or other equally effective systems, or

3.2.1.3 Within 6 feet of an unguarded edge, or

3.2.1.4 On a yellow tag scaffold which requires fall protection.

3.2.2 Approved forms of fall protection include, but are not limited to:

3.2.3.1 OSHA compliant guard railing,

3.2.3.2 Full body hardness with lanyard and approved anchor point,

3.2.3.3 Horizontal lifeline, and

3.2.3.4 Retractable lifeline.

3.2.3 Each person working in boom type personnel lifts must wear a full body harness and be anchored to the approved anchor location at all times.

3.2.4 Employees and contractors shall not exit an elevated boom or scissor lift, except where elevated work areas are otherwise inaccessible or hazardous to reach. Personnel may only exit the platform when it is the safest and last practical alternative. Exiting the platform must only be executed with the knowledge and consent of the Safe Work Permit writer. When personnel exit to unguarded work areas, a fall protection plan must be in place and personal fall arrest must be used.

3.3 Confined Space Entry

3.3.1 The refinery has established a comprehensive Confined Space Entry program. Strict adherence to the site's Confined Space Entry program is required at all times.

3.3.2 Employees and contractors working in and around confined spaces are expected to comply with the following:

3.3.2.1 Obtain a Safe Work Permit for entry into any space defined as a confined space in the Confined Space Entry SWI.

3.3.2.2 Ensure that all hazards of the confined space have been assessed and the Safe Work Permit has been signed by an MPC Entry Supervisor.

3.3.2.3 Comply with all the requirements specified on the Safe Work Permit before entering any confined space.

3.3.2.4 Ensure that the air in the confined space has been checked with a fully calibrated air monitoring instrument appropriate for the expected hazardous atmospheres inside the confined space.

3.3.2.5 Logon to the confined space log and receive approval from the Confined Space Attendant prior to entering the confined space.

3.3.2.6 Notify the Confined Space Attendant and log-out of the confined space when exiting.

3.4 Energy Isolation (LOTO)

3.4.1 Before performing invasive work on any piece of equipment in the refinery, it is the responsibility of the owner of the equipment to make sure that the equipment has been isolated from all energy sources.

3.4.2 The refinery has established a comprehensive Control of Hazardous Energy policy. Strict adherence to the Control of Hazardous Energy policy is required for all work that would expose employees and/ or contractors to hazardous energy.

3.4.3 Employees and contractors who may be exposed to hazardous energy when performing invasive work on equipment are expected to comply with the following:

3.4.3.1 Obtain or complete a Safe Work Permit once the affected equipment has been identified and prior to beginning invasive work.

3.4.3.2 Develop and/ or (depending on your role in the energy isolation process) the isolation/ blind list to ensure that all energy sources and LOTO locations have been identified.

3.4.3.3 Participate in the Joint Job Site Visit (JJSV) or receive a briefing by the equipment owner or your JJSV representative and verify as necessary all energy isolation locations have been locked and/ or tagged as required by the Control of Hazardous Energy policy.

3.4.3.4 Place a personal lock on the appropriate lock out device (e.g., lock box) or follow equivalent energy isolation controls per the Control of Hazardous Energy SWI (e.g., PAE) prior to beginning work.

3.4.3.5 Sign the isolation log or otherwise document that you are actively participating in the LOTO of the affected equipment.

3.4.3.6 Remove your personal lock or sign off the isolation when the job is complete, or you are complete with your portion of the job.

3.4.3.7 Equipment owners must ensure that all keys for owner locks are inside the lockout box.

3.4.3.8 The equipment owner's lock must be the first lock on and the last lock off the lockout box.

3.4.3.9 The equipment owner must never remove a personal lock of an affected employee until it has been verified that, that person

is clear of the equipment and no longer exposed to hazardous energy as required per the Control of Hazardous Energy SWI.

3.5 Hot Work

3.5.1 Before performing any Hot Work in the refinery, a Safe Work Permit must be completed, if required.

3.5.2 The site has established a comprehensive Hot Work policy. Strict adherence to the Hot Work SWI policy is required for all work that could be the source of ignition for an explosion or fire.

3.5.3 Employees and contractors performing Hot Work are expected to comply with the following:

3.5.3.1 Obtain or complete a Safe Work Permit for all activities identified as hot work as required per the site's Hot Work and Safe Work Permit SWIs.

3.5.3.2 All hot work conducted by the Owning Department shall be authorized with a Safe Work Permit, as required by the Safe Work Permit SWI.

3.5.3.3 Ensure that the air in the area where the hot work will be conducted has been checked for oxygen content and LEL with a calibrated atmospheric monitoring instrument.

3.5.3.4 Ensure that all hazards of the hot work have been assessed.

3.5.3.5 Comply with all of the fire prevention requirements specified on the Safe Work Permit before beginning any hot work.

3.5.3.6 Ensure that all open flame or spark producing hot work has a dedicated person serving as a "fire watch" and is equipped with the appropriate firefighting equipment.

3.5.3.7 Ensure that anything produced during the hot work that could smolder (e.g., slag, hot welding rods, etc.) has been extinguished and will not pose a hazard when personnel leave the area.

3.6 Bypassing Safety Devices

3.6.1 The refinery has been designed to operate safely within a specified operating envelope. To prevent potentially catastrophic events, the process units have been equipped with various types of safety devices to monitor critical process variables, monitor atmospheric conditions, provide pressure relief, safely shut-down process equipment during upset or abnormal operations, and mitigate an emergency event.

3.6.2 Employees and contractors work on and around process equipment are expected to always operate with these safety devices enabled unless an approved bypassing procedure or Management of Change is used.

3.7 Alky Unit Personal Protective Equipment

3.7.1 The Alkylation Unit involves inherent risk due to the properties of sulfuric acid. To ensure any risk of personnel exposure is mitigated, strict

adherence to the PPE requirements for all work activities performed in the Alkylation Unit is required.

3.7.2 Employees and contractors performing work activities in the Alkylation Unit are expected to comply with the following:

3.7.3.1 Operators shall select and utilize the correct PPE classification based on the specific operator job task being performed.

3.7.3.2 Employees and contractors must utilize the correct PPE classification as specified on the Safe Work Permit.

3.8 Cranes and Lifting

3.8.1 The refinery has established a comprehensive crane and lifting policy. To ensure that personnel are not injured, and process equipment is not damaged during crane and lifting operations, strict adherence to the refinery crane procedures is required.

3.8.2 Employees and contractors performing crane and lifting operations are expected to comply with the following:

3.8.2.1 Fully complete all applicable pre-lift approvals and lifting plans per the Safe Lift Instruction SWI.

3.8.2.2 Only perform lifting activities (crane operation, flagging, etc.) for which they are fully qualified to perform.

3.8.2.3 Ensure that no lifting operation encroaches the minimum required clearance from live electrical lines.

3.8.2.4 Ensure that no crane, lifting device, or rigging is loaded beyond its rated capacity.

3.9 Electrical Safe Work Practices

3.9.1 Electricity is recognized as a serious workplace hazard in the refinery. Marathon's Energized Electrical Safe Work Practices, RSP-1162-000, are designed to protect employees exposed to dangers such as electric shock, arc flash, arc blast, fires, and explosions.

3.9.2 The Electrical Safe Work Practice RSP shall be followed at the refinery. Strict adherence to the RSP is required for all work including operating electrical equipment, diagnostic tests, maintenance repairs, modifications, construction, or new installations when electrical circuit parts are energized.

3.9.3 Employees and contractors performing work are expected to comply with the following RSP-1162-000 requirements:

3.9.3.1 The installation or repair of any electrical equipment shall be performed by a qualified person only.

3.9.3.2 Obtain or complete a Safe Work Permit and/ or Energized Electrical Work Permit as required.

3.9.3.3 Adhere to and follow the Energized Electrical Work Matrices including shock protection PPE requirements in Appendix B of RSP-1162-000.

3.9.3.4 Adhere to and follow Approach Distances to energized electrical equipment in Appendix C of RSP-1162-000.

3.9.3.5 Adhere to and follow Arc Flash PPE requirements in Appendix D of RSP-1162-000.

3.9.3.6 Complete and use the Electrical Switching Procedure Form in Appendix E of RSP-1162-000 as required per Section 7.2 of the RSP.

3.9.3.7 Obtain and complete an Energized Electrical Work Permit in Appendix G of RSP-1162-000 as required per Section 7.0 of the RSP.

3.9.3.8 Complete the Temporary Power Approval Checklist in Appendix F of RSP-1162-000 as required per Section 6.0 of the RSP.

3.9.4 Employees and contractors shall understand all electrical labeling and adhere to PPE requirements. Arc Flash labels will include the nominal system voltage, arc flash boundary, and at least one of the following:

3.9.4.1 Available incident energy and corresponding working distance,

3.9.4.2 Minimum arc rating of clothing,

3.9.4.3 Required level of PPE, or

3.9.4.4 Highest Arc Flash PPE Category for the equipment.

4.0 LIFE CRITICAL DISCIPLINARY & ACCOUNTABILITY REQUIREMENTS

4.1 Employee Disciplinary Procedures

4.1.1 Employees are expected to follow all the refinery's safety rules while working in the refinery.

4.1.2 Because of the potential consequences of not complying with the Life Critical Safety Rules, Corporate Refining and the Senior Vice President of Refining have placed special emphasis on these Life Critical Safety Rules and will hold employees to a high standard of performance.

4.1.3.1 Failure to comply with the Life Critical Safety Rules may result in discipline, up to and including termination for employees.

4.1.3.2 Application of discipline will be in compliance with union contracts, local work rules, or local agreements.

4.1.3.3 Since non-compliance with the Life Critical Safety Rules can have severe consequences, steps in the refinery's disciplinary program may be skipped.

4.1.3.4 The Life Critical Rules Accountability Flowchart (Appendix A) will be used as a guide for discipline decisions.

4.1.3.5 Training and communications must be completed to ensure understanding and acceptance of this emphasis by all employees.

4.2 Contractor Disciplinary Procedures

4.2.1 Contractors are expected to follow all the refinery's safety rules while working in the refinery.

4.2.2 Because of the potential consequences of not complying with the Life Critical Safety Rules, Corporate Refining and the Senior Vice President of Refining have placed special emphasis on these Life Critical Safety Rules and will hold contractors to a high standard of performance.

4.2.2.1 Failure to comply with the Life Critical Safety Rules may result in permanent removal of the contract employee from the refinery.

4.2.2.2 Training and communications must be completed to ensure understanding and acceptance of this emphasis by all contractor and subcontractor employees.

4.3 Employee Direct Supervisor Accountability for Life Critical Safety Rules

4.3.1 Supervisors are expected to ensure that employees follow all of the refinery's safety rules while working in the refinery.

4.3.2 Because of the potential consequences of not complying with the Life Critical Safety Rules, Corporate Refining and the Senior Vice President of Refining have placed special emphasis on these Life Critical Safety Rules and will hold Supervisor to a high standard of performance.

4.3.3 Any supervisor witnessing and not taking immediate action to correct a deviation or not reporting the violation of a Life Critical Safety Rule to their Supervisor or Manager will also be subject to the refinery's discipline program and may be reflected in their performance review.

5.0 LIFE CRITICAL SAFETY RULES & BBS PROGRAMS

5.1 Conflict Between BBS and Life Critical Safety Rules

5.1.1 The BBS (STEPP) process in place at the refinery is critical to the success of the safety performance and safety culture at the plant.

5.1.2 This Life Critical Safety Rules & Accountability SWI is not to circumvent the STEPP process.

5.1.3 Peer-to-peer observations conducted under the auspices of the STEPP program are not subject to the Life Critical accountability standard.

5.1.3.1 Any activity in a peer-to-peer observation that involves an imminent hazard to the employee or contractor being observed must be stopped to ensure the safety of all persons involved.

6.0 REVIEW AND REVISION HISTORY

Table 2 Revision History

Revision	Date	Change Author	Reason for Change
0	09/09/2020	Sam Streacker	Original Issue

7.0 APPENDIX A: ACCOUNTABILITY FLOWCHART