HSS-201 Safe Work Permit

Overview

Purpose

The purpose of this standing instruction is to develop and implement a Safe Work Permit program for the Marathon Petroleum Company LP (MPC) Los Angeles Refinery (LAR).

Scope

The scope of this standard practice applies to all LAR employees and contractors to ensure:

(a) that all work conditions and equipment are safe, and will remain so while work is being performed, and

(b) compliance with all applicable standards and regulations.

Note: The Los Angeles Refinery includes Carson Operations, Wilmington Operations, Watson Cogen, Blue Barn, Calciner, and Sulfur Recovery Plant.

Records Retention

Printed copies of this document should not be retained more than 12 months. Any revision to this document will be retained indefinitely.

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1.0 References

1.1 Refining References

The table below lists the Refining references used within or relate this document.

Number	Description
HSS-008	Blinding and Energy Isolation
HSS-630	Hot Work Safety
HSS-215	Confined Space Entry
HSS-205	Safe Entry into Inert Atmospheres Overview
RSP-1121-010	Blinding and Energy Isolation
RSP-1121-020	Safe Entry into Inert Atmospheres
RSP-1127-000	Confined Space Entry
RSP-1715-000	Hot Work
RSP-1128-000	Safe Work Permit

1.2 Industry References

The table below lists the industry references used within or relate to this document.

Number	Description
American Society of Safety Engineers (ASSE)	
ASSE Z117.1	Safety Requirements for Confined Spaces
American Petroleum Institute (API)	
API RP 2009	Safe Welding, Cutting, and Other Hot Work Practices in the Petroleum and Petrochemical Industries
API RP 2016	Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks
API RP 2201	Safe Hot Tapping Practices in the Petroleum & Petrochemical Industries Petroleum & Petrochemical Industries
API STD 2015	Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks
API STD 2217A	Guidelines for Safe Work in Inert Confined Spaces in the Petroleum Industry
National Fire Protection Association (NFPA)	
NFPA 1500	Standard on Fire Department Occupational Safety and Health Program

1.3 Regulatory References

The table below lists the regulatory references used within or relate to this document.

Number	Description
Title 8, California Code of Regulations, Section 5157	Permit-Required Confined Spaces
Title 8, California Code of Regulations, Section 5189.1	Process Safety Management for Petroleum Refineries

Title 8, California Code of Regulations, Section 6777	Hot Work Procedures and Permits
29 CFR 1910.119	Process Safety Management
29 CFR 1910.146	Permit Required Confined Spaces
29 CFR 1910.147	Control of Hazardous Energy (LOTO)
29 CFR 1910.1200	Appendix E, Hazard Communication Standard

1.4 Terms

For definitions of terms used in this document, see Appendix A: Terms and Definitions.

2.0 Roles and Responsibilities

2.1 Roles and Responsibilities

The table below lists the roles and responsibilities in this document.

Roles	Responsibilities
Owning Department Supervision	**(a)** Ensures that management processes are in place to carry out the appropriate functions of the Safe Work Permit system. **(b)** Ensures that all persons within their areas of responsibility have received the appropriate Safe Work Permit training. **(c)** Ensures that Safe Work Permits are being filled out completely and correctly. **(d)** Ensures that quality Joint Job Site Visits are being performed by routinely being present in the field to provide assistance and coaching. **(e)** Ensures that equipment is properly prepared to turn over to Maintenance. Ensures that equipment is prepared in advance of task execution, per the schedule, utilizing the Control of Hazardous Energy Standing Instruction (HSS-008). **(f)** Approves precautions to implement when completing cold work >10% LEL and work on equipment that cannot be adequately de-pressured or it cannot be verified as de-pressured. **(g)** Participate in Joint Job Site Visits /review when requested by Planner or when unsure about the job plan. **(h)** Review tasks and associated documentation that require an Owning Department Supervisor's co-signature and sign the work permit prior to permit release by Permit Writer/ Owning Department Representative. **(i)** Co-signs all applicable initial confined space entry permits. (Co-signature is only required the first time a space is entered.) **(j)** On a daily basis, retrieves, audits, and stores the Safe Work Permit, JSA, associated Form(s) for any tasks performed that day. **(k)** On a weekly basis, transfers all closed out Safe Work Permit related documents to the Safety Department.

Owning Department Personnel/ Owning Department Representative / Permit Writer	**(a)** Participates in the Joint Job Site Visit, as required. **(b)** Ensures that the equipment for release to the Servicing Group Representative(s) and the environment surrounding the job are in safe condition. **(c)** Conducts atmospheric testing at the job site area, as required. **(d)** Identifies and communicates any remaining hazards associated with the work and the actions required to safely work with or mitigate the hazards. **(e)** Ensures that the permit recipients fully understand the requirements of the Safe Work Permit and takes appropriate action. **(f)** Review the JSA for completeness and alignment with the SWP . **(g)** Notifies their Supervisor with any questions or concerns regarding the job or the Safe Work Permit. **(h)** After an initial entry, if any conditions change (e.g., any isolation change; elevated H2S, LEL, PID, or CO gas test readings; change of atmospheres; etc.), the Owning Department must contact the co-signers to reconvene and issue a new initial entry permit. **(i)** Ensures that work proceeds safely within the terms of the Safe Work Permit relevant to their assigned responsibilities. **(j)** Following initial issuance of the SWP, periodically (***at least once per shift***) visits permitted job site(s) and verifies work being performed is in compliance with Safe Work Permit requirements. **(k)** Ensures the correct issuance and cancellation of Safe Work Permits in the area and/or equipment under their control. **(l)** Extends Safe Work Permits, as appropriate. **(m)** Transfers responsibility for the Safe Work Permit when there is a change in Permit Writers or shifts. **(n)** Cancels the Safe Work Permit if the conditions of the permit are not being met by the Servicing Group or area/equipment conditions require a work stoppage. **(o)** Ensures availability for consultation during maintenance work. **(p)** Informs the Servicing Group Representative(s) of any changes in conditions which would affect the job, or any operating emergency. **(q)** Ensure Affected Area representative is notified when Hot Work task or any other task that may impact adjacent operating areas falls in buffer zone. **(r)** Ensures a post job site visit is completed with the Servicing Group and validates work completion and housekeeping. **(s)** After close out of a permitted task, staples the two copies of the Safe Work Permit, two copies of the JSA, and associated Form(s) and places the documents in the daily Safe Work Permit folder. Ensures that the daily Safe Work Permit folder is transferred to Owning Department Supervision. **(t)** For jobs that include confined space entry tasks, staples the two copies of the Safe Work Permit, two copies of the JSA, and associated Form(s) and places the documents in the designated folder for that Confined Space Entry work throughout the entirety of that job. Upon completion of the Confined Space Entry task, ensures that the designated folder is placed in the daily Safe Work Permit folder which is transferred to Owning Department Supervision.

2.1 Roles and Responsibilities (continued)

Roles	Responsibilities
MPC Maintenance Foreman or Designee	**(a)** Ensures the Servicing Group carries out their specific tasks. **(b)** Ensures that quality Joint Job Site Visits are being performed by routinely being present in the field to provide assistance and coaching. **(c)** Radio will be the required and primary method of communication between the Owning Department and Servicing Group. **(d)** Ensures that all work carried out by personnel under their control is covered by a valid Safe Work Permit, when required. **(e)** Ensures that work proceeds safely within the terms of the Safe Work Permit. **(f)** Ensures the Servicing Group fully understand the requirements of the Safe Work Permit. **(g)** Understands the limitations and restrictions of the Safe Work Permit in order that the work may proceed safely. **(h)** Prior to performing work, ensures that all members of the Servicing Group adhere to all safe working practices and are fully familiar with the limitations/restrictions described on the Safe Work Permit. **(i)** Approves precautions to implement when completing cold work >10% LEL and work on equipment that cannot be adequately de-pressured or it cannot be verified as de-pressured. **(j)** Ensures that all precautions specified on the Safe Work Permit are implemented at the work site and all members of the Servicing Group comply with the requirements of the Safe Work Permit. **(k)** Ensures that the Owning Department approves any changes to work conditions, work content, or work scope. **(l)** Co-signs all applicable initial confined space entry permits. (Note: Co-signature is only required the first time a space is entered.)
MPC Contractor Coordinator	**(a)** Ensures participation by the Owning Department and Servicing Group Representatives in the Joint Job Site Visit. **(b)** Ensures that contractors comply with all MPC's refinery safety rules. **(c)** Provides an ongoing communication between contractors and Refining personnel. **(d)** Ensures that all members of the Servicing Group adhere to all safe working practices and are fully familiar with the limitations/restrictions described on the Safe Work Permit. **(e)** Co-signs all applicable initial confined space entry permits. (Note: Co-signature is only required the first time a space is entered.)
Operations Maintenance Coordinator (OMC)	**(a)** Participate in job walk/review when requested by Planner or when unsure about the job plan. **(b)** Review the job scope in SAP and validate the tasks and required forms. **(c)** If a form requires approvers, ensure approvals are acquired. **(d)** When required, request an Isolation List/Plan from Operations. **(e)** Approve the job scope in SAP when the pre-approvals for a task on the associated form and Isolation List/Plan are complete.

2.1 Roles and Responsibilities (continued)

Roles	Responsibilities
Planner	**(a)** Complete a job walk/review to determine job scope. As needed, invite OMC and/or Servicing Group Representative to assist. **(b)** Identify and document tasks and associated documents in SAP based on the Permitted Task List. Assemble the Work Order Package once the OMC has approved the Job Plan in SAP. **(c)** Provide assembled Work Order Package to Servicing Group Representative for review. **(d)** Ensure that applicable forms are in the Work Order Package prior to task execution. **(e)** Ensure the Servicing Group Representative receives the finalized Work Order Package.
Servicing Group Representative	**(a)** Accountable for bringing the permitting documents to Owning Department. **(b)** Participates in the Joint Job Site Visit. **(c)** Ensures that work proceeds safely within the terms of the Safe Work Permit. **(d)** Notifies their supervisor(s) and Owning Department of any changes on the job site or required changes to the work scope. **(e)** Reads and understands the Safe Work Permit, and signs on and off of the permitted job, as appropriate. **(f)** Ensure the Job Safety Analysis (JSA) is completed prior to task execution. **(g)** Review the completed work permit, Job Safety Analysis, and any relevant form(s) with the Servicing Group. **(h)** Lead the Toolbox Talk (Pre-Task Briefing) for all tasks by reviewing the Permit, Job Safety Analysis, and associated form(s), and asking for feedback from the Servicing Group. **(i)** Ensure all Servicing Group members sign the Servicing Group Signatures of Acknowledgement section of the Job Safety Analysis prior to starting work. **(j)** Know the situations in which permits are revoked (See Section 6.12 of this Standing Instruction). **(k)** If the JSA requires an update, ensure all affected personnel are informed of the update. **(l)** Is on-site and available at all times for consultation during maintenance work. **(m)** Ensures the SWP and associated documents are kept at the job site for the duration of the task or until the end of the shift, whichever comes first. **Note:** This does not include keeping the permit inside of the work truck of the crew performing the task. **(n)** Ensures that the work described in the Safe Work Permit is completed or left in a safe condition if not completed. **(o)** Ensures that the job site is cleaned up at the conclusion of each workday and at the completion of the job. **(p)** Completes the Section VI: Return of Equipment / Work Area - Job Completeness (**8.7**) portion of the Safe Work Permit. **(q)** Once the permit is closed out, ensures that the associated Safe Work Permit copies, JSA copies, and associated Form(s) are transferred to the Owning Department for retention.

Servicing Group	**(a)** Ensures that work proceeds safely within the terms of the Safe Work Permit. **(b)** Notifies their Supervisor(s) and Owning Department of any changes on the job site or required changes to the work scope. **(c)** Reads and understands the Safe Work Permit, and signs on and off of the permitted job, as appropriate. **(d)** Review the completed work permit, Job Safety Analysis, and any relevant form(s). **(e)** Participate in the Toolbox Talk (Pre-Task Briefing) for all tasks by reviewing the Permit, Job Safety Analysis, and associated form(s). **(f)** Sign the Servicing Group Signatures of Acknowledgement section of the Job Safety Analysis prior to starting work. **(g)** Know the situations in which permits are revoked (See Section 6.12 of this Standing Instruction). **(h)** Notify operations if the mid-shift gas test has not been performed by the designated time.

2.0 Roles and Responsibilities, Continued

2.1 Roles and Responsibilities (continued)

Roles	Responsibilities
Safety Department	**(a)** Maintains and updates the Safe Work Permit Standing Instruction. **(b)** For applicable initial confined space entries, review the confined space for the following: • Ensures the Energy Isolation List (EIL) is approved and verifications are signed off with time and date. • Ensures Isolation Blind List (IBL) is approved, all blinds verified installed by Servicing Group and Owner and that the Owning Department Verification of Blind Installation is signed off with time and date. • Ensures the Safe Work Permit form has been properly completed. • Co-signs all applicable initial confined space entry permits. **(c)** Periodically audits job sites to determine compliance with the Safe Work Permit. **(d)** Corrects unacceptable conditions immediately and provides feedback, both positive and negative, to the Owning Department and/or Servicing Group Representative. **(e)** Establish and maintain the SWP Roles and Responsibility Map to indicate what department is responsible for issuing SWPs in that area. **(f)** On a weekly basis, collects Safe Work Permit folders from Owning Department Supervision. Ensures Safe Work Permit folders are retained according to Section 6.4.
Training Department	**(a)** Provides training materials that have been prepared in conjunction with the Safety Department that adequately prepares Permit Writers and MPC Servicing Group Representatives to be compliant with the Safe Work Permit process. **(b)** Schedules Permit Writer training. **(c)** Maintains records of the training provided.

3.0 Safe Work Permit Program

3.1 Safeguards and Precautions

The purpose of the Safe Work Permit program is to:

(a) verify, in writing, that proper safeguards and precautions have been taken to minimize the possibility of personnel injury and property damage during maintenance, repair, or construction activities (e.g., cold work, hot tap/stopple, vehicle entry, hot work, and confined space entry operations), and

(b) inform Servicing Group of the proper safeguards necessary for their activity.

Note: The authorization signatures ensure coordination and control of the work and are a form of agreement between the Safe Work Permit Writer and all personnel involved with the work.

3.2 Owning Department Personnel

3.2.1 The Safe Work Permit program informs Owning Department personnel of every maintenance, repair, or construction activity:

(a) being performed in their area(s) and/or on their equipment, that

(b) in their area(s) and/or on their equipment have been properly completed.

3.2.2 The Owning Department, through issuance of the Safe Work Permit, helps to ensure that proper safeguards can be taken to protect people and facilities from possible hazardous situations.

3.3 Requirements and Procedures

Each use of the Safe Work Permit defines specific requirements and procedures.

4.0 Work Planning Elements

4.1 Permitted Task List

The Permitted Task List (PTL) contains tasks, required supplemental documents, required form(s), and task approvers (if applicable). The PTL is used during the planning phase. If a work task is not listed on the PTL, consult with the Safety Department to add the task on the PTL.

4.2 Job Plan Overview

A Job Plan Overview is required for all jobs requiring a work permit, except for: Preventive Maintenance (PM) jobs on the schedule that do not require form(s) to be completed, deliveries, and instrument shift truck tasks. Elements of the Job Plan Overview are completed within SAP on the Operations Tab of the Work Order Screen or handwritten in the field. The Job Plan Overview must have the following:

a. List of Owning Department (tasks) that make up the job,
b. Task ID Number based on the Permitted Task List,
c. Form code, if applicable,
d. Planner (or equivalent) and OMC (or equivalent) signatures are not required unless the Job Plan Overview was handwritten in the field or a change was made to the job plan requiring a form that has pre-approvals.

It is acceptable for certain tasks that do not require a Form to be completed to have pre-prepared JPOs. Examples include inspection, scaffolding, first attempt and other minor repairs identified as a result of LDAR.

4.3 Work Order Package Requirements

The following work order package components are required:

a. Job Plan Overview that shows tasks,
b. Applicable form(s).

4.4 Tasks and Permitting Requirements

Permitted tasks are categorized into different tasks with specific permitting requirements. The Job Plan Overview documents the task ID number and associated form(s).

a. Permitted tasks require, at minimum, a Safe Work Permit and Job Safety Analysis.
b. Controls from all applicable site standing instructions, form(s), and relevant procedures must be in place prior to work permit release.

4.5 Tasks with Associated Form(s)

Certain tasks have a form developed specifically for that task. Some forms require pre-approvals from higher level approvers prior to the task being performed. All forms have a section that must be completed on the shift of the task prior to performing the task. The Permitted Task List lists the name of the form associated with each applicable task. The Permitted Task List, for tasks that have forms requiring higher level pre-approvers, lists the approvers for the task.

4.6 Field Instrument Work

Instrumentation troubleshooting and minor maintenance is addressed in the Permitted Task List as "Field instrument work [not affecting Instrumented Protective System (e.g., SIS, IPF, ESD, SRA/SDL)]". For these activities, a JPO is optional. These activities include:

1. General instrumentation troubleshooting,
2. Response to instrument emergencies,
3. Calibrate control valve instrumentation (e.g., positioner and transducers),
4. Check calibration of pressure, flow, and level devices,
5. Zero pressure, flow, and level devices,
6. Check various types of regulators for proper operation and adjust,
7. Clear plugged sensing lines or seal sensing lines on instruments,
8. Data collection (upload device configuration to handheld communicator or laptop),
9. Tighten control valve packing,
10. Tighten tubing fittings and stainless pipe fittings (excludes threaded fittings under pressure),
11. Troubleshoot instrument loops,
12. TVCAT Flare Sample System IN-0056,
13. Isolation of equipment
14. Checking fixed vibration systems

4.7 Cross Operating Area Ownership

For direction on Cross Operating Area Ownership, please refer to POL-1009 Off Plot High Consequence Ownership (Carson).
Some general guidelines:

a. Commodity belongs to unit from where it came from until it reaches final destination.

b. Planners to determine who will take ownership of the system for the purposes of planning and executing jobs when there are multiple senders to common system.

4.8 Affected Areas and Systems

Buffer zones are the last fifty (50) feet of a unit's area of responsibility.

Note: For all permitted work activity near rail operations, Buffer Zones extend 25 feet from any railway and requires an MPC train representative or RP&S representative to be notified of the task. Unpermitted tasks performed directly on railways requires checking in with Operations and signing into the Train & Rack (LAR-C)/RP&S (LAR-W) Unit Sign in Log.

In the case where tasks in the buffer zone may impact the adjacent unit (e.g. hot work, invasive work, or lifting activity):

a. The Affected Area Owning Department representative must also sign the permit.

b. Conflicting tasks occurring in the buffer zone must be prioritized between the representative from the Owning Department Affected Areas.

c. Where tasks may impact refinery systems (e.g., fuel gas, hydrogen, steam), include communications plan (Operations Coordination meetings) as part of the planning process.

5.0 Use of a Safe Work Permit

5.1 Safe Work Permit Requirements

A Safe Work Permit is required for all maintenance, repair, or construction activities on equipment or within areas owned or operated by:

(a) Operations,
(b) Maintenance (e.g., electrical substations),
(c) third parties, and
(d) Safety Departments.

Examples of Activities: Cold work, vehicle entry, hot tap/stopple, hot work, or confined space entry.

The Safe Work Permit and associated documents must be kept at the jobsite for the duration of the task or until the end of the shift, whichever comes first.
Note: This does not include keeping the permit inside of the work truck of the crew performing the task.

5.2 Exceptions to Safe Work Permit Requirements

Exceptions to Safe Work Permit requirements are limited to Operator performed cold work, leak detection and repair (LDAR) monitoring, vibration analysis, etc. and the following:

a. Routine maintenance activities in office buildings outside refinery fence line;
b. Maintenance activities taking place in a permanent shop building and documented in a maintenance procedure;
c. Adjacent to an active shop building, outside of operating areas;
d. Hot work performed in maintenance shops;
e. Unit walkthroughs (e.g., audits, safety walks, administrative tasks, and job site visits).
f. Maintenance activities that do not impact Owning Department controls within Operations Shelters/Controls Rooms.

Note: The PTL documents whether a task requires a permit.

5.3 Safe Work Permit Form

The LAR MPC Refining Safe Work Permit can be found in Appendix C. This Safe Work Permit is to be used for all covered work.

5.4 Job Safety Analysis (JSA)

JSAs are used to describe the task steps, hazards associated with each task step, and controls to mitigate hazards. JSAs can be used to educate employees and contractors on safe practices prior to performing work.

A JSA shall be completed for all work conducted at LAR by or on behalf of MPC when any of the following conditions exist:

- All Permitted tasks,
- The task(s) involves rotating equipment hazards, such as using a drill press, bench grinder, lathe, or other shop-related equipment,

A JSA should also be conducted for new or infrequently performed jobs for which there is not maintenance, operational, or other equivalent procedure or written work instruction.

Exceptions: For unpermitted tasks, a JSA is not required when a current and documented, operational, maintenance, or equivalent procedure or written instruction exists for the job, and that procedure/written instruction has considered and addressed the risks that would

otherwise be managed by the JSA. In that case, the procedure shall be followed, in lieu of a JSA.

Job Scope Changes
If the scope of work for which the original JSA was written changes, the work shall stop, the new or changed hazards identified and documented on the JSA, and effective mitigation controls put in place. The revisions to the JSA shall be communicated to all affected individuals.
Note: Minor mistakes may occur when completing the Job Safety Analysis. For any minor corrections to the JSA, Servicing Group Representative shall initial the change.

Duration
The duration of a valid JSA shall not exceed the duration of the work task for which it was developed.

Job Safety Analysis Form Requirements
The Job Safety Analysis drives the discussions that ensure a task is completed according to a safe plan. The information that must be included in a JSA is the following:
a. Name of company or craft performing the work, unit or area where work is being performed, metal/type for welding if applicable, tools and equipment used to perform the work, primary and secondary evacuation areas, and location of nearby safety shower and eyewash station.
b. The task steps, hazards associated with each task step, and controls to prevent exposure to hazards. The Job Hazards Reference should be used to help identify hazards and associated controls. The Hierarchy of Controls methodology should be used to identify the most effective mitigations for hazards identified by the JSA (see Appendix E for details on the Hierarchy of Controls methodology).
c. The critical step of the task and the worst credible consequence.
d. Whether robust controls have been identified to prevent the worst credible consequence that could result from performing the critical step.

Toolbox Talk Requirements
The Toolbox Talk engages personnel in a discussion about task scope and required controls prior to task execution.
a. Toolbox Talk occurs at the job site or after a job site walk has occurred.
b. The Job Safety Analysis and all supplemental form(s) (if applicable) must be reviewed by the Servicing Group performing the task.

All personnel performing work under a Safe Work Permit are required to sign the Servicing Group Signatures of Acknowledgment on the JSA.

6.0 Safe Work Permit Requirements

6.1 Issuance of Safe Work Permits

All Safe Work Permits must be issued per instructions contained in this and all applicable procedures before the performance of any type of activity in the applicable areas.

6.2 Adherence to Procedures

Procedures must be strictly adhered to. Deviations from this procedure must be:
(a) in written format, and
(b) approved by the Safety Manager or designee.

6.3 Safe Work Permit Period

(a) All permits are valid for 12 hours, or the end of the operating shift, whichever comes first, and
(b) can only be extended for a period of 12 hours immediately after the initial valid period.

6.4 Safe Work Permit Retention

Each Safe Work Permit and its corresponding JSA must be retained for 84 months (7 years). Each Safe Work Permit for a confined space and hot work and its corresponding JSA must be retained for 30 years. See Flow Chart in Appendix F.

6.5 Permit Writer/ Owning Department Representative

The Permit Writer/ Owning Department Representative:
(a) shall be available for consultation during work, and
(b) shall inform the Servicing Group Representative(s) of any changes in conditions, or activities which would affect the job, or any operating emergency.

6.6 Scope Changes

If the scope of work changes during the covered Safe Work Permit period, the Servicing Group Representative(s) or any member of the Servicing Group ***must***:

(a) STOP WORK, and
(b) notify the Permit Writer/ Owning Department Representative.

If the Permit Writer/ Owning Department Representative approves the change in the scope of work:

(a) update the Safe Work Permit to reflect the scope change and any new requirements, as well as, verify the adequacy of safeguards and job site preparations, and initial the changes or
(b) write a new permit to cover the new scope of work.

6.7 Crew Changes for Servicing Group

6.7.1 If there are personnel changes to the Servicing Group at any time during the permit period, the Safe Work Permit ***must*** be reviewed with the new personnel by a Servicing Group Representative who participated in the Joint Job Site Visit (JJSV). If, as a result of the personnel change, there are no Servicing Group Representatives who participated in the Joint Job Site Visit in the work party, the Servicing Group Representative must request a new Joint Job Site Visit from the Permit Writer/ Owning Department Representative.

6.7.2 If the change in Servicing Group necessitates a change to the permit, the Servicing Group Representative of the impacted work party must contact the Permit Writer/ Owning Department Representative to inform them of the change and request an update to the Safe Work Permit. Any changes will be initialed by the Owning Department.

Note: The JJSV discussion shall occur at the job site.

6.8 Job Status Notification

The Servicing Group Representative(s) will inform the Permit Writer/ Owning Department Representative of the job status

6.9 Owning Department Shift Change During

6.9.1 If there is a shift change of Owning Department personnel involved with the work:
(a) the original Permit Writer/ Owning Department Representative must inform their relief personnel of any active work ongoing in their unit or area, and

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(b) the oncoming Permit Writer/ Owning Department Representative will extend the Safe Work Permit, if necessary.

6.9.2 Communication with the Servicing Group Representative(s) ***must*** be as thorough as when the original Safe Work Permit was issued.

6.9.3 The oncoming Permit Writer/ Owning Department Representative ***must*** perform additional gas testing, as required.

6.11 Change of Servicing Group Representative(s)

6.10.1 In the event there is a change in the Servicing Group Representative of the work party, the Safe Work Permit ***must*** be reviewed, via a JJSV by the:
- **(a)** Permit Writer/ Owning Department Representative, and
- **(b)** new Servicing Group Representative(s).

6.10.2 The oncoming Servicing Group Representative ***must***:
- **(a)** accept the conditions on the Safe Work Permit, and
- **(b)** sign the field copy as an acknowledgement and acceptance of the permit conditions.

6.12 Work Completion Notification

6.12.1 The Servicing Group Representative(s) ***must*** inform the Permit Writer/ Owning Department Representative when the work is complete.

6.12.2 The Permit Writer/ Owning Department Representative and Servicing Group Representative(s) must visit the work site to:
- **(a)** review the completed work and work site cleanup, and
- **(b)** discuss the following:
  - status of the equipment,
  - status of area surrounding the work site,
  - status of lock out/tag out,
  - special concerns for returning equipment to service, and
  - any other details pertinent to the permitted job.

6.12.3 When complete, the Permit Writer/ Owning Department Representative and Servicing Group Representative(s) execute signoffs.

6.12.4 If discrepancies exist or the equipment does not appear ready for service, the Permit Writer/ Owning Department Representative ***shall not*** sign off on the permit and consult the appropriate group before proceeding.

6.13 Revoking and Reinstating Permits

The table below describes three potential interruptions that may revoke or require reinstatement of Safe Work Permits.

Interruption	Conditions and Actions	Safe Work Permit Requirements
Unexpected Hazards	When a hazardous situation develops during the course of work, the Servicing Group Representative(s) or any Servicing Group member must: **(a)** **STOP WORK** immediately, **(b)** summon assistance or correct the hazard, as appropriate, **(c)** shut down any machinery or other source of ignition, as appropriate, and **(d)** if necessary, leave the area.	Revoke all Safe Work Permits in the affected area. Only after hazards are mitigated may another Safe Work Permit be issued. If appropriate, the original Safe Work Permit may be used to continue the work.
Interruption by Operations	When operating personnel find it necessary to open, unhead, or disconnect vessels or lines which are known or suspected of containing flammable or toxic liquids or vapors after a Safe Work Permit has been issued: **(a)** recall Safe Work Permits in the affected area, and **(b)** conduct additional gas tests, as required. **Note:** The recall is to assure that no work is being performed in the affected areas until it is determined that it is safe to return to work.	It is mandatory that all Safe Work Permits in the affected area be temporarily recalled.
Interruption by MPC Maintenance or Contractors	When work is interrupted or delayed for ***more than two (2) hours***, it is the responsibility of the Servicing Group Representative in charge of the work to: **(a)** notify the Permit Writer/ Owning Department Representative of the interruption or work delay. Confirm with the Permit Writer/ Owning Department Representative if any atmospheric or other permit conditions have changed. If the task required a gas test, a new gas test is required. **(b)** If the work will not continue for the rest of the day, the Servicing Group Representative will retain the permitting documents.	Return the permit to the Permit Writer/ Owning Department Representative if the work has been discontinued or terminated.

6.14 Safe Work Permit Audits

The Safety Department will audit the Safe Work Permit Program annually to ensure that the program:

(a) is working as intended, or

(b) should be modified to correct identified deficiencies.

6.15 Work Performed by Owner of Equipment

6.14.1 Hot work, confined space entry, flare work or electrical hot work performed by the Owning Department (e.g., Operator Performed Maintenance) must be permitted, no matter who performs the work. The Safe Work Permit shall be fully completed as if the task were being performed by a Servicing Group.

6.14.2 Any other work performed by the owner of the equipment, on jobs where energy isolation is required, must be done under lock out/tag out, unless the job is included in the "*Approved Minor Servicing Activities*" – ***Appendix I*** of **RSP-1121-010** or is considered "exclusive control" which only involves plug and cord equipment.

6.16 Owning Department Signature Requirements for Hot Work

The following requirements shall be followed if Owning Department personnel will be conducting hot work:

6.16.1 The Owning Department personnel responsible for completing the hot work task cannot write or issue his/her own permit and shall sign the Safe Work Permit as the "Servicing Group Representative".

6.16.2 The Owning Department Representative authorizing the Safe Work Permit shall sign as the "MPC Owning Department Representative".

6.16.3 The Shift Leader (person directly responsible for hourly employees) should be notified of the permit.

6.16.4 All other hot work requirements (e.g., LEL checks, fire watch, sewer covers, etc.) apply to Owning Department hot work.

6.17 Lighting a Process Heater

6.17.1 Hot work associated with lighting a process heater (all fired process equipment including direct fired tank heaters) can be controlled by either a Safe Work Permit or an Operating Procedure.

6.17.2 Minimum requirements prior to introducing the ignition source to the process heater:

(a) Gas testing must be completed to ensure:
- The firebox has been properly purged prior to lighting a burner, and
- The area surrounding the heater is safe to light a torch/flare to be used for lighting the heater.

(b) For heaters with electronic ignition inside the firebox, the heater firebox requires gas testing prior to lighting the heater.

6.18 Requirements for Cuts Made to Piping and Equipment

For this document, a cut will include line cutting, hot taps, demolition work, drilling, tie-ins or similar activity where mechanical integrity will be compromised. In addition to the requirements in HSS-203 (Demolition and Decommissioning Equipment and Unknown Line Verification), the following are the requirements for cuts made to piping and equipment:

(a) The group responsible for developing the work scope that requires the cut (typically Engineering or Maintenance) must attach a tag at the cut location and sign the Pre-Job Sign Off side of the tag. The tag that must be used is in Figure 1 below.

(b) At the time the tag is hung, the Owning Department will verify the location is correct and also sign the Pre-Job Sign Off side of the tag.

(c) On the shift the cut is being made, the Owning Department will verify again that the tag is in the proper location and sign and date on the Day of Execution side of the original tag or attach another tag with date and signature.

(d) The Servicing Group Representative must verify that a tag(s) is in place before the cut is made. The individual within the Servicing Group **who will actually make the cut** must personally sign and date each tag on the Day of Execution side of the tag just prior to work commencing.
Note: The Servicing Group Representative cannot sign in lieu of the individual in the work party actually making the cut.

(e) If the work is not performed during the execution shift the tag was signed and dated on, leave the original tag in place and add a new tag with the signatures on the day of execution sidefrom the Owning Department and Servicing Group personnel actually making the cut.

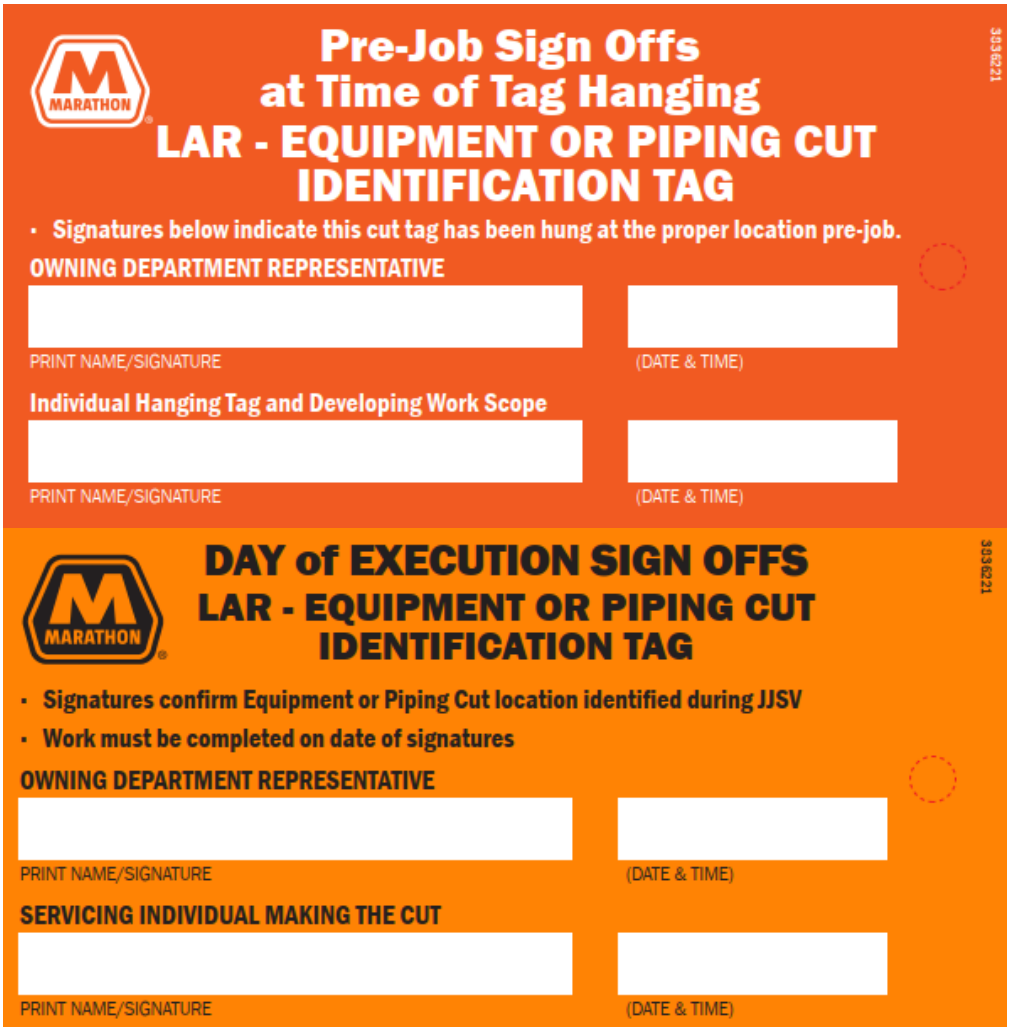


Figure 1 - LAR - Equipment or Piping Cut Identification Tag

6.19 First Break Requirement Exemptions

First break requirements listed in this section are not required for the following activities:

(a) In-service welds or hot taps on piping or equipment covered by SP-50-24.
(b) Subsequent break points on equipment within the same scope of energy isolation within the same process unit
(c) Blind removal upon completion of maintenance activities when the blind is identified with a Blind Tag and listed on an Isolation Blind List
(d) Operator Performed Tasks
(e) Opening a bleeder to verify energy isolation
(f) Approved Minor Servicing Activities

6.20 Invasive Work Risk Assessment Matrix (RAM)

All ***permitted*** invasive work requires a risk assessment following the process outlined in HSS-201 Attachment 1.

6.20.1 The Owning Department ***must***:

(a) Safely control invasive work activities in their area,

(b) Identify hazards and assess risks for invasive work using the Risk Assessment Matrix (RAM) (See HSS-201 Attachment 1 for details),
(c) Communicate all hazards and mitigations to the work party via the Joint Job Site Visit (JJSV), and
(d) Document the mitigations and RAM score on the Safe Work Permit.

6.20.2 The Servicing Group Representative(s) ***must***:
(a) Verify that the permitted invasive work has been risk ranked using RAM,
(b) Document the RAM Score on the JSA,
(c) Use / implement the proper level of mitigation indicated by the RAM score unless more stringent mitigations are required by a procedure, guideline, or form, and
(d) Stop the work if any invasive work conditions change and report them to the Owning Department.

Notes:
(1) The use of RAM does not supersede operation procedures, guidelines, or safety procedures. If existing procedures are more restrictive, those requirements must be followed.
(2) Risk assessments are not required during turnarounds once the unit is perimeter blinded, de-pressured, and decontaminated.

6.21 Barricading

The following requirements shall be followed for barricading invasive work where the equipment cannot be verified as de-energized:

6.21.1 The Owning Department shall establish a perimeter barricade around the work site to protect personnel from exposure to hydrocarbons or hazardous materials greater than 140°F during the initial line break.

Notes:
Owning Department supervision (Day Foreman, Shift Foreman or designee) and MPC Maintenance supervision (foreman or designee) must review the barricaded area, as well as the other precautions being implemented (i.e., unit evacuation of non- essential personnel during invasive work) prior to co-signing the Safe Work Permit.

(a) For services that have H_2S levels above the PEL or that are elevated in temperature (>140°F), the perimeter barricade shall be established based on the impacted area (considering wind direction, gas test results, etc.) plus an additional 25 feet at a minimum.
(b) For all other services if gas test results show contaminant levels above the PEL/TLV limits in Appendix B, the perimeter barricade shall be based on the gas test results and wind direction.

6.21.2 Only personnel in the proper level of PPE, as designated on the Safe Work Permit, shall be allowed within the established perimeter barricade during invasive work.

6.21.3 The perimeter barricade shall be demarcated with a physical barricade and signs/tags on all sides.

6.21.4 The Owning Department shall monitor the initial line break and adjust the perimeter barricade as necessary. The same level of PPE as required within the barricaded area shall be worn by the operator(s) while conducting gas testing near the barricades.

Note: The requirements in this section are not required during turnarounds once the unit is verified to be perimeter blinded, de-pressured, and decontaminated.

6.22 Blanket Work Permit

6.22.1 A blanket work permit may be issued to Servicing Group Representatives to perform work in multiple locations when the following conditions are met:

(a) The work remains under the responsibility of the Owning Department Representative that issued the original permit or a relieving Owning Department Representative.
(b) The work scope is the same at all locations and does not change once the work permit is approved and issued.
(c) The level of required personal protective equipment (PPE) and safeguards are the same for each work location.
(d) A Joint Job Site Visit (JJSV) is conducted at each work location.
(e) The Servicing Group Representative (individual receiving the permit) is performing or directing tasks at all job sites.

In order for work in multiple locations to be included on a blanket work permit, each location and piece of equipment must be documented on the permit. For example, to include the pulling of three separate control valves on one blanket permit, the criteria in a through e above must be met and the valve numbers must be documented on the permit.

Note: If an equipment list will be used because the space on the Detailed Work Description section of the Safe Work Permit does not suffice, the Owning Department Representative and Servicing Group Representative must identify each item on the equipment list by circling or highlighting the item and initialing next to each item. Two copies of the initialed equipment list with the identified equipment must be made. Both the Owning Department Representative and Servicing Group Representative must keep an initialed copy throughout the permit duration.

6.22.2 A single permit may be used for multiple tasks under limited circumstances. Inspection (excluding radiography, penetrant testing, or magnetic particle testing), crane support, and attendant support tasks are all allowed to be included on the permit of the primary task.

6.22.3 A blanket work permit may be used to permit maintenance work that will be executed using an approved Maintenance Procedure (e.g., SIS system testing).

6.23 Co-Signer

6.23.1 Only qualified personnel designated by Management may be Co-Signers. Section V of the Safe Work Permit documents situations in which a Co-Signer is required.

7.0 Joint Job Site Visits (JJSV)

7.1 JJSV Participants

7.1.1 The following individuals are required to participate in the Joint Job Site Visit (JJSV):

(a) An Owning Department Representative, and

(b) A Servicing Group Representative from each MPC craft or contract company performing work under the permit.

Note: Additional representatives from the Owning Department, Servicing Organization, Safety Department, etc. who are not members of the Servicing Group may also participate in the JJSV.

7.1.2 For situations where the entire Servicing Group is not present during the JJSV, it is the responsibility of the Servicing Group Representative(s), who were present, to review the details discussed during the JJSV with each member of the Servicing Group.

7.1.3 To ensure accurate, reliable communication, a Joint Job Site Visit attendee must be present at the job site while the work is going on.

7.1.4 Any individual has the right to ask the Owning Department for another Joint Job Site Visit if they do not feel comfortable that the safety aspects of the job have been adequately communicated to them.

7.2 JJSV

The following are required for all permitted work activities:

7.2.1 JJSV participants will discuss the following:

- Accurately Define Work Scope (Blinding, Disassembling, Hot Work, Confined Space, Vehicle Entry, etc.)
- Planned job steps for that shift.
- Guarantee the Correct Equipment Location (Owning and Servicing Group Representatives Agree on the Location at the Site). This must be done at the site and may include climbing of tanks, vessels, pipe racks and towers.
- Discuss job surroundings and work conditions.
- Review All Hazards (RAM, PPE, Chemical Hazards, Physical Hazards, Activity in the Area, Barricades, etc.)
- Logistical arrangements required for job execution (e.g., crane placement and scaffold requirements)
- Energy Isolation/Verification Completed (Breakers, Valves, Blinds, Open Bleeders, Atmospheric Testing, Zero Energy, Start Switches, etc.) This must also be completed and verified at the site.
- Emergency Scenarios Covered (Emergency evacuation point, Wind Direction, Safety Showers, Notifications, etc.)
- Discuss First Break Location on Equipment (Identify and Agree on the 1st Break Location)
- Ensure mutual understanding of the job scope, responsibilities and requirements.
- Special Permit Requirements

Note: The items for Energy Isolation and 1st Breaks do not need to be discussed if they do not apply to the work being done.

7.3 Scope of Work

Discussion about the scope of work must communicate:
- **(a)** information about the specific equipment involved, and
- **(b)** a description of the tasks to be performed.

Note: The sequence of any of the tasks should be discussed also if they are relevant to the safety of the job.

7.4 Preparation and Isolation of Equipment

7.4.1 The degree of equipment preparation must match the scope of work planned. When the Servicing Group Representative(s) and Owning Department meet at the job site prior to beginning work, the Owning Department will describe the:
- **(a)** equipment to be worked on, preparation of the equipment to be released to the Servicing Group Representative(s),
- **(b)** isolation points
- **(c)** atmospheric testing done to establish PPE requirements.

7.4.2 For any work that requires energy isolation, a demonstration that the energy has been controlled must be conducted. The verification points used to demonstrate energy control are listed on the Energy Isolation List for the job and these points must be verified during the Joint Job Site Visit.

7.5 PPE Requirements

7.5.1 The personal protective equipment requirements must be discussed during the JJSV.

Note: Since the Servicing Group Representatives are SMEs on the work hazards and the Owning Department are SMEs on the process hazards, it is imperative that the determination of the PPE requirements follow from a dialogue during the JJSV.

7.5.2 For permitted invasive work, the participants shall discuss the calculation of the RAM score and the associated PPE requirements. If a Standing Instruction and/or form exists for the invasive work, the PPE requirements on the Standing Instruction and/or form must be reviewed. The highest level of PPE determined from the RAM score or on the standing instruction and/or form must be used.

7.6 Surrounding Hazards and Emergency Response

7.6.1 Hazards to the Servicing Group may exist from external sources such as nearby work, operational activities, weather or other work conditions. The potential for such hazards, and their mitigation, shall be discussed during the JJSV.

7.6.2 It is important that the Servicing Group Representatives know what to do in the event of an emergency. The Owning Department shall ensure that the Joint Job Site Visit participants are aware of:
- **(a)** the location of the nearest safety shower/eyewash,
- **(b)** evacuation route(s) out of the unit,
- **(c)** emergency evacuation point,
- **(d)** location of windsocks,
- **(e)** evacuation alarms, and
- **(f)** how to contact the unit operators and report an emergency.

8.0 Completing the Safe Work Permit

8.1 Section I: Work Authorization

Follow the steps in the table below to complete Section I: Work Authorization.

Step	Action
1	Enter the date the work is to be done.
2	Enter the time the work is authorized to begin.
3	Enter the time at which the permit expires.
4	Enter permit extensions. **(a)** If the original Permit Writer/ Owning Department Representative on shift is relieved, then the relieving Permit Writer/ Owning Department Representative must sign both copies of the permit. **(b)** A determination as to the need for additional gas testing or a re-validation is required.
5	Enter work order number, if applicable.
6	Identify the permit type **Examples:** Cold Work, Hot Work, Confined Space Entry, Vehicle Entry
7	Identify relief change, as appropriate.
8	Identify additional forms, if necessary.
9	Enter emergency contact information.
10	Enter the exact location where the work is to be performed.
11	Enter the authorized Servicing Group that will perform the work.
12	Enter the specific work description on how the work is being performed and what tools/equipment will be used.
13	Identify all potential hazards and/or chemical exposures that may be encountered.
14	Identify if the process safety boards have been reviewed.
15	Calculate RAM Score for permitted Invasive Work, if applicable.
16	Indicate all preparatory actions that have been taken to ensure that the equipment is ready for the work to be performed.
17	Indicate the personal protective equipment that must be worn for the job to be performed safely.

8.2 Section II: Hot Work

Indicate type of hot work to be performed and the fire prevention requirements.

Reference: See Appendix A: Terms and Definitions for examples of attended and non-attended hot work. Follow the requirements in **HSS-630.**

Important: Hot tapping and welding on lines or equipment under pressure or not hydrocarbon gas free requires special approval per the requirements of the In-Service Welding and Hot Tapping Procedure.

8.3 Section III: Confined Space Precautions

Indicate precautions that must be taken to ensure that confined space entry may be performed safely. Verify the rescue team is on-site and available. Indicate how the Safety Attendant and Entrant(s) will maintain contact during a confined space entry.

Reference: Follow the requirements in the Confined Space Entry Standing Instruction.

8.4 Section IV: Atmospheric Monitoring Follow the steps in the table below to complete Section IV: Atmospheric Monitoring.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Record the initial atmospheric test results and the time taken in the appropriate sections on the field copy and the Permit Writer/ Owning Department Representative’s copy.

Note: For any additional atmospheric monitoring, only record results on the field copy.</td></tr>
<tr><td>2</td><td>Identify instrumentation serial number and date of last bump test.</td></tr>
<tr><td>3</td><td>All confined spaces require continuous multi-gas monitoring per the Confined Space Entry Standing Instruction and the permit will indicate that atmospheric testing must be continuous. All attended hot work tasks require continuous LEL monitoring per the Hot Work Safety Standing Instruction and the permit will indicate that atmospheric testing must be continuous. For confined space entry tasks, the Permit Writer/ Owning Department Representative must clearly indicate the sampling point in the space.

The Table below summarizes gas testing requirements.
<table>
<tr><th></th><th>Task / Equipment</th><th>Gas Testing Requirements</th></tr>
<tr><td rowspan="6">INSIDE Process Unit / Tank Basin</td><td>Vehicle Entry, Light Plants, Portable Compressors, Portable Engines</td><td>Initial Gas Test and Mid-Shift Gas Test</td></tr>
<tr><td>Non-Attended Hot Work: Not Cutting or Drilling into Process Piping</td><td>Initial Gas Test and Mid-Shift Gas Test</td></tr>
<tr><td>Non-Attended Hot Work: Cutting or Drilling into Process Piping</td><td>Initial Gas Test and Mid-Shift Gas Test</td></tr>
<tr><td>Opening an Energized Explosion-Proof Enclosure or Purged Enclosure in an Electrically Classified Area</td><td>Initial Gas Test and Mid-Shift Gas Test</td></tr>
<tr><td>Attended Hot Work</td><td>Initial Gas Test, Mid-Shift Gas Test, <u>and</u> Continuous LEL Alarm</td></tr>
<tr><td rowspan="2">OUTSIDE Process Unit / Tank Basin or inside pressurized building</td><td>Non-Attended Hot Work</td><td>None</td></tr>
<tr><td>Attended Hot Work</td><td>Initial Gas Test, Mid-Shift Gas Test, <u>and</u> Continuous LEL Alarm</td></tr>
<tr><td>Confined Space Entry</td><td>Confined Space Entry</td><td>Initial Gas Test, Mid-Shift Gas Test, <u>and</u> Continuous Multi-Gas Meter</td></tr>
</table>
</td></tr>
</table>

4	**Step 4.1** Conduct appropriate tests to determine if any harmful levels exist in all cases where there is a possibility of: **(a)** oxygen deficiency, **(b)** any vapors, **(c)** gases, **(d)** mists, **(e)** fumes, **(f)** pH, or **(g)** other hazardous substances being present. **Step 4.2** The testing: **(c)** must be completed prior to issuing the applicable Safe Work Permit and the results communicated to all personnel involved via the Safe Work Permit, and **(d)** shall be made in an area that: – provides a representative sample of employee exposure, and/or – reflects the condition of the equipment being worked on. **Note:** Workers have the right to be present for initial testing per 29 CFR 1910.146(c) if entry is being performed.
5	Is the LEL greater than 0% for hot work? **(a)** If **yes**, – Do not issue a permit unless a variance form has been completed, – the Permit Writer/ Owning Department Representative must describe the source of the flammable vapors and the control strategy on the variance form, and – the Owning Department must approve the use of steam, nitrogen, CO_2 or other means of keeping the immediate work area out of the flammable range. **(b)** If **no**, go to **Step 6**.
6	Use the SDS and Threshold Limit Values (TLV) or Permissible Exposure Limit (PEL) of hazardous substances for entry or safe work. **Reference:** See Appendix B. **Note:** If in doubt, contact the Owning Department or Safety Department.
7	The Owning Department needs to: **(a)** evaluate the potential for fire / ignition from tools and equipment when hydrocarbon vapors may present to determine the type of permit required, and **(b)** consider the following guidelines: – Cold work rules apply if the work involved would not ordinarily create an ignition source. – Hot work rules apply if it can be expected (even remotely) that the work could produce an ignition source. – Additional safety precautions to the extent deemed necessary by the Owning Department, maintenance, or contractor, must be taken, depending on the individual task, hazards present, etc. – If there is any doubt as to the safety of the job, consult with the Owning Department, Maintenance Foreman, and MPC Contractor Coordinator or Safety Personnel.
8	If required for the work scope, conduct initial atmospheric monitoring as soon as practical prior to the start of work. **Important:** The initial atmospheric monitoring must be conducted ***within two hours*** prior to start of work.
9	When work is not started within two (2) hours of the time the initial atmospheric monitoring, the Permit Writer/ Owning Department Representative must conduct another test with the results shown.

10	The following additional atmospheric monitoring is required: **(a)** For dayshift permits, a mid-shift gas test must be performed between the hours of 11:00am and 1:00pm. **(b)** For nightshift permits, a mid-shift gas test must be performed between the hours of 11:00pm and 1:00am. **(c)** For permits issued after 12:00pm/12:00am, the mid-shift gas test shall be performed 4 hours after the permit is issued, unless the permit is less than 4 hours in duration. **(d)** more frequent gas testing shall be performed if there is any reason to suspect that conditions may change. **(e)** If the midshift gas test is not conducted in the specified time frame. The servicing group shall stop work and notify the Owning Department. Note: For Confined Space Entries, it is not required to turn off the ventilation for midshift gas testing.
11	If the Safe Work Permit is being issued for four (4) hours or less, a mid-shift gas test may not be required depending on work and site conditions.

8.5 Section V: Required Signatures

8.6.1 Obtain signatures from all applicable personnel as indicated to validate the conditions specified on the permit, as per the signature matrix.

8.6.2 Signatures shall only be recorded after the Joint Job Site Visit is completed.

8.6.3 The Servicing Group Representative, by signing this permit, are indicating that all workers covered by the permit have properly signed-in to the process area.

8.6 Section VI: Return of Equipment/ Work Area – Job Completeness

Completion of the following must occur:

(a) Indicate the status of the job at the conclusion of the Safe Work Permit.
(b) Indicate if any issues occurred during the work.
(c) For Confined Space Entry Debriefing, each company involved in the entry must complete the "Servicing Group Representative Debriefing Notes" on the back of the SWP.
(d) Obtain signatures from Servicing Group Representative(s) and Owning Department to certify that the permit has been terminated.
(e) Record the time of signatures.

8.7 Additional Signatures

Obtain applicable signatures on the JSA from each Servicing Group Representative/ member who joined a job in progress to certify that the requirements specified on the permit have been effectively communicated to members of the Servicing Group who joined a job in progress.

8.8 Safe Work Permit Instructions

The Safe Work Permit includes instructions for permit completion on the back of the permit.

8.9 Confined Space Accountability

Adhere to the following confined space accountability requirements:

8.10.1 Authorized Entrants must log in and out each time the confined space is entered or exited.

8.10.2 Each permit must identify the following:
(a) Verification of on-site rescue team (i.e., MPC, 3rd party, or Inert Entry Contractor).

8.10.3 Each permit must identify the following by name:
(a) confined space entry supervisor,

(b) all fire watch personnel,
(c) all bottle watch personnel, and
(d) all confined space attendants.

8.10.4 Each Servicing Group Representative shall comment during debriefing on conditions confronted or created during the permitted work.

Appendix A: Terms and Definitions

A.1 Affected Area	**Affected Area** is an operating area or system that may be impacted by tasks in adjacent operating area.
A.2 Applicable Initial Entry	***Applicable Initial Entry*** is a confined space entry which requires co-signatures on the Safe Work Permit prior to the first entry. After an initial entry, if any conditions change (e.g., any isolation change; elevated H2S, LEL, PID, or CO gas test readings; change of atmospheres; etc.), the Owning Department must contact the co-signers to reconvene and issue a new initial entry permit.
A.3 Blanket Work Permit	***Blanket Work Permit*** is a work permit that allows a Servicing Group to perform work in multiple locations within a unit.
A.4 Blinding	***Blinding*** is the absolute closure of a pipe, line, or duct, by fastening across its bore a solid plate, plug, or cap which: **(a)** completely covers the bore, **(b)** extends at least to the outer edge of a flange's mating surfaces, and **(c)** is capable of withstanding the maximum upstream system pressure. **Examples of Blinds:** A blank, slip plate, slip blind, blind flange, cap, and/or physical disconnect.
A.5 Buffer Zone	**Buffer Zone** is the last 50 feet of any operating area.
A.6 Cold Work	***Cold Work*** is maintenance, repair, cleaning, or construction activity, not requiring the use of fire, hot surfaces, spark producing equipment, or electrical equipment that is not classified for use in the area.
A.7 Confined Space	***See the Confined Space Entry Standing Instruction.***
A.8 Contractor Coordinator	***Contractor Coordinator*** is normally the MPC employee in charge of coordinating contract companies on jobs. On construction projects or TARs, the construction management coordinator hired by MPC may be designated as the MPC Contractor Coordinator.
A.9 Energy Isolation	See the Hazardous Control of Energy Standing Instruction.

A.10 Hazardous Atmosphere

Hazardous Atmosphere is an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (i.e., escape unaided from a permit space), injury, or acute illness.

Reference: For a compilation of normally encountered vapor and gas hazards at a refinery, see Appendix B.

A.11 Hot Tapping (Pressure Tapping)

Hot Tapping (Pressure Tapping) is the practice of installing a valve connection and then drilling or cutting into the pipe or equipment, through the valve connection, while the pipe or equipment is in service or has not been purged (hydrocarbon gas free).

Reference: For detailed permit requirements, see the site-specific In-Service Welding and Hot Tapping Procedure.

A.12 Hot Work

Hot Work is repair, maintenance, or construction activity, which requires the use of spark-producing equipment or may create an ignition source.

Attended Hot Work is hot work that requires a fire watch. Some examples of attended hot work are: burning, welding, brazing, electric arc welding, annealing (electric or gas), electric soldering, stress relieving, use of open flames, use of non-process propane or gas fired heaters, cutting and grinding, CAD welding, and if combustible materials are within 35 feet of worksite. This type of hot work requires the placement of covers on sewers within 35 feet. These listings are not all-inclusive.

Non-Attended Hot Work is hot work that does not require a fire watch. Some examples of non-attended hot work are: concrete breaking; lights, and extension cords, non-explosion proof cordless tools, non-intrinsically safe flash cameras, gasoline or diesel-powered equipment (e.g., compressors, generators, pressure washers, etc.), opening of energized explosion proof enclosures, abrasive blasting, and grass cutting in dike area.
Note: According to RSP-1715-000: Fabrication areas established outside of the battery limits and away from other process hazards including live process piping (e.g., laydown yard, remote fabrications area, etc.) may not require a Safe Work Permit based on a hazard assessment conducted by Refinery Personnel. Refer to Section 3.4.1 of RSP-1715-000 for the minimum elements required for the fabrication area risk assessment.

A.13 Immediately Dangerous to Life or Health (IDLH)

Immediately Dangerous to Life or Health (IDLH) is any condition that poses an immediate or delayed threat to life or would cause irreversible adverse health effects or interfere with an individual's ability to escape from a confined space.

A.14 IDLH Atmosphere

IDLH Atmosphere is any area that may have an atmosphere that is immediately dangerous to life and health.

A.15 Inert Confined Space

For specific inert confined space entry definitions and requirements, see Inert Entry Standing Instruction.

A.16 In-Service Welding

In-Service Welding is the practice of welding on pipe or equipment (for example, tank, vessels, exchangers, etc.) which is in-service. This includes grinding, burning, and welding for any purpose, such as adding brackets, shoes, boxing in leaks, adding weld-o-lets and back welding fittings.

Reference: For detailed permit requirements for in-service welds, see the site-specific In-Service Welding and Hot Tapping Procedure.

A.17 Invasive Work

Invasive Work is work that expects to require exposure to the internals of a vessel, pump, exchanger, or any other piece of refinery equipment (i.e., piping, sewers, tanks, hoses, etc.).

A.18 Job Plan Overview (JPO)

Job Plan Overview is a form that identifies all tasks, whether a permit is required, and form(s) required to complete a job.

A.19 Joint Job Site Visit

Joint Job Site Visit is a meeting between an Owning Department Representative and at least one Servicing Group Representative of all parties working off of the permit at the specific location where the job will be conducted.

The meeting discussion will address the work scope and all safety aspects of the permit.

The Servicing Group Representative(s) that attend the Joint Job Site Visit must convey the information covered in the discussion to all members of their work party. A Servicing Group Representative who attended the Joint Job Site Visit must remain at the work site for the duration of the job.

A.20 Non-Invasive Work

Non-Invasive Work is any cold work or hot work being done where there is no potential for contact with product exposure hazards, process hazards, vessels, pumps, piping, or any other piece of refinery equipment.

A.21 Owning Department

Owning Department refers to the department that owns and operates process, process-related, and/or utility equipment, machinery, building, and/or systems. Owning Department personnel that issue permits are referred to also as Permit Writer.

A.22 Oxygen Deficient Atmosphere

Oxygen Deficient Atmosphere is any atmosphere containing less than 19.5% oxygen by volume.

A.23 Process Break

Process Break is the opening of a process system to the atmosphere for the purposes of maintenance or new construction.

Examples: Separating flanges and opening exchangers.

Non-Examples: Operational venting, draining, purging, etc., of equipment.

A.24 Safe Work Permit

The ***Safe Work Permit*** is a work-authorizing process and record that is managed, prepared and issued by the Refining department that "owns" the equipment or is responsible for the area before certain work is conducted.

Notes:

(1) It authorizes a specific scope of work for a specific time frame and is a prerequisite for performing work.
(2) It is used to assess hazards and to document requirements and conditions such as atmospheric monitoring results, personal protective equipment, confined space details, work requirements (e.g., hot tap, excavation, critical lift), emergency communications, and other potential hazard mitigation means and methods.
(3) The authorization coordinates and controls the work and is a form of agreement between the Safe Work Permit Writer and all personnel involved with the work.

A.25 Safe Work Permit Extensions

Safe Work Permit Extensions are the extensions of the Safe Work Permit by the Permit Writer/ Owning Department Representative at the end of the maintenance shift or at the end of 12 hours. As conditions warrant, a Safe Work Permit may be extended one time, for a period of 12 hours but not exceeding 24 hours in total.

A.26 Servicing Group

Servicing Group includes all personnel whose tasks are covered by the Safe Work Permit. A Servicing Group may also be referred to also as Work Party.

A.27 Servicing Group Representative(s)

Servicing Group Representative(s) are the people who are receiving the permit to work on the equipment/process. This may include operations, blending, shipping, maintenance, contractors, and other MPC employees.

A.28 Stoppling

Stoppling is the practice of using a device (stopple) through a hot tap connection to isolate a section of pipe for repair and/or revision without depressurizing or purging.

Reference: For detailed permit requirements for stoppling, see the site-specific In-Service Welding and Hot Tapping Procedure.

A.29 Vehicle Entry

Vehicle Entry is any passage of a motorized vehicle:
(a) across the battery limits of an operations complex,
(b) in a tank farm diked area, or
(c) into any area where classified electrical equipment is required.

Vehicle entry is a form of non-attended hot work.

A.30 Work Scope

Work Scope is the type and detailed description of the work to be performed including the:
(a) equipment to be worked on, and
(b) personnel performing the work.

Appendix B: Contaminant Thresholds and Conditions

B.1 Table The table below describes contaminant thresholds and conditions.

Contaminant	PEL/TLV (ppm)[1]	STEL (ppm)	IDLH (ppm)	Odor Threshold (ppm)
Ammonia (NH_3)	25	35	300	0.43-53
Arsenic (As)	0.01 mg/m³	None	5 mg/m³	N/A
Benzene (C_6H_6)	1.0	5	500	34-119
Carbon Monoxide (CO)	25	N/A	1200	Odorless
Hydrogen Sulfide (H_2S)	10	15	100 (MPC)	0.001-0.13
Lower Explosive Limit (LEL)	0 % LEL 0-10 % LEL >10 % LEL	Hot Work[3] Cold Work[2] No Work[2]	N/A	N/A
Mercaptans				
– Butyl	0.5	None	500	0.0073-0.001
– Ethyl	0.5	None	500	0.001-0.003
– Methyl	0.5	None	150	0.0001-0.041
Oxygen (O_2)	19.5 – 23.5 %	N/A	N/A	N/A
Perchloroethylene ($Cl_2C=CCl_2$)	25	100	150	2-71
Silica (SiO_2)	0.025 mg/m³ (Respirable Fraction)	None	N/A	N/A
Sulfur Dioxide (SO_2)	0.5	1	100	0.33-5
Sulfuric Acid (H_2SO_4)	0.2 mg/m³	None	15 mg/m³	0.15

Notes:

(1) The above limits are based on the OSHA 6 (b) PEL limits, or in their absence on current TLVs.

(2) "Cold work > 10% LEL (but not to exceed 20% LEL) may be authorized by Owning Department and Maintenance Supervision. Both the Owning Department supervisor (Day Foreman or OSS) and Maintenance Foreman (or designee) must sign the work permit to designate their approval to proceed with the work considering the precautions and safeguards being implemented to protect workers, manage nearby ignition sources, etc. **Note:** Atmospheric Monitoring shall reflect the Servicing Group's breathing zone.

(3) See Step 5 of Section 8.5.

Conditions	Time Frame
Valid Permit Period – Initial	Not to exceed 12 hours
Valid Permit Period – Extension	One additional 12-hour shift
Permit Atmospheric Monitoring Re-Check Frequency	Mid-shift unless Safe Work Permit is written for work that will be less than 4 hours in duration then additional gas check may not be required depending on the work and site conditions. Midshift gas test must be performed between 11AM and 1PM on dayshift and 11PM and 1AM on nightshift. For permits issued after 12PM/12AM, the midshift gas test must occur 4 hours after permit issuance unless the permit is less than 4 hours in duration.

Appendix B: Contaminant Thresholds and Conditions, Continued

B.2 Key Terms The table below describes the terms used for the table above.

Term	Definition
PEL	OSHA Permissible Exposure Limit measured as an 8-hour TWA.
TLV	ACGIH Threshold Limit Value measured as an 8-hour TWA.
STEL	OSHA/ACGIH Short Term Exposure Limit, not to be exceeded, and for no longer than 15 minutes.
Ceiling	OSHA/ACGIH designated maximum concentration, not to be exceeded at any time.
IDLH	NIOSH Immediately Dangerous to Life and Health concentration.
Odor Threshold	Minimum concentration (or range of concentrations) of contaminant in air that most people can recognize by smell.

Appendix C: Safe Work Permit

C.1 Refining Safe Work Permit

Marathon Petroleum Corporation

SAFE WORK PERMIT
Los Angeles Refinery

Permit No.:
Work Order No.:

SECTION I – WORK AUTHORIZATION

Date:
Time Issued: ☐ AM ☐ PM
Time Expires: ☐ AM ☐ PM
Permit Extended Until:
Operator Relief Change
Name: Time:

Permit Type
☐ Cold Work
☐ Hot Work
☐ Confined Space Entry
☐ Vehicle Entry

Additional Forms (Competent Person May Be Required)
☐ Job Safety Analysis
☐ Attended Hot Work
☐ ELUT:
☐ CSE Rescue Plan
☐ Crane Personnel Lift
☐ Other:
☐ In-Service Weld/Hot-Tap
☐ Abrasive/Hydro Blasting
☐ Other:
☐ Handrail/Grating Removal
☐ Excavations/Trenching
☐ Other:
☐ Critical Lift Checklist
☐ RSP Waiver/Variance
☐ Other:

Emergency Contacts
Phone No. (Circle appropriate Number)
Carson 222 Wilmington 6911
Emergency: Radio: (Circle appropriate Channel)
c-C1 w-C1 Orange Button
Servicing Group Radio Channel:
Owning Department Channel:

Exact Location: (Unit Area, Equipment No., etc.)
Authorized Servicing Group: (Company and Craft)
Detailed Work Description:
Chemicals (SDS available upon request): (Describe)
Personnel have reviewed Process Safety Board? ☐ Yes ☐ N/A (Non-Process Area)

If there are any standing instructions or forms that require higher level of mitigation than the RAM score, ensure that the highest level of mitigation is implemented.
Invasive Work: ☐ N/A Exposure Concern ____ x Exposure Volume ____ x Exposure Impact ____ = RAM Score

EQUIPMENT/AREA PREPARATION (Check appropriate boxes)

Equipment Lines/Valves
☐ Not Applicable
☐ In Service
☐ Bleeder/Vents Tagged Open
☐ Blinded
☐ Closed Locked/Tagged
☐ Drained & Depressured
☐ Flushed and Decon'd
☐ Neutralized with
☐ Disconnected
☐ Pneumatic Energy Isolated
☐ Purged with
☐ Other:

Vessels/Tanks
☐ Not Applicable
☐ Adequate Ventilation
☐ Radiation Source LO/TO or Removed
☐ Washed with
☐ Steamed
☐ Air Movers/Air Horns Grounded/Bonded
☐ Neutralized with
☐ Floating Roof Stabilized

Lockout/Tagout
☐ Not Applicable
☐ All Energy Sources Isolated
☐ Keys Secured Inside Lockbox No.
☐ Owner Lock Attached to Group Lockbox
☐ Servicing Group Lock Attached to Group Lockbox
☐ Battery/Perimeter LOTO
☐ Equipment Not Isolated

Electrical
☐ Not Applicable
☐ Electrical Equipment Still Energized
☐ Power Feed LOTO & Tested (push start button)
☐ Electrical Leads Disconnected
☐ Proper Grounding
☐ Low Voltage (<50volts)
☐ Fuses Pulled
☐ Electrical Tracing De-Energized
☐ 12-Volt Lighting
☐ 110-Volt Lighting
☐ GFCI Required

General
☐ Not Applicable
☐ Other Work in Close Proximity
☐ No Sampling, Venting or Draining in Area
☐ Non-Sparking Tools
☐ Hazard Signs Posted
☐ Barricaded & Tagged
☐ X-Ray Precautions
☐ Contract Rigger – Required hard hat sticker present
☐ Other Precautions:

PERSONAL PROTECTIVE EQUIPMENT Minimum PPE requirements are: Hard Hat, Safety Glasses with side shields, Hearing Protection, Safety Boots, FRC, Goggles on Person.

☐ Personal H_2S Monitor
☐ Goggles, type
☐ Face Shield
☐ Fall Protection
☐ Lanyard
☐ Gloves
☐ Double Hearing Protection
☐ Disposable Coveralls (FR)
☐ Rain Suit (FR)
☐ Welding/Cutting PPE
☐ NFPA 70E Electrical PPE
☐ Asbestos PPE
☐ Other:

Chemical Protective Clothing
☐ Chemical Coveralls or Jacket/Pants
☐ Chemical Protective Boots
☐ Chemical Resistant Gloves
☐ Chem Tape

Supplied Air Respirators
☐ Hood ☐ SCBA
☐ Airline w/ egress bottle
☐ Verify Supplied Air Is Labeled Grade D Breathing Air
☐ Supplied Air Attendant/ Bottle Watch
☐ Back Up Required
☐ Personal H2S monitor not required while wearing fresh air
☐ Other:

Cartridge Respirators (APR)
☐ Full Face ☐ Half Face
☐ Multi-Gas
☐ HEPA (e.g. Asbestos/Dust)
☐ Other:

Respirator Requirements

PIDs for VOCs with Benzene:	<20 (ppm) - No Requirements
	20-199 (ppm) - Half Face
	200-999 (ppm) - Full Face
	>1000 (ppm) - Supplied Air
Hydrogen Sulfide (H_2S)	0-9 (ppm) - No Requirements
	10-49 (ppm) - Supplied Air, APR if approved
	>50 (ppm) - Supplied Air
Carbon Monoxide (CO)	>25 (ppm) - Supplied Air
Sulfur Dioxide (SO_2)	0-0.4 (ppm) - None
	5-99 (ppm) - Full Face
	>100 (ppm) - Supplied Air

SECTION II – HOT WORK ☐ N/A (See Section II, Note on back) ☐ Non-Attended ☐ Attended (Fire Watch Required) – NAME IDENTIFIED ON REVERSE SIDE

☐ Vehicle/Compressor
☐ Electric/Battery Tool
☐ Electric Cord (GFCI Required)
☐ Opening of Energized Explosion Proof or Purged Enclosures
☐ Pneumatic Tool with Spark Potential (e.g., chipping on concrete)
☐ Welding/Arc Cutting/Torch/Grinding
☐ Heating Coils
☐ Welding Blanket or Shield
☐ Combustibles, Sewers, Manholes and Vent Pipes within 35 ft Covered/Sealed/Protected/Removed
☐ Other, Specify:
☐ Additional Fire Watch
☐ Charged Hose
☐ Portable Fire Extinguisher
☐ Circle Communication Method: Voice – Visual – Video – Radio – Air Horn – Other:

SECTION III – CONFINED SPACE PRECAUTIONS ☐ N/A Print Name of Entry Supervisor (1st shift) (2nd shift)

☐ Rescue Personnel notified (Roster Attached)
☐ Temperature > 95°F
☐ Retrieval Device Required
☐ Confined Space Hazards Discussed
☐ Ventilation Required
☐ Coordinate Multi-Craft Work
☐ Signs Posted
☐ Inert Entry
☐ Attendant with Vest (Name Identified on Reverse Side)
☐ Additional Attendant Required #
☐ Circle Communication Method: Voice - Visual - Video - Radio - Air Horn - Other
☐ Entering Excavations Greater than 4 feet deep
☐ Emergency Egress Lighting
☐ Non-Sparking Tools
☐ Other:

☐ MPC Emergency Response Team ☐ 3rd Party Response Team ☐ Inert Entry Contractor ☐ Other

SECTION IV – ATMOSPHERIC MONITORING ☐ N/A (To be filled out by the Owning Department. Use supplemental sheet if necessary)

Circle letter corresponding to what the gas test is for. V=Vehicle Entry, H=Hot Work, C=Confined Space, B=BAM

	V/H/C/B	V/H/C/B	V/H/C/B	V/H/C/B	V/H/C/B	V/H/C/B
TIME						
OXYGEN (19.5 – 23.5%)	%	%	%	%	%	%
HW=%LEL CSE=%%LEL	%	%	%	%	%	%
CO (<25ppm)	ppm	ppm	ppm	ppm	ppm	ppm
H_2S (<10ppm)	ppm	ppm	ppm	ppm	ppm	ppm
PID (<2/5ppm)	ppm	ppm	ppm	ppm	ppm	ppm
OTHER ____						
Equipment #						
Last Bump Date						
INITIALS						

CONTINUOUS GAS/TOXICITY MONITORING REQUIRED ☐ Yes ☐ No
If Yes, specify contaminant(s) below.
Hot work must be tested at least midway through the maintenance shift.
Continuous monitoring is required for all confined space entries and attended hot work.
☐ O_2 ☐ CO ☐ LEL ☐ H_2S ☐ Other(s):
☐ Location of sampling hose:
Comments

A new gas test is required if work is not started within 2 hours of initial gas test.
THIS PERMIT REFLECTS CONDITIONS AT THE TIME OF ISSUANCE.
IF CONDITIONS CHANGE, STOP WORK AND NOTIFY THE OWNING DEPARTMENT.

SECTION V – REQUIRED SIGNATURES JJSV Completed by: ____ Owning Dept Initials ____ Servicing Group Initials ____

Responsible Person	Print Name	First Signatures	Print Name	Work Extension Signature	SIGNATURE MATRIX: Cold Work	Hot Work	CSE	Excavations
MPC Owning Department Supervisor/Designee					X[4,5]	X[3]	X[2]	
MPC Maintenance Foreman/Designee					X[4,5]	X[3]	X[1]	
MPC Contractor Coordinator/Designee							X[2]	
MPC Affected Area Representative					X[6]	X[6]	X[6]	X[6]
Competent Person (MPC or Contractor)								X
MPC Safety Representative							X[2]	
MPC Owning Department Representative					X	X	X	X
Servicing Group Representative (MPC or Contractor)					X	X	X	X

1 Required if MPC Maintenance involved, for initial entry only 2 Required if Contractor involved, for initial entry only 3 Initial Entry 4 LEL for Cold Work that is greater than or equal to 10%
5 Required if equipment cannot be verified as depressured (see back of permit for Section V instructions) 6 Required if affected area involved

ADDITIONAL SIGNATURES (Servicing Group/Additional Contractor Representatives) – AVAILABLE ON JSA FORM

SECTION VI – RETURN OF EQUIPMENT/WORK AREA – JOB COMPLETENESS ☐ Confined Space Representative Debriefed (see bottom of other side & list each company name)

Job Status: ☐ Complete ☐ Ongoing ☐ Problems encountered during work (add comments) - Comments:
Service Group Locks Removed? ☐ Yes ☐ N/A Job site left in a safe and clean state? ☐ Yes ☐ No
Servicing Representative Signature: Time: ☐ AM ☐ PM Owning Department Signature: Time: ☐ AM ☐ PM

Soft Copy – Servicing Group During Task, Owning Dept after task. Must be retained for 7 years. If Confined Space, must be retained for 30 years. Hard Copy – Owning Department During Task. Must be retained with Soft Copy after Permit Completion

Appendix C: Safe Work Permit, Continued

C.2 Back Side

INSTRUCTIONS TO COMPLETE THE WORK PERMIT

"SG (Servicing Group)" or "OD (Owning Department)" are listed next to each section. This indicates responsibility for these sections of the permit.

SECTION I

- OD A. DATE: Enter the date the work is to begin.
- OD B. TIME ISSUED: Enter the time that the work is authorized to begin.
- OD C. TIME EXPIRES: Enter the time at which the permit expires.
- OD D. PERMIT EXTENSION: Enter permit extensions. If the original permit writer on shift is relieved, then the relieving permit writer shall sign both copies of the permit. The relieving permit writer must perform additional gas testing as required.
- OD E. RELIEF CHANGE: Identify operator relief change as appropriate.
- SG/OD F. PERMIT TYPE: Check the appropriate box to identify applicable required permits.
- SG/OD G. ADDITIONAL FORMS: Identify and indicate all additional required forms have been completed and attached to the permit.
- OD H. EMERGENCY CONTACTS: Enter emergency contact information.
- SG/OD I. EXACT LOCATION: Identify precisely where the permitted work is to be performed (unit area, equipment number, etc.).
- SG J. AUTHORIZED SERVICING GROUP: Enter the name of the company/contractor being given authorization to perform the work.
- SG/OD K. WORK DESCRIPTION: List the specific work description of the work being authorized by the permit.
- SG/OD L. POTENTIAL HAZARDS/CHEMICALS: Identify all potential hazards and/or chemical exposures that maybe encountered.
- SG/OD M. PROCESS HAZARDS OVERVIEW: Identify if the process hazard overview boards have been reviewed.
- OD N. EQUIPMENT PREPARATION – Check the appropriate boxes to indicate which preparatory actions have been taken to ensure that the equipment is ready for the work to be performed. Electricians should sign permit if performing a rack out or rack in.
- SG/OD O. PERSONAL PROTECTIVE EQUIPMENT (PPE) – Check the appropriate boxes to indicate which types of personal protective equipment must be worn in order for the job to be performed safely.

SECTION II

- OD A. HOT WORK – Check the appropriate box to indicate the type of hot work to be performed and the fire prevention requirements.

SECTION III

- OD CONFINED SPACE PRECAUTIONS – Check the appropriate boxes to indicate precautions that must be taken to ensure the confined space entry may be performed safely as per Refining Confined Space Entry Standard Practice RSP-1127-000. Identify Available Rescue Team Type.

SECTION IV

- OD ATMOSPHERIC MONITORING – Test results and the time taken shall be recorded in the appropriate sections and initialed by the person making the test. Record instrumentation serial number and date of last calibration. Check the box indicating whether or not atmospheric testing must be continuous. Conditions that require continuous monitoring include those identified in the Refining Confined Space Entry Standard Practice RSP-1127-000.

SECTION V

- SG/OD REQUIRED SIGNATURES – Obtain signatures from all applicable personnel as indicated to validate the conditions specified on the permit. Signatures should only be recorded after the joint job site visit has been completed.

DEFINITIONS:

MPC Owning Department Representative: Member of the MPC Owning Department who writes the permit. For non-process related construction, the Construction Manager or Construction Supervisors will act as the Permit Writer.

MPC Owning Department Supervisor/Designee: MPC Owning Department's supervisor; typically a Shift or Unit Supervisor. For non-process related construction, the Construction Manager will act as the Owning Department Supervisor. If equipment cannot be verified as depressured, the signature requirement for an MPC Owning Department Supervisor/Designee only applies to the following services: Hydrogen, flare gas, corrosives, and high temperature hydrocarbons (>400°F).

MPC Maintenance Foreman/Designee: The person to whom the servicing group/ work party directly reports. If equipment cannot be verified as depressured, the signature requirement for an MPC Maintenance Foreman/Designee only applies to the following services: Hydrogen, flare gas, corrosives, and high temperature hydrocarbons (>400° F).

Servicing Group Representative (MPC or Contractor): Member of the servicing group/ work party who will be working from the permit or supervising the personnel working on the permit.

Competent Person (MPC or Contractor): Person who can identify existing and predictable hazards in and around the excavation, and who has the authority to take prompt and corrective measures to eliminate them. This person has also received specialized training to identify hazards associated with excavations, shoring, and trenching.

MPC Safety Representative: an MPC (or MPC directly supervised) Safety Professional.

SECTION VI

- SG/OD RETURN OF EQUIPMENT/WORK AREA JOB COMPLETIONS – Check the appropriate boxes to indicate the status of the job at the conclusion of the work permit. Indicate if the cleanup is completed. Indicate LOTO removal. Obtain signatures from the servicing representative(s) and owning department to certify that the permit has been terminated. Record the time of signatures. Archive the Work Permit in accordance with the company's records retention policy.

TERMS – PPE - Personal Protective Equipment; APR - Air Purifying Respirator; CS - Confined Space; HW - Hot Work

FIRE WATCH, SUPPLIED AIR ATTENDANT/BOTTLE WATCH**, AND/OR CONFINED SPACE ATTENDANT****

NAME	COMPANY	Fire Watch	Bottle Watch	Conf. Space Att.	Date	ON	OFF	ON	OFF	ON	OFF

Confined Space Attendant to place signage over manways when no attendant is on duty. **Must be aware of all permit requirements

CONFINED SPACE SIGN-IN/SIGN-OUT FOR AUTHORIZED ENTRANTS (Supplemental sign-in/sign-out log must be turned in with Permit)

NAME	COMPANY	Date	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT

SERVICING GROUP REPRESENTATIVE DEBRIEFING NOTES (Required for Confined Space Entry)

COMPANY	COMMENTS ☐No problems encountered during entry

Appendix D: Responsible Party Matrix

RESPONSIBLE PARTY MATRIX

Safe Work Permit Responsibilities	Routine & Priority 1	E-Tickets & Off Hours	Projects	Power Distribution Group	Turnaround
Planning Job Walk	* Planner	*** SG Foreman & Shift Supervisor	Planner	Planner	Planner
Complete Job Plan Overview, including noting permit required y/n, forms, and higher-level approval forms	* Planner	*** SG Foreman & Shift Supervisor	Planner	Planner	Planner
Validate Job Plan Overview	**OMS	*** SG Foreman	**OMS	**OMS	Ops Rep
Assemble Work Order Package, including applicable forms	* Planner	*** SG Foreman & Shift Supervisor	Planner	Planner	Planner
Review and approve Job Plan Overview and Work Order Package	**OMS	*** SG Foreman & Shift Supervisor	**OMS	PDG Supervisor	Execution Coordinator
Bring Permit Package to Unit (Available to Servicing Group prior to work start)	**OMS	**OMS	SG Rep	Owning Department	Owning Department
Complete JJSV	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.
Conduct initial gas test	OD Rep.	OD Rep.	OD Rep.	OD Rep.	OD Rep.
Complete Permit	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.
Complete JSA	SG Rep.	SG Rep.	SG Rep.	SG Rep.	SG Rep.
Review Permit with JSA and any other associated forms	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.	OD Rep and SG Rep.
Approve Permit	OD Rep.	OD Rep.	OD Rep.	OD Rep.	OD Rep.
Accept Permit	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party
Conduct Toolbox Talk and Sign Declaration	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party
Maintains Permit/JSA/Forms at job site	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party	SG Rep. and Work Party
Maintains copy of permit in the Ops Shelter	OD Rep.	OD Rep.	OD Rep.	OD Rep.	OD Rep.

OD=Owning Department; SG=Servicing Group
* During Routine Hours, Maintenance Foreman may fulfill Planner role for day of execution changes.
** OMS is primary. Shift Supervisor shall fulfill the OMS role during off shift hours.
*** During Off Hours, an MPC Craftsperson, Contract Supervisor, or RSS may fulfill the Servicing Group Supervisor role.

Appendix E: Hierarchy of Controls

The JSA guides personnel in the identification and implementation of controls to mitigate the hazards associated with the task steps. The "Hierarchy of Controls" methodology should be used to identify the most effective mitigations for each hazard identified by the JSA. The order of precedence and effectiveness of hazard control is described below. Examples of each control are displayed in Figure 2.

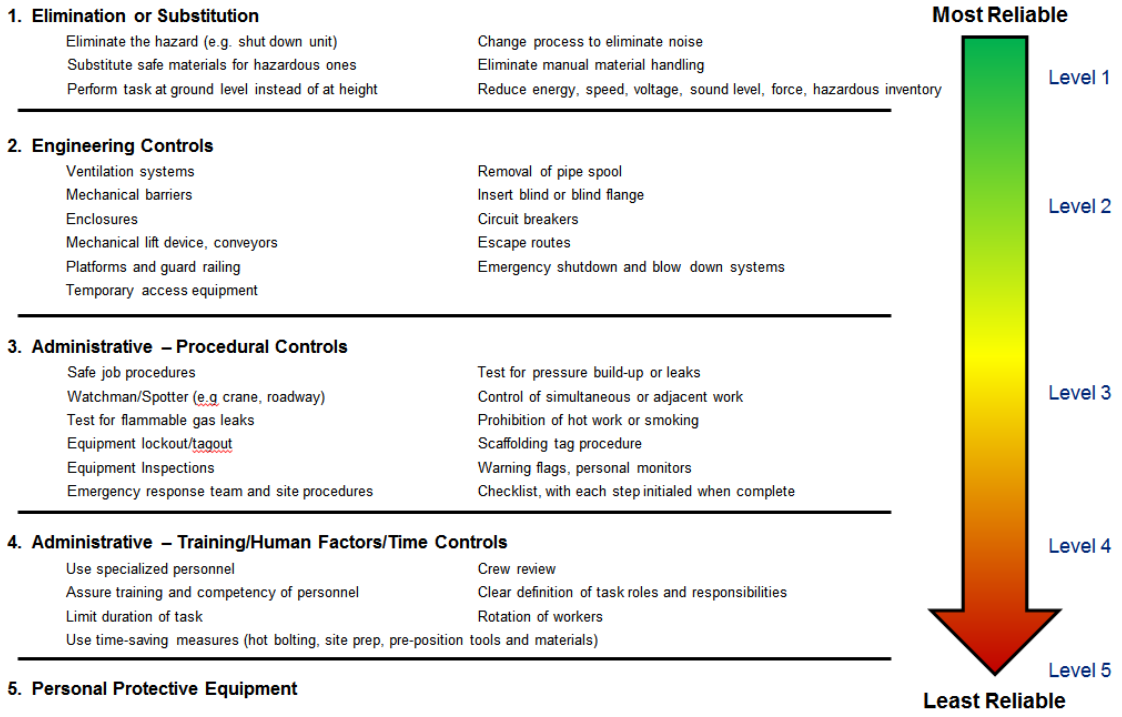


Figure 2 Hierarchy of Controls

Elimination and Substitution

Elimination and substitution, while most effective at reducing hazards, also tend to be the most difficult to implement. If the process is still at the design or development stage, elimination and substitution of hazards may be easier to implement. For an existing process, major changes in equipment or process may be required to eliminate or substitute for a hazard.

Engineering Controls

a Engineering controls are favored over administrative and personal protective equipment (PPE) for controlling existing worker exposures in the workplace because they are designed to remove the hazard at the source, before it comes in contact with the worker.

b Engineering controls protect workers by removing hazardous conditions or by placing a barrier between the worker and the hazard. Examples include local exhaust ventilation to capture and remove airborne emissions or machine guards to shield the worker. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions. They typically do not interfere with worker productivity or personal comfort and make the work easier to perform rather than more difficult.

Administrative Controls and PPE

a Administrative controls and PPE are frequently used with existing processes where hazards are not particularly well controlled. These methods for protecting workers have also proven to be less effective than other measures, requiring significant effort by the affected workers.

b Administrative controls may include the following:

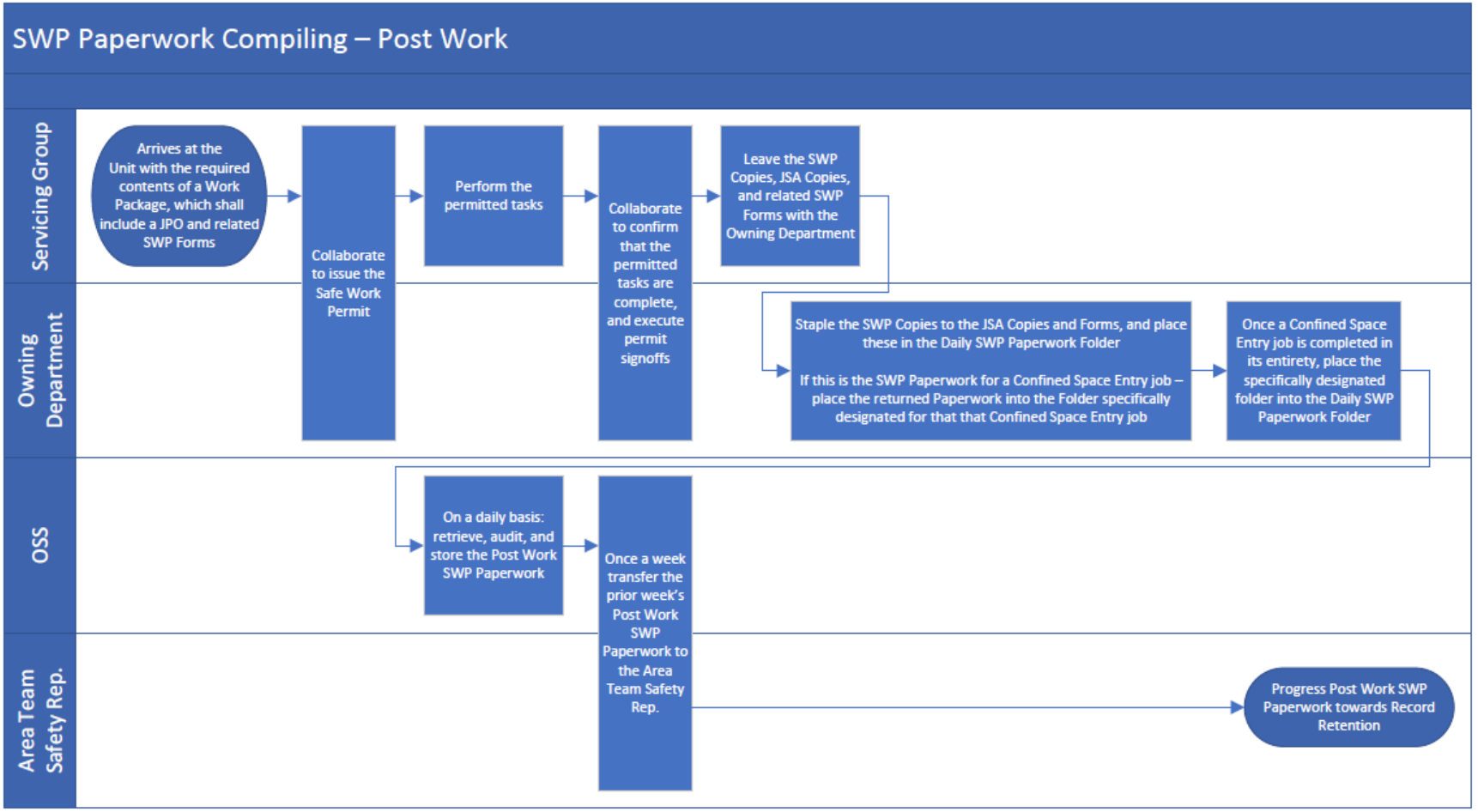
- Written operating procedures, work permits, and safe work practices;
- Exposure time limitations (used most commonly to control temperature extremes and ergonomic hazards);
- Monitoring the use of highly hazardous materials;
- Alarms, signs, and warnings;
- Buddy system; and
- Training.

c Personal Protective Equipment in addition to minimum required PPE such as respirators and double hearing protection is acceptable as a control method in the following circumstances:

- When engineering controls are not feasible or do not eliminate the hazard;
- While engineering controls are being developed;
- When safe work practices do not provide sufficient additional protection; and
- During emergencies when engineering controls may not be feasible.

d Frequently, the hazard cannot be completely eliminated. In these cases, the JSA should seek to use more effective controls as defined by the hierarchy.

Appendix F: SWP Paperwork Compiling - Post Work



Revision History

Document Revision History Complete the following table for each document revision.

Rev. No.	Description of Change	Author	Approved By	Rev. Date
1	Added requirements for 25' buffer zone near railways. Section 4.15.	Christine Tenazas		08/17/15
2	Addition of clarifying example to definition of high energy hot work. "Heating metals using heating coils" is high energy hot work.	Christine Tenazas	Mike Kulakowski	02/28/17
3	Updated document to comply with Andeavor corporate Safe Work Permitting and Job Hazards Analysis Standards.	Alek Hamparian	Mike Kulakowski	06/27/18
4	Updated document to comply with MPC RSP-1128-000.	Alek Hamparian	Mike Kulakowski	11/22/2019
5	Updated the Blanket Work Permit section. Updated the Gas Testing Summary Table.	Alek Hamparian	Mike Kulakowski	06/17/2020
6	Included requirements for revised paperwork compiling process.	Alek Hamparian	Mike Kulakowski	09/28/2020
7	Added the following statement to the definition for Applicable Initial Entry and updated the Owning Department responsibility with: "After an initial entry, if any conditions change (e.g., any isolation change; elevated H2S, LEL, PID, or CO gas test readings; change of atmospheres; etc.), the Owning Department must contact the co-signers to reconvene and issue a new initial entry permit."	Alek Hamparian	Mike Kulakowski	01/28/2020
8	Added language regarding specific times in which mid-shift must be performed.	Johnny Maldonado	Mike Kulakowski	1/14/2023
9	Added review JSA to Owning Department Responsibilities. Added complete Section VI of the SWP to Servicing Group Responsibilities. Added retention requirement for Hot Work. Added to initial changes to permit. Added responsibilities before beginning work. Added first break requirement exemptions. Added job task execution requirements. Replaced OMC references with OMS. Added newest version of SWP and Responsible Party Matrix.	Johnny Maldonado	Connie Lema	5/15/2024
10	Updated section 6.18 to reflect cut tag update to be 2 sided (one for pre-execution and one for day of execution) and added examples of new tags	Connie Lema	Mike Kulakowski	02/03/25

To comply with Employee Participation requirements of Cal PSM and CalARP, I have reviewed the revisions to the following standards:

LAR-PSM-012 Process Safety Information (updated on 7/1/2021)

LAR-PSM-020 Hierarchy of Hazard Controls Analysis (updated on 4/30/21)

LAR-PSM-002C Management of Organizational Change (updated 12/17/20)

LAR-REF-RMS-MEC-DOC-008 LAR Mechanical Integrity Site Plan (updated on 9/30/20)

HSS-201 Permit to Work Standing Instruction (Updated on 1/28/21)

Emergency Response Plan (Updated 3/2021)

LAR-PSM-013 Compliance Audit (updated on 12/17/20)

Chuck Meeks (Wilmington USW Process Safety Representative):

---------- Date: 9/13/21 ----------