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Demolition, Decommissioning Equipment and Unknown Line Verification

Purpose

The purpose of this Standing Instruction is to establish safe work practices to eliminate potential hazards encountered when demolishing or removing from service process piping and equipment, E & I equipment and verifying the contents of an unknown line prior to working on it, whenever encountered

Scope

This standard covers the demolition and decommissioning work done by Marathon contractors or direct employees

Records Retention

Printed copies of this document should not be retained for more than 12 months. Any revision to this document will be retained a maximum of 10 years following the revision.

Table of Contents

1.0 References

1.1 Refining References

The table below lists the Refining references used with this document.

Number	Description
MPC	Fugitive Dust Procedures
BL-57474	Movement of Fixed Assets
PSM-002	Management of Change
HSS 008	Blinding and Isolations
HSS 201	Safe Work Permit
HSS-305	Hazard Communication
HSS-306	Respiratory Protection Program
HSS-307	Noise and Hearing Conservation Program
HSS-405	Respirable Crystalline Silica Exposure Prevention
HSS-410	Asbestos Exposure Prevention Program
HSS 413	Handling of Synthetic Mineral Fiber (non-Asbestos-Containing) Insulation
HSS 414	Lead Exposure Prevention Program
E201	Asbestos Demolition
E211	Northeast Property Excavation
SWP Form: A12	Removal of Asbestos Containing Material
SWP Form A16	Clean up of Asbestos that has been disturbed
TENV 227	Asbestos Demolition
FS 465	Mercury Handling
SAF 042	Mercury Spill Procedure
MNT Pipe-004	Blinds (Installation and Removal)
HSS-501	Personal Protective Equipment
RRD-1110-005	Construction Work Package Development
RRD-1323-000	Safe Equipment Preparation Guidelines
RRD-1337-001	Equipment Rate Reduction and Idling Guidelines

1.2 Regulatory References

The table below lists the regulatory references used with this document.

Number	Description
Title 8 CCR Section 341	§341.1. Issuance of Permits.
Title 8 CCR Section 1734	§1734. Supervision.
Title 8 CCR Section 1735	§1735. Demolishing Buildings.
Title 8 CCR Section 1736.	§1736. Disposal of Waste Material.

1.3 Terms

The following terms are used in this document:

Reference: For details, see Appendix A: Terms and Definitions.

2.0 Roles and Responsibilities

2.1 S.P.A.

LAR has identified a Single Point of Accountability (S.P.A.) as the one individual MPC Representative responsible for Demolition, Decommissioning and Unknown Line Verification. The Single Point of Accountability may be any of the following positions: Operations, Maintenance, Projects, or TAR representatives and their duties are defined below. SPA shall have the following duties:

2.1.1 S.P.A. develops and issues the demolition job scope, which includes a current drawing (P&ID) and electrical single line (where applicable), and a schedule for review with the Demolition Team. Temporary and final disposal sites are determined to ensure there will be no operational or environmental impacts due to proximity of storm waterways. For TAR related demoed equipment, temporary and final disposition sites must be approved by the refinery's TAR Logistics Coordinator.

2.1.2 S.P.A. shall contact D&D or LAR document repositories for fiber plans first when the conductor is known (or suspected) to be for IT Networking.

Note: Isometric documents shall not be used to perform the demolition job scope.

2.1.3 S.P.A. must ensure the necessary government permits and notifications are completed and obtained.

2.1.4 For process unit equipment and piping, ensures a MOC completion, with the appropriate evaluation team, prior to commencing demo work per PSM-002 Management of Change and Pre-Startup Safety Review Standard Practice.

2.1.5 S.P.A. shall lead the demolition job scope meeting/walk and ensure that all required job scope participants approve of the demolition job scope.

a. A copy of the demolition job scope will be kept on site and shall be maintained for the duration of the demolition project.

2.1.6 S.P.A. shall verify that the contents of all equipment (i.e. piping, pumps etc.) to be demolished have been thoroughly decontaminated prior to beginning demolition, according to the RRD-1323-000 Safe Equipment Preparation Guidelines.

2.1.7 During the job walk, if equipment is identified as an unknown line the S.P.A. shall:

a. Review section 3.6 Unknown Line Verification Checklist Procedures. Completes the attachment C, as required.

b. If the conduit contains unknown fiber optics, that is not Process Control-related, contact MPC Field IT Networking Support.

Note: The Unknown Line Verification Checklist ***remains with the work package.***

2.1.8 S.P.A. completes the appropriate checklist or signs off for proposed demolition of job scope.

a. In the rare event that a package needs to be issued with holds in it, the S.P.A. shall follow RRD-1110-005 Construction Work Package Development, **section 2.10.4**

2.1.9 Review checklist during the job walks and kick-off meeting.

Note: All checklists shall remain with the work package.

2.1.10 During the job walk, if the area is too congested or noisy, review the details of the job walk away from the congested or noisy area and capture all the scope that was identified or discussed during field walk.

Note: HSS-307 Noise and Hearing Conservation Program requires anyone with potential to be exposed to elevated noise shall follow **section 5.2** Hearing Protection Required Area in this standard.

2.1.11 S.P.A. shall monitor the demolition job scope from the start of the job scope to completion.

2.1.12 S.P.A. ensures that equipment, piping and E and I equipment to be demolished shall be energy isolated; de-energized, energy source conductors disconnected, and conduit air gapped prior to painting equipment **Pink**.

2.1.13 S.P.A. shall identify all hazardous material that requires sampling and or abatement, including lead paint and insulation suspected Asbestos Containing Material (ACM). (See 1.1 Reference Section of this document to retrieve the appropriate site standard).

2.1.14 In the event, equipment was tagged for demolition before removing insulation, the equipment uncovered must be re-identified with the **Pink** spray paint after insulation is removed.

2.1.15 S.P.A. (e.g. Operations for process equipment and piping.) shall identify and mark equipment, piping or instrumentation to be demoed with **PINK** spray paint (**spell out** "**DEMO**" where possible) for clear identification including the equipment # (if applicable).

Note: Pink spray paint (Demolition Spray Paint MM-3774332) shall only be used for demolition identification.

2.1.16 S.P.A. reviews Appendix C: Equipment Demolition Process Signoff and ensures all appropriate signatures have reviewed and signed off before adding their signature to section 9 "***Proceed to demolition***".

Note: Appendix C: Equipment Demolition Process Signoff is to remain with the work package.

2.1.17 A safety kick-off meeting shall be held before the demonstration starts. The attendees shall be an Operations Representative, Environmental, Health and Safety, Maintenance Representative, Storehouse representative, and, if a contracted job, the Contractor Representative and their Field Supervision. Potential hazards for the job will be reviewed.

2.1.18 S.P.A. ensure inspection and engineering records are updated and delivers all marked up, as-build drawings and data to the Design and Documentation Department.

2.2 Operations Representative

Shall be responsible for:

2.2.1 Reviews and approves the Refinery Representatives demolition plan, including the plan for mitigation of hazards.

2.2.2 Reviews and approves all equipment marked for demolition.

2.2.3 Participates in demolition scope job walks and meetings.

2.2.4 Contacts Health Department to monitor and sample all suspected lead jobs, prior to demolition. (See HSS 414 Lead Exposure Prevention Program).

2.2.5 Conducts/Attends safety kick-off meetings.

2.2.6 Responsible for equipment and piping isolation (s), i.e. de-energization and blinding requirements, (Refer to HSS 008-Control of Hazardous Energy and or appropriate Maintenance procedures).

2.2.7 Responsible for performing marking on all equipment to be demolished with **PINK** paint and any additional labeling for clear identification equipment to be demoed.

2.2.8 Reviews Electrical job scope with Marathon Electrical Department and the LAR Representative.

2.2.9 Removal or relocation of pipeline or electrical conduit shall not be done until positive identification or clearance of the line can be made.

2.2.10 Prepares equipment for safe demolition (i.e. readies equipment for removal).

2.2.11 Review and issue daily permit per HSS-201 Safe Work Permit.

2.2.12 Monitors job activities.

2.3 Maintenance Representative

Shall be responsible for:

2.3.1 Participates in the demolition scope job walks and meetings.

2.3.2 Attends safety kick-off meetings.

2.3.3 Monitoring job plans and progress.

2.3.4 Participating in blinding requirements.

2.3.5 Reviews this demolition policy with the work crew(s) prior to starting work.

2.3.6 Contacts Health Department to have all suspected paint, insulation, and building materials sampled for lead and asbestos content, prior to demolition.

2.4 Environmental Representative

Shall be responsible for:

2.4.1 Participating in the demolition scope job walk and meetings.

2.4.2 Determining hazardous material characterization and disposal related to equipment contents and components (i.e. insulation, lead paint, etc.).

2.4.3 Ensures that equipment listed in demolition scope of work has been decontaminated by means of blinding, steaming, water washing, purging, etc., as required by unit safe operating practices and procedures. Equipment must be decontaminated before preparing it for demolition and final disposition.

2.4.4 Works with Operations Specialist to determine final disposition of assets. If equipment is to get disposed of, determine appropriate disposal site (temporary and permanent) of hazardous material if any. If equipment is to be kept onsite for future use, assists asset owner to determine storage location.

2.4.5 Ensures that the demolition contractor submits the required Rule 1166 notification to SCAQMD (if applicable) applicability of notification must be discussed with Health and Environmental Departments. If notification is required, then a copy of the compliance plan shall be given to the Safety and Environmental Departments.

2.5 Health Representative

Shall be responsible for:

2.5.1 Participate in the demolition scope job walk and meetings.

2.5.2 Attends safety kick-off meetings.

2.5.3 Based on hazardous material characterization, will determine health monitoring required to demolition/decommissioning related to equipment contents and components (i.e. asbestos insulation, lead paint, mercury, etc.).

2.5.4 Completes sampling of any suspect hazardous materials to get removed as listed in demolition scope of work.

2.5.5 Works with Operations and crafts person to determine applicability of SCAQMD Rule 1403 for demolition and asbestos abatement.

2.5.6 Communicates results of asbestos or lead content to operation and maintenance representatives to ensure that hazardous materials identified during sampling are properly handled and disposed.

2.5.7 Based on analytical results Health determines PPE requirements for jobs related to the demolition/decommissioning job.

2.5.8 Notify the SDS System Administrator, in the Health Department, when equipment has been removed from service so equipment content can be de-inventoried and SDS information deactivated, as required.

2.6 Inspection Representative

Shall be responsible for:

2.6.1 Participate in demolition scope job walk and meetings.

2.6.2 Attends safety kick-off meetings as required.

2.6.3 Provides inspection services as required by the S.P.A.

2.6.4 Ensure all inspection databases are updated.

2.8 Safety Representative

Shall be responsible for:

2.6.1 Participates in the demolition scope job walks and meetings.

2.6.2 Attends safety kick-off meetings.

2.6.3 The Authorized Gas Tester will conduct LEL test and document results on the Clean/Safe Vessel Tag prior to demolition or disposal. Support permitting of work as required. (See HSS-201 Safe Work Permit)

2.7 Storehouse Representative

Shall be responsible for:

2.7.1 Participates in the demolition scope job walks to understand the final disposition of equipment and materials associated with demolition work (i.e. scrap metal)

2.7.2 Attend safety kick-off meetings as required to communicate requirements for metal recycling effort including size (for metal scrap and piping). General size requirements include 18' maximum for piping.

2.7.3 Ensure there is an outlet for all metal equipment listed in demolition scope of work. Equipment must be decontaminated before preparing it for demolition and final disposition.

2.7.4 Provides metal scrap containers to demo contractor for small pieces of metal removed during the demolition (i.e. piping, metal scraps).

2.7.5 Responsible for inspection of containers during accumulation to ensure that equipment/ scrap that are free of insulation or other contaminants (i.e. coatings, trash, excess oil, and insulation) that would prevent their recycling.

2.7.6 Performs the final inspection of the demoed equipment before it leaves the MPC LAR Refinery.

2.7.7 Communicates any non-conformance issues to LAR Representative and implement corrective action prior to allocating the materials for transportation outside the refinery.

2.7.8 For large vessels and equipment, ensures that Clean/Safe Vessel Tag is affixed to the demoed equipment and assures that proper signoffs have been made prior to salvage. Clean/Safe Vessel Tags are available at the MPC Storehouse.

2.7.9 Initiates salvage effort. Ensures that materials meet guidelines established in the contract for metal scrap recycling.

2.7.10 Completes a Movement of Assets form and forward it to Accounting

3.0 Procedures

3.1 Demolition Contractor

3.1.1 A demolition scope job walk is held with the demolition contractor to field check equipment to be demolished and verify equipment is clearly identified.

3.1.2 The demolition contractor will review all work and, permitting restrictions, for all segments of the demolition plan. Any potential hazards (such as firefighting plans) should be discussed prior to the safety kick-off meeting.

3.1.3 The demolition contractor must submit a Rule 1403 Notification for demolition (if applicable) to SCAQMD. This notification and any revision associated with Rule 1403 Notification shall be reviewed with the Health Group for approval prior to sending it to the agency.

3.1.4 A copy of all SCAQMD notifications and compliance plan requirements will be at the job site with job permitting paperwork.

3.2 Operations

3.2.1 Operations write any specialized equipment isolation procedures for the demolition job and assign a representative from Operations to serve as a demolition coordinator.

a. If this task takes longer than one shift or if the assigned SPA is unavailable to oversee the task until completion; all duties will be handed over to the oncoming operator, where the work is taking place, during shift turn over.

b. This role will be filled by the operator responsible for the area where the work is taking place, unless otherwise specified by management. If the task is ongoing into subsequent shifts, the operator will include it as part of normal shift hand over and unit log.

3.2.2 Operations isolates and prepare equipment to be demoed by blinding, steaming, water washing, purging, etc., as required by unit safe operating practices and procedures. An equipment isolation list must be created in accordance with HSS 008 Control of Hazardous Energy.

3.2.3 Equipment must be decontaminated before preparing it for demolition and final disposition (i.e. disposal or storage). Decontamination includes the removal of all contents to prevent accidental leaks. Decontamination activities must be recorded on the **Clean/Safe Tag**.

The Authorized Gas Tester must perform an LEL test prior to disposal or demolition.

3.2.4 Operations shall mark all equipment, piping or instrumentation to be demolished with pink spray paint and marked "**DEMO**" (as needed) for clear identification, including the equipment # (if applicable).

3.2.5 After Operations has verified equipment has been decontaminated, isolated and prepared the equipment for demolition, affix the 'Clean/Safe Vessel Tag' to the equipment and obtain signature on the Tag by Operations. Signatures on the Tag should be obtained following each of the steps as indicated on the Tag.

3.2.6 Operations shall ensure that the Electrical and Instrumentation departments are contacted for instrument removal.

3.2.7 During demolition work, the Operations Representative shall witness all torch cuts to equipment still connected within the unit or area.

3.2.8 All steel structures shall be dismantled column length by column length and tier by tier, so the structure shall not be overstressed during demolition.

3.2.9 Operations shall ensure that underground piping is abandoned in accordance with this procedure and appropriate forms are filled out.

Note: Contact the FEMI (Fixed Equipment Mechanical Integrity) group to ensure this process is followed.

3.2.10 Ensure all equipment that is ENIC, OOS or AIP (as define in section 3.5.1 ENIC, OOS & AIP Minimums) is updated on the LAR site Master ENIC, OOS or AIP Equipment list in SAP and that it complies with Attachment C - Equipment Demolition Process Signoff (as defined in 3.9 Minimum Requirements Limits for Demolition) and RRD-1337-001 Equipment Rate Reduction and Idling Guidelines.

3.2.11 On the finding of an unknown line, the demolition crew shall contact the PEI group refinery representative. If it is necessary to remove or relocate the line in question, they shall then use the "Unknown Line Verification Checklist" procedure, Attachment D of this instruction.

3.2.12 Whenever an unknown material is identified that segment of the job will be shut down in order to determine proper handling and disposal procedures. Personnel involved in this determination are the LAR Representative, Environmental, Health and Safety, and an Operations Representative.

3.2.13 Removal of materials during demolition work:

a. If chutes are used to drop material to ground level, they shall be constructed to eliminate failure due to impact of the materials. The area around the chute shall be barricaded on all sides to warn workers of the overhead hazards.

b. Waste disposal must get coordinated through the Environmental Department, Waste Engineer to ensure appropriate planning, segregation, and disposal.

c. The LAR Representative must give approval to remove demoed equipment from the Los Angeles Refinery under the requirements established by Environmental for that job.

d. Metal recycling must be coordinated with the Storehouse foreman to ensure proper coordination, segregation, and removal from the site.

3.3 Electrical and Instrumentation

3.3.1 All electrical/instrumentation associated with a piece of equipment to be demolished will be de-energized, energy source conductors disconnected, and conduit air gaped prior to any pink marking or demolition work. If electrical conduit is abandoned in place, the conduit must be removed from the electrical box and capped so that it can easily be recognized as de-energized.

3.3.2 The electrical/instrumentation shops must be contacted for instrument removal when applicable.

3.3.3 All the fluid /oil filled electrical equipment such as transformers and oil filled circuit breakers and capacitors deemed for disposal will be removed provided that a fluid sample/ oil has been provided to the Environmental Department to determine proper handling of the materials before these are evacuated from the equipment. Samples are collected by the Electric Group and provided to Environmental to get them analyzed at a third-party laboratory.

3.3.4 All the fluid /oil filled electrical equipment such as transformers, oil filled circuit breakers, capacitors deemed for storage, and future use must be stored with appropriate secondary containment. The Environmental Water Compliance Engineer must be consulted prior to selecting a storage location to determine is the area is suited for storage and in compliance with SPCC requirements.

3.3.5 Some Instrumentation contains Mercury and must be handled in accordance with site instructions (F/S 465 "Mercury Handling (Carson) or SAF-042 Mercury Spill Procedure (Wilmington).

3.4 Control System Specialist (IT Networking) or Communication Specialist (Telephone) Departments

3.4.1 The Control System Specialist or Communication Specialist shall review and inspect conduit intended to be demolished prior to conduit removal. The Control System Specialist shall review fiber plans, with SPA, prior to demolition.

3.4.2 All IT Networking or Telephone conduit, associated with a piece of equipment to be demolished, will be de-energized; energy source conductors disconnected, and conduit air gapped prior to any pink marking for demolition work.

3.4.3 Communication Specialist shall verify conduit by testing for voltage

3.4.4 If IT Networking or Telephone conduit is to be abandoned in place, the conduit must be removed from the energy source and capped so that it can easily be recognized as de-energized.

3.4.5 If it is determined conduit contains communication Fiber Optic for Process Control and conduit was exposed (either through damage or through following the Appendix D: Unknown Line Verification Checklist) SPA must consult Control System Specialist in the development of a specific conduit and/or broken fiber repair plan and have approval of that plan prior to repair or demolition work.

3.4.6 Control System Specialist shall ensure any fiber drawing updates are correct.

3.5 Equipment not in Commission, ENIC, Out of Service, OOS or Abandoned in Place, AIP)

All equipment or facilities deemed to be taken Out of Commission, Out of Service or Abandoned in Place (e.g., ENIC, OOS & AIP) shall follow the unit shut down, decommissioning and isolation procedures in addition to the following:

Note: All pipelines and conduit connections must be air gaped. The individual that tags the equipment must clearly write their name, department, contact information, date, and the reason for decommissioning (i.e. equipment Out of Service)

3.5.1 ENIC, OOS & AIP Minimums

Piping equipment or systems, electrical circuits or equipment which is NOT intended for future use must be **air gaped in place** and will meet all of the following:

a. Has been decommissioned with no intention for future use.

b. It is physically disconnected (e.g. air-gaped) from all energy sources and/or other piping/equipment.

c. Has been completely de-inventoried/purged of hydrocarbon/chemicals; and

d. Review structural supports, etc. at routine frequency to assure integrity/safety

e. Consult PEI on inspection frequency

f. Review Asbestos and Lead Exposure (if applicable)

g. Movement of fixed assets" form needs to be filled out to remove items from our asset register and Permits

h. PSI and PSM documents will require updates reflective of status.

3.5.2 Decommissioned Equipment (i.e. equipment being salvaged or scrapped).

3.5.3 Piping equipment or systems, electrical circuits or equipment which is **NOT** intended for future use but will be **air gaped in place** shall meet all of the following:

a. Has been decommissioned with no intention for future use.

b. It is physically disconnected (e.g. air-gaped) from all energy sources and/or other piping, conduit or equipment.

c. Has been completely de-inventoried/purged of hydrocarbon/chemicals and the Clean Vessel Tag has been attached (if applicable)

d. The remaining structure (if any) needs routine assessment for integrity/safety

e. Consult PEI on inspection frequency

f. Review Asbestos and Lead Exposure (if applicable))

g. Movement of fixed assets" form needs to be filled out to remove items from our asset register and Permits

h. PSI and PSM documents will require updates reflective of removed status.

3.6 Unknown Line Verification Checklist Procedures

3.7.1 Notification will be the duty of the LAR Representative to initiate the following procedure for obtaining an Unknown Line Verification Checklist:

a. Notify the Supervisor of the area involved.

b. Notify the Fire & Safety Department.

c. Follow Line Identification Method.

d. Notify the Foreman of the Electrical and Instrumentation Department, if applicable.

e. Notify Engineering (Design and Drafting) to record the status of the line on appropriate drawings.

3.7 Line Identification Method

3.7.1 Expose the line by additional excavation to find out where the line ties into.

3.7.2 Identify the type of line being excavated (i.e. conduit, product pipeline etc.).

3.7.3 Check the line for conduit service. Conduit couplings are spaced at 10-foot intervals. If the line is verified conduit, call the electrical department for service.

3.7.4 Drawings of underground pipelines, conduit, etc. are on file in the Shops, Drafting Room, and North or South Processing Offices. Check the current drawings for line identification.

3.7.5 Check the location of the unexposed line by means of a pipeline locator and verify flow through the line.

3.7.6 After all of the above steps are taken, a small hole (1/8" maximum diameter) shall be drilled in the top of the line using a drill block so that the bit will just break through the wall of the pipe. Equipment for plugging the hole will be on hand prior to drilling, in case the line is under pressure.

3.7.7 The hole should be increased in size to allow insertion of a non-conducting probe to check the line for electric conduits. If electrical wires or cables are present in the line, the LAR Electrical Supervisor and Engineer of the Electric Department shall make a further investigation and provide direction prior to issuance of the Unknown Line Verification Checklist.

3.7.8 If the conduit contains unknown fiber optics, that is not Process Control-related, contact Marathon Field IT Networking Support. If it contains known fiber optics that connect to Process Controls contact Operations and Field IT Networking Support.

3.8 Issuance of Unknown Line Verification Checklist (s)

3.8.1 If the following conditions have been fulfilled and it is the opinion of the Area Foreman, the Electrical Foreman and the Fire & Safety Representative that the line is dead, an Unknown Line Verification Checklist will be granted. Such a Checklist will allow only cold-cutting of the line. If burning or welding is required on the line, a Hot Work risk assessment will be made, and results added to the work permit as required (see HSS-201 Safe Work Permit).

3.8.2 If work to be done on the line involves rerouting, plugging or modification of any type, a MOC form must be initiated. The Job Foreman or LAR Representative is responsible for initiating this procedure.

3.9 Minimum Requirements Limits for Demolition

Attachment C - Equipment Demolition Process Signoff

3.9.1 **Air Gapping:** All power circuits will be air gaped at both ends of the circuit. This also applies to control stations, all motor conduit connection points, cable pull enclosures, electrical/instrument equipment and enclosures, which will be removed, and conduits capped.

3.9.2 **Verify Energy Isolation:** LAR Representative will visually verify each isolation point identified on the Energy Isolation List (as required) for all isolation of electrical equipment, instrumentation and process piping and equipment scheduled to be demolished or removed from service.

Note: Be aware of pump piping circuits where bleeders are not present in between discharge valves, and check valves to provide appropriate verification of de-pressure.

3.9.3 **Electrical Equipment**, such as motors, will generally be abandoned in place after air-gapping unless removal is authorized. Control panels where all conduits going in and out are air-gapped will be removed and the conduits taken back to nearest well-supported fitting.

3.9.4 **Switch Rooms/Substations** will have all out of service equipment removed. All conduits for out of service equipment inside the Switch room/Substations will be removed to a point, minimum 12 inches, to outside the switch room/substation. Drawing mark-ups (and as-builts) showing removed equipment within these buildings shall be required.

3.9.5 **Fluid/oil filled electrical equipment** such as transformers and oil filled circuit breakers and capacitors will be removed and provisions

made to be removed from refinery property (comply with Refinery waste removal policies). Fluid samples (i.e., oil, gas or any product in the equipment) must be provided to the Environmental Department to determine proper handling of the materials before these are evacuated from the equipment.

3.9.6 **Instrumentation:** Instruments will be removed per instrument demo indexes and conduits taken back to the nearest well supported fitting. Instrument wiring to be removed back to the terminal box, or interface with any active wiring. Where all instruments and conduits are removed, the terminal box will also be removed.

Appendix A: Terms and Definitions

Term	Description
Abandoned in Place	The practice of leaving all or part of a decommissioned facility or its equipment in its pre-decommissioned location, but having been otherwise made non-functional **Note: All pipelines and conduit connections must be air gapped**
ACM	Asbestos Containing Material
Air-Gapped	Physical separation of equipment from operating systems by disconnecting piping or removing a valve, or a section of piping, e.g. roll spool piece, so there is an "air gap" between operating and decommissioned systems.
Demolition	The removal and disposal of any permanent, temporary or stored equipment from its designated location and/or service, not replacing it in kind service.
Demolition Team	LAR Representative, Operations, Maintenance, Inspection, Environmental, Health & Safety, and Storehouse Salvage, Operations Specialist, and Contractor Supervision (if needed).
Decommissioned (i.e. Equipment not in Commission, ENIC or Out of Service, OOS)	When equipment has been planned for orderly permanent shutdown, i.e. to be taken out of service without the intention of restoring service, it is being decommissioned. That means it is necessary to disable and isolate the equipment. **Note: All pipelines and conduit connections must be air gapped**
Equipment	Equipment defined includes the following: Machinery, Piping, Electrical, Instrumentation, Vessels, Tanks and Heat Exchangers.
E and I Equipment	Electrical and Instrumentation equipment.
Inductance Meter (LCR Meter)	A LCR meter (Inductance (L), Capacitance (C), and Resistance (R)) is a piece of electronic test equipment used to measure the inductance, capacitance and, resistance of a component.
Single Point of Accountability	The LAR Representative serves as a Single Point of Accountability for the Demolition or decommissioning job, and may be a Maintenance Representative, Project Representative, Operations Representative, or TAR Representative.
Unknown Line	Any line that is unverifiable in service or content through the most current P&ID. Ex. if you do not know what is in the line or lost sight of the line during job walk, **the line is an unknown line**.

Appendix B: Building Demolition Survey Checklist

California Code of Regulations

Title 8, Section 1734 Supervise Demolition Operations:

Survey of the condition of the structure to be demolished. Write and keep the survey on the jobsite and make it available to the Division upon request.

Title 8, Section 1735 Demolish Building Safely:

Determine if any type of hazardous chemicals, gases, explosives, flammable materials or similarly dangerous substances have been used in any pipes, tanks or other equipment on the property before demolition begins. Test and purge any hazardous substances and eliminate the hazard before demolition.

Project Name _____ FM _____

Demolition Description:

Hazardous Materials Present:	**YES**	**NO**	**Energy Isolation Required:**	**YES**	**NO**
Asbestos Containing Material (ACM)*	☐	☐	Electrical	☐	☐
Lead Paint	☐	☐	Pneumatic	☐	☐
Mercury Instruments / Switches	☐	☐	Hydraulic	☐	☐
Hazardous Chemicals Present	☐	☐	Other	☐	☐
Flammable Materials Present	☐	☐			
Gasses Present	☐	☐			
Other:	☐	☐			

Describe details and mitigation of any YES indicated:

Condition of structure:

Demolition effects on adjacent structures or surroundings:

*Important: AQMD notification of building, foundations, structural support demolition involving ACM removal. (Please note that this will require two notifications to SCAQMW; one for ACM removal and one for demolition work).

Complete Movement of Fixed Assets Form

LAR MPC Representative: _____ Date: _____

Appendix C: Equipment Demolition Process Signoff

Description of Demolition:_____

Project or WO:_____

1. Ensure current demolition drawings (i.e. P&ID's etc.) and/or instructions generated, as appropriate.
Signature of Completion _____DATE _____

2. Review and approve demo drawings by engineering (i.e. Electrical & Instrumentation, Mechanical, Civil etc.). Electrical & Instrumentation devices and shut down systems shall have Inst. Shop review.
Signature of Completion _____DATE _____

3. Walk down of demo equipment by Marathon Operations, Maintenance, Electrical & Instrumentation shop, and demo contractor with special attention to identify demo limits. Hang the appropriate tags (e.g. Isolation, Out of Service etc.) to clearly identify limits. **See Sec. 3.9 -** Minimum Requirements Limits for Demolition.
Signature of Completion _____DATE _____

4. Marathon Electrical & Instrumentation shop will carry out the following: (prior to signature review section 3.3 Electrical and Instrumentation & 3.4 Control System Specialist (IT Networking) or Communication Specialist (Telephone) Departments)

- ALL ELECTRICAL ISOLATION (De-energization of electrical equipment; including isolation by disconnecting wires from energy source): **Signature of Completion** _____DATE _____
- Testing for voltage verification: **Signature of Completion** _____DATE _____

Marathon Electrical & Instrumentation shop will either be carried out or be present for the following:

- Air gap conduit from energy source enclosure and other equipment:
  Signature of Completion _____DATE _____

Marathon Control System Specialist (IT Networking) shall carry out or be present for the following:

- Isolations, voltage verification and air gap conduit from energy source enclosure and other equipment:
  Signature of Completion _____DATE _____

Marathon Communication Specialist (Phone shop) shall carry out or be present for the following:

- Verify voltage and air gap conduit from energy source enclosure and other equipment
  Signature of Completion _____DATE _____

5. Decontamination:

- Ensure that all equipment has been properly decontaminated by means of; blinding, steaming, water washing, purging, etc., as required by unit safe operating practices and procedures. Equipment must be decontaminated before preparing it for demolition and final disposition and tagged with a Clean/Safe Equipment Tag (see Attachment D).:
  Signature of Completion _____DATE _____

6. Lead and Asbestos Abatement:

- Lead and Asbestos abatement must be completed prior to the commencing of any demolition job to ensure that contaminants are removed to prevent spreading issues to secondary locations.
  Signature of Completion _____DATE _____
- Verified by Marathon Health before marking for demolition.
  Signature of Completion _____DATE _____

7. Paint equipment to be demoed with **PINK** spray paint, by Ops.

- After all enclosures have been de-energized and air gaped, clearly identify demo equipment (line of sight minimum), especially end points. **Signature of Completion** _____DATE _____
- Marathon Operations, Electrical & Instrumentation or Inspection will verify that **PINK** spray paint applied correctly.
  Signature of Completion _____DATE _____

8. Test for voltage by demo contractor (use appropriate voltage meter) witnessed by Marathon Electrical & Instrumentation Representative: **Signature of Completion** _____DATE _____

9. Proceed with demolition: **Signature of Completion** _____DATE _____

Appendix D: Unknown Line Verification Checklist

DEPARTMENT:		**DATE:**	
LOCATION:			
WORK TO BE DONE:			
REQUESTED BY:			

LINE IDENTIFICATION PROCEDURE

1. Have individuals who might have knowledge of the line been contacted?			
By:		Yes ☐	No ☐
Remarks			
2. Has line been zero energy verified (e.g. tested for live electrical conduit, product or pressure still in the pipeline)?			
By:		Yes ☐	No ☐
Remarks			
3. LAR Representative has reviewed checked the job versus the prints?			
By:		Yes ☐	No ☐
Remarks			
4. Has line been checked with pipeline locator and leak detector?			
By:		Yes ☐	No ☐
Remarks			
5. Has a small hole been drilled in top of the line?			
By:		Yes ☐	No ☐
Remarks			
6. Has line been checked with electrical search line?			
By:		Yes ☐	No ☐
Remarks			
7. Has line been probed with a non-conductor?			
By:		Yes ☐	No ☐
Remarks			

Checklist Completed:	a.m. / p.m.		Date:		Expires:	a.m. / p.m.		Date:	

Safety Representative	LAR Marathon Representative
Authorized Gas Tester	Process Operator

Attachment E Clean/Safe Equipment Tag

Equipment #	**Equipment Name or Other ID**

Equipment or items listed is clean and has been decontaminated of all residual products and has been tested for safe LEL by the Authorized Gas Tester and is approved for transport and disposal.

Role	Department	Signature	Print	Phone #	Date	Comments/LEL
Operations Rep	**Operations**					
Operations will isolate and prepare equipment to be demoed by blinding, steaming, water washing, purging, etc., as required by unit safe operating practices, procedures and job hazard plans						
Maintenance Rep	**Maintenance**					
Ensure equipment or item has been properly decontaminated interfacing with slab, Environmental Engineer and Waste Management as required						
Environmental Engineer	**Environmental**					
Verifies "clean" and that any hazardous material disposal issues have been addressed						
Safety Rep	**Safety**					
Measures LEL and authorizes any hazardous condition permits required for demolition or disposal						
LAR Rep (SPA)	**Maintenance Engineer, Project Engineer, or Maintenance Foreman**					
Responsible for final disposition of demolished equipment or material						
Storehouse Rep	**Storehouse**					
Makes determination of safe disposal method (cut or ship complete) and arranges external transportation for purpose of disposal of all clean scrap metal						

These Demolition Tags (MM-3767659) are available at the storehouse

Revision History

Document Revision History

Complete the following table for each document revision.

Rev. No.	Description of Change	Author	Approved By	Rev. Date
02	*Removed* all Andeavor References and format and replaced with MPC, *Added* missing standing instructions to Refining references, *Clarified* the meaning of S.P.A., *Added* the required MPC reference whenever process equipment is opened to atmosphere sec. 2.1.6., *Added* sec. 2.1.8a In the rare event that a package needs to be issued with holds in it, the S.P.A. shall follow RRD-1110-005 Construction Work Package Development, section 2.10.4, *Added* 2.1.10 congested or noisy work areas, Clarified 2.1.16-SPA Appendix C Review and Signoff requirements *Added 3.2.9 underground piping & 10* Master AIP Equipment list in SAP for *Added* Notes “checklists/signoffs remain with the Work package” “Contact the FEMI” “Anyone with potential to be exposed to elevated noise” “Be aware of pump piping circuits” *Changed color* of both demo tags and spray paint from orange to pink.	Rinaldo Edmonson	Safety Manager	10/30/2024