Contents

List of Tables

1.0 INTRODUCTION

1.1 Purpose

To define the requirements for safe erection, disassembly, inspection and use of supported and suspended scaffolding in the Marathon Anacortes Refinery.

1.2 Scope

This procedure applies to Marathon Anacortes Refinery employees and contractors. All personnel working on Marathon Anacortes Refinery property must comply with this procedure.

This document does not apply to:

- Manually propelled, self-propelled, or boom-supported elevating work platforms
- Aerial lifts

For crane suspended personnel platforms, see R-11-008 and WAC 296-155.

2.0 REFERENCES

2.1 Marathon Standards, Policies & Procedures

- TSHS-013 Fall Protection Standard

2.2 Government Regulations

- WAC 296-24 General Safety & Health Standards
- WAC 296-155 Safety Standards for Construction Work
- WAC 296-874 Scaffolds

3.0 DEFINITIONS

The following definitions are applicable to this procedure.

Table 1 Definitions

Term	Description
Competent Person	One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. The competent person has the responsibility for evaluating the conditions and making decisions (i.e., scaffold) which will not only affect the scaffold set up, but also the safety of the crew, including fall protection and others working around and on the scaffold. All references in this document to Scaffold Builders, Scaffold Inspectors, or Scaffold Users apply only to persons meeting this definition as competent persons in the specific activity or situation referenced. Marathon Anacortes Refinery employees or contractors shall designate these persons as competent and shall maintain documented applicable work history of training, education, and experience.
Exposed Power Lines	Electrical power lines which are accessible to and may be contacted by employees. Example: electrical wires outside of a conduit or raceway. Such lines do not include extension cords or power tool cords.
Falling Object Protection	Devices, systems, structures, work practices or other means intended to prevent tools, materials, debris and other objects from falling or to deflect or contain falling objects from striking workers below.
Feasible	Means possible (i.e., Guardrail System or Personal Fall Arrest System).
Guardrail System	A vertical barrier, consisting of, but not limited to top-rails, mid-rails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lower levels.
Infeasible	Nearly impossible. Infeasible is much closer to "impossible" than "inconvenient."
Lifeline	A component consisting of a flexible line that connects to an anchorage at one end to hang vertically (i.e., vertical lifeline), or that connects to an anchorage at both ends to stretch horizontally (i.e., horizontal lifeline) and serves as a means for connecting other components of a Personal Fall Arrest System to the anchorage.
Maximum Intended Load	The total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.
Personal Fall Arrest System	A system used to arrest an employee's fall. It consists of an anchorage, connectors, and body harness and may also include a lanyard, deceleration device, lifeline or combinations of these.
Platform	A work surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks, fabricated decks, and fabricated platforms.

Table 1 Definitions

Term	Description
Qualified/ Qualified Person	One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the work, or the project. Marathon Anacortes Refinery employees or contractors shall designate these persons as qualified and shall maintain documented applicable work history of training, education, and experience.
Scaffold	A temporary elevated platform (i.e., supported or suspended) and its supporting structure (i.e., including points of anchorage) used for supporting employees or materials or both.
Single-Point Adjustable Suspension Scaffold	A suspended scaffold consisting of a platform suspended by one rope from an overhead support and equipped with means to permit the movement of the platform to desired work levels.
Supported Scaffold	One or more platforms supported by rigid means such as outrigger beams, brackets, poles, legs, uprights, posts, or frames.
Suspension Scaffold	One or more platforms suspended from an overhead structure by ropes or other non-rigid means.
Toe Board	A barrier installed at the outermost edge of a walking/working surface to prevent objects from falling onto workers below. Toe board components (i.e. 9 gauge tie wire, and wood) are typically used to prevent the platforms/planks from uplifting or sliding.
Two-Point Suspension Scaffold (Swing Stage)	A suspension scaffold consisting of a platform supported by hangers (i.e. stirrups) suspended by two ropes from overhead supports and equipped with means to permit the raising and lowering of the platform to desired work levels.
User	Any person ascending, stepping onto, or performing work from a scaffold. (Note: This is a Marathon Anacortes Refinery definition)

4.0 ROLES AND RESPONSIBILITIES

All Marathon Anacortes Refinery employees and contractors are responsible for reading and complying with this procedure, which is to be used in conjunction with WAC 296-155 Part C-1, WAC 296-24 Part J-3, and WAC 296-874-100. In addition, it shall be the responsibility of all Marathon Anacortes Refinery employees and contractors to read and comply with the following requirements. These requirements are designed to promote safety and understanding of the Marathon Anacortes Refinery procedures for the erection, inspection, and use of scaffolding. These requirements are not all-inclusive, nor do they supplant or replace other additional safety and precautionary measures to cover unusual conditions.

5.0 SCAFFOLD CONSTRUCTION REQUIREMENTS

Erecting scaffold on forklifts or other powered industrial trucks, such as front-end loaders, is generally not allowed on-site.

5.1 Capacity

- Each supported or suspension scaffold, including components, shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.
- All scaffolds at Marathon Anacortes Refinery are to be considered as light duty rated, (i.e., 25#/sq. ft. of deck space) unless otherwise documented.

5.2 Scaffold Platform Construction

Each platform on all working levels of scaffolds shall be fully planked or decked (i.e., between the uprights and the guardrail system) with no more than 1" spacing between the platform components, or no more than 9-½" between the platform and the uprights. Exception: The requirement to provide full planking or decking does not apply to planks or platforms used by Competent Scaffold Builders performing scaffold erection or dismantling. Appropriate fall protection must be used when working with these conditions.

- Each end of a wood plank, unless cleated, shall extend over its support at least 6" and no more than 12".
- Wood planks or fabricated platforms shall not deflect more than 1/60 of the span when loaded. Example: An 8' (96") plank on a span of 7' (84") shall not deflect more than 1.40" (1 3/8").
- All platform components must be secured typically with 9-gauge wire to prevent sliding and uplifting. This includes planks or platforms that are left in place after they are used by the scaffold erectors.
- Scaffold erection on process lines should be avoided whenever possible.

There will be instances in which the only practical means of access to a work-site is the erection of a scaffold or platform built on process lines. The following is instructions in the event of such a case:

- Before any scaffold is constructed on process lines, the Operations Supervisor of that unit must grant permission.
- Insulated lines shall not be used to support a scaffold without Operations Supervisor approval.
- All piping used to support scaffolding must be capable of withstanding the intended weight of the completed scaffold, its users, and equipment.
- Piping smaller than 6" diameter, instrument airlines, or electrical conduit shall not be used to support a scaffold.
- Caution must be used when working around hot process lines. If the process line outside temperature could exceed 125°F, it shall be insulated for personnel protection.
- When scaffolds are built near hot equipment they shall be so spaced or insulated so that they will not ignite or char by contact, or by radiated heat.

- Steel or aluminum decking will be the primary material for scaffolding jobs where the skin temperature of the decking would be expected to exceed 250°F.
- Wood planking and plywood used for scaffolding will be allowed in process units if it is not in direct contact with hot piping and/or hot equipment, and if the skin temperature will not exceed 250°F.
- Consideration for thermal expansion (i.e., pipe will grow when heated) must also be allowed for. Before starting such a job, the approval of the Shift Supervisor shall be obtained.
- All unavoidable obstructions (Ex: piping, valves, etc.) and scaffold components that pose a potential head knocker hazard at scaffold access points or to persons or to persons using a scaffold ladder shall be wrapped with yellow and black striped barricade tape.

5.3 Criteria for Supported Scaffolds

Supported scaffolds must meet the WAC-296-874-400 requirements specific to the type of supported scaffold used. Those requirements include but are not limited to the following:

- Supported scaffolds with a height to base ratio of more than four to one (4:1) shall be restrained from tipping by installing guys, ties or braces as follows.
  - According to the scaffold manufacturer's recommendations or at all points where the following horizontal and vertical planes meet: The first vertical level at a height equal to 4 times the smallest base dimension.
  - Subsequent vertical levels every:
    - 20 feet for scaffolds 3 feet wide or less
    - 26 feet for scaffolds wider than 3 feet
  - Horizontally at:
    - Each end of the scaffold (or guyed at each corner, if the scaffold is not braced or tied to a supporting structure) and at intervals of 30 feet or less. (The 30-foot horizontal intervals are measured from one end of the scaffold to the other.)
    - Supported scaffolds shall be level and plumb, and shall be braced to prevent swaying or displacement.
    - Supported scaffolds shall bear on base plates resting on an adequate firm foundation, such as on a typical Marathon Anacortes Refinery concrete slab. It is up to the competent scaffold erector to decide if a mudsill is required when building a scaffold on a concrete slab.
    - A "mudsill" is required under the scaffold base plate when the scaffold is being constructed on soft or uneven ground.
    - Scaffolds built on a solid metal platform shall have mudsills under the base plates or be tied or braced to a secure structure to prevent the scaffold from sliding.

- The base plates of scaffold built on a grating (metal or synthetic) must be attached/wired to the grating, or the scaffold otherwise appropriately tied off to prevent the scaffold from sliding.

5.4 Criteria for Rolling (On Casters) Scaffolds

Rolling scaffolds must meet the WAC-296-874-400 requirements specific to the type of rolling scaffold used. Those requirements include but are not limited to the following:

- All scaffold components including casters or wheels, shall be joined together with lock pins, snaps, bolts, or equivalent fasteners.
- Wheels or casters shall be provided with a locking device and kept locked during erection, usage, and dismantling.
- Marathon Anacortes Refinery does not allow extending adjusting screws on rolling scaffolds more than 12", measured from the top plate of the caster to the screw handle.
- The working platform height of a rolling scaffold must not exceed 3 times the smallest base dimension.
- All planks and platforms shall be secured to prevent uplifting or sliding.
- Marathon Anacortes Refinery does not allow personnel or debris on a scaffold while it is being moved.
- All supported mobile/rolling scaffolds shall have a horizontal diagonal for stability. Mobile scaffolds shall be plumb, level, and squared.
- Motorized vehicles or add-on motors shall not be used to move rolling scaffolds unless the scaffold is designed to be used with the type of propulsion system employed.

5.5 Criteria for Suspension Scaffolds (aka Two-Point Suspension Scaffold)

Typically, at Anacortes Refinery, these are platforms supported by hangers (i.e., stirrups) suspended by wire rope from overhead supports. Air spiders, boatswain chairs, and man baskets are not included in the following requirements (see R-11-003). Suspended scaffolds must meet the WAC-296-874-30002 through 296-874-30046 requirements specific to the type of suspended scaffold used. Those requirements include but are not limited to the following:

All suspension scaffolds and structures they are suspended from shall be capable of supporting at least 4 times the anticipated load.

When wire rope clips are used on suspension scaffolds:

- There shall be a minimum of 3 wire rope clips installed a minimum of 6 rope diameters apart.
- Wire rope and clips used on a suspended scaffold shall be inspected and retightened to the manufacturers' recommendation at the start of each work shift.

- When wire rope clips are used, the U-bolt shall be placed over the dead end of the rope and the saddle shall be placed over the live end of the rope.
- To reduce the possibility of welding current arcing through the suspension wire rope when performing welding from suspended scaffolds, the following precautions shall be taken as applicable:
  - An insulated thimble shall be used to attach each suspension wire rope to its hanging support (i.e., anchor point). Excess suspension wire rope and any additional independent lines shall be insulated from grounding.
  - The suspension wire rope shall be covered with insulating material extending at least 4' above the point of attachment.
  - Each point of attachment shall be covered with insulated protective covers.
  - In addition to a work lead attachment required by the welding process, a grounding conductor shall be connected from the scaffold to the structure. The size of this conductor shall be at least the size of the welding process work lead, and this conductor shall not be in series with the welding process or the work piece; if the scaffold grounding lead is disconnected at any time, the welding machine shall be shut off.
  - An active welding rod or un-insulated welding lead shall not be allowed to contact the scaffold or its suspension system.

6.0 ACCESS

When scaffold platforms are more than 2' above or below the point of access, proper access to the differing height platform shall be provided.

Note: Depending on the nature, or a potential hazard, of the job that will be performed from the scaffold, consideration shall be given to provide secondary access or egress to/from the job.

When stairway type ladders or stair towers are used they must be constructed to be in compliance with WAC 296-874-20024 through 296-874-20028.

If vertical ladders are used for access:

- The ladder shall be positioned so as not to tip the scaffold.
- The ladder shall have uniform rung spacing, when feasible. Marathon Anacortes Refinery requires the bottom rung on a scaffold ladder to be installed 12" from grade, so it is the same as the rest of the ladder rungs.
- Ladder access shall incorporate rest platforms at 20' maximum vertical intervals.
- Rest platforms shall be installed in a manner that requires the scaffold user to get off the ladder on a rest platform before continuing to ascend or descend the scaffold. Ladders shall not line up vertically with each other between rest platforms.
- The ladder shall extend a minimum of 36" above the platform when feasible. A "grab pole" may be substituted if extending the ladder above the platform is infeasible.

- The ladder shall be installed in a manner that prevents any protrusion from the scaffold (Ex: toe boards, scaffold components) or other objects from interfering with a person's hands or feet contacting the next rung.
- If feasible, scaffold ladder installations should maintain a minimum perpendicular clearance of 30" between the center line of a scaffold ladder rung or rail, and any obstruction on the climbing side of the scaffold ladder. Sections 5.2 and 11.0 of this procedure contain marking and tagging requirements that apply when this clearance cannot be maintained.
- When unavoidable obstructions (Ex: piping, valves) are encountered when climbing a scaffold ladder, a head knocker tag and marking tape must be attached as required in Sections 5.2 and 11.0 of this procedure.
- The scaffold ladder landing zone (i.e., area a person steps on to, or steps off of the ladder) shall be a minimum of 30" on the climbing side of the ladder, if feasible. The intent of the minimum of 30" is to be sure that a person, who is getting on or off of the ladder, has sufficient unobstructed space to do so.
- Ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use (per WAC 296-874-40008). Always use 2 ladder brackets for attaching the top and bottom ladder sections.

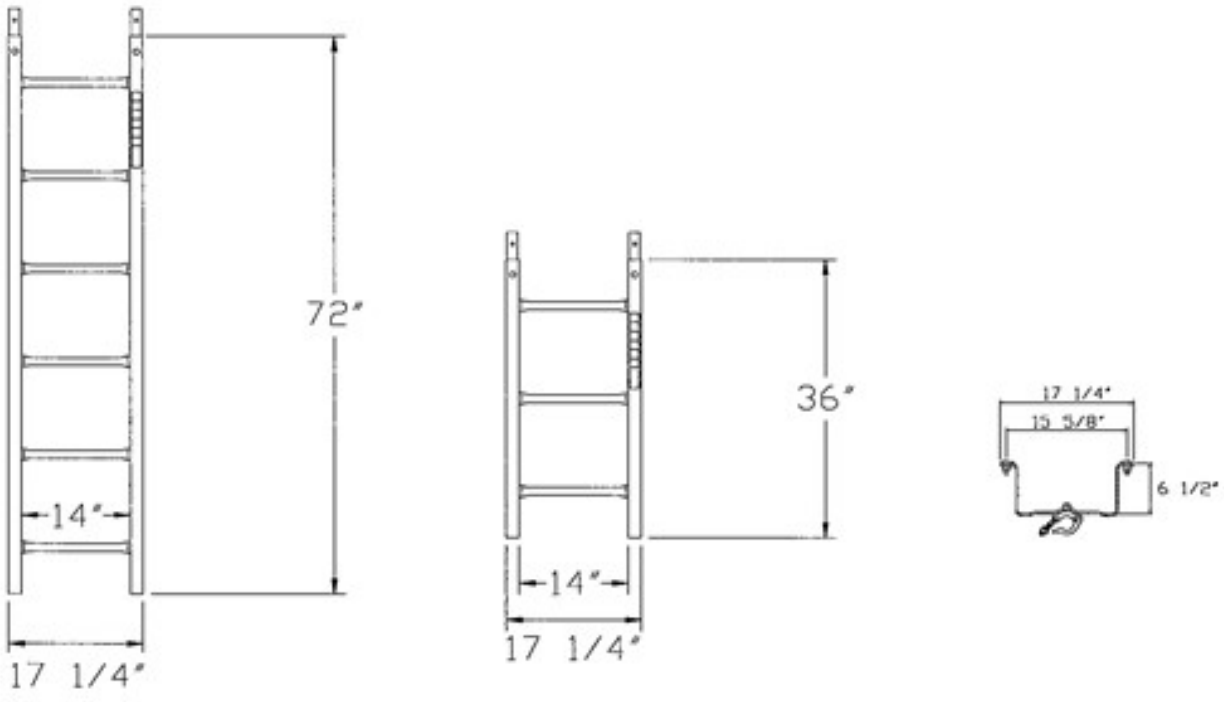

Figure 1 Example of the standard and preferred scaffold ladder to be used at Marathon Anacortes Refinery

7.0 FALLING OBJECT PROTECTION

When feasible, toe boards shall be installed on all open sides and ends of all scaffold platforms more than 6′ above a lower level and extend at least 3 ½″ above the working surface. Note that there are very few scaffold installations where toe boards are infeasible.

Exception: When a gate is used, it shall be equipped with an integral toe board when feasible. There shall be no toe boards affixed to the platform at the point of platform/ladder access when a "gate" is used. Marathon Anacortes Refinery chooses not to have a tripping hazard (Ex: fixed toe board) when the gates are used.

If anything is piled higher than the top edge of the toe board, or where there is a potential danger of anything falling from a scaffold, a screen (maximum of ½″ mesh) extending from the toe board or platform to the top of the guardrail, a canopy structure, debris net, or a catch platform shall be erected.

Screens, nets, or other devices shall not be erected to obstruct any platform/ladder access opening when a gate is used. Tools, materials, and equipment on scaffold decks shall be kept far away from ladder access points on all scaffolds.

Note: If access under the platform is not required, a barricade fully surrounding the area with potential for falling object hazards may be used in place of the screens, nets, or other devices mentioned above. When a gate is used, a barricade fully surrounding the area with potential for falling object hazards shall be erected prior to the scaffold being used.

8.0 REQUIREMENTS FOR SAFE USE OF SCAFFOLDS

8.1 Use

Anyone using or inspecting a scaffold must have had the appropriate training prior to performing those tasks. Scaffold and scaffold components shall be inspected for visible defects by a competent person before use for each work shift when the scaffold will be used, and after any occurrence which could affect a scaffolds structural integrity. It is also the scaffold user's responsibility to check the scaffold for any deficiencies before each use. Any scaffold found to be defective shall be immediately red tagged and not used until repaired or replaced.

Scaffolds shall not be moved horizontally while employees are on them.

Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed power lines than as follows:

Table 2 Power Line Distances

Voltage	Minimum Distance	Alternatives
Less than 300 volts	3′	N/A
300 volts to 50 kv	10′	N/A
More than 50 kv	10′ plus 0.4″ for each 1 kv over 50 kv	2 times the length of the line insulator but never less than 10′

Scaffolds and conductive materials handled on scaffolds may be closer to exposed power lines than the minimum separation distance specified above if both of the following conditions are met:

- Less clearance is necessary to do the work.
- The Marathon Electrical Supervisor has been notified and has ensured the lines are de-energized, relocated, or that protective coverings have been installed on the lines to prevent accidental contact.

Work shall be prohibited on scaffolds covered with snow, ice, or other slippery material, except as necessary for removal of such materials.

Work on scaffolds is prohibited during storms or high winds, unless a competent person has determined it is safe to do so.

Debris shall not be allowed to accumulate on platforms.

Ladders or makeshift standing platforms shall not be used on scaffolds to increase the working level height of an employee.

8.2 Fall Protection

Each employee on a scaffold more than 6' above a lower level shall be protected from falling to that lower level.

- Any employee on a suspended scaffold shall be protected by a personal fall arrest system.
- Each employee on a single-point or two-point adjustable suspension scaffold shall be protected by both a personal fall arrest system and guardrail system.

Marathon Anacortes Refinery requires a guardrail system on any supported scaffold/ platform 6' above a lower level. The top edge height of the top-rail shall be between 39" and 45" above the platform surface. The mid-rail shall be installed approximately midway between the platform and the top-rail. If a guardrail system is not feasible (as determined by the Scaffold Builder) or left off for a specific task, some other appropriate fall protection system must be used and shall be denoted on the tag. A tag example might be "missing hand rail for pipe installation, fall protection required."

Whenever a person (i.e., not using the scaffold ladder) climbs above the deck of a platform, scaffold, elevated work platform or stairway above 4 feet, the height of the guardrail must be raised accordingly to maintain a protective height of 42 inches plus or minus 3 inches above the raised platform/work height. If this is not practical, then a fall protection system shall be used.

9.0 SCAFFOLD ERECTION AND DISMANTILING REQUIREMENTS

9.1 General

Scaffolds over 125' in height above their base plates shall be designed by a qualified, registered professional Engineer.

All other scaffolds must be designed by a qualified person and constructed according to that design.

All scaffold erection, moving, altering, dismantling work must be performed by experienced and trained employees selected by a competent person, and must be supervised and directed by a competent person.

Note: Employees trained as Scaffold Inspectors or users may handle individual scaffold components in support of erecting, altering, moving, or dismantling scaffold if under the supervision and direction of a competent person. But they shall not climb onto or ascend/descend a scaffold framework unless using a properly attached scaffold ladder, or enter onto any incomplete scaffold deck or rest platform, or attach or remove any scaffold components to or from the scaffold.

9.2 Fall Protection (for Erecting & Dismantling)

A competent person shall determine the feasibility and safety of providing fall protection for employees erecting or dismantling scaffolds. Maximum feasible fall protection shall be used. The burden of demonstrating infeasibility is on the competent person.

Note: Access requirements for employees erecting or dismantling supported scaffolds are specifically addressed in WAC 296-874-20008, 40008 & 40010.

When determining the best feasible fall protection, apply the following:

- Scaffold components can be used for personal fall arrest system anchorage points if the component and the scaffold can meet the full anchorage load requirement without failing or causing the scaffold to overturn (i.e., the scaffold is appropriately tied off/secured).
- Where suitable anchorage is not available, all possible alternative protection must be provided. This may include providing the use of access ladders to each level and providing appropriate decks and guardrails on areas used by erectors/dismantlers.
- When horizontal lifelines are used, the lifelines shall be fastened to fixed safe points of anchorage. These may, with a competent person's approval, include structural members of the scaffold.
- When vertical lifelines are used, each worker shall be attached to a separate lifeline and anchor. Vertical lifelines must be independent of the scaffold. WAC 296-874-20060.

10.0 GENERAL SCAFFOLD PLATFORM COMPONENT MATERIAL GUIDELINES AND TABLES

10.1 Planking & Platforms

The allowable span for Douglas Fir or Southern Pine Scaffold Grade planks, 2" by 10" (nominal) or 2" by 9" (actual) solid sawn wood planks 1 ½" by 9 ¼".

Table 3 Solid Sawn Wood

Maximum Intended Nominal Load (lbs/ft2)	Maximum Permissible Span Using Full Nominal Thickness Un-Dressed Lumber (ft)	Maximum Permissible Span Using Lumber (ft)
25#	10′	8′
50#	8′	6′
75#	5′	0′

All planking shall be scaffold grade, Douglas Fir or Southern Yellow Pine, or equivalent as graded by recognized grading agencies.

Note: If a scaffold plank shows signs of damage, or if the plank has been subject to conditions that might have caused damage, and after careful inspection you are still in doubt about its strength, do not use it.

All continuous planking shall be overlapped (minimum 12″) and secured from movement.

Scaffold planks shall extend over their end supports not less than 6″ or more than 12″.

Fabricated planks and platforms may be used in lieu of solid sawn wood planks. Maximum loads for fabricated planks and platforms shall be:

Table 4 Fabricated Planks & Platforms

Rated Load Capacity	Intended Load (lbs/ft^2) (i.e. applied uniformly over the entire span area)
Light duty	25#
Medium duty	50#
Heavy duty	75#

11.0 SCAFFOLD TAGGING

11.1 General

The scaffold tagging system consists of five different tags:

- **Red Tag**: The 3 3/8″ x 4 7/8″ red tag labeled "Do Not Use This Scaffold Keep Off" indicates the scaffold is incomplete or unsuitable for use. The scaffold is not to be used.

  ("Tag Scaffold; Red" SAP 2434468)

- **Yellow Tags**: The two-yellow scaffolding related tags are of different sizes and indicate the scaffold or surrounding area may have hazards the user should be aware of.

  - The 3 3/8″ x 4 7/8″ yellow tag labeled "Caution Scaffold Related User Hazards May Exist" identifies the hazard as perceived by the Scaffold Builder. The scaffold user is responsible to evaluate the applicable means to mitigate the hazard or

condition noted. If the hazard is personnel falling, then the tag is to state "Fall Protection Required". This tag is to be displayed at eye level at the point of access.

("Tag Scaffold; Yellow" SAP 2434469)

- The 8 ½" x 11" yellow tag labeled "Caution Head Knocker Above" is self-explanatory and when required is to be conspicuously attached to the scaffold 3' to 4' below the hazard.

  ("Tag Scaffold; Caution Head Knocker Above" SAP 2448411)

- **Green Tag**: The 3 3/8" x 4 7/8" green tag labeled "This Scaffold Has Been Erected to Meet WISHA Standards and is Safe for All Craft Work" indicates the scaffold met all OSHA/WISHA/Marathon Anacortes Refinery, requirements for scaffolds when it was erected. It is always the user's responsibility to inspect the scaffold before using it.

  ("Tag Scaffold; Green" SAP 2434467)

- **White Tag**: The 3 ¼ x 8" white tag labeled "Inspection Record" provides a record of inspections performed by Competent Scaffold Inspectors. If the tag does not bear today's date, or the date on which the current shift started and an accompanying signature of a Competent Scaffold Inspector or Competent Scaffold Builder, then the scaffold cannot be used.

  ("Tag, Sfty: Narrow Insert, White" SAP #3693343)

  ("Tag, Sfty: Scaffold Insp Tag Hldr, White" SAP #3693342)

  Note: White Marathon Anacortes Refinery scaffold inspection tags and tag holders are available 24/7 in bins outside the Marathon Safety Equipment Room.

11.2 Tagging Requirements

The Scaffold Builder overseeing the construction of the scaffold shall be responsible to affix the appropriate scaffold tags. Tags shall be affixed at approximately eye height at each point of access to the scaffold, except for the "Caution Head Knocker Above" tag.

- At no time shall any scaffold related tag be covered by another tag or be otherwise obscured from view.
- Tagging during Construction or Dismantling: When the scaffold is unattended during construction or dismantling, it shall be tagged with a red tag.
- Tagging Modified Scaffold: Whenever a scaffold is modified the scaffold tag shall be changed, if necessary, to the appropriately colored tag for the duration of the modification.
- Tag Identification: Colored tags shall be signed and dated by the Scaffold Builder overseeing the erection or modification of the scaffold.
- Inaccurate Tags: Persons finding yellow or green tagged scaffolds they believe to be incomplete or unsuitable for use shall immediately notify the unit or area Supervisor. This Supervisor shall immediately inspect the scaffold, red tag it if necessary, and notify the Supervisor responsible for the scaffold as soon as is practical.

- Tag Removal or Changing:
  - Any competent scaffold user, inspector, or builder may affix a red tag to a scaffold they believe is unsafe for use. Any person (except Competent Scaffold Builders) red tagging a scaffold shall immediately inform their Supervisor.
  - Competent Scaffold Builders are the only persons authorized to remove red tags or to affix or change any yellow or green tag.
  - Competent Scaffold Inspectors and Builders may inspect scaffolds and install, remove, and sign white Marathon Anacortes Refinery scaffold inspection tags.
- No Tag:
  - A scaffold without a colored tag shall be considered "red tagged" and shall not be used until an appropriate colored tag is placed on the scaffold.
  - A scaffold without a white Marathon Anacortes Refinery scaffold inspection tag bearing today's date (or the date on which the current shift started) shall not be used until properly inspected and tagged.
- Multi-Level Scaffold: When a scaffold consists of multiple levels, it is possible that different levels may have different conditions. The entire scaffold will then be tagged to the most restrictive level.

12.0 USE OF MOTORIZED SUSPENDED SCAFFOLDS (SPIDERS™ , ETC.)

Employers who use suspended scaffolds (Spiders™, etc.) to perform inspection and maintenance shall do so in accordance with the manufacturer's instructions, warnings and design limitations. If suspended from a crane when occupied, use of these scaffolds becomes a critical lift crane operation and must be done in compliance with R-11-008.

In addition, the end user shall implement eight specific safety provisions:

12.1 General Requirements

Do not load scaffolds in excess of the working load for which they are rated. Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards. Employees shall not work on scaffolds during storms or high winds or on scaffolds that are covered with ice or snow. Do not allow tools, materials and debris to accumulate in quantities that may cause a hazard (i.e., overload, tripping, falling objects).

12.2 Employee Training

All persons rigging or using equipment must have training, with documentation of training available upon request.

12.3 Inspection of Equipment

Suspended scaffolds (i.e., hoists, rigging and anchor points) must be inspected according to Manufacturer's recommendations identified in the Operator's Manual (i.e., must be attached to the hoisting machine). Fall arrest systems must be inspected each shift by a competent person. Personal fall protection equipment must be inspected each shift by the user.

12.4 Proper Rigging

Suspension cables must be capable of supporting six times the intended load (i.e., load rating found on data plate on the hoisting machine). Rig so suspension points are directly above the hoisting machine. The suspension rope/wire cable must be protected from sharp edges. A shackle (i.e., wired or pinned) must be used for attaching the suspension wire rope eye to the rigging device. Transportable rigging devices (i.e., hooks, clamps, beams, etc.) must be tied back with wire rope and hardware of equal strength to the hoist rope and must be secured against movement. Use only swaged fittings or J-type clamps to fasten wire rope; do not use U-clamps.

12.5 Anchor Points

Anchor points must be capable of supporting four times the intended load for the hoisting machine. Anchor points for fall protection must be capable of supporting 5,000 pounds per lifeline. Separate primary anchor points are required for the hoisting machine and fall protection systems. Fall Arrest Systems.

12.6 Fall Arrest Systems

Each person must be attached to a fall arrest system at all times. Each person must be attached to a separate lifeline long enough to reach the lowest level and the lifeline must have a weight attached to the bottom. Lifelines must be protected from sharp edges, abrasion, fire, etc.

12.7 Rescue Plan

Rescue provisions must be identified in a written Rescue Plan that has been approved by the Safety Department and reviewed by all personnel involved in the use of the scaffold system.

12.8 Welding From Suspended Scaffolds

Use an insulated thimble to attach each wire rope to its rigging. Cover the wire rope with insulating material 4’ above and below the wire rope guide. Ground the staging to the structure. The conductor must be at least the size of the welding machine grounding lead. Be sure wire rope does not contact the structure along its entire length.

13.0 TRAINING

13.1 Users

Persons using any scaffold shall be trained by a qualified person. “Using” a scaffold means walking or climbing on or onto any part of the scaffold, including the ladder, for any purpose.

The training and direction shall include the following areas, as applicable:

- The nature of any electrical hazards, fall hazards and falling object hazards.
- Procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The proper use of the scaffold and the proper handling of materials on the scaffold.

- The maximum intended load and the load-carrying capacities of the scaffold.
- The scaffold tagging system.

13.2 Scaffold Inspectors

Each employee who is involved in inspecting a scaffold shall be trained by a qualified person. The training shall include the following:

- The nature of scaffold hazards.
- The proper guidelines for erecting, inspecting, and maintaining the type of scaffold that is in place.
- The load-carrying capacity and intended use of the scaffold platform.
- The importance of providing proper fall protection and access.
- The scaffold tagging system.

13.3 Scaffold Builders

Each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining or inspecting a scaffold shall be trained by a qualified person. The training shall include the following:

- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question.
- The design criteria maximum intended load- carrying capacity and intended use of the scaffold.
- The importance of providing proper fall protection and access.

Note: Employees trained as Scaffold Inspectors or users may handle individual scaffold components in support of erecting, altering, moving, or dismantling scaffold if under the supervision and direction of a competent person. But they shall not climb onto or ascend/descend a scaffold framework unless using a properly attached scaffold ladder, or enter onto any incomplete scaffold deck or rest platform, or attach or remove any scaffold components to or from the scaffold.

13.4 Retraining

Is required if:

- Changes present a hazard.
- Changes in the types of scaffolds, fall protection, falling object protection present a hazard.
- The employee forgot their training.

14.0 REVIEW AND REVISION HISTORY

Revision #	Preparer	Date	Description
0	Mark Willand	1/2/2022	Reformatted and Numbered per Document Control Policy, R-63-001.
1	Brady Emmons	10/23/2023	Line by line review

15.0 ATTACHMENT 1 – SCAFFOLD BUILDER INITIAL INSPECTION CHECKLIST (R-11-026-F01)

Marathon Petroleum Company	REFINERY-WIDE	R-11-026-F01
ANACORTES REFINERY	Scaffold Building Initial Inspection Checklist	Page 2 of 2
		REVISION: 1

Falling Object Protection:

- ☐ Verify that toe boards are in place (except across gate openings) and adequately secured.
- ☐ Verify at least one of the additional falling object protections below is provided or feasible for the user to install if there is a chance falling objects could cause personal injury or equipment damage.
  - Wire mesh
  - Caution barricade tape around the scaffold base
  - Snow fencing

Access:

- ☐ Verify adequate access to any platform that is over 2' higher than the lower platform.
- ☐ Verify that ladders and hand holds extend at least 3' above the deck.
- ☐ Verify access gates have been installed when feasible. Access gates must have an integral toe board when feasible.
- ☐ Verify access gates swing closed when released.
- ☐ Verify ladders are attached so they will not tip the scaffold.
- ☐ Verify rung spacing between the ground or platform and the first rung is the same as the spacing between subsequent ladder rungs (preferably 12").
- ☐ Verify access rest platforms are at 20' maximum vertical intervals (unless the top platform is under 24').

Tie Offs:

- ☐ Where the height to base ratio is more than four to one (4:1), verify that vertical scaffold tie offs or braces are present.
- ☐ Verify the uppermost tie offs or braces are placed as close to the top horizontal member as possible.
- ☐ Verify vertical tie offs or braces are no more than 20' apart (26' on scaffold with a minimum base dimension of 3').
- ☐ Verify horizontal tie offs or braces are present on scaffolds 30 feet or longer and with a height to base ratio of more than 4:1.

Tags:

- ☐ Verify "Head Knocker" tags, where required, are installed conspicuously 3' to 4' below the hazard.
- ☐ Verify that one of the following tags is attached near the bottom of the ladder;
  - Red Tag: the scaffold is unsuitable for use
  - Yellow Tag: additional precautions are required and noted on the tag
  - Green Tag: the scaffold meets all applicable requirements
- ☐ Verify a white Marathon Anacortes Refinery scaffold inspection record tag and tag holder are installed, with the tag obscuring the warnings printed on the tag holder. Installing used tags with at least 5-10 open/unused signature lines is acceptable.
- ☐ Sign the white Marathon Anacortes Refinery scaffold inspection record tag if the scaffold is not red tagged and is to be used today.

Falling Object Protection:

- ☐ Verify that toe boards are in place (except across gate openings) and adequately secured.
- ☐ Verify at least one of the additional falling object protections below is provided or feasible for the user to install if there is a chance falling objects could cause personal injury or equipment damage.
  - Wire mesh
  - Caution barricade tape around the scaffold base
  - Snow fencing

Access:

- ☐ Verify adequate access to any platform that is over 2′ higher than the lower platform.
- ☐ Verify that ladders and hand holds extend at least 3′ above the deck.
- ☐ Verify access gates have been installed when feasible. Access gates must have an integral toe board when feasible.
- ☐ Verify access gates swing closed when released.
- ☐ Verify ladders are attached so they will not tip the scaffold.
- ☐ Verify rung spacing between the ground or platform and the first rung is the same as the spacing between subsequent ladder rungs (preferably 12″).
- ☐ Verify access rest platforms are at 20′ maximum vertical intervals (unless the top platform is under 24′).

Tie Offs:

- ☐ Where the height to base ratio is more than four to one (4:1), verify that vertical scaffold tie offs or braces are present.
- ☐ Verify the uppermost tie offs or braces are placed as close to the top horizontal member as possible.
- ☐ Verify vertical tie offs or braces are no more than 20′ apart (26′ on scaffold with a minimum base dimension of 3′).
- ☐ Verify horizontal tie offs or braces are present on scaffolds 30 feet or longer and with a height to base ratio of more than 4:1.

Tags:

- ☐ Verify "Head Knocker" tags, where required, are installed conspicuously 3′ to 4′ below the hazard.
- ☐ Verify that one of the following tags is attached near the bottom of the ladder;
  - Red Tag: the scaffold is unsuitable for use
  - Yellow Tag: additional precautions are required and noted on the tag
  - Green Tag: the scaffold meets all applicable requirements
- ☐ Verify a white Marathon Anacortes Refinery scaffold inspection record tag and tag holder are installed, with the tag obscuring the warnings printed on the tag holder. Installing used tags with at least 5-10 open/unused signature lines is acceptable.
- ☐ Sign the white Marathon Anacortes Refinery scaffold inspection record tag if the scaffold is not red tagged and is to be used today.

16.0 ATTACHMENT 2 – SCAFFOLD DAILY INSPECTION CHECKLIST (R-11-026-F02)

Marathon Petroleum Company LP	REFINERY-WIDE	R-11-026-F02
ANACORTES REFINERY	Scaffold Daily Inspection Checklist	Page 1 of 2
		REVISION: 1

Instructions: Qualified Scaffold Inspectors use this checklist to determine whether or not an existing scaffold shows visible signs of damage or excessive use. If needed, refer to procedure R-11-026 for more detailed specifics of each requirement.

Base:
- ☐ Verify the scaffold is visibly plumb and level.
- ☐ Verify all base plates are in place and undamaged.
- ☐ Verify all screw jacks are tight against stops.

Structure:
- ☐ Verify all parts of the scaffold are an adequate distance from exposed power lines for the work to be performed on the scaffold.
- ☐ Verify that attachment wedges and button snaps are fully engaged.
- ☐ Verify the wheels are locked on rolling scaffolds.

Platform:
- ☐ Verify with unit operator that wood components will be a safe distance from hot or potentially hot piping.
- ☐ Verify all ignitable components adjacent to hot or potentially hot piping are protected by appropriate insulation material or removed.
- ☐ Verify that there are not splits, cuts, or de-lamination in work planks.
- ☐ Verify that there are no holes large enough to allow falling through or tripping.
- ☐ Verify all planks are secured to prevent sliding, or uplifting.
- ☐ Verify that platform planks do not have more than [illegible] spacing between them.
- ☐ Verify excessive debris or materials have not accumulated on the work platform.

Guardrails:
- ☐ Verify that serviceable guardrails are installed on all platforms 6' above a lower level unless alternate fall protection is required.

Falling Object Protection:
- ☐ Verify that toe boards are in place and adequately secured.
- ☐ Verify at least one of the additional falling object protections below is provided or feasible for the user to install if there is a chance falling objects could cause personal injury or equipment damage.
  - Wire mesh
  - Caution barricade tape around the scaffold base
  - Snow fencing

Access:
- ☐ Verify that ladders and hand holds are not damaged and that they extend at least 3' above deck.
- ☐ Ensure access gates swing closed when released.
- ☐ Verify ladder rungs are not bent, dented or damaged.

Marathon Petroleum Company LP	REFINERY-WIDE	R-11-026-F02
ANACORTES REFINERY	Scaffold Daily Inspection Checklist	Page 2 of 2
		REVISION: 1

Tie Offs:

- ☐ Verify that vertical tie offs or braces are present if scaffold height requires them.
- ☐ Verify that horizontal tie offs or braces are present if scaffold height and length requires them.

Tags:

- ☐ Verify that one of the following tags is attached near the bottom of the ladder:
  - Red Tag: the scaffold is unsuitable for use
  - Yellow Tag: additional precautions are required and noted on the tag
  - Green Tag: the scaffold meets all applicable requirements
- ☐ Verify "Head Knocker" tags, where required, are installed conspicuously 3' to 4' below the hazard.
- ☐ Verify a white Marathon Anacortes Refinery scaffold inspection record tag and tag holder are installed, with the tag obscuring the warnings printed on the tag holder. If the tag has no open/unused signature lines replace it with a fresh tag. Marathon Anacortes Refinery scaffold inspection tags and tag holders are available 24/7 in bins outside the Marathon Safety Equipment Room
- ☐ Sign the white Marathon Anacortes Refinery scaffold inspection record tag if the scaffold passes inspection.