
HEALTH AND SAFETY PROGRAM 326 – SCAFFOLDING SAFETY PROCEDURE

1.0 PURPOSE

- 1.1 The purpose of this policy is to provide minimum requirements for contractors and Westlake personnel involved in building, erecting, installing, modifying and working from Scaffolds and to provide guidelines for the execution of tasks to enhance worker health and safety and prevent property damage.

2.0 SCOPE

- 2.1 This procedure applies to all Westlake employees and contract employees working at the Plaquemine Facility.

3.0 DEFINITIONS

- 3.1 **Fabricated Frame Scaffold** – A Scaffold consisting of a platform(s) supported on fabricated end frames with integral posts, horizontal bearers, and intermediate members.
- 3.2 **Guardrail System** – A barrier erected along an unprotected or exposed side, edge, or other area of a walking-working surface to prevent employees from falling to a lower level.
- 3.3 **Ladder Jack Scaffold** – A supported Scaffold consisting of a platform resting on brackets attached to ladders.
- 3.4 **Landing** – A platform at the end of a flight of stairs.
- 3.5 **Personal Fall Arrest System** – A system used to arrest an employee in a fall from a Walking Working Surface. It consists of a body harness, anchorage, and connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these.
- 3.6 **Planking** – Manufactured platforms made of wood, metal, or other materials.
- 3.7 **Platform** – A surface constructed above lower levels to provide employees a safe Walking Working Surface while working at elevated heights.
- 3.8 **Pole Scaffold** – A supported Scaffold consisting of a platform(s) resting on bearers, the outside ends of which are supported on runners secured

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to post(s) or upright(s), and the inner ends of which are supported on or in a structure.

- 3.9 **Registered Professional Engineer** – An Engineer with a recognized degree and professional certificate who is capable of design, analysis, evaluation and specifications in the subject work, project or product.
- 3.10 **Scaffold Competent Person** – A person trained in requirements related to the safe construction and use of Scaffolds, as well as, 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.
- 3.11 **Scaffold** – A elevated platform (supported or suspended) and its supporting structure constructed for the purpose of supporting employees or material, or both.
- 3.12 **Single Point Adjustable Suspension Scaffold** – A suspension 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.
- 3.13 **Supported Scaffold** – Scaffold platform(s) supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support.
- 3.14 **Suspension Scaffold** – Platform(s) suspended or cantilevered in the air by being supported from an overhead or adjacent structure.
- 3.15 **Toeboard** – A barrier secured along the sides and ends of a platform to guard against the falling of material.
- 3.16 **Tube and Coupler Scaffold** – A supported or suspended Scaffold consisting of a platform(s) supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners.

4.0 ROLES & RESPONSIBILITIES

4.1 Plant Manager

- 4.1.1 It is the responsibility of the Plant Manager, or their designee, to fully implement this procedure and to ensure the resources are available to implement this procedure for the Plaquemine plant.

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- 4.1.2 The Plant Manager, or designee, is responsible to assure site personnel have been trained in the procedures developed and that all required training documentation is retained.

4.2 Maintenance Manager

- 4.2.1 Maintenance Manager is responsible to communicate the requirements of this procedure with contractors to ensure proper Scaffolding materials are being used, per this procedure, to construct and build safe Scaffolding for the site.

4.3 Health & Safety Department

- 4.3.1 Health & Safety Department shall update and review procedure according to the latest regulatory requirements.
- 4.3.2 Health & Safety Department is responsible for ensuring requirements of the procedure are communicated with contractors.
- 4.3.3 Health & Safety Department is responsible for ensuring training requirements for Westlake Plaquemine meet the requirements of this procedure, that employees are trained and training records are retained appropriately.
- 4.3.4 Health & Safety Department are responsible to perform periodic audits to ensure compliance with this procedure and implement corrective actions from any deviations or findings from audits.

4.4 Operations Supervisors & Maintenance Superintendents

- 4.4.1 Responsible to ensure Westlake employees are trained in Scaffold user training per this procedure.
- 4.4.2 Ensure that Westlake employees using Scaffolding are trained, equipped with and utilizing approved fall protection per HSP – 319 Fall Protection Procedure.

4.5 Westlake Employees

- 4.5.1 Westlake Employees utilizing Scaffolding are responsible to review, understand and comply with this procedure at all times.

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- 4.5.2 Westlake Employees utilizing Scaffolding shall read and comply with Scaffold tags to ensure proper precautions are taken prior to using the Scaffold, such as but not limited to, whether or not 100% fall protection is required.
- 4.5.3 Westlake Employees are not trained Scaffold Competent Persons and therefore shall not installing, build, erect, modify or dismantle Scaffolds at any time.
- 4.5.4 Westlake Employees shall ensure their fall protection is inspected daily and annually prior to use per HSP – 319 Fall Protection Procedure.

4.6 Contractors

- 4.6.1 Contractors installing, building, erecting, modifying or dismantling Scaffolding shall only do so under the guidance and direction of a trained Scaffold Competent Person which also shall inspect scaffolding and update tags prior to each shift.
NOTE: Contractors must get approval from Maintenance Manager for approval if a Scaffold is put in service that is missing a fall protection member – see section on “Yellow Tags”.
- 4.6.2 Contractors installing, building, erecting, modifying or dismantling Scaffolding in any way, shall follow at a minimum this procedure, unless their procedure is more stringent, and shall strive to build all Scaffolds to “Green” tag where possible.
- 4.6.3 Contractors utilizing Scaffolding shall follow this procedure at a minimum and follow their Fall Protection Procedure where it supersedes the requirements of this procedure.

5.0 PROCEDURE

5.1 General Requirements

- 5.1.1 All Scaffolds must conform to OSHA Scaffold construction standards (29 CFR § 1910.27(a)) and specifications and site Health and Safety Procedures.

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- 5.1.2 Scaffolding must be maintained in a safe condition. Any deteriorated or damaged Scaffolding components or parts shall be immediately removed from service.
- 5.1.3 Scaffolds shall be erected, moved, dismantled, or altered by personnel trained and certified for such work and under the supervision and direction of a Scaffold Competent Person.
- 5.1.4 Scaffolds shall be constructed and loaded per the Scaffold's design specifications.
- 5.1.5 Each Scaffold and Scaffold component shall be capable of supporting its own weight and at least four (4) times the maximum intended load applied or transmitted to it without failure.
- 5.1.6 Scaffold components shall be manufactured by the same company, be compatible, and of the same material of construction.
- 5.1.7 Scaffolds shall be constructed in such a manner to meet the requirements of a "Green Tag" Scaffold as outlined.
- 5.1.8 The use of Lean-to Scaffolds are prohibited.
- 5.1.9 No one will be allowed on a rolling Scaffold while it is being moved.

5.2 Supported Scaffold Base and Supports

- 5.2.1 All Supported Scaffolds shall meet the requirements as outlined in 29 CFR § 1926.451(c) in addition to the requirements of this policy.
- 5.2.2 Installed at locations where horizontal members support both inner and outer legs;
- 5.2.3 Installed according to the Scaffold manufacturer's recommendations or at the closest horizontal member ratio of four to one (4:1) height and be repeated vertically at locations of horizontal members every twenty feet (20') or less thereafter for Scaffolds three feet (3') wide or less, and every twenty-six feet (26') or less thereafter for Scaffolds greater than 3 feet (3') wide. The top guy, tie or brace of completed Scaffolds shall be placed no further than the four to one (4:1) ration height from the top. Such guys, ties and braces shall be installed at each end of the Scaffold and at horizontal intervals not to exceed thirty-feet (30') (measured from

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one end [not both] towards the other)

5.2.4 Scaffold footing shall bear base plates that are sound, rigid, and capable of carrying the maximum intended load without settling or displacement and shall be placed on firm foundation.

5.2.5 Unstable objects shall not be used in support of Scaffolds or platforms.

5.2.6 Mobile equipment shall not be used to serve as a source of support for any part of the supported Scaffold.

5.3 Suspended Scaffolds

5.3.1 All Suspended Scaffolds shall meet the requirements as outlined in 29 CFR §1926.451(d).

5.3.2 The use of wire rope, as suspension rope, shall be prohibited unless being used as part of a Single Point Adjustable Suspension Scaffold as outlined in this policy.

5.4 Scaffold Platforms

5.4.1 Every Scaffold work platform must be fully planked. Each platform to be occupied by those performing work, other than assembly or dismantling, shall be fully planked or decked between the support uprights and secured to prevent any movement of the planking.

5.4.2 The minimum Scaffold platform and/or walkway width shall be 18 inches wide unless it is demonstrated that the platform and/or walkway cannot feasibly meet the minimum requirement.

5.4.3 Scaffolding must be level at all times.

5.4.4 Scaffold planking shall be marked as such and free of knots, cracks, warpage, or other signs of defects or abnormalities.

5.4.5 Scaffold Planks used for platforms must be of uniform thickness and extend for six (6) inches to twelve (12) inches over the bearing support. All planking shall be overlapped (12-18 inches), or secured from movement.

5.4.6 If it is necessary to overlap planking to extend the platform, the overlap

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shall be at least 12 inches and secured/restrained to prevent movement.

5.4.7 Scaffold planking shall be laid with no openings more than 1 inch except for where there is an entrance opening such as Scaffolding inside a vessel.

5.4.8 Scaffold planking shall not span more than ten (10) feet.

5.4.9 To prevent Scaffold fires, Scaffold boards shall be protected from charring and ignition when placed near a hot surface greater than 175 °F. Protection shall include appropriate high temperature insulation (such as Kaowool) and an air gap between Scaffold boards and hot surface such that hot air flow is deflected away from the Scaffold boards.

5.5 Guardrail Systems

5.5.1 All Scaffolds shall have Guardrail Systems constructed at each working level.

5.5.1.1 This does not apply to situations where piping, equipment, valves or the like, prevent Guardrail Systems from being installed. Such configurations shall fall under the section for Yellow Tag and require 100% fall protection at all times.

5.5.2 The site strictly prohibits configurations where Guardrail Systems are missing creating fall hazards such as leading edge or other hazards where a worker could fall to a lower level. This does not apply to contractor companies while scaffolds are being constructed.

5.5.3 A Scaffold over four (4) feet in height must be equipped with toe boards not less than four (4) inches high, handrails (between and mid rails to provide maximum personnel safety.

5.5.4 The egress opening of each Scaffold ladder shall have a pre-fabricated self-closing swing gate installed in the opening to continue the guardrail system protection.

5.6 Scaffold Access

5.6.1 All Scaffolds shall have access points that meet the requirements as

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outlined in 29 CFR §1926.451(e).

- 5.6.2 All Scaffolds must have a ladder that provides safe access to the work platform and ladders shall extend above the top working platform a minimum of four feet (4').
- 5.6.3 Scaffold ladders shall be installed in such a manner that the maximum climbing distance of twenty feet (20') is not exceeded.
- 5.6.4 Any Scaffolding platforms above twenty (20) feet shall be equipped with a Self-Retracting Lanyard (SRL), Ladder Safety System or other approved means of protecting workers from falls while using Scaffold ladders. All SRLs shall be affixed or installed in such a manner to allow the user to maintain 100% tie-off while ascending or descending the ladder.

5.7 Falling Object Protection

- 5.7.1 Falling object hazards shall be mitigated through the installation of barricades, mesh/screens, debris nets, or catch platforms/canopies when the toe board, as part of the Guardrail System, does not provide sufficient protection.
- 5.7.2 Tools, materials and/or debris shall not be allowed to accumulate on Scaffold platforms.
- 5.7.3 Stacking loose materials or tools on the Scaffold platform higher than the toe board is prohibited unless mesh/screens is installed from the platform to the top rail to secure the material.
- 5.7.4 Overhead protection shall be provided for workers on a Scaffold exposed to an overhead hazard.

5.8 Safe Work Practices

- 5.8.1 Scaffolds and their components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
- 5.8.2 If any part of a Scaffold is found to be, or becomes damaged, work shall immediately stop and the Scaffold shall be immediately repaired or replaced.

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- 5.8.3 Employees shall be prohibited from working on Scaffolds covered with snow, ice or other slippery material.
- 5.8.4 If Personal Fall Arrest Systems are approved for use while working on Scaffolds, the requirements of HSP – 319 Fall Protection shall be followed.
- 5.8.5 Work on Scaffolds is prohibited during severe weather and shall only be conducted per the requirements of the site's severe weather policies.
- 5.8.6 Tarps or other material used as a wind barrier shall not be draped around a Scaffold that is not attached to a structure or designed to withstand potential wind load.
- 5.8.7 Scaffolds shall not be constructed within 10 feet of energized power lines.
- 5.8.8 Portable ladders or other means to gain additional height advantage shall not be used while working on Scaffolds.
- 5.8.9 When lifting tools and/or materials to Scaffold Platforms, the area shall be barricaded or monitored to warn personnel of the lifting activities.
- 5.8.10 Lifting buckets and tag lines shall be utilized when lifting tools or materials to Scaffold Platforms.

5.9 Scaffold Inspections & Tagging

- 5.9.1 Scaffolds and Scaffold components shall be inspected for visible defects by a Scaffold Competent Person before each work shift and after any occurrence which could affect a Scaffold's structural integrity.
- 5.9.2 Each inspection shall be documented shall be documented utilizing a tagging system to inform employees of the date of inspection, name of Scaffold Competent Person completing the inspection and any hazards associated with the Scaffold.
- 5.9.3 The Scaffold tagging system shall consist of three distinct tags:
 - **Green Tag:** When a Scaffold is complete and meets all Westlake/OSHA guidelines, a green tag will be attached to a highly visible part of the Scaffold where it can be seen before ascending.

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The green tag will indicate the Scaffold is safe for use, and identify any special precautions regarding the use of the Scaffold.

- **Yellow Tag:** When a Scaffold is complete and meets all Westlake/OSHA guidelines, a yellow tag will be attached to a highly visible part of the Scaffold which requires 100% use of Personal Fall Protection. The yellow tag will indicate the Scaffold is safe for use with additional requirements, as well as identify any special precautions while working on the Scaffold. Example of yellow tag may include:
 - Uneven flooring or trip hazard
 - Overhead obstructions
 - Trip hazards or uneven working surface
 - Missing Guardrails or Handrails - requires approval from Maintenance Manager or site designee.
- **Red Tag:** When a Scaffold is incomplete nor meets all Westlake/OSHA guidelines. A red tag will be attached to a highly visible part of the Scaffold where it can be seen before ascending. The red tag will indicate the Scaffold not safe for use and shall not be occupied.

5.9.4 If a Scaffold does not have an inspection tag applied, it will be deemed a “Red Tag” Scaffold per the Scaffold tagging system outlined in this procedure.

5.9.5 Scaffolds found missing fall protection components or found in an Unsafe manner, shall not be used and shall be red tagged.

5.10 Scaffold Types and Methods

5.10.1 All **Pole Scaffolds** shall meet the requirements as outlined in 29 CFR §1926.452(a).

- Pole Scaffolds greater than fifty feet (50') in height shall be designed by a Registered Professional Engineer and shall be constructed and loaded based on the specific Scaffold design

5.10.2 All **Tube and Coupler Scaffolds** shall meet the requirements as outlined in 29 CFR §1926.452(b).

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- Tube and Coupler Scaffolds greater than one hundred feet (100') in height shall be designed by a Registered Professional Engineer and shall be constructed and loaded based on the specific Scaffold design

5.10.3 All **Fabricated Frame Scaffolds** shall meet the requirements as outlined in 29 CFR §1926.452(c).

- Fabricated Frame Scaffolds shall not be constructed greater than three (3) frames high.

5.10.4 All **Single Point Adjustable Scaffolds** shall meet the requirements as outlined in 29 CFR §1926.452(c).

6.0 TRAINING

6.1 Plaquemine employees are required to have completed Scaffold User training prior to accessing any Scaffolds on the site. This Scaffold User training is administered initially and then annually thereafter as a refresher training via the site's online Computer-Based Training (CBT) software.

7.0 PROGRAM REVIEW

7.1 The Plaquemine site HSE Dept. shall perform a documented review of HSP 326 – Scaffolding program every three (3) years, at a minimum.

8.0 REFERENCES

8.1 Corporate HSE Policy HSE 71.006: Walking Working Surfaces

8.2 29 CFR S1910 Subpart D: Walking-Working Surfaces

8.3 29 CFR S1926 Subpart L: Scaffolds



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0	<i>Scaffolding requirements extracted from HSP-313 Scaffolding and Ladder use. Establishing new HSP-326 Scaffolding Procedure. MOC: PLQ0.EHSSPSM.073124.77092. Draft was created in Dec. 2023.</i>	H. Garner	6/13/2024

